



TARONG ENERGY CORPORATION LIMITED
OCCUPATIONAL HEALTH & SAFETY PROCEDURE FOR

UNPROTECTED EDGE RISK CONTROL
OHS-PROC-104

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1 Purpose:

The purpose of this procedure is to describe the management of unprotected edges to ensure that any creation of an unprotected edge is, managed safely. Examples of creating an unprotected edge include the removal of flooring, walkways, stairs and hand railings.

This procedure details the required provisions and authorisations that must be obtained before work commences and following the completion of work.

2 Scope:

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

3 Application of Procedure

- This procedure is to ensure that at no time is an unprotected edge created that is not adequately controlled or eliminated.
- This procedure applies in all cases where an unprotected edge is to be potentially created which would result in a fall or drop of greater than 0.5 of a metre.
- Where a potential fall or drop risk is intended to be created of less than 0.5 of a metre (e.g. Shallow drain cover, flooring directly over a duct etc) – no unprotected edge risk control authorisation is required but the area **MUST** be adequately barricaded and signed to control the risk of injury as per Barricades OHS-PROC-113.
- Where work is to occur in an area without edge protection (permanent), which is not a normal place of work (e.g. on a roof, tank etc) and a fall risk exists, the hazards associated with such work shall be managed by the JSEA in accordance with Safe Work at Heights procedure OHS- PROC-100.

4 Procedure:

4.1 Prior to removal of a protected edge:

- All other reasonable means of undertaking the job without the need for removing flooring and handrails shall be considered before commencing the job. The use of engineering controls (e.g. permanent handrails) to not create an unprotected edge shall be the preferred control.
- The provision of Emergency Response access to the area must be considered and provided, e.g. grid mesh will only be removed from one side of a conveyor or restricted area at a time. This ensures access/egress to or from the conveyor or equipment.
- All working at heights shall be evaluated and planned for with safe systems set up. Fall protection (Harness/ restraint lanyards etc) shall be worn and suitably attached by all personnel working within the immediate area surrounding the walkway penetration or unprotected edge where there is a potential to fall, refer Safe Working with Heights procedure, OHS-PROC-100.
- The possibility of dropped objects / loads and falling hot materials shall be evaluated.

- The integrity of the floor is to be checked to ensure:
 - The surrounding area would not be affected structurally by the floor being removed (eg. Interlinking panels etc).
 - Other hazards such as rust, securing devices etc are identified so as to not affect the flooring removal (e.g. manual handling, SWL/ WLL of equipment).
- The possibility of persons being affected by fumes; vapours and gases are to be considered in the JSEA/ Confined spaces permit.
- Ensure that the removal/ replacement of protected edges does not compromise the safety of personnel.
- Maintain the original design intent (e.g. floor loading) when work is complete.
- Plan the work and designate a lay down area for the sections to be removed.
- Identify the correct lifting requirements for the sections to be removed.

4.2 Steps for management of an unprotected edge:

When creation of an unprotected edge (eg. flooring or hand railing removal) has been deemed necessary the following steps shall be taken:

- An “Unprotected Edge Risk Control Authorisation” (Form T-1237) shall be obtained from the Working Party Supervisor who shall be advised of the job to be performed and method of approach.
- In accordance with OHS-PROC-108 Job Safety Analysis, a JSEA shall be performed to identify hazards associated with the job.
- The Supervisor/Tarong Energy Representative shall authorise the Unprotected Edge Risk Control Authorisation when satisfied appropriate controls are in place. This is to be done by inspecting the work site, reviewing the risk controls and checking safety procedures.
- The Unprotected Edge Risk Control Authorisation shall also be endorsed by the Safety Officer/Safety representative.
- For information relating to the “Working with Heights” refer to procedure Working with Heights OHS-PROC-100.

4.3 General Instructions:

4.3.1 Provision of Alternative Route:

An alternate means of access shall be required if the flooring and hand railing to be removed is one or more of the following:

- A principal means of evacuation in the case of an emergency;
- The only access to a substation;
- The only access to fixed emergency equipment;
- The only access to operating plant that requires regular inspection or attendance.

4.3.2 Barricading and signage of area:

- Restrict access to the work site to personnel directly involved with the work by installation of a suitable barricade with signage indicating the hazard present and the responsible supervisor.
- Barricades shall be placed to cover all possible access to the area where unprotected edges are created and also protect people from areas below (drop zone).
- Any barricade and signage installed must be appropriate for the task / hazard present in warning or preventing people from being exposed to a fall or falling object hazard and comply with Barricades OHS-PROC-113.

4.3.3 Working with Heights:

- If as part of the job, work is required at heights that expose a worker to a fall hazard then safety harnesses and restraint systems to prevent persons falling shall be used in accordance with the Working with Heights procedure OHS-PROC-100.

5 Re-instatement of protected edge:

- Reconfirm the requirements of the Unprotected Edge Risk Control Authorisation and the **JSEA**. Ensure the work party know and understand their roles and required sequence of work (i.e. floor reinstated prior to barricade removed) before starting the task.
- Where a fall risk exists, any person working inside the barricaded area shall wear a harness and lanyard system securely attached to a suitable anchor point. Where possible it should be used in a manner that prevents (i.e. total restraint system) a fall from the **unprotected edge**.
- When a section of grid mesh has been replaced on a walkway or floor it shall be immediately fixed – flooring must not be left unfixed.
- Barricading shall not be removed from any area until the Supervisor signs off the Unprotected Edge Risk Control Authorisation and ensures that the fall risk is removed/controlled.

6 On completion of the work:

- The authorisation recipient shall ensure that all actions required under the Unprotected Edge Risk Control Authorisation are complied with.
- The flooring/edge protection etc is to be replaced and secured.
- The work party shall inform the Supervisor of job completion. The Supervisor (or their delegate) shall inspect the area. When satisfied with the condition of the work area the Unprotected Edge Risk Control Authorisation shall be signed off.
- Any additional sign off (as required) of the authorisation as specified in Section 7 must also be performed (e.g. RPEQ).
- Once all parties are satisfied that the work has been completed correctly, the area has been made safe and the authorisation has been signed off, the barricade can be removed and the area returned to its normal condition.

- All barricading below the work area will be removed as soon as the job is complete.

7 Materials and Modifications:

- In most instances, the need for an Unprotected Edge Risk Control Authorisation (i.e. for the removal of floor sections, stairs or handrails) will be the result of a maintenance or modification requirement.

Restoration Work:

- If the work involves replacement to restore the section to its original state (i.e. no design or material changes), the work can proceed and be signed-off on completion by the Supervisor.

Modification Work:

- Any change of materials, structure or mountings of floor sections, stairs or handrails may only be performed if the alterations have been approved by the RPEQ.

Inspection prior to sign-off of the Unprotected Edge Risk Control Authorisation:

- Where structural modifications to existing walkways are involved, or where a different material to the original has been used, the work must be inspected and approved by RPEQ before removal of barricades.

8 Responsibilities:

8.1 Manager Operations:

Shall ensure that a system is in place for the safe management of unprotected edges.

8.2 Supervisors/Coordinators:

It is the responsibility of Supervisors/Coordinators to ensure that all personnel follow all procedures relating to Unprotected Edge Risk Control and working with heights when involved with such work and ensure that the requirements of this procedure are considered during the planning of the task.

Review the completed Unprotected Edge Risk Control Authorisations with a view to provide engineering controls to engineer out the hazard of an unprotected edge where a risk assessment deems it practical and necessary. Technical Services should be consulted if deemed necessary.

8.3 Records:

The completed authorisations will be forwarded to Records for filing in WHS/56 (TPS) or WHS/62 (WPS).

8.4 Technical Services/ Engineering

The engineering functions of the Technical Services department are responsible to:

- Ensure that where modifications are done that such modifications are approved by the relevant person (e.g. RPEQ, structural engineer etc) and comply with Australian Standards.

9 Statutory and Legal Considerations:

- Workplace Health and Safety Act 1995.
- Workplace Health and Safety Regulation (1997).

10 Health, Safety and Environmental Considerations:

Nil.

11 Definitions:

Flooring	Any section of trafficable flooring, walkway, platform, (grid mesh, checker plate, etc) steps or ladder rungs.
Drop Zone	Area below or adjacent that objects could fall into or be directed into if they strike other structures after they fall.
Hand railing-	A structure to prevent persons from falling off any platform, walkway or landing.
JSEA	Job Safety and Environmental Analysis Worksheet
Kickboard	A kickboard is a physical barrier to prevent objects from being kicked / knocked off a platform, walkway of landing.
OIC	Officer in Charge refer Corp-PTW-01
PPE	Personnel Protective Equipment
Representative	Tarong Energy person who is responsible for tasks involving the removal of flooring and/or hand railing that is being undertaken (e.g. Contracts Administrator)
RPE	Registered Professional Engineer
Shall	Indicates that a statement is mandatory
Should	Indicates a recommendation
Unprotected Edge	A drop off / fall of any height which is created by the removal/ modification to an existing structure which is in place preventing exposure to an unprotected edge. For example: removal of flooring, handrails, stairs, hatches, pit covers, manholes etc.
Walkway	A passageway that is either level or sloping from the surrounding floor level. A walkway may be a continuous structure or steps with landings.

12 Reference Documentation:

Corp-ENG-07	Inspection of cranes, hoists and mobile lifting equipment
Corp-PTW-01	Corporate Permit to Work Manual
OHS-PROC-100	Safe Working with Heights
Gov-Proc-07	Archival of Records
T-1022	Job Safety and Environmental Analysis Worksheet
T-1237	Unprotected Edge Risk Control Authorisation

13 Revision History:

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0	31.07.2007	New Procedure	M Joy	J Judge