



Bangladesh Power Development Board

**INTEGRATED MANAGEMENT SYSTEM
(BASED ON ISO 9001:2015, ISO 14001:2015 & ISO
45001:2018 STANDARDS)**

ENCLOSED SPACE



INTEGRATED MANAGEMENT SYSTEM

Document No.:
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1 Purpose

This purpose of this procedure is to outline the requirements and method/s for the identification, classification and control of work in any confined space. Entering into a confined space to perform work should only be done if it is impossible to effectively complete the work from outside of the space. It is the responsibility of each employee to follow the rules and guidelines in this program.

2 Scope

These procedures shall be applied to all sites of Bangladesh Power Development Board (BPDB) and contractors' employees to protect them from potential hazards that may be encountered in entering and working in confined spaces.

A "permit-required" confined space is one that meets the definition of a confined space and has one or more of these characteristics:

- Contains or has the potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing the entrant.
- Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section, and/or contains any other recognised serious safety or health hazards. These shall include but are not limited to:
 - Process vessels i.e. separators, pressure vessels
 - Storage tanks
 - Compressor enclosures
 - Heaters and boilers
 - Flare and vents systems
 - Cellars and pits
 - Culverts
 - Any underground tank
 - Chemical vessels

This procedure must be used with the Enclosed Space Entry Checklist. For each entry, there has to be checklist used. If the there is an interruption during the work, a fresh checklist and fresh permit needs to be obtained.

3 Terms and Definition

Atmospheric Monitoring - The continuous measurement of oxygen concentration or airborne contaminants over an uninterrupted period of time.

Atmospheric Testing - The measurement of oxygen concentration or airborne contaminants that is not continuous.

Atmospheric Testing Officer - A person trained to carry out atmospheric monitoring and/or testing for Confined Space Entry Permits.

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Confined Space - Is an enclosed or partially enclosed space that is not intended or designed primarily for human occupancy, within which there is a risk of one or more of the following:

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

Contaminant - Any dust, fume, mist, vapor, biological matter, gas or other substance, in liquid or solid form, the presence of which may be harmful to persons.

Competent Person - In relation to the doing of anything, means a person who has acquired, through training, qualification or experience a combination of those things, the knowledge and skills required to do that thing competently.

Entry (to a confined space) - When a person's head or upper body is within the boundary of the confined space.

Flammable Range - The range of flammable airborne containment (percentage by volume) in air at which an explosion can occur upon ignition.

Expressed as:

Lower Exclusive Limit (LEL) – The concentration of a flammable contaminant in air below which the propagation of a flame does not occur on contact with an ignition source.

Upper Explosive Limit (UEL) – The concentration of a flammable contaminant in air above which the propagation of a flame does not occur on contact with an ignition source.

Permit Holder - A person involved in the task who accepts the permit from the permit authoriser and ensures all details on the permit are implemented.

Permit Authoriser - A person appointed by the Operation Manager to authorise work in confined spaces and issue associated permits.

Stand-by Person - 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, observing those inside. In addition, where necessary, the competent person may operate and monitor equipment for the safety of personnel in the confined space and initiate emergency response

Time-weighted average (TWA) - This is the average airborne concentration of a particular substance when calculated over a normal eight-hour day workday, for a five-day working week.

Abbreviations

BPDB – Bangladesh Power Development Board

LEL - Lower Explosive Limit

TWA - Time-weighted average

UEL - Upper Explosive Limit

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PWT – Permit to work

HSE – Health, Safety and Environment

AIHA - American Industrial Hygiene Association

4 Roles and Responsibilities

HSE Engineer

Responsible for ensuring that HSE Procedures and Risk Assessments are conducted and are adhered to in the area.

Ops/Maintenance Managers, and Supervisors

Personnel under their control are aware of, understand and comply with the requirements of this procedure.

PTW Performing Authority

Carry out 'toolbox' talks prior to works being carried out. Oversee safety of personnel and work within 'confined space'. Ensuring strict adherence to all Safety Procedures, Job Safety Plan, Risk Assessments and Work Instructions. Checking condition of work site on completion of all works.

Employee (Entrants)

Don't enter confined space without a valid confined space permit. Don't enter confined space in absence of Safety Attendant. Discuss potential hazards with the supervisor before work in the confined space is initiated. Immediately evacuate the space at the first indication that something is wrong or when ordered to by the Safety Attendant.

Safety Attendant/Supervisor

Never leave the confined space unless duty is handed over to another attendant. Maintain continuous communication with the entrants. Order entrants to evacuate the space immediately when conditions allowed for in the permit are exceeded or entrants exhibit behavioural or physical effects of exposure. There is a situation outside of the space that could affect entrants. Know all emergency numbers in case of emergency and summon rescue personnel in an emergency situation. Keep unauthorized personnel away from the confined space.

Contractors Employee

When contractors and their employees are assigned to perform work in a confined space, plant personnel shall:

- Inform the contractor that the work place contains "confined spaces" and that confined space entry is allowed only through compliance with this program.
- Apprise the contractor of the hazards identified and personnel experience with the space that qualify it as a confined space.

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- Co-ordinate entry and monitoring of confined spaces with the contractor, when both plant and contractor personnel will be working in or near the same place.

At the conclusion of confined space operations, debrief the contractor regarding the confined space program, and any hazards confronted or created during confined space entry.

5 Confined Space Entry Procedure

5.1 Preparation for Confined Space Entry

A person shall not enter a Confined Space unless;

- a Confined Space Mechanical Permit –to-Work has been issued.
- the person/s requiring access to the confined space are understand the Confined Space Risk Assessment, conduct a risk assessment in accordance with the Hazard Identification, risk assessment and determining control procedure and read and understand the Emergency Response Procedures.
- The person is appropriately trained to make safe entry into the enclosed space
- they have been approved by the Permit Holder to enter the Confined Space who has given consideration to the physiological and psychological demands of the work.
- the person signs onto the Confined Space Entry Permit and on the Entry/Exit log.

Note: Emergency response personnel will enter a Confined Space under emergency response protocols only.

5.1.1 Potential Hazards Associated with Confined Space Entry

Potential hazards associated with confined space entry are recognised. These hazards can be any or all of the following:

- Oxygen deficiency or enrichment
- Flammability (fire and / or explosion)
- Residual liquids, or solids and associated toxic or other noxious gases
- Chemical hazards
- Physical hazards, e.g., engulfment by substance
- Number of personnel working within the confined space
- Restricted entry / exit
- Narcotic and anaesthetic effect of hydrocarbon gas and vapours

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5.1.2 Planning and Risk Assessment

The first priority is to consider if the work in the confined space can be limited or avoided. Alternatives may be:

- Residues may be removed from the outside using water jetting or in place cleaning systems.
- In some cases, it may be possible to see inside without entering by using a boroscope.
- Use of non-invasive inspection techniques

If the work is to be carried out in a confined space, a risk assessment shall be completed covering all activities that will be carried out both inside and outside of the space.

Personnel selected for confined space entry shall have the correct level of competence, experience and knowledge as indicated by the risk assessment. It will be necessary to include Vendors / 3rd parties or HSE professionals in this task.

The risk assessment will consider but is not limited to:

- Previous contents of the confined space
- Internal temperature and humidity of confined space
- Ingress of substances
- Oxygen deficiency or oxygen enrichment
- Residues
- Contamination
- Physical dimensions including internal structures or obstacles
- Nature of any work itself, including concurrent activities.
- The maximum number of personnel required to work in the confined space

The outcome of the risk assessment process shall be a Job Safety Plan approved by the Responsible Supervisor, who shall determine what mitigation must be put in place based on the Risk Analysis.

Where the risk assessment indicates that properly trained individuals can work for periods without supervision, it should be ensured that they are competent to follow the established safe system of work and have been provided with adequate information and instruction about the work to be done.

The Permit Applicant shall prepare a rescue plan as part of the Risk Assessment Process suitable for the agreed maximum number of personnel and covering each entry. This document should be reviewed and approved by the Responsible Supervisor. Some examples of possible inclusions to the rescue plan are:

- Number of personnel required to provide effective rescue.
- The equipment required for immediate use
- Contingency plans for loss of communication
- Safest route of access and egress with respect to casualty handling

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- Removal of unnecessary obstacles, which will hinder rescue operations

NOTE: These issues may limit number of people in confined space

The Permit Applicant must appoint a trained rescue team before work begins. For efficient functioning, a rescue team must consist of at least two persons. The Permit Applicant must be sure that the designated rescue team can be deployed quickly in an emergency and that they will be able to function effectively. If assistance is required this shall be provided by the Area Fire Service.

The rescue team must be equipped with suitable personal protective equipment to enable them to function efficiently.

Rescue plans covering the maximum permitted number of personnel will be agreed and practiced before any entry takes place. If it is not possible or practicable to perform training exercises before entry, it is the Permit Applicant responsibility to ensure all parties with responsibilities under this plan are competent in their roles.

Entry into a confined space shall be controlled by a PTW.

Personnel required to work safely in confined spaces must have had adequate training and experience in the particular work involved. Training standards must be appropriate to the task, and to the individual's roles and responsibilities, so that work can be carried out.

In order to achieve the above the following conditions require being satisfied and / or detailed in the Job Safety Plan prior to entry into a confined space:

- All entries into a confined space shall be controlled by the Mechanical Permit-to-Work system
- When entry is required, the confined space shall be physically isolated from all sources of hazardous substances, and from all sources of energy or motive power
- Hazardous substances contained within the confined space shall be displaced, and the space suitably cooled and ventilated
- The confined space shall be tested for the presence of hazardous substances and for acceptable oxygen content. If conditions for safe entry cannot be achieved or guaranteed, additional precautions to be applied, e.g. the use of breathing apparatus
- Provision of personal protective clothing and equipment (personal gas detectors if required), access and egress, standby personnel, and rescue plans
- When a person is in a confined space a standby person shall be in attendance at all times and the responsible supervisor shall ensure that this person is authorised and fully briefed on the activity to be undertaken
- Additional hazards, including concurrent activities in the vicinity of, or within, the confined space is considered

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- When entry to a confined space is required using breathing apparatus, only those persons trained and deemed competent in the use of the breathing apparatus shall be allowed to enter the confined space
- All personnel involved in the confined space entry shall made aware of the hazards

5.1.3 Working Atmosphere

Gas testing of confined spaces shall only be carried out by an Authorised Gas Tester and shall be as specified on the PTW and recorded on the Confined Space Entry Certificate and the Additional Gas Test Record form (if required).

5.1.3.1 Oxygen Atmospheres

Confined spaces may only be entered when the atmosphere inside has been certified as having a safe oxygen (between 20%-21%) content as indicated by approved apparatus available at site.

WARNING: If the oxygen content is less than 20% the vessel MUST not be entered.

Potential Effects of Oxygen Deficient Atmosphere	
Oxygen Content	Effects and Symptoms
19.50%	Minimum Permissible Level
15 - 19%	Decreased Ability to work strenuously. Impaired coordination and possible coronary, pulmonary, or Circulatory problems
12 - 14%	Respiration and pulse increase in exertion. Impaired, coordination, perception and judgment.
10 - 12%	Respiration further increases. Poor judgment, blue lips
8 - 10%	Mental failure, fainting, nausea, unconsciousness
6 - 8%	6 minutes - 50% fatal 8 minutes - 100% fatal
4 - 6%.	Coma in 40 seconds, death

5.1.3.2 Flammable Atmospheres

Entry into confined spaces where there is any possibility of flammable vapours, gas testing with an approved explosive meter shall be carried out and recorded. This meter must be capable of measuring hydrocarbons in an inert atmosphere if the confined space has been subjected to gas freeing using nitrogen.

The frequency of subsequent testing shall be stipulated on the PTW. If a reading greater than 0% is indicated the Responsible Person or his delegate must be notified and any required

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restrictions or precautions to be taken shall be entered on the "Confined Space Entry Certificates".

Flammable process hydrocarbon vapours are also hazardous due to their potential narcotic / anaesthetic effects, and can result in irrational behaviour, loss of consciousness, or even death. Hazardous concentrations can be related to flammability limits. Continuous ventilation shall be established within these spaces where possible.

5.1.3.3 Toxic Atmospheres

Toxic substances in a confined space can be caused by four major sources:

- The product(s) stored in the space- This includes not only the product that has been stored there, but also the decomposition of organic matter, which produces methane, carbon monoxide, carbon dioxide, and hydrogen sulphide (decomposition of organic matter may also cause an oxygen deficient atmosphere).
- Inadequate Isolation- Failure to adequately isolate the confined space through disconnection, blanking/binding, or double blocking and bleed procedures may result in toxic materials re-entering the space.
- Work done inside of the confined space- Cleaning, painting, degreasing, hot work, etc. may produce a toxic atmosphere inside of the confined space.
- Work done near the confined space- Materials produced by work or process near the confined space may enter and accumulate in that space.

All confined spaces that may contain atmospheric hazards must be tested prior to entry. The testing must be performed by a person trained in the use of testing equipment and familiar with the substances that may be in the confined space. Entry into a confined space with a hazardous atmosphere will only be permitted after procedures for safe entry have been established and entrants have received necessary training.

Potential Effects on Hydrogen Sulphide Exposure

PPM	Effects and Symptoms	Time
10	Permissible Exposure Level	8 hours
50 - 100	Mild eye irritation, mild respiratory irritation	1 hour
200 -300	Marked eye irritation, marked respiratory irritation	1 hour
500 - 700	Unconsciousness, death	< 1 hour
1000 or more	Unconsciousness, death	Minutes

Potential Effects of Carbon Monoxide Exposure

PPM	Effects and Symptoms	Time
35	Permissible exposure level	8 hours
200	Slight headache, discomfort	3 hours
400	Headache, discomfort	2 hours

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600	Headache, discomfort	1 hour
1000 - 2000	Confusion, nausea, headache	2 hours
1000 - 2000	Slight heart palpitation	1/2 hour
2000 - 2500	Unconsciousness	1/2 hour
3000 or more	Fatal	< Hour

5.1.3.4 Ammonia Atmospheres

Ammonia has a sharp, distinct, penetrating odour detectable at very low concentrations. At moderate levels of concentration, ammonia can irritate the eyes and respiratory tract; at high concentrations, it can cause ulceration to the eyes and severe irritation to the respiratory tract

Health effects of Ammonia	
PPM	Health Response
24 - 50	Nose and throat irritation after ten minutes of exposure
72 - 134	Irritation of nose and throat after five minutes exposure
700	Immediate and severe irritation of respiratory system
5,000	Respiratory spasms, rapid suffocation
Above 10,000	Pulmonary edema, potentially fatal accumulation of fluid in lungs and death

Typical ammonia levels in well-ventilated, environmentally regulated buildings are 10 to 20 ppm with liquid manure systems and 50 ppm where manure and urine are deposited on solid floors. Levels can exceed 50 ppm with lower winter ventilation rates and reach 100 to 200 ppm in poorly ventilated area.

Ammonia is lighter than air and can be easily removed from buildings by proper ventilation.

- **Ammonia Detection**

Ammonia levels above 20 ppm are easily detectable. There are several methods of detecting ammonia and these include litmus paper, detection tubes and electronic devices.

Accuracy, ease of operation and calibration, and cost are factors to consider in the selection of ammonia detection devices.

Ammonia and Health Hazards Ammonia poses a threat to workers in Plant facilities. Ammonia is a significant respiratory hazard for workers who experience long-term exposure to this gas in constant average values greater than 25 ppm.

In addition to respiratory effects, ammonia can cause skin and eye irritation and displace oxygen in the bloodstream. Long-term exposure to ammonia can cause pneumonia.

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• Occupational Contamination Limits of Ammonia

There are a number of guidelines and limits to ammonia exposure aimed to protect human health and safety. The American Industrial Hygiene Association (AIHA), the American Conference of Governmental Industrial Hygienists (ACGIH) and the National Institute for Occupational Safety and Health (NIOSH) recommend an exposure Threshold Limit Value (TLV) of 25 ppm for ammonia (based on 8-hour time weighted average).

TLV is defined as an estimate of the average safe airborne concentration of a substance that represents conditions under which it is believed that nearly all workers may be repeatedly exposed to day after day without adverse effect. The Occupational Safety and Health Administration (OSHA) sets 50 ppm as the permissible exposure limit (PEL) for ammonia.

Threshold Limit Value for ammonia gas:

- long term exposure (8 hours): 25 ppm
- short term exposure (15 minutes): 35 ppm

5.1.4 Chlorine threats

Chlorine is a very toxic gas and exposure to levels as low as 1 ppm for a few minutes can cause eye, nose, and throat irritation.

Exposure to concentrations above 30 ppm, even for a short period, can be dangerous, causing severe breathing difficulties such as coughing, tightness in the chest and wheezing. It is essential that persons exposed to such levels seek early medical advice and be warned that pulmonary oedema (fluid on the lungs) may occur several hours afterwards.

Breathing even very low concentrations of chlorine can aggravate the symptoms of existing respiratory diseases such as bronchitis and asthma. Workers need to be aware of this possibility. Those with such disorders should be medically assessed prior to placement, and may require ongoing health surveillance.

The workers exposure level for chlorine is currently:

- 0.5 parts per million (0.5 ppm) time weighted average over eight hours, or
- 1 ppm over fifteen minutes.

The occupational exposure standard (OES) for chlorine is 0.5 parts per million (0.5 ppm) time weighted average over eight hours, or 1 ppm over ten minutes.

A worker exposure should not normally exceed those limits. If it does, action should be taken to reduce that exposure.

Chlorine may be detected by smell at around 1 ppm.

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5.1.5 Internal temperature and humidity

For entry to spaces like Waste Heat Recovery Units of gas turbines, additional hazards may exist. These hazards exist due to the operational service where the space has been subjected to high temperature. Hazards such as internal temperature, humidity and hot surfaces should be included in the risk assessment, and suitable controls put in place. These controls could for example, result in work duration being reduced accordingly.

5.1.6 Breathing Apparatus

For entry in to a confined space without the use of breathing apparatus, tests may include but are not limited to:

- Oxygen (between 20%-21%)
- H₂S shall be no greater than 1ppm
- Benzene shall be less than 1ppm, but preferably zero
- Hydrocarbons in air less than 2% LEL but preferably zero (see Table)

<2%	Entry allowed without BA
≥2% and <10 or atmosphere unsustainable	Entry only with BA
≥ 10%	No entry allowed

CAUTION: If it is considered that the breathable atmosphere cannot be guaranteed then entry shall be completed wearing breathing apparatus.

5.1.7 Ventilation

Ventilation shall be employed to make the atmosphere inside of the confined space able to 'support life'. Where the atmosphere in the confined space is flammable or toxic, forced ventilation will be employed to extract and clean air be allowed to replace that extracted by natural circulation from a low point.

WARNING: Outside air shall not be forced in to expel the flammable atmosphere as this may cause an explosive mixture being formed.

5.1.8 Positive Isolation

Before any entry is permitted to a confined space positive isolation shall be carried out as required.

Process equipment and systems shall be positively isolated as detailed in PTW procedure.

Mechanical isolations shall be carried out using 'spades and blind' where applicable, or removal of spool pieces where applicable.

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Electrical shall be isolated at the MCC or switchboard. All isolations should be carried out by a 'competent person' and be tagged in accordance with Electrical prevention programme procedure and the issue of an Electrical Isolation Certificate which shall be attached to the PTW.

5.1.9 Use of Naked Flames and Arc

Strict control shall be exercised on the use of 'naked flames or arc welding' equipment inside or in the vicinity of confined spaces where flammable vapours are or could be present. Such works shall require a 'Hot Work Permit' to be in force.

Fixed and portable fire equipment, correct for the type of work being undertaken, shall be provided at and adjacent to the work place.

WARNING: CO₂ or dry powder type extinguishers shall not be used inside of confined spaces when personnel are inside. Accordingly, water shall not be used if 'live' electrical equipment is being used inside the confined space. In the event of a fire personnel shall be evacuated as quickly and safely as possible.

5.1.10 Personal protection equipment (PPE)

Correct PPE shall be worn at all times while the work is being undertaken. Specialised PPE required for specific tasks shall be made available to all personnel involved. The requirements of specialized PPE shall be made on the risk assessment/job safety plan.

5.1.11 Confined Space Entry Process

The Permits and Certificates shall be completed, signed and attached to the PTW with a Job Safety Plan (including Risk Assessment) and all relevant drawings and documents.

1.	When confined entry is required to undertake maintenance, repair or modification it must be accessed if a full or partial process shutdown of the facility or system is required.
2.	The 'Permit Applicant' shall complete the PTW and the Confined Space Entry Certificate as required. Depending on the nature of the work to be undertaken additional Certificates such as Mechanical and Electrical Isolation may be required.
3.	The permit applicant and the 'Responsible Supervisor' shall inspect the work site and identify all hazards. The permit applicant and responsible supervisor shall produce and agree a Risk Assessment which will form the basis of a 'Job Safety Plan' which shall be approved by the responsible supervisor.
4.	The responsible supervisor shall: <ul style="list-style-type: none">• authorise the PTW• authorise the isolation on the Mechanical Isolation Certificate

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	<ul style="list-style-type: none">check the 'Confined Space Entry Certificate' safety precautions approve the risk assessment and Job Safety Plan
5	Once authorised the PTW and all other required certificates shall be issued to the 'Performing Authority to undertake the work, the operation manager or his delegate shall oversee or undertake the required isolation in accordance with the mechanical isolation certificate and ensure that electrical isolations have been made and certified by the competent electrical person. The isolations shall be signed for on the PTW and / or the Mechanical / Electrical Isolation Certificates.
6	<p>The performing authority shall conduct a Toolbox talk to ensure that personnel working on the job are aware of the safety hazards, the risk assessment contents, control measures required and emergency response procedures.</p> <p>The performing authority shall oversee the provision of all necessary safety equipment and that the correct tools and PPE are provided.</p>
7	The operation manager or his delegate shall check that all safety precautions have been taken and that all required equipment for the confined space entry is available.
8	Once the PTW has been validated by the operation manager or his delegate the vessel/tank/equipment can be drained, gas freed and opened for ventilation.
9	The initial gas test shall be taken when the confined space has been ventilated or prepared for entry. When gas freeing using nitrogen has taken place a meter capable of measuring hydrocarbons in an inert atmosphere shall be used. The gas test shall be conducted by the area authority or registered gas tester. The results are entered on the Confined Space Entry certificate.
10	<p>Once the gas tests have been conducted and the confined space conforms to the requirement the authorisation can be issued by the responsible supervisor / area authority. The authorising authority shall sign the appropriate section of the Confined Space Entry certificate.</p> <p>CAUTION: Before entry shall be authorised confined spaces that have contained hydrocarbons shall be tested using a Photo-Ionization Detector (PID – e.g. Dragger Tube) to confirm that levels Butane, Pentane and Benzene (highly narcotic) are below OEL and % volume required to produce surgical anaesthesia.</p>
11	<p>The work can be carried out within the confined space in accordance with that defined on the PTW. The permit holder shall oversee the work and ensure that 'entries' and 'exits' are logged on the Confined Space Entry certificate.</p> <p>The appointed 'standby man/men' shall maintain communication with the personnel inside the confined space and also the operation manager or his delegate / control room</p>
12	Additional gas tests (including PID if considered necessary) shall be carried out in accordance with the PTW. These gas tests shall be entered at the correct intervals on the Confined Space Entry certificate or the Additional Gas test Records sheet.

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13	On completion of the work the permit holder shall oversee the 'normalisation' of the work site. The confined space shall be inspected and all 'entry and exit' records checked before closure is authorised. Inspection and authorisation for closure shall be given by the area authority or responsible supervisor.
14	On closure the performing authority carry out reinstatement testing of the equipment / vessel and remove or oversee the removal of all isolations with the Area Authority. The Area Authority shall be close out the PTW.
15	The vessel/tank/equipment shall be handed over to production and brought back into service.

5.2 Emergency Procedures

The rescue of an entrant from a confined space requires special precautions and training. Multiple fatalities often occur when well -intentioned, but un-prepared co-workers attempt to rescue a fellow employee.

If rescue of a downed entrant cannot be made from outside the confined space, the safety attendant must summon help by contacting plant management.

The Safety Attendant should then attempt to pull the worker out of the confined space using the life-line winch (if available). Attempts to ventilate the confined space, if possible, should also be made. Safety Attendant must not enter the confined space to rescue a downed entrant unless all of the following conditions are met:

- The Safety Attendant has been trained in rescue procedures.
- The necessary equipment is available.
- Another Safety Attendant is present.
- Rescue cannot be done from outside of the space.

6 References

ISO 45001: 2018 Standard

7 Appendix

a) Checklist for Enclosed Space

8 Revision History

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