

Definitions

Permit To Work Document Suite

30 December 2010

CSE-PTW-02



DOCUMENT CONTROL

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Version History

0.00.01	30/01/2004	First consultation draft – across sites
0.00.02	01/03/2004	Inclusion of site comments and approved for release
1.00.03	22/12/2006	Update to include OIC Control point locks
1.00.04	02/08/2007	Updated definitions as per V1.00.10 of the procedure
1.00.05	08/08/2007	Include entry and ventilation point definitions Updated definition on confined space to reflect AS 2865
2.00.00	30/12/2010	Updated format, added Person in Charge of Work (PICW)

Access

Is a process of allowing personnel access to live electrical plant or in-service mechanical plant for testing or fault-finding purposes without an isolation. Access to live plant is to be undertaken in accordance with the Electrical Safety Procedure and via the use of a PTW Issued for Access.

Airborne Contaminant

Any contaminant present in the air, which may be harmful to persons.

Alive (or Live)

Plant and apparatus that is not isolated. (eg. plant that is in service or endorsed to test, operator stand-by or under access).

Allied process

Includes cutting, grinding and gouging associated with welding.

Anchorage point

A secure point of attachment on a building or other structure to which a fall-arrest device, lanyard assembly or other line may be secured.

Note: Examples of anchorage points include:

- a sling around a steel I beam joined by a shackle or other joining component;
- a stainless steel eye-bolt set in a concrete floor or structural steel member ; and
- a plate for a travel restraint system fixed by screws to a structural roof component.

Appliance

Is a device that consumes electricity at a voltage greater than extra low voltage and in which the electricity is converted into heat, motion or another form of energy or is substantially changed in its electrical character. Although a light fitting, including its bulb or tube, is an appliance, the bulb or tube, taken alone, is not an appliance.

APTW (Application for PTW)

An electronically generated form specifying the plant item and scope of work.

Associated equipment (for an electric line)

Means something ordinarily found in association with the electric line, especially for the purpose of protecting, insulating or supporting the operation of, the electric line.

Note: examples include:

- a bracket, casing, coating, covering, duct, frame, insulator, pillar, pipe, pole, tower, or tube enclosing, surrounding or supporting a wire or conductor; or
- an air break, circuit breaker, switch, transformer or other apparatus connected to a wire or conductor.

Atmospheric monitoring

The continuous measurement of oxygen concentration or selected atmospheric contaminants over an uninterrupted duration of time.

Atmospheric testing

The testing of oxygen concentration or atmospheric contaminants, which is not continuous.

Authorised person (for an electrical part)

Means a person who:

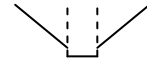
- has enough technical knowledge and experience to do work that involves contact with, or being near to, the electrical part; and
- has been approved by CS Energy to do work that involves contact with, or being near to, electrical parts.

Authorised zone

Is the area where access is restricted in accordance with schedule 2 of the Electrical Safety Regulations, due to work being done around exposed electrical parts. Persons must be authorised and competent to work in the area in proximity to exposed energized electrical parts.

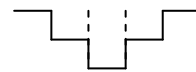
Battering

A method of cutting an excavation edge at an angle up to 45° to the horizontal.



Benching

A method of cutting an excavation edge into steps or benches that are less than 1.5m long and 1.5m high.



Commissioned installation (Gas Fuel)

A gas fuel system within an installation that has been fully pressurised and is in service.

Commissioned plant

Plant that has undertaken final testing and been accepted by the Operator/Maintainer as fit for normal operational service.

Competent person

A person who has, through a combination of training, education and experience, the current knowledge and skill enabling that person to perform correctly a specified task. This person must also meet all the requirements under the Fit for Duty Policy and complies with the relevant training schedule provided in the associated PTW procedures for the specified task undertaken.

Note: Prescriptive requirements for a person to be able to undertake a specific task may be found in relevant Australian standards, industry standards, advisory standards, industry codes of practice and other legislation as applicable.

Confined space (Ref: DR05564 Draft Australian Standard 2865:2001)

A confined space is an enclosed or partially enclosed space, which is not intended or designed primarily for human occupancy within which there is a risk of:

- an oxygen concentration outside the safe oxygen range;
- a concentration of airborne contaminant which may cause impairment, loss of consciousness or asphyxiation'
- a concentration of flammable airborne contaminant which may cause injury from fire or explosion; or
- engulfment in a stored free flowing solid or a rising level of liquid, which may cause suffocation or drowning; or
- Restricted means of entry and exit.

Notes:

1. Enclosed or partially enclosed spaces that may meet the definition criteria for a confined space are:
 - a. storage tanks, tank cars, process vessels, boilers, pressure vessels, silos and other tank like compartments;
 - b. pipes, sewers, shafts, degreaser pits, ducts and similar structures;
2. Some enclosed or partially enclosed spaces have atmospheric contaminants that are harmful to persons but are designed for persons to occupy, for example, abrasive blasting or spray-painting booths.
3. The standard does not apply to underground mining, tunnelling construction, excavation work (trenching), abrasive blasting or spray-painting. In such cases other safety systems of work, for example legislation or codes of practice are applicable.
4. A rising level of a liquid in an enclosed or partially enclosed space may cause engulfment through the inability for a person to readily exit the space.
5. The Standard considers engulfment in free flowing solids as the immersion or envelopment of a person in a free flowing solid that is stored within the confined space.
6. A confined space may have, or may not have, restricted means of entry and exit. Appropriately sized entry and exit points are of importance for the safe entry and exit or retrieval of a person(s) in an emergency

Examples of confined spaces may include:

- storage tanks, process vessels, boilers, pressure vessels, silos and other tank-like compartments;
- open-topped spaces such as pits or degreasers; or
- pipes, sewers, shafts, ducts and similar structures.

Confined Space Coordinator

A person, nominated by the Overhaul/Outage Manager, to coordinate the work activities within a defined area that contains multiple confined spaces. Their primary responsibility is to ensure that simultaneous or residual work activities being undertaken in a confined space has minimal potential to impact upon the working conditions of another confined space. Each confined space within that defined area under the Confined Space Coordinator's control will still have an OIC appointed who will hold the responsibility for their work party and work being undertaken inside that confined space.

Confined space entry sign on/off sheet

A sheet utilised by the OIC control access to the confined space.

Confined Space Opening

An opening for entry or exit from a confined space shall be of adequate size to permit rescue of all persons who may enter the confined space. The opening may have an access cover and/or confined space sign to prevent unauthorised or unintentional entry to the confined space.

Control Point

A nominated entry point where the PTW, JSEA, Confined space sign on/sign off and if required Stand-by person are located. (Note: PTW and JSEA may be located at an alternate central location (e.g. boiler furnace))

Danger tag



A danger notice in the form of a tag that:

- is fixed to a red isolation lock at isolation points;

- provides warning and information to persons involved in plant isolation, access, inspection, maintenance and repair;
- identifies a PTW number and step number corresponding to the associated PTW;
- signifies that the isolation point is not to be interfered with or operated under any circumstances; and
- must only be hung or removed by a PTWO.

Dangerous electrical event

Is any of the following:

- the coming into existence of circumstances in which a person is not electrically safe, if:
 - the circumstances involve high voltage electrical equipment; and
 - despite the coming into existence of the circumstances, the person does not receive a shock or injury;
- the coming into existence of the following circumstances:
 - if a person had been at a particular place at a particular time, the person would not have been electrically safe;
 - the person would not have been safe because of circumstances involving high voltage electrical equipment;
 - an event that involves electrical equipment and in which significant property damage is caused directly by electricity or originates from electricity;
 - the performance of electrical work by a person not authorised under an electrical work licence to perform the work;
 - the performance of electrical work by a person if, as a result of the performance of the work, a person or property is not electrically safe;
 - the discovery by a licensed electrical worker of electrical equipment that has not been marked as required under the Electrical Safety Act 2002.

De-commissioned plant

Plant that has been permanently removed from service and had all energy sources removed.

Designated area

A clearly identified area for which a risk assessment has been undertaken and approval has been received from the PTW Administrator stating the area is safe to carry out normal hot work processes.

Digging

For the scope of this procedure, any activity involving the use of hand tools or the insertion of objects into the ground to a depth exceeding 100mm.

Direct contact

Means:

- a person with an electrical part if:
- the person is touching the electrical part with the person's bare hands or another bare part of the person's body, or
- the person is touching a conductive object with a bare part of the person's body and the conductive object is touching the electrical part, or
- an article of clothing worn by the person is touching the electrical part, or

- an article of clothing worn by the person is touching a conductive object and the conductive object is touching the electrical part.
- operating plant with an electrical part if:
- any part of the operating plant is touching the electrical part, or
- anything the operating plant is handling is touching the electrical part.
- a vehicle with an electrical part if:
- any part of the vehicle is touching the electrical part, or
- anything being carried or otherwise handled by the vehicle is touching the electrical part.

DNOB - Do Not Operate Board



A safety sign bearing the words 'Do Not Operate' signifying:

- that the HVIA system is currently in use at a generation/transmission interface,
- that lines or apparatus are in the existing state for the protection of personnel; and
- that operation of the lines or apparatus may be hazardous for a switching operator.

Dual electrical feed

A piece of equipment is said to have a Dual Electrical Feed when one (1) item of plant can be energised from two (2) separate sources. (eg. a motor fed from two (2) switchboards with an automatic changeover device, or a switchboard fed from two (2) separate transformers).

Edge protection

Means a barrier to prevent a person falling, which is erected along the edge of a building, structure, a penetration in a surface, or elevated platform/access way.

Electric line

Is a wire or conductor or associated equipment used for transmitting, transforming, or supplying electricity at a voltage greater than extra low voltage.

Note: an electrical line does not include a wire or conductor directly used in converting electricity into another form of energy, or a wire conductor within the internal structure of a building

Electric line work

Is electrical work associated with an electric line.

Electrical equipment

Is any apparatus, appliance, cable, conductor, fitting, insulator, material, meter or wire:

- used for controlling, generating, supplying, transforming or transmitting electricity at a voltage greater than extra low voltage, or
- operated by electricity at a voltage greater than extra low voltage, or
- that is, or that forms part of, a cathodic protection system.

Note: electrical equipment does not include any apparatus, appliance, cable, conductor, fitting, insulator, material, meter or wire forming part of a vehicle if it forms part of a unit of the vehicle that provides propulsion for the vehicle, or its source of electricity is a unit of the vehicle that provides propulsion for the vehicle.

Electrical equipment work

Is electrical work other than electrical installation work or electric line work.

Electrical installation

Is a group of items of electrical equipment, if:

- all the items are permanently electrically connected together, and
- the items do not include items that are works of an electricity entity, and
- electricity can be supplied to the group from the works of an electricity entity or from a generating source.

Note: an item of “electrical equipment” can be part of more than 1 electrical installation and for item one above:

- an item of electrical equipment connected to electricity by a plug and socket outlet is not permanently electrically connected, and
- connection achieved through using works of an electricity entity must not be taken into consideration for deciding whether items of electrical equipment are electrically connected.

Electrical installation work

Is electrical work associated with an electrical installation, but does not include testing, repairing or maintaining electrical equipment included in the electrical installation, or electric line work associated with the electrical installation.

Electrical isolation

An isolation is deemed to be initiated if any energisation, or switching surge will not cross the isolation point and the isolation point is fitted with a locking device and accompanying danger tag. Isolation of remote controls via software logic alone, is not acceptable.

Electrical part

Means an exposed part, or an overhead insulated electric line.

Electrical work

Is the manufacturing, constructing, installing, testing, maintaining, repairing, altering, removing or replacing of electrical equipment.

Note: the following are not ‘electrical work’:

- installing or removing electrical equipment by connecting it to electricity, or disconnecting it from electricity, by a plug and socket outlet,
- repairing or replacing non-electrical components of electrical equipment,
- replacing a component forming part of electrical equipment if the electrical equipment has been designed so that the component is readily and safely able to be replaced by a person without electrical knowledge or skill,
- assembling, making, modifying or repairing electrical equipment in a workplace registered under the Workplace Health and Safety Act 1995, if that is the principal manufacturing process at the workplace, and arrangements are in place, and are detailed in written for, for ensuring that:
 - the work is done safely and competently, and
 - the equipment is tested to ensure compliance with the relevant standards,
 - building, under the supervision of an electricity entity, an overhead electric line on structures that do not already carry an energised overhead electric line,

- building or repairing ducts, conduits, troughs (channels) where electrical wiring will be or is installed, if:
- the channels are not intended to be earthed, and
- wiring installed in the channels is not energised, and
- the work is done under the supervision of a person licensed to perform electrical installation work,
- laying, cutting or sealing underground cables that are part of the works of an electricity entity before the initial connections of the cables to an electricity source,
- recovering underground cables that are part of the works of an electricity entity after disconnection from an electricity source,
- altering, repairing, maintaining or recovering an overhead electric line that is part of the works of an electricity entity, if the work is performed under the entity's supervision and:
- if the line is not on supports supporting another electric line – the line has been isolated from an electricity source so that the closure of a switch cannot energise the section of the line where work is being done, or
- if the line is on supports supporting another electric line – both lines have been isolated from an electricity source so that the closure of a switch cannot energise the section of the line where the work is being done or an adjacent section of the other line,
- work performed by a person on electrical equipment if:
- the electrical equipment is not energised, and
- the work is prescribed under a regulation for this paragraph, and
- it is necessary for the person to perform the work to meet the eligibility requirements for an electrical work licence.

Elevating work platform (EWP)

A telescopic device, scissor device, or articulated device, or any combination thereof used to position personnel, equipment and materials at work locations above or below the base support surface.

Entry into a confined space

When a person's head, ie the breathing zone, or upper body is within the boundary of the confined space.

Excavation

For the scope of this procedure, a hole in the ground/earth or face of the ground/earth, greater than 100mm deep after material is removed or moved.

Exclusion zone

For a person for an electrical part, or for operating plant or a vehicle for an electrical part, means the distance from the part stated for the person, plant or vehicle.

Extra low voltage

Means voltage of 50V or less AC RMS, or 120V or less ripple-free DC.

Fall arrest harness system

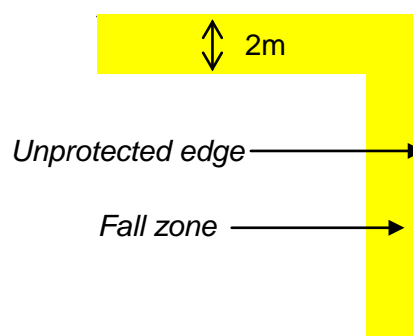
Means a system that:

- a is designed to arrest a fall of a person using it and prevent or minimise the risk of injury to the person as the fall is arrested, and
- b consists of a harness attached to:

- i a device to absorb the energy of the falling person attached to a lanyard that is attached to a static line or anchorage point, or
- ii a line that:
 - a has a device that automatically locks the line, and absorbs the energy of the falling person, and
 - b is attached to a static line or anchorage point, or
- iii a lanyard that:
 - a has a device that travels along a line or rail, automatically locks onto the line or rail, and absorbs the energy of the falling person, and
 - b is attached to a static line or anchorage point.

Fall zone

An area adjacent to an unprotected edge (ie rooftop edge, platform without a handrail, etc) from which a person can fall a distance of 2 metres or more. For flat roofs or surfaces, this area is within 2 metres of the unprotected edge.



Note: No person is to enter a fall zone unless appropriate personal fall protection is used. A greater distance from the edge may need to be considered in determining an appropriate fall zone, due to the slope of the surface.

Flammable airborne contaminant

Any dust, fume, mist, vapour or gas present in the air at concentrations that can propagate a flame on contact with an ignition source.

Flammable range

The range of flammable airborne containment (percentage by volume) in air in which an explosion can occur upon ignition. Expressed by lower explosive limit (LEL) and upper explosive limit (UEL)

Geo-technical engineer

A person who is a registered professional engineer under the Professional Engineers Act 1988, and who holds a professional engineering qualification relevant to geo-technology (including a civil engineer).

Hazard

A source of potential harm to personnel, plant or the environment.

Hazardous energy source

Source of energy that may be hazardous to people, plant or the environment. This includes:

- electricity,
- plant or materials under the influence of gravity,
- moving plant or materials,
- atmospheres and fluids under pressure,
- materials that may be particularly hazardous or at an extreme temperature,
- systems that store energy, and

- devices that may cause a build up of energy or material if not controlled in a certain way.

Hazard level

The level to which pressure equipment has the potential to cause injury or illness or damage to property or environment. Five specific hazard levels exist (A to E) as defined within AS 4343.

High voltage

Means voltage greater than low voltage.

Hot work

Any welding, thermal, friction or oxygen cutting, grinding, heating and other fire-producing or spark-producing tasks that may increase the risk of fire or explosion.

Hot work checklist

A document required to be filled out as part of the PTW process where hot work is undertaken outside of maintenance workshops or designated areas. Refer also to *Attachment 1*.

HVIA - High Voltage Isolation and Access Procedures

Procedures intended for use by the Queensland Electricity Supply Corporation for work on transmission and distribution systems.

Industrial radiation work

The use of a radioactive isotope by a contractor to check the quality of a weld or other metal components (also known as non-destructive testing).

Instructed person

for an electrical part, means a person who is acting under the supervision of an authorised person for the electrical part.

Ionising radiation

Means electromagnetic or particulate radiation capable of producing ions, but does not include electromagnetic radiation of a wavelength greater than 100 nanometers.

Isolation

The process of separating all sources of energy from an item of plant.

Isolation guide (may be know as Standard Isolation Sheet)

An isolation sheet that has been previously prepared and is stored ready for easy access. These are to be approved by a nominated SPTWO.

Isolation point

A location or control device that enables a source of energy to be disconnected or physically restricted.

Isolation sheet

A form (either manually or electronically prepared) specifying the plant to be isolated, numbers of locks and tags required to affect the isolation, as well as a detailed list of instructions that must be followed during the isolation process.

Isolation storage rack

- is located at the Permit Control Room;
- is used to store and secure the key to a series of isolation locks hung during an isolation;
- is used to store an isolation sheet once isolations have been made and locked out;
- is used to store left over isolation locks not used as part of a series of locks; and

- is capable of having locks attached to it to restrict access to the isolation lock key/s.

JSEA

A Job Safety Environment Analysis used to assess the safety and environmental risks associated with a work activity. It identifies hazards, details controls and assesses the level of risk associated with a particular work activity.

Live work

Means electrical work performed in circumstances in which some or all of the electrical equipment the subject of the electrical work is energised.

Low voltage

Means voltage greater than extra low voltage, but not more than 1000V AC RMS or 1500V ripple-free DC.

Lower Explosion Limit (LEL)

In relation to a flammable contaminant, the concentration of the contaminant in air below which the propagation of a flame does not occur in contact with an ignition source.

Non-ionising radiation

Electromagnetic radiation of a wavelength greater than 100 nanometres; or sonic radiation.

Nominated Entry point

A confined space opening nominated by the OIC as the point in which personnel will enter and exit the confined space. (Note: there may be more than one nominated entry point for large confined spaces (e.g. boiler furnace)). The nominated confined space entry point must be of adequate size to permit rescue of all personnel that enter the confined space; must be clear of any obstructions; and where necessary be provided with scaffold platform, stairs or ladders to allow safe and convenient access for work and rescue purposes.

Nominated Ventilation point

A confined space opening not used for entry and exit but open for purging or ventilation and required to stay open for the duration of the PTW.

OIC - Officer in Charge of Work

The OIC is an authorised person who has successfully completed all appropriate OIC training and is deemed competent. They coordinate the work and where applicable, a workgroup which is operating within a specific PTW. The OIC carries the responsibility for the PTW once issued and the OIC shall surrender the PTW on completion of the job.

OIC Control Point Lock



A locking that is applied where a door, hatch or covering is opened for ventilation or entry purposes for a confined space. An OIC Control Point Lock is not an isolation point. It is locked open to ensure that it will not be closed unintentionally and affect the atmosphere of the confined space. The OIC Control Point lock is white in colour and is applied with warning - control point tag to identify it should not be touched. It is the responsibility of the OIC for the work being undertaken in the confined space to apply the white locks and warning - control point tags. There may be multiple OIC Control Points for a single confined space.

Operator earths

Operator Earths are earths capable of withstanding prospective fault currents. They are placed under the direction of an Isolating or Switching Sheet by a PTWO, with an isolation lock and Danger

Tag/DNOB attached. They may be a designated earth switch or a portable earthing device connected to a permanent earthing point.

Overhead platform

A platform designed to provide overhead protection against falling objects for personnel working or accessing areas below. An overhead platform may form part of a scaffold or consist of decking positioned on existing floor grates.

PCR

Plant Control Room.

Personal alarm dosimeter

Means a device that produces a visual or audible signal when any radiation dose received by the device is more than a certain dose level, or any radiation dose received by the device during a particular period is more than a certain dose level.

Person in Charge of Work (PICW)

A Person in Charge of Work (PICW) is an authorised person who has successfully completed the required training and is authorised as competent to coordinate and manage work under a PTW. This role is responsible for managing the work party signed onto the PTW to complete work within the isolation boundary. The PICW is to liaise with the Officer in Charge of the PTW as required.

Plant

- installations, equipment and pressure vessels directly involved in electricity generation,
- fixed installations, equipment and machinery,
- a component of plant, and
- a fitting, connection, accessory or adjunct to plant.

(This includes any plant hard-wired, permanently piped or physically connected to an energy source.)

Prescribed information

In relation to an underground service, means the information about the service necessary to safely do excavation work at or near the service, including:

- the location of the service,
- the type of the service,
- the depth of the service,
- for an electrical service – whether the service is live or not, and
- the restrictions to be followed in doing the work.

PTW (Permit to Work)

A PTW is an authorisation, on the prescribed form, giving approval for work on specified equipment.

PTW administrator

The PTWA is a designated person at each Power Station responsible for the administration of the PTW System.

PTW board

A lockable board that:

- is used to house all isolation and PTW documentation once the PTW is issued,
- is used to secure the key(s) of a PTWO lock once isolations have been made and locked out, and

- is capable of having an OIC lock and personal locks attached to it to secure access to the PTWO key(s).

PTWO – PTW Officer

The PTWO is an authorised person who has successfully completed all appropriate PTW training and is deemed competent to isolate the plant and issue a PTW allowing work to safely proceed, then on return close the PTW and restore the plant.

Purging

Purging is to be undertaken in an atmosphere within a Confined Space is inadequate due to the presence of contaminants or flammable gases. Purging is undertaken via the introduction of a purging agent into the space, which displaces the contaminants and ensures a suitable atmosphere for personnel entry. Purging is not to be undertaken via the introduction of pure oxygen gas or of a gas mixture with oxygen content of greater than 21%.

Radiation

A gamma emitting isotope from a radiation gauge source, usually a small quantity of either Cobalt-60 or Caesium-137. These isotopes are used typically in hopper level detection gauges and conveyor belt weighers.

Radiation safety and protection plan

For a radiation practice, means a radiation safety and protection plan approved by the chief executive for the practice.

Radiation safety officer

A person who is appointed and has undertaken training in the safety aspects of industrial radiation.

Radiation source

Means a radioactive substance or a radiation apparatus.

Radiation warning sign

Sign attached to a container or apparatus, means labels adhering to, or symbols embedded in, the container or apparatus indicating that the container or apparatus poses a radiation hazard.

Radioactive substance

Any substance which consists or contains more than the prescribed concentration of any radioactive chemical, element or isotope, whether natural or artificial.

Rehearsal – Emergency Response Plan

A process in accordance with an Emergency Response Plan whereby a verbal and/or physical ‘run-through’ (dependent on risk) of a response and retrieval of a person/s inside a confined space is undertaken. *A verbal rehearsal of the response is the **minimum** mandatory requirement when an Emergency Response Plan is developed.*

Safe Oxygen range

A minimum oxygen concentration in the atmosphere of 19.5 percent by volume under normal atmospheric pressure and a maximum oxygen concentration in the atmosphere of 23.5 percent by volume under normal atmospheric pressure. At pressure significantly higher or lower than the normal atmospheric pressure, expert guidance should be sought.

Safety observer (electrical work)

Means a person:

- who is competent to help with the electrical work,
- who is competent to rescue the person performing the electrical work and to provide resuscitation, and
- whose competency in relation to resuscitation has been assessed in the last 6 months.

Serious electrical incident

Is an incident involving electrical equipment if, in the incident:

- a person is killed by electricity, or
- a person receives a shock or injury from electricity, and is treated for the shock or injury by or under the supervision of a doctor, or
- a person receives a shock or injury from electricity at high voltage, whether or not the person is treated for the shock or injury by or under the supervision of a doctor.

Shall

Indicates that a statement is mandatory.

Should

Indicates a recommendation

Shoring

A system of temporary supports and sheeting material used to maintain the stability of the sides of an excavation.

SPTWO – Senior PTW Officer

A SPTWO coordinates the day to day requirements of the PTW System.

Stand-by person (confined space)

A competent person assigned to remain on the outside of, and in close proximity to, the confined space and capable of:

- being in continuous communication with and, if practical, to observe those inside,
- where necessary, initiate emergency response procedures, and
- operate and monitor equipment used to ensure safety during entry and work in the confined space.

Static line (also known as a horizontal lifeline system)

Means a horizontal or substantially horizontal flexible line, to which a lanyard may be attached and which is designed to arrest a free fall. It is supported by at least 2 anchorage points located so that the angle between the horizontal and an imaginary straight line between any anchorage point and the other or nearest anchorage point is:

- if the manufacturer of the flexible line has specified the size of the angle – not more than the size specified, or
- if the manufacturer has not specified the size of the angle – not more than 5°.

Supervise (electrical work)

Means technical supervision of electrical work to ensure the requested scope is completed.

Suspension trauma

A condition (ie. following a fall), whereby a person suspended in a harness in a substantially upright position may experience blood pooling in the legs. Depending on the susceptibility of the individual, this

may lead to loss of consciousness, renal failure and eventually death. The effects of suspension trauma may be experienced by some individuals in just a few minutes.

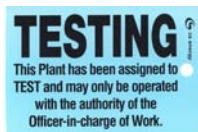
Switching operator

A person authorised to carry out electrical field switching.

Switching sheet

A document that has a unique identifying number and has been checked and authorised, listing electrical switching operations in a step-by-step process.

Test tag



A notice in the form of a blue tag that:

- is fixed to control point/s for running a test or introducing a hazardous energy source;
- provides warning and information to persons involved in plant isolation, access, inspection, maintenance and repair;
- identifies a step number corresponding to the associated PTW issued for Test;
- signifies that the control point is not to be interfered with or operated under any circumstances unless authorisation is given by the OIC;
- must only be hung or removed by a PTWO.

Transmission control centre

A location where a defined range of interconnected transmission system (275/132/110/66 kV) operational switching is planned, coordinated and supervised, either continuously or during nominated periods.

Travel restraint system

Means a system that:

- consists of a harness or belt, attached to one or more lanyards, each of which is attached to a static line or anchorage point, and
- is designed to restrict the travelling range of a person wearing the harness or belt so that the person can not get into a position where the person could fall off an edge of a surface or through a surface.

Trench

An excavation where the maximum depth is greater than the minimum width.

Trained Rescue Person

A person who is trained and competent in the use of specific rescue equipment; is familiar with CS Energy requirements and procedures; and understands the critical attributes of confined spaces. Trained rescue personnel shall be aware and/or provide input into the Emergency Response Plan for each particular job they are assigned to.

Underground service

A cable, pipe or other thing laid or installed underground for the transmission, transportation or storage of electricity or a substance.

Unprotected edge

Include roofs, landings, floor levels, walkways or platforms, which do not have a form of edge protection (ie handrail, guardrail, parapet, barricade, etc) to prevent people and/or objects from falling a distance of 2 metres or more.

Untrained person (electrical part)

Means a person who is not an authorised person or an instructed person for the electrical part.

Ventilation

Using specified equipment to generate airflow inside a confined space to create a contaminant free atmosphere that is within the safe range of oxygen to conduct tasks inside safely. Ventilation is used when the purging process cannot adequately maintain a suitable atmosphere throughout the entire duration of entry. Also ventilation must be used when the work activities to be undertaken within the space, it is identified that contaminants will be given off that will compromise the atmospheric condition within the space.

Warning – Control Point Tag

A tag that is applied with the control point lock (white) that provides advice not to touch the lock and tag, as it is locking open a control point for confined space work.

WCD

Work clearance document that provides the identification and operations to be performed in carrying out plant isolation. (also commonly known as an isolation sheet)

Work at heights

Includes any work where there is the potential for serious injury or damage associated with falling persons or objects. Work at heights typically includes work on plant, rooftops, scaffolding, work platforms, access ways, ladders, out of EWPs, etc. The following situations are recognised by CS Energy as 'work at heights':

- working at a height where a person could fall 2m or more; or
- working at a height where a person could fall less than 2m where it is likely that a serious injury will occur as a result of a fall; or
- working within a fall zone.

Work party

All persons who perform specific work activities as coordinated by an OIC.

Work party status sign on/off sheet

A sheet utilised by the OIC to both control access to the work area and to assist with the transfer of information regarding the PTW to the work party.

Working earths

Earths placed at the work site under the coordination of an OIC to limit the rise in potential.

Works (electrical entity)

Means the electrical equipment, and electric line associated equipment, controlled or operated by the entity to generate, transform, transmit or supply electricity.