TARONG ENERGY CORPORATION LIMITED

OCCUPATIONAL HEALTH & SAFETY PROCEDURE FOR

BARRICADES

OHS-PROC-113

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1. Purpose:

To protect personnel by preventing or controlling access to hazards / high risk work areas by the installation and maintenance of barricades.

This procedure defines the requirements for and the appropriate methods of barricades to be utilised at Tarong Energy Corporation sites.

This procedure details the application of:

- Barricade tape (type used);
- The signs to be used; and

- The requirement for hard / solid barricades.

2. Scope:

This procedure shall apply to all Tarong Energy employees, visitors, contractors and their employees.

3. Procedure:

3.1 General

- Barricades shall be erected to prevent personnel from inadvertently been exposed to a hazard.
- Examples of when barricading shall be erected includes, where there is a danger of a person falling or being struck by falling objects, where there is a danger of injury from equipment or processes or for maintenance of switchboards & high voltage testing.
- Works requiring a barricade shall not commence until the requirements of this procedure have been satisfied.
- Barricades shall be removed when works have been completed or when the hazard is controlled.

3.2 Barricade Safety.

Where barricade tape is used to restrict access to an area the following rules apply as a minimum:

- The barricaded area must encompass the entire potentially affected area of the hazard – ie sparks, falling objects, leaks etc. (take into account the possible deflection of an object from a structure below if it falls)
- Where it is used to protect from a trip hazard or unprotected edge (less than 2m high) the barricade must be installed at least 2 metres back from the edge / hazard.

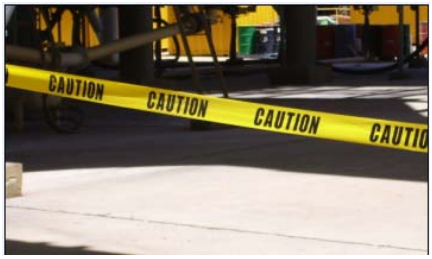
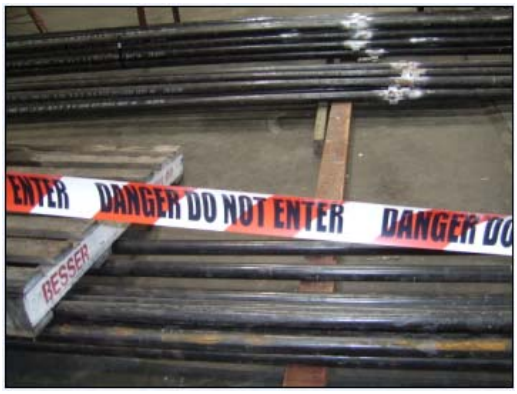
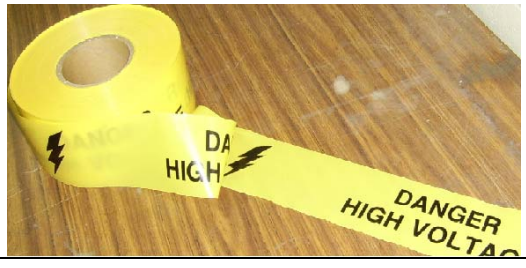
- The barricade shall be maintained in good condition ensuring it remains effective as a control measure. The supervisor and work party are responsible to monitor the condition of the barricade.

3.3 Types of Barricading

Barricades can be classed as either a soft barricade or a hard (solid) barricade. Soft barricades are those that use an approved tape to prevent or restrict access to an area. A hard barricade is a physical structure such as scaffold tubes or water filled devices that prevent or restrict access to an area.

Soft Barricades

TEC has four types of barricade tape. They are to be used to identify and protect personnel from general hazards and also those which are high risk and may pose a risk to life and health.

	Example	Application	Stock code
Caution Barricade Tape	 	The caution tape shall be used to highlight minor hazards to other personnel that may need to access the area. Any person may access into a caution barricaded area as long as they have familiarised themselves with the hazards detailed on the barricade signage and implemented any controls indicated on the signage.	Available in Work group stores. Stock Code # 103028 **non sticky back tape** Stock Code # 610230 – **sticky back tape**
Restricted Access Barricade Tape		This restricted access tape restricts access to the barricaded work area to the work party and only personnel authorised by the person in charge of the barricaded area (as indicated on the signage). This tape shall only be used for non electrical use, such as hot work, falling objects and unprotected edges.	Available in Work group stores. Stock Code # 610231
Restricted Access Electrical Work Barricade Tape		This restricted access tape is to be used to barricade off and restrict access to electrical hazards. This tape is commonly used for switchboard maintenance. Only the work party and personnel authorised by the person in charge of the barricaded area (as indicated on the signage) are permitted to access through the barricade.	Stock held in Main Warehouse. Stock Code # 75465
Restricted Access High Voltage Danger Barricade Tape		This restricted access tape is to be used to barricade off and restrict access to high voltage electrical hazards. This tape is commonly used to provide the minimum safe	Available in Work group stores. Stock Code # 72330

		approach distance from the item under high voltage testing. Only the work party and personnel authorised by the person in charge of the barricaded area (as indicated on the signage) are permitted to access through the barricade.	

Solid Barricades

The purpose of a solid barricade is to provide a physical barrier capable of performing the same function as a permanent guardrail.

A Solid Barricade shall:

- Have a solid top and mid rail (eg. Scaffold tube or equivalent) with the applicable sign attached. The top rail must be between 900mm and 1100mm high; Mid rail shall be no more than 560mm from the floor if no toe board is fitted and 450mm between rails.
- The installation of a kick rail or mesh to contain objects etc shall be by risk assessment and detailed in the JSEA or Unprotected Edge Risk Control Authorisation.
- Be able to withstand an impact of 550N outwards or down on the top rail. Additional controls may be required to secure free standing barricades.
- Water filled plastic barricades are classed as a suitable barricading method. Where they are used with potential for a vehicle impact they shall be linked together and filled.

Where solid barricades are used they shall be accompanied with signs to communicate the hazard information. As appropriate, barricade tape may be used to highlight the existence of the barricaded area.

3.4 Method of Barricading

3.4.1 Caution Barricades

Caution barricade tape shall be erected to inform personnel of an uncontrolled hazard within the barricaded area. The caution barricade tape is not suitable for medium, high or extreme risk hazards. It is only suitable for minor hazards where the main control is for personnel to be aware of the hazard. Examples of suitable hazards that can be controlled by Caution barricades includes: trip hazards, hot surfaces, delineation of stored equipment, etc.

Caution barricades are not to prevent personnel from entering the barricaded area. They are to highlight the hazard so that personnel can safely access the area. This tape is not appropriate for height and unprotected edge hazards. The appropriate signage as detailed in section 3.5 shall always be attached to a caution barricade.

3.4.2 Restricted Access Barricades

Restricted access barricades shall be erected to prevent unauthorised personnel from accessing the barricaded area. The intent is that only the working party has access to the area while the hazard is present and uncontrolled. This barricade is suitable to use to restrict access from hazards such as:

- Hot Work;
- Persons working above / falling objects;
- Spills / leaks;
- General delineation of a work area (e.g. cluttered access etc).
- Unprotected edges creating a fall risk of less than 2m (a specific risk assessment is required to only permit a soft barricade).

Only personnel authorised by the person in charge of the barricaded area (as indicated on the barricade signage) shall access the barricaded area. The appropriate signage as detailed in section 3.5 shall always be attached to a restricted access barricade.

3.4.3 Electrical Work Barricades

The Electrical work barricade is to be erected to prevent access to electrical hazards. This barricade is most commonly used for switchboard maintenance and identifies to the working party the safe access area for the switchboard maintenance work.

The barricade is to be erected at a height of 1.3 metres with an opening of 2 metres where practical. The entry size can be varied by the OIC to suit the work location provided it does not introduce a hazard and the Work Area is clearly delineated.

Restricted access signs and Switchboard on PTW signs are to be placed at the entrance to the barricade.

The erection and removal of the barricade will be controlled by the switching sheet.

3.4.4 High Voltage Testing Barricades

The high voltage testing barricade is to be erected around the item under test to provide a minimum safe approach distance as listed under the Electrical Safety Act for the testing voltage that is to be applied.

The barricade is to be erected at a height of 1.3 metres with an opening of 2 metres where practical. The entry size can be varied by the OIC to suit the work location provided it does not introduce a hazard and the testing area is clearly delineated.

Danger high voltage and restricted access signs are to be placed at the entrance to the barricade.

Flashing red lights will be installed and activated when test voltages are applied.

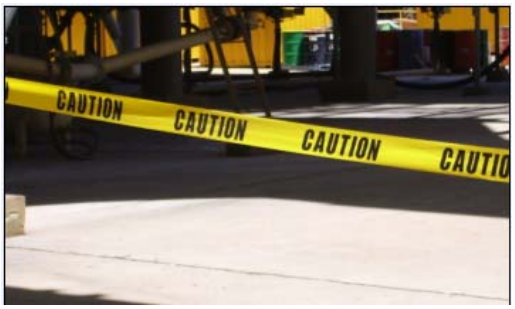
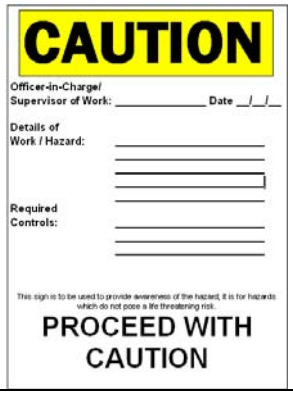
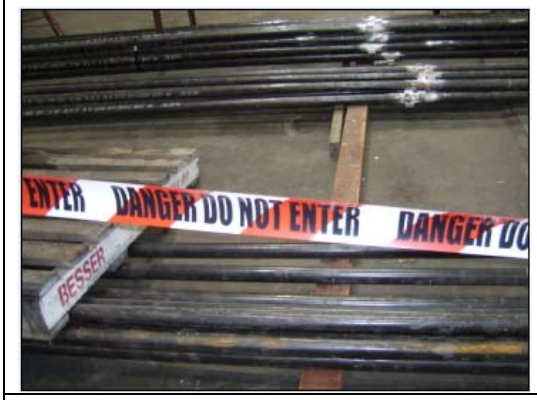
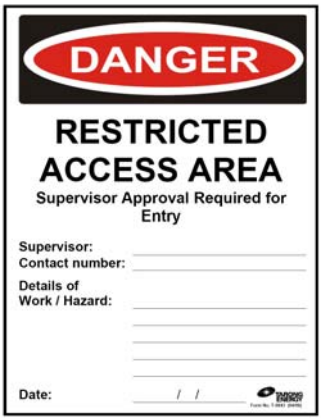
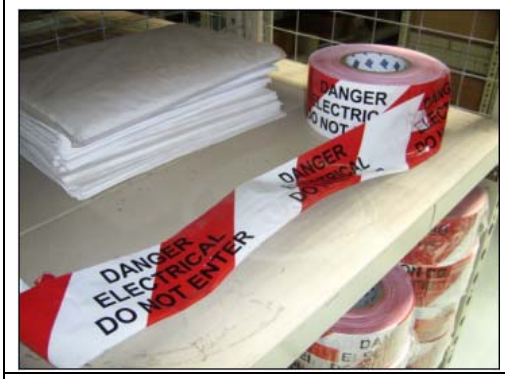
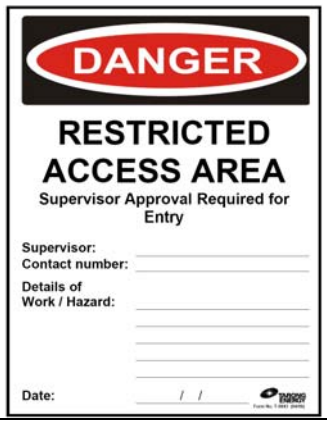
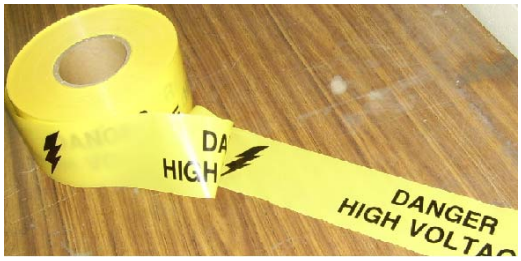
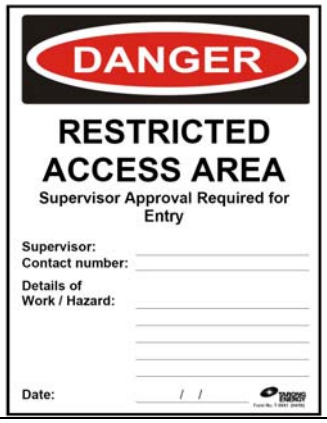
The erection and removal of the barricade will be controlled by the switching sheet.

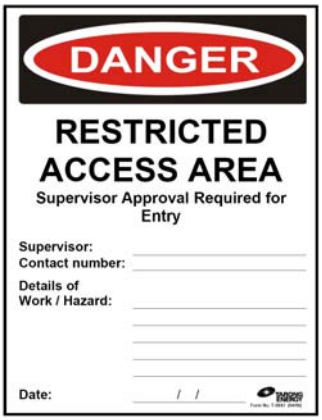
3.4.5 Requirement for lights

Where barricades are installed across roadways and will remain in place during hours of darkness, the barricade shall be fitted with flashing lights to identify the barricade / traffic obstruction.

3.5 Appropriate Signage

All barricades must be fitted with signage. The follow indicates what signage is appropriate for each type of barricade.

Type of Barricade	Appropriate Signage
Caution Barricade Tape 	
Restricted Access Barricade Tape 	
Electrical Work Barricade Tape 	
High Voltage Danger Barricade Tape 	

Solid Barricade  	

The signage must detail:

- The name of the person in charge of the barricaded area,
- The hazards that are within the barricaded area,
- The date, and
- The contact details of the person in charge of the area, if required.

3.6 Removal of Barricades.

Tapes and barricades shall be removed once they are no longer required (ie hazard controlled / work completed etc). This shall normally be done by the person who installed the tape or barricade.

Note. Outside of normal work hours where the work party involved with the barricade are not present on site, the shift operations coordinator can authorise access into a barricaded area following assessing and confirming it is safe to enter. Eg access to perform plant isolations.

3.7 Construction Work areas:

For work which is part of a construction activity including where a principal contractor is appointed, “Danger – Construction work area” signs shall be used. (Refer Attachment 11.1)

4. Responsibilities:

4.1 Manager Operations:

The Manager Operations shall ensure that this procedure is implemented and maintained throughout Tarong Energy Operations.

4.2 Coordinators & Supervisors:

Shall ensure that:

- Where barricades are installed that they comply with and are maintained in accordance with this procedure.
- Work teams have sufficient supplies of barricade tape, signs and resources for solid barricades.

4.3 Employees and Contractors:

Shall ensure that:

- They do not access a barricaded area unless the conditions detailed on the barricade sign are complied with e.g. permission has been obtained from the supervisor / person in control of the area.
- Monitor and maintain the condition of barricades in their work areas.

5. Training and Competencies:

Awareness to this procedure will be provided through the Tarong Energy Induction and as part of the Working at Height training for TEC.

5.1 Records:

Training Records –The People Services Department is responsible for managing & maintaining all training records. All hard copy training documentation shall be forwarded to the training coordinator for data entry and filing.

Note: ***Record Keeping shall be in compliance Archival of Records Gov - Proc - 07*.**

6. Statutory and Legal Considerations:

- Workplace Health and Safety Act 1995.
- Workplace Health and Safety Regulation (2008).

7. Health, Safety and Environmental Considerations:

As detailed in this procedure.

8. Definitions:

Barricade	A structure consisting of vertical and / or horizontal components (eg. Barricade mesh, tape, panels etc), or similar objects, used to create a restricted access area to prevent unauthorised access into a particular work area, and/or area where a hazard(s) may exist. It is usually a temporary measure and should have a minimum height of 900mm.
Competent person	Means a person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill,

	for the safe performance of the specific work.
Construction Work Area	An area on a TEC site where construction activity is being performed including under principal contractor appointment – as defined under Sections 14 and 184A of the Workplace Health & Safety Act 1995.
General hazard	A situation or condition where the hazard present is not deemed to be an immediate life threatening risk.
High risk hazard areas	A situation or condition where the hazard present is deemed to be an immediate life threatening risk (eg. Steam leak, fall through/over an unprotected edge etc).
Shall	Indicates that a statement is mandatory
Should	Indicates a recommendation

9. Reference Documentation:

AS1170.1 & 2	Structural Design Actions
AS1657	Fixed platforms, stairways and ladders- Design, construction & installation.
OHS-PROC-100	Safe Working with Heights
OHS-PROC-101	Elevated Work Platforms
OHS-PROC-102	Fall Injury Prevention Systems
OHS-PROC-103	Fixed Platforms
OHS-PROC-104	Unprotected Edge Risk Control
OHS-PROC-105	Scaffolding
OHS-PROC-106	Working on Roofs
OHS-PROC-107	Working on Ladders
Gov- Proc- 07	Archival of Records
T-0843	“DANGER-Restricted Access Area”- sign.
T-1735	“Caution-Proceed with caution” sign
T-1237	Unprotected Edge Risk Control Authorisation
T-1289	“DANGER – Construction Work Area” – sign.

10. Revision History:

Rev No.	Revision. Date:	Revision Description:	Author:	Approved. By:
0	31.07.2007	New Procedure	M Joy	J Judge
1	3.07.08	Included reference to Switchboard and High Voltage Testing Barricades	D. Lavender	M.Joy
2	04.11.2010	Reviewed and included caution barrier tape.	T. Young	J. Judge
	21.12.10	Minor changes were made:	T.Young	

		Stock code added to Caution Barricade Tape. Picture added of Red High Voltage Barricade Tape as this will be what will be received with any new purchase. No change of process occurred and only Store Code numbers were added to clarify information. No signatures were obtained.		

11. Attachments

11.1 Construction Work Area sign