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Confined Space Entry Procedure

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1.0 PURPOSE

The entry into a confined space is predominant in many operations and maintenance activities throughout different Sectors. Examples of confined spaces across working Sectors include manholes and vaults, HVAC units, boilers, and water tanks to name a few. Activities, where personnel have to access and work in confined spaces can present many different hazards such as engulfment, fire, electrical, and hazardous atmospheres. Therefore, it is necessary for Entities, and/or their facility management contractors, to implement a procedure giving direction to identify, label, assess, and mitigate hazards associated with entering and working within confined spaces.

2.0 SCOPE

The scope of this procedure is to provide means to the user to create a custom procedure outlining and detailing confined space identification and entry for work purposes, and the requirements and responsibilities of the Entities and/or facilities or operations and maintenance activity contractors. This procedure applies throughout the Kingdom of Saudi Arabia to Operations and Maintenance functions and activities surrounding government owned facilities and projects where work includes the necessity to enter and work within confined spaces.

3.0 DEFINITIONS

Definitions	Description
Acceptable Entry Conditions	The conditions that must exist to allow entry into a confined space and to ensure that authorized entrants can safely enter, work in, and exit the space.
Airborne Contaminant	Any contaminant present in the air that may be harmful to persons.
Attendant	An individual stationed outside the confined space who monitors the authorized entrants and who performs all assigned attendant's duties as defined by the permit.
Authorized Entrant	An employee who is authorized to enter a confined space.
Competent Person	One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them
Confined Space	A confined space is an area, place, location or other space which meets all the following criteria. It may, or may not, require a separate permit have other hazards present, such as moving parts, hazardous atmosphere, or electrical hazards. To meet the definition of a confined space, the work area must meet ALL three of the following criteria: 1) It will have only limited openings/means for Entry and Exit; 2) The space is not intended for continuous human occupancy; 3) The space is large enough for workers to enter. 4) Excavation exceeding 1.2 meter depths.
Confined Space Entry Permit	The written or printed document that is provided to allow and control entry into a confined space.
CPR	Cardiopulmonary resuscitation
Engulfment	The surrounding and effective capture of a person by a gas, vapor, liquid, or finely divided solid sub- stance that can be aspirated to cause death by filling or plugging the respiratory system, or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.
Entry Supervisor	The employee responsible for determining if acceptable conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry, and for terminating entry.
Hot Work	Welding, thermal or oxygen cutting, heating, including fire-producing or spark-producing operations that may increase the risk of fire or explosion
HSE	Health, Safety, and Environment

Definitions	Description
IRT	Incident Response Team
JHA	Job Hazard Analysis
LEL	Lower Explosive Limit: The concentration of a flammable contaminant in air below which the propagation of a flame does not occur on contact with an ignition source
PPE	Personal Protective Equipment
RCD	Residual Current Device
RPE	Respiratory Protective Equipment
Safe Oxygen Range	A minimum oxygen content in air of 19.5% by volume under normal atmospheric pressure and a maximum oxygen content in air of 23.5% by volume under normal atmospheric pressure during occupancy
SIMOPS	Simultaneous Operations
UEL	Upper Explosive Limit: The concentration of a flammable contaminant in air above which the propagation of a flame does not occur on contact with an ignition source.

4.0 REFERENCES

- OSHA 29 CFR 1910.146 - Permit-Required Confined Spaces
- OSHA 29 CFR 1926 Subpart AA - Confined Spaces in Construction
- EOM-KSS-PR-000014 Emergency Preparedness Procedure
- EOM-KSH-PR-000004 Respiratory Protection Equipment Procedure
- EOM-KSS-PR-000003 Personal Protective Equipment Procedure
- EOM-KS0-PL-000001 A&FM HSE Orientation and Training Plan
- EOM-KSS-PR-000022 Hazard Communication Procedure
- EOM-KSS-PR-000006 Barricades and Signs Procedure

5.0 RESPONSIBILITIES

5.1 HSE Representative

- Evaluates the facility for confined space hazards.
- Auditing the confined space entry permit.
- Coordinates with the supervisor to implement engineering controls.
- Prescribes protective equipment for confined space entry operations.
- Trains personnel in accordance with confined space entry requirements.
- ensuring confined space pre-entry testing and atmospheric under monitoring.
- ensuring any required radiological and/or chemical under monitoring.

5.2 Supervisor

- Verifies that pre-entry tests specified by the permit have been conducted and that acceptable entry conditions exist.
- Ensures that procedures and equipment specified by the permit are in place prior to entry.
- Approved the permit and authorizes entry.
- Terminates the entry and cancels the permit as necessary.
- Verifies that rescue services are available and that the means for summoning them are in place and operable.
- Removes unauthorized individuals who enter or attempt to enter the space during entry operations.
- Determines that entry operations remain consistent with terms of the permit and that acceptable entry conditions are maintained.
- Ensures safe closure and maintains control of the confined space.

5.3 Attendant

- Continuously maintains an accurate count of authorized entrants.

- Remains outside the permit space during entry and/or rescue operations.
- Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space
- Monitors activities inside and outside the space to determine if it is safe for entrants to remain inside the space or non-entry personnel to remain outside the space nearby.
- Orders evacuation under the following conditions:
    - Upon detection of a prohibited condition;
    - Upon detection of the behavioral effects of hazard exposure to authorized entrants;
    - Upon detection of a situation outside the space that could endanger the entrants;
    - Upon noting that the attendant cannot effectively or safely perform required duties.
- Summons rescue/emergency services upon determination that authorized entrants may require assistance to escape from the space.
- Takes the following actions when unauthorized persons' approach or enter the space:
    - Warns the unauthorized person to stay away;
    - Advises an unauthorized person to exit the space;
    - Advises authorized entrants and the entry supervisor that an unauthorized person has entered the space;
    - Performs non-entry rescues as per job task instruction;
    - Performs no duties that might interfere with the primary duty (i.e., monitoring and protecting authorized entrants).

5.4 Authorized Entrant

- Review and sign the confined space entry permit.
- Review the JHA before start the Job.
- Properly use all of the required equipment (i.e., ventilation, communication, lighting, PPE).
- Maintain communication with the attendant to enable the attendant to monitor entrant status and alert entrants of the need to evacuate the space.
- Alert the Attendant when:
    - Entrant recognizes any warning sign, symptom of exposure, or the presence of a dangerous situation;
    - A prohibited condition is detected.
- Exit the space as quickly as possible when:
    - An order to evacuate is given;
    - The entrant recognizes a warning sign or symptom of exposure to a dangerous situation;
    - The entrant detects a prohibited condition;
    - An evacuation alarm is activated.

6.0 REQUIREMENTS

6.1 General Overview

Entry to a confined space to carry out work should be prohibited unless there is no other reasonably practicable method of carrying out the work.' The Confined Space Entry Program is composed of the following elements:

- Personnel Training, and competency of persons involved.
- Confined Space Entry Procedures i.e. a clear, assessed, safety system of work.
- Emergency/Rescue

Each project/facility will implement this procedure by:

- Evaluating the workplace to determine which spaces (if any) are confined spaces;
- Coordinating with subcontractors, owners, and operating plant personnel (when applicable);
- Testing to identify potential hazards;
- Posting warning signs, entry barriers, etc.;
- Initiating lockout/tagging of energized systems, energy and machinery, if applicable;
- Initiating the Entry Permit System;

- Providing equipment for gas testing, ventilation, communications, lighting, access and egress, personal protection, and emergency/rescue;
- Monitoring confined spaces prior to and during work entry operations;
- Training authorized entrants, attendants, and entry supervisors;
- Initiating emergency/rescue plan.
- Initiating safe closure of confined spaces after entry operations.

6.2 Process Review

When necessary, the HSE representative or designee will revise the program to correct its deficiencies and/or procedures before subsequent entries are authorized.

Entry operations will be reviewed whenever there is reason that measures taken under the program may not protect the employees. Examples of circumstances requiring review of the program include the following:

- Any unauthorized entry of a permit space.
- The detection of a condition prohibited by the permit.
- The occurrence of an injury or near-miss during entry.
- Notification by employee of program ineffectiveness.
- Changes in applicable regulations or related procedures.

6.2.1 Annual Review

The program will be evaluated by the HSE representative or designee at least once a year to ensure that it is effective and that employees who are participating in entry operations are protected from confined space hazards. The annual evaluation will consist of a review of regulations, procedure content, and canceled permits.

6.3 Risk Assessment

A Risk Assessment shall be conducted by meeting all the concerned parties should attend by competent persons before conducting any tasks associated with the confined space. The assessment shall be documented and take into account at least the following:

- The hazards of the confined space.
- The tasks required to be conducted, including the need to enter the confined space.
- The range of methods by which the tasks can be conducted.
- The hazards involved and associated risks involved with the actual method selected and equipment proposed to be used.
- Control measures required to eliminate confined space entry risks or to reduce those risks to a level as low as reasonably practicable.
- Emergency response procedures.
- The competence of the persons to conduct the tasks.
- Coordination with other competent/authorized persons where the confined space involves a task separately assessed as requiring a permit to work (e.g., work from height, pressure systems).

Risk factors to consider when undertaking a Risk Assessment of a confined space include the following:

- Atmospheric assessment, including testing or monitoring to be undertaken and the parameters to be assessed before a Confined Space Entry Permit is issued.
- Engulfment of a person in any flowing solids in the confined space or engulfment from a rising level of liquid in the confined space.
- Proposed operations and tasks, particularly those that may cause a change to the conditions in the confined space.
- The number of persons occupying the space.
- The soundness and security of the overall structure and the need for illumination and visibility.
- The identity and nature of the substances last contained in the confined space.
- Any risk control measures needed to bring the confined space to atmospheric pressure.

- The number of persons required outside the space to maintain equipment essential for the task being undertaken within the confined space; to provide adequate communication with and observation of the persons within the confined space; and to properly initiate emergency response procedures.
- Risks associated with other hazards.
- Arrangements for emergency response, first aid, and resuscitation.
- The physiological and psychological demands of the task and the competency of those persons involved in the tasks or emergency response duties.
- Adequate instruction of those persons in any required procedure, particularly those which are unusual or non-typical, including the use and limitations of any PPE and mechanical or other equipment to be used.
- The availability and adequacy of appropriate PPE, protective clothing and emergency equipment for all persons likely to enter the confined space.
- The need for additional risk control measures, including that may include:
    - Prohibition of hot work in adjacent areas.
    - Prohibition of smoking and naked flames within the confined space and, where appropriate, the adjacent areas.
    - Avoidance of contamination of breathing air from operations or sources outside the confined space (e.g., from the exhaust of an internal combustion engine).
    - Energy isolation, disconnecting of piping, blinding/blocking/venting, and locking devices.
    - Prohibition of movement of equipment such as forklifts in adjacent areas.
    - Prohibition of spark generating equipment, clothing and footwear.
- Whether purging or cleaning in the confined space is necessary.
- Whether hot work is necessary.
- Conditions that could impede entry and exit or the conduct of the tasks in the confined space (e.g. plant layout, dimensions, manual handling and ergonomic aspects of the task activity).

Prior to entry into any confined space, a risk assessment shall be conducted to identify energy sources that must be isolated for a safe operation.

A Job Hazard Analysis (JHA) or Method Statement will be prepared to identify the controls required for a safe operation. The JHA/Method Statement will include the Confined Space Entry Permit, Hazardous Work Permit, and the controls systems required for working in confined spaces.

6.3.1 Simultaneous Construction Activities

Where the Risk Assessment identifies the potential for Simultaneous Operations (SIMOPS) Construction Activities to have an impact on a confined space entry, requesting contractor must inform, the HSE Representative or task Supervisor, who will liaise with the various contractors to mitigate any perceived hazard or risk prior to issuing a Permit to Work.

6.4 Identification of a Confined Space

Confined spaces shall be identified and determined in the planning of and preparation for work through design reviews, Risk Assessments, JHA's, and other risk management processes. During the performance of work, inspections and observations shall be used to monitor identified confined spaces as well as to identify where other confined spaces potentially or actually exist. Guidance for the identification and determination of confined spaces is given in Table 1 below and **Attachment 2 - Confined Space Definition Guidance**.

Description of space	Physical Characteristics		Identified Hazards				Is the enclosed or partially enclosed space a potential Confined Space?
	Step A	**Step B**	**Step C**	**Step D**	**Step E**	**Step F**	
	Is space enclosed of partially enclosed?	Is space intended or designed primarily for other than human occupancy?	Could the atmosphere have oxygen concentration outside the safe oxygen range?	Could the atmosphere have a concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation?	Could the atmosphere have a concentration of flammable airborne contaminant that may cause injury from fire or explosion?	Could the atmosphere have a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning?	
Examples	**Requires A and B?**		**Required to have either: C, D, E or F?**				
Sewage pit	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Workshop welding bay	Yes	No	Yes	Yes	No	No	No
Boiler	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NOTES: For an enclosed or partially enclosed space to be considered as a potential Confined Space, the following conditions apply: • *Confined Space = A + B + (C or D or E or F).* • *The hazards identified in Steps C to F shall be confirmed by risk assessment.*							

Table 1: Confined Space Hazard Identification Matrix

6.5 Rescue Plans

Responsible entities shall develop, or assist in development of rescue plans in consultation with Incident Response Team IRT. Plans shall include the following information:

- An assessment of the hazards associated with the confined space.
- The required gas testing/monitoring equipment.
- The personnel required to perform the rescue.
- All precautions to be taken while in confined space.
- The required personnel protective equipment.
- The required rescue equipment.
- The required tools and any other special equipment.

A means of communication and a system of signals agreed shall be understood by personnel involved.

6.6 Confined Space Entry

6.6.1 Pre-Entry Actions

Projects and business entity are responsible to develop a list of responsibilities and work flow process; the following represents the minimum expectations:

- Designated HSE Representative and Entry Supervisor shall visit the confined space and review their risk assessment and Safe Sequence of Work to the actual conditions.
- The Safe Sequence of Work shall be reviewed whenever there is a reason to believe that measures taken may not be protecting the employees, or causing other hazards to arise.
- A pre-task briefing must then be conducted by the Entry Supervisor to personnel involved with the entry to the confined space, including the IRT members; the following topics should be covered and checked:

ACTION	RESPONSIBILITY
Obtain other relevant permits.	Works Supervisor
Account for all entrants	Attendant
Co-ordinate with owners, operators, subcontractors	Works Supervisor
Verify availability of emergency personnel	HSE Representative
Obtain other hazardous work permits e.g. Excavation permit, hot work, etc.	Entry Supervisor
Assemble equipment / materials	Works Supervisor
Test Atmosphere	Entry Supervisor
Assess and evaluate Safe Method Statement	Entry Supervisor
Initiate ventilating equipment as required	Entry Supervisor
Secure Area	Attendant

ACTION	RESPONSIBILITY
Check PPE	HSE Representative
Discuss actual work task	Works Supervisor
Sign the Confined Space Permit	All involved
Authorize the Confined Space Permit	Entry Supervisor
Account for entrants	Attendant
Commence works	All involved

6.6.2 Entry Permit

- A confined space entry permit must be completed prior to any work in a space meeting the definition of a confined space (See **Attachment 1 - EOM-KSS-TP-000001 - Confined Space Permit Template**)
- Anyone responsible for work that requires a confined space entry permit may initiate one.
- As a minimum, the initiator will enter the request date, the work description, work location, and duration of the work, and then forward the form to the authorized Entry Supervisor.
- The entry supervisor and the health and safety representative identified on the permit are the only employees authorized to sign the permit and authorize entry.
- The properly completed and signed permit should be posted with the hazardous work permit at the entry portal of the confined space prior to the time of entry so that authorized entrants can confirm that pre-entry preparations have been completed.
- As a standard practice, the duration of the permit may not exceed the time required to complete the assigned task, or one shift, whichever comes first.
- The entry supervisor will terminate entry to a confined space and cancel the permit when:
    - The authorized time period of the permit has expired.
    - Entry operations covered by the entry permit have been completed.
    - A condition that is not allowed under the entry permit arises in or near the permit space.
    - An emergency or incident required evacuation of the area.
- The original cancelled permit, along with a copy of the corresponding hazardous work permit, will be maintained with the project/facility files.

6.6.3 Entry Equipment

The risk assessment conducted for task shall identify all equipment required. Suitable equipment shall be provided including, where necessary, equipment for:

- Personal protective equipment including fall protection where applicable.
- Ventilation equipment.
- Emergencies including rescue.
- First aid.
- Communication.
- Fire suppression.

The equipment shall be appropriate to the tasks to be conducted in the confined space, and maintained in a proper working condition.

Ventilating equipment:

Where the existence of dangerous air contamination and/or oxygen deficiency is suspected or determined, forced air or exhaust ventilation shall be implemented. Ventilation will continue whilst employees are in the confined space and until all have exited. Air supply shall be from a clean source and must not increase the hazards in the space. The atmosphere within the confined space shall be monitored continuously.

Communication system:

An effective continuous means of communication between Attendant and those in the confined space shall be provided by the Contractor. Pre-work checks must be conducted prior to entry. Equipment may consist of radios, portable phones; video equipment etc. an alternate means (whistles, bells, flashing lights etc.) must be in place in case of failure of the primary system.

Personal Protective Equipment:

Required PPE shall be defined in the task Job Hazard Analysis.

Temporary Lighting:

Temporary lighting will be supplied to ensure an adequate degree of illumination not exceed 24 Volt for the safe performance of work tasks. Confined space entries will be evaluated for specific hazards relating to the usage of temporary lighting. The use of low voltage Residual Current Device RCD-equipped lighting systems and associated electrical distribution cords may be required depending on existing or potential hazards within the confined space.

Hand and Power Tools:

Confined spaces will be evaluated for specific hazards relating to hand/power tool usage. The use of low-voltage (12V) or RCD-equipped electrical tools shall be required. Compressed air-powered tool used shall be powered by Grade D breather air or its equivalent.
Power generators, Arc Machines and air compressors shall be located outside of the Confined Space.

Signage:

"Danger – Permit to enter required – Confined Space – Do Not Enter" signs must be posted to ensure adequate warning of the existence and location (Figure 1).

Figure 1: Danger Typical sign for Confined Space

it is advised to add another sign containing the contact number of the confined space Person in Charge and emergency contact number.

Barriers:

Barriers shall be erected around the confined space site to ensure that persons have to come into contact with the attendant, and cannot accidentally enter the confined space. Barriers shall also protect the opening to the confined space preventing accidental fall through and to protect the persons inside from falling objects.

Non-Entry Rescue Equipment:

Non-entry rescue equipment may include but not limited to:

- Full body harness with retrieval line attached.
- Mechanical device for lifting (i.e., tripod) positioned outside the space in such a manner that rescue can begin immediately.

Other Equipment:

Ladders, scaffolding or working platforms, shoring devices will be used as necessary to provide safe conditions for entry. Suitable and sufficient firefighting equipment shall be available.

Gas Cylinders and Hoses

No cylinder of compressed or liquefied gas shall be taken into a confined space. The compressed or liquefied gas supply to equipment in the confined space shall be turned *Off* at the cylinder valve when not in use.

Hoses supplying gas-operated equipment used in a confined space shall be located, suspended or otherwise guarded to avoid accidental damage. These hoses must be tested for leaks prior to installation and shall be removed from confined spaces once you finished the required task.

6.6.4 Means of Entry and Exit

Except for boilers and pressure vessels for which specific requirements for openings exist, each confined space shall be provided with at least one entrance of sufficient size to permit entry and exit. Except for boilers and pressure vessels, there shall be at least:

- One entry having an aperture not less than 450 mm long by 400 mm wide, if rectangular, or not less than 450 mm in diameter, if circular, or having major and minor axes not less than 450 mm and 400 mm, respectively, if elliptical; or
- Other suitable means of entry and exit meeting the intent of Item above.

The means of entry to and exit from a confined space shall be kept free from any encumbrances. When the atmospheric hazards or the nature of the tasks to be conducted in a confined space may require such things as power lines, hoses and ventilation ducts to pass through an entry or exit opening, the provision of a second opening is must.

6.6.5 Testing and Monitoring

The Entry Supervisor and competent person must perform pre-entry testing to determine if acceptable entry conditions are present prior to entry. Instruments (gas test device) will be of sufficient sensitivity and specificity to identify and evaluate hazardous atmospheres that may exist or arise. Continues tests will be performed to ensure no buildup of a hazardous atmosphere. The results of initial and continuse tests will be logged in an air monitoring sheet every 30 min (See **Attachment 1 - EOM-KSS-TP-000001 - Confined Space Permit Template**), accompanied by the names or initials of the testers and by an indication of when the tests were performed. Calibration checks have been performed in accordance with manufacturer's instructions. Records of atmosphere testing shall be recorded and made available for auditing and governmental authorized inspections.

CONDITION TO BE TESTED	ACCEPTABLE PARAMETERS
Oxygen Content:	More than 19.5%, but less than 23.5% of oxygen
Flammable Gases & Vapors:	0 % of the lower explosive limit
Toxic Gases & Vapors:	0 PPM the permissible exposure limit for known contaminants, or less than 1 part per million for unknowns

6.7 Emergencies and Emergency Response

In the event a hazardous atmosphere is detected after entry operations have begun, the entry supervisor and attendant must:

ACTION	RESPONSIBILITY
1- Order an immediate evacuation of the confined space	Attendant

ACTION	RESPONSIBILITY
2- Account for all entrants	Attendant
3- Prevent anyone from re-entering	Attendant
4- Evaluate the space to determine how the hazardous atmosphere occurred	Entry Supervisor
5- Implement engineering controls to reduce the hazardous atmosphere to an acceptable level	Entry Supervisor
6- Document the event on the Permit	Entry Supervisor

Facilities and contractors shall co-ordinate with off-site rescue services before the start on any works to determine:

- Rescue man / equipment's.
- Availability and extent of Services.
- Back-up arrangements.
- Response time
- Emergency phone numbers and contacts
- Availability of standby services for complicated entries
- Any special requirements of the emergency services.

Facilities and contractors shall provide off-site rescue services with the following information:

- Full extent of the confined space works.
- Hazards expected including details of known hazardous substances.
- Details of local emergency arrangements.
- Details of emergency practice drill they may want to participate in.
- Safety data sheets for hazardous substances being used.
- Where feasible, entry rescues will only be performed by qualified off-site emergency personnel. If off-site emergency services are deemed too far away from the work site, project personnel must be fully trained and equipped to perform entry rescue activities.

6.8 Training

The A&FM HSE Orientation and Training Plan should provide a standardized level of awareness to the new employee, to understand and recognized confined spaces and their hazards.
Confined Space Entry training shall be mandatory for all personnel who will control entry, enter, supervise works in a confined space, or are dedicated members of the incident response team. The training shall be conducted before employees are first assigned their duties and works in a confined space, whenever there is a change to procedures or duties, or when activities are not continuous and there has been a lapse of time between confined space works or whenever there is a reason to believe there are inadequacies in an employee's knowledge/use of this program.

Records of training are to be kept for the entire contract on site. Details to be recorded are:

- The date of the training;
- Employee's name;
- Employee's signature;
- Trainer's name and a summary of the training contents.

Training Provider (internal or external) must have a valid internationally recognized qualification to deliver the training. As a minimum, the training delivered to all personnel should cover the following elements:

- Means of communicating with the attendant.
- Entry & explosive atmosphere hazards.
- Signs, symptoms and consequences of exposure testing and monitoring equipment to be used.
- Correct use of communications, ventilation and lighting equipment.
- Evacuation signals and alarms.
- Signs and symptoms of heat stress injuries.
- Functions of the Attendant.

Additional training to be delivered to the Attendant and Entry Supervisor must include:

- Behavioral effects of hazard exposure of the entrants

- How to communicate with entrants to monitor their status
- How to alert entrants of the need to evacuate the confined space
- How to monitor activities inside and outside of the space to determine if it is safe for entrants to remain
- How and when to order an evacuation.
- How to summon the IRT and emergency services.
- How to prevent unauthorized access to the confined space.

Additional training to be delivered to the Entry Supervisor must include:

- The tests, procedures, and equipment required by the permit system How & When to endorse the permit to allow entry.
- When to terminate the entry, and cancel the permit.
- How to determine that acceptable conditions are maintained.

Training to be delivered to the initial emergency team must include:

- Training on the Respiratory Protective Equipment (RPE) provided and rescue equipment.
- Simulated rescue operation at least once every 12 months from the actual confined space, or a representative space that simulates the type of confined space being worked in.
- Basic first aid and cardiopulmonary resuscitation (CPR).

7.0 ATTACHMENTS

1. EOM-KSS-TP-000001 - Confined Space Permit Template
2. Confined Space Definition Guidance

Attachment 1 - EOM-KSS-TP-000001 - Confined Space Permit Template

SECTION (1) DESCRIPTION OF WORK:

FACILITY NAME: _____ ADDRESS: _____

PERMISSION IS GRANTED TO: _____

DESCRIPTION OF WORK: _____

SPECIFIC WORK LOCATION: _____

CHECK ONE:	DATE PERMIT VALID:	PERMIT IS VOID:
____CONFINED SPACE ____HOT WORK ____ENTRY	WORK BEGINS AT _____ (AM) (PM) PERMIT EXPIRES AT _____(AM) (PM) PERMIT (MAY) (MAY NOT) BE REISSUED FOR SIMILAR PERIOD	1. WHEN WORK STOPPED FOR 1-1/2 HR(S) 2. WHEN TEST LIMITS EXCEEDED ACCEPTABLE ENTRY LIMITS 3. OTHER:

SECTION (2) PRECAUTIONARY MEASURES TO BE ACCOMPLISHED PRIOR TO AUTHORIZATION:

All non-applicable items to be initiated by permit issuer in n/a column. All applicable items to be acknowledged as in place and initialed by employee performing work in yes column.

	Yes	N/A		Yes	N/A
1. Proposed worked checked with person in charge			13. SDS reviewed and workers trained for physical/health hazards		
2. Standby fire protection equipment or fire watch Required (list):			14. Welding or cutting equipment; safety grounded, sparks and flash protected		
3. Piping and conduit (including Underground) drawings Checked before excavation or work			15. Special warning/caution barriers/signs posted (list type/location)		
4. Precautions taken against release of vapors, gas, product, dust, or other contaminants/ hazardous materials			16. Vapor/exposure tests required (see section (3) Vapor/exposure tests to be repeated		
5. Lockout/tag out of valves, electric, hydraulic, mechanical, steam or air activated equipment (list)			17. Other precautions in place prior to Issue:		
6. Ines, valves, vessels, equipment, etc. ○ Depressurized or pressured ○ Reduced to safe level ○ Drained or purged ○ Vapor free or inert ○ Valves closed ○ Blinded, blanked or ○ Double blocked & bled			18. Personal protective equipment required as checked below: Rubber Boot — Respirator: Apron — - Supplied Air Safety Shoes — - SCBA Hard Hat — - Cartridge Coverall — Safety Harness Safety Shower — Life-line Goggles — Safety Glasses Eye-wash — Face Shield		
7. Sewer and pipe openings covered or protected.			19. This acknowledges that above items Marked “yes” have been satisfied prior to the start of work and will continue in Effect throughout the course of work Specified in this permit. Signature of Supervisor performing		

			work: _____		
8. Gage glass columns, pressure relief and sample lines drained, closed, protected or disconnected			20. Entry Supervisor Name and Signature: _____		
9. Ventilation equipment installed			21. Work Authorized Supervisor Signature _____		
10. Proper means of access or egress available					
11. Entrants, standby and entrant supervisor identified					
12. Emergency rescue and method of notification provided.					

SECTION (3) VAPOUR/EXPOSURE TEST:

CAUTION AIR MONITORING REQUIRED BEFORE ENTRY								
DATE:	TIME:	CHECKED BY	ENTRY		O_2	LEL	H_2S	DAC
			YES	NO				

SECTION (4) ENTRY LOG:

ATTENDANT:	**CONFINED SPACE NAME:**
ATTENDANT:	**AREA/VESSEL:**

NAME: (PERSON ENTERING)	DATE:	TIME IN: INITIALS	TIME OUT: INITIALS

Attachment 2 - Confined Space Definition Guidance