JOIFF

The Organisation for Emergency Services Management

THE JOIFF STANDARD

GUIDELINE

ON

CONFINED SPACE ENTRY

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JOIFF Guideline on Confined Space Entry

INDEX

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CONFINED SPACE ENTRY

1. Foreword:

JOIFF, The Organisation for Emergency Services Management, aims to serve the best interests of Emergency Responders in high hazard Industry through the generation of guidelines, codes of practice and standard operating procedures. This is called "The JOIFF Standard" and it has become recognised as Best Industry Practice. This Guideline on Confined Space Entry is the latest addition to the JOIFF Standard.

The primary aim of Emergency Response is to work to achieve safe systems of work that will ensure that the need for any and all kinds of rescue operations are reduced or hopefully eliminated. However, accidents happen and so Emergency Responders must be prepared, competent and correctly equipped to deal with them with minimum injury to persons and impact to property and environment.

The aim of this Guideline is to give relevant information and guidance to persons who engage in Confined Space Entry including those who may be required to engage in rescue or recovery in/from Confined Spaces.

This Guideline has been developed by JOIFF following consideration by a Working Group made up of Emergency Response experts from JOIFF Member Organisations Worldwide. JOIFF recommends that those engaged in Confined Space Entry and Rescue should ascertain if any local/National rules/regulations pertaining to Confined Space Entry and Rescue are in place in the Country/Region in which they operate. These may take precedence over any comments/recommendations in this Guideline.

2. Introduction:

A confined space is an enclosed, restricted, or limited space which, by virtue of its enclosed nature, creates conditions that give rise to a possibility of an accident, harm or injury to those partially or fully entering the space. These spaces include, but are not limited to

- underground vaults,
- tanks,
- storage bins,
- pits and diked areas,
- vessels,
- sewers,
- silos.

Confined spaces are significantly more hazardous than normal workplaces. The hazards involved may not be unique to confined spaces, but are always exacerbated by the enclosed nature of the confined space. Persons should only enter a confined space for any purpose when it is not reasonably practicable to achieve that purpose without entering the space.

Before allowing persons to enter a confined space, hazard identification and risk assessment should be carried out to ensure that all risks associated with the hazards of the confined space are evaluated and controlled. Persons should not enter a confined space unless there is a system of work in place that has been planned, organised and can be carried out and maintained for the duration of the entry, so as to render the work safe and without risk to health.

Entry and exit time is of major significance and is directly related to the potential hazard of the confined space. Matters to considered for each entry include but are not limited to:

- type of confined space to be entered;
- access to the entrance;
- number and size of openings;
- barriers within the space;
- occupancy load;
- time requirement for exiting in event of fire or vapour incursion;
- time required to rescue injured workers if this situation might arise.

Persons who enter confined spaces, who supervise entry into confined spaces and who approve permits-to-work in confined spaces should be competent to carry out this work and should have the information, training and instruction appropriate to the particular characteristics of the proposed work activities.

Before any confined space entry, suitable emergency arrangements appropriate to the confined space in question should be made. These arrangements should include a Response Plan which covers aspects such as

- the provision of a suitable and reliable means of raising the alarm in the event of an emergency;
- the ready availability of persons who are competent in emergency rescue procedures in confined spaces;
- all necessary rescue equipment being kept in a ready and well maintained condition;
- the provision of equipment for resuscitation if there is a foreseeable risk that this will be needed.

3. Hazards of Confined Spaces:

Some of the hazards of confined spaces are:

- <u>Structure and Layout:</u>
  The structure and layout of the confined space may present the risk of entrapment. Certain confined spaces, e.g. sewers, may be of such a convoluted structure as to present a risk of occupants becoming lost or disorientated.

  A confined space may also present the risk of claustrophobia. It is strongly recommended that personnel who are to enter/work in confined spaces should be checked for claustrophobia before initially being allowed to enter and on a regular basis after that. Those who show signs of being affected by claustrophobia should not be allowed to enter.

- Oxygen Deficiency:
  Oxygen levels can be reduced in a confined space by displacement of oxygen in the air by another gas, by biological processes or by chemical reactions such as

    - rotting of organic matter;
    - rusting of metals;
    - burning;
    - absorption of air onto steel surfaces when damp;
    - gas and vapours from substances, engine driven equipment etc.;
    - poor ventilation leading to a build of carbon dioxide from entrants.

  Even a relatively small reduction in the concentration of oxygen in the atmosphere can result in impairment of judgement. Generally there will be no warning of oxygen deficiency to alert the senses and the effects can be rapid. Very low oxygen concentrations can lead to unconsciousness and death.

- Oxygen Enrichment:
  Oxygen enrichment of the atmosphere in a confined space may be caused by e.g.

    - failure to adequately blank or disconnect oxygen supply lines;
    - leaking oxygen hoses or pipes;
    - misguided use of oxygen for ventilation purposes.

  Oxygen enrichment increases the flammability of the area and of combustible materials. Some materials, which do not burn in air may burn vigorously or even spontaneously in an enriched oxygen atmosphere.

- Flammable/Explosive Atmospheres:
  Flammable/explosive atmospheres in a confined space can arise from the presence and/or introduction of flammable liquids, vapours or gases or by the suspension of combustible dust in air.

- Toxic Atmospheres:
  Toxic atmospheres may occur due to the presence or ingress of hazardous substances. Such substances may be present in confined spaces for a number of reasons e.g.

    - substances remaining from previous processing/storage;
    - the disturbance of sludge or other deposits e.g. during cleaning;
    - substances trapped under scale or in brickwork that are released as a result of the work process;
    - the presence of a fire or smouldering within the space or an adjoining space;
    - seepage from improperly isolated adjoining plant;
    - formation of such an atmosphere during the work processes carried out in the space.

  Such an atmosphere may cause various acute effects on humans including impairment of judgement, unconsciousness and death.

- Flowing Liquid or Free Flowing Solids:
  Liquids or solids can flow into the confined space causing drowning, suffocation, burns and other injuries. Dust and powders in sufficient quantities that are disturbed in a confined space can result in an asphyxiating atmosphere.

- Excessive Heat:
  An enclosed confined space with elevated temperatures can increase the risk of heat stress. The risk may be exacerbated by the wearing of personal protective equipment, by necessary heavy work and work rate and/or by lack of or reduced ventilation.

- Cold environments:
  Entry to some confined spaces may be in low temperatures. It is important that this is taken into account in the risk assessments, both prior to and during entry. Problems that cold environments can present include but are not limited to:

  - rapid cooling of body temperature;
  - restricted entry resulting in not being able to wear cold weather PPE;
  - difficulty in keeping warm due to the type of physical activity being carried out in the confined space.

- Some other possible hazards:
  Some other possible hazards of confined spaces include but are not limited to

  - contact with live electrical hazards;
  - exposed steel on footwear/equipment that might cause static/sparks in contact with other items;
  - slippery surfaces;
  - working at height;
  - falling;
  - physical contact with mechanically-powered apparatus and moving parts of mechanical equipment;
  - corrosive surfaces;
  - presence of radioactive sources;
  - noise;
  - dust;
  - exposure to biological hazards e.g. micro-organisms, contaminated water and sewage, animals that are infected etc.;
  - exposure to dangerous substances e.g. solvents, chemicals residues, cleaning materials, scale in tanks etc.

4. Risk Assessment:

Before carrying out work which involves entry into a confined space, a risk assessment should be carried out to formulate a safe system of work. The risk assessment should determine

- measures required to ensure the safety and health of all those entering and working in the confined space and
- emergency response protocols to be in place prior to any entry or work.

The risk assessment should be carried out by persons who are knowledgeable, experienced and competent in carrying out such risk assessments and in addressing the necessary protective measures and emergency arrangements that should be put in place prior to work.

If the risk is found to be unacceptable, then entry should not be undertaken.

Matters to be considered in carrying out a risk assessment, include but are not limited to

- hazards arising as a result of the environment inside the confined space;
- hazards created by work and other activities that will be carried out inside the confined space;
- hazards that are outside the confined space that could affect a person inside the confined space.

Where an Industry sector has established good practice on confined space entry, consideration should be given to its adoption for the standardisation of safe work procedures and the specification of training. Adoption of any such system does not lessen the requirement for a thorough risk assessment before entry into any confined space and may be suitable to be used as an added layer of protection.

Risks arising from the work to be undertaken in the confined space should be included in the risk assessment. The need to isolate the confined space from risks arising externally which may affect the environment inside the confined space should be an additional part of the risk assessment. These dangers include but are not limited to

- ingress of liquids, gases, steam, inert gas, water, raw materials, etc.;
- ingress of sources of ignition;
- inadvertent confinement i.e. closing or blocking of exit routes;
- connected plant and machinery;
- electricity.

It is necessary to engage in the continuous assessment of risk in confined space entry as circumstances of an operational incident may change rapidly. This continuous assessment, known as “dynamic risk assessment”, should identify and implement the control measures necessary to ensure an on-going acceptable level of safety. If a dynamic risk assessment identifies risk(s) that cannot reasonably or practicably be managed or addressed to mitigate the identified risk(s), work should be stopped and all personnel should be removed from the confined space until measures can be put in place to allow for continued safe working.

5. Monitoring the atmosphere:

Because of the nature of confined spaces, the risk of injury/death due to dangerous ambient atmospheres is significant. Some of the different types of hazardous atmospheres that can be present in confined spaces are listed in clause 3 above.

In confined spaces, there is an on-going risk of a change in atmosphere. To ensure that the quality of the air is and remains safe for those in the confined space it is necessary that continuous monitoring of the air environment takes place. This is particularly important where persons are working in confined spaces without the protection of breathing apparatus. Even those wearing breathing apparatus could be affected by new hazards caused by a change in the working environment, therefore continuous monitoring of the atmosphere should be in place as part of every confined space entry protocol.

If identified in the initial or dynamic risk assessment, monitoring and testing should be carried out prior to and continuously during a confined space entry. Such testing should include but not be limited to testing for

- oxygen content,
- flammable atmosphere,
- toxic or asphyxiating contaminants.

Testing of the atmosphere should be carried out by competent persons who are capable of correctly interpreting the results. The equipment used for such testing should be calibrated on a regular basis to ensure that accurate measurements are obtained. Where appropriate, records should be kept of the results and findings of the testing.

Where there is a risk that the atmosphere in a Confined Space is or might become hazardous, atmospheric monitoring should be completed prior to entry and Respiratory Protective Equipment should be worn.

Where any doubt exists as to the quality of the atmosphere, immediate action should be taken to ensure the continuing safety of those within the confined space. Authority to "Stop Work" is a critical component of this process.

6. Ventilation:

There are several methods of ventilating a confined space. The method and equipment chosen should be dependent upon the size of the confined space openings, the type of gases to be diluted and the source of air. Ventilation should be continuous where possible because in many confined spaces a hazardous atmosphere will form if the flow of air is stopped.

A common method of ventilation uses a large hose, one end attached to a fan and the other lowered into a manhole or opening with the purpose of diluting or displacing all harmful gases and vapours. The air intake should be placed in an area that will draw in fresh air only. During ventilation by this method, all openings including emergency exits should be opened for ventilation.

<u>Natural Ventilation:</u>
Natural ventilation – also known as natural draft – utilises the natural air currents in the confined space. During confined space entry, all openings including emergency exits should be opened for ventilation. When using natural ventilation, it is important to remember that many vessel acts like chimneys and steps must be taken to ensure that air that is contaminated from e.g. the sewer systems, processes/chemicals used on the site etc. is not drawn into the ventilation system. The potential for this happening is usually increased during major turnarounds when there is a large amount of equipment being serviced, cleaned etc.

Natural ventilation is usually minimal movement of air and any work in the confined space may change the air mixture. To maintain air quality, mechanical ventilation e.g. blowers, fans etc. is usually more reliable.

Mechanical Ventilation:
Mechanical ventilation - also known as forced ventilation – is a control to ensure that the air reliability is managed in a safe manner over the entire work period. As the mixture of atmosphere in a confined space may change - and many times will change - due to work being carried out, mechanical ventilation forces the movement of air, therefore maintaining a safe atmosphere.

There are 3 major groups of design of mechanical ventilation - centrifugal, axial, and air ejector

- Centrifugal Ventilators are generally driven by an electric motor. They are noted for their moderate to high static pressure, good air delivery, and sturdiness. They are noisier than the other two types of mechanical ventilators and also usually heavier.
- Axial Ventilators are generally used when there is a need to move large volumes of air against relatively low static pressures. They are typically powered by small electric motors and are known to be quieter and less heavy then the standard centrifugal ventilator.
- Air Ejectors are favoured for use because they have no moving parts. They operate by either compressed air or steam being admitted into a side inlet of the structure or confined space. This creates a venturi effect where large volumes of surrounding air enter through the inlet and then exit the other end of the ventilator, typically at high velocity. This has advantages in areas of high residue that could clog a centrifugal or axial design. They are also useful in applications requiring explosion proof ventilation.

Where mechanical ventilation is provided it is important to be aware that:

- there should be a warning system in place to immediately notify those in the confined space in the event of a failure in the ventilation equipment e.g. failure in the power supply/motors used by the ventilators etc.;
- care should be taken to make sure the air being provided by the ventilation system to the confined space is "clean" i.e. breathable air;
- ease of air movement throughout the confined space should be considered because of the danger of pockets of toxic gases still remaining even with the use of mechanical ventilation;
- oxygen should not be used as substitute for fresh air because increasing the oxygen content will significantly increase the risk of fire and explosion;
- under certain conditions where flammable gases or vapours have displaced the oxygen level but are too rich to burn, mechanical ventilation may dilute them until they are within their explosive range;
- if inert gases e.g. carbon dioxide, nitrogen are used in the confined space, the space should be well ventilated and re-tested before anyone is allowed enter;
- the use of mechanical ventilation should be noted on the permit-to-work (permit-to-work is discussed in clause 10 below).

Regardless of the type of ventilation used, it is important to maintain constant air monitoring of the confined space to ensure a safe environment.

7. Communications:

An effective and reliable means of communications at all times during work in confined spaces is essential. Such communication is likely to be necessary between each member of the team entering the confined space, between those inside and those outside the confined space and between the persons outside the confined space and any emergency/rescue teams that may be required. If a situation arises on the outside of the confined space which could endanger the entrants it is important that those in the confined space are informed quickly. If persons in the confined space get into difficulties of any type, it is critical that this is communicated to the emergency team at the very earliest so that whatever action that is necessary to provide suitable assistance can be speedily taken.

The choice of a means of communication should take into account all anticipated conditions inside the confined space e.g. noise levels, visibility, possibility of a flammable atmosphere, personal protective equipment in use e.g. ear muffs, breathing apparatus etc. The communications system chosen should allow all messages to be communicated easily, rapidly and unambiguously between all relevant people.

8. Personal Protective Equipment (PPE):

The role of PPE is to allow persons to work in environments where without the protection afforded by the PPE, they normally could not work without the risk of injury or death. Correctly used, PPE is just one part of an overall Safety Management System with the role of protecting the Wearers against on-going risk and safeguarding them from accidental or unexpected exposure to hazards relevant to their work place.

Before choosing the PPE to be used it is necessary to establish through risk assessment the potential exposures of personnel. Based on the results of the risk assessment, Management Systems that are fit for purpose should be established. Within these systems, suitable PPE that will protect personnel at all times in their work place as part of a safe system of work should be provided.

In choosing PPE, it is important to consider protection for all parts of the body i.e.

- head including face,
- eyes,
- hearing,
- respiratory system and
- torso including arms and legs and hands and feet.

The PPE used for any exposures should be

- appropriate for the risks involved, without itself leading to any increased risk e.g. heat stress, reduced movement, reduced vision, reduced hearing etc.,
- correspond to existing conditions at the workplace,
- take account of ergonomic requirements and the worker's state of health and
- fit the wearer correctly after any necessary adjustment.

PPE should be certified to recognised International standards e.g. CEN, NFPA, ISO.

All PPE should be properly stored, inspected and maintained at all times based on the manufacturers' recommendations and Best Industry Practice.

Adequate and suitable training should be provided on an on-going basis to allow personnel to understand the capabilities and limitations of their PPE and personnel should be able to demonstrate on an on-going basis competence in work activity whilst wearing the PPE.

Employers have the ultimate responsibility for providing the PPE and for ensuring that all component parts of the PPE are compatible and fit for purpose. The PPE should protect personnel whilst allowing them to carry out the work required in their workplace without unduly increasing the risk by the use of such PPE. Employers are also responsible for providing suitable training in the correct wearing and use of the PPE.

9. Respiratory Protective Equipment (RPE):

RPE is a particular type of Personal Protective Equipment (PPE) designed to protect the wearer against inhalation of hazardous substances. The type of RPE to be used should be based on a Risk Assessment of the potential exposure which ensures that it is suitable for the purpose for which it is intended, i.e. correctly selected and matched to the job, the wearer and the risk.

There are two main types of RPE:

- Respirator (filtering device).
  This type of RPE uses filters to remove contaminants in the air that is breathed. RPE of the respirator type with filters or cartridges is normally suitable only for protection against low concentrations of hazardous contaminants. Filtering devices should never be used for protection in situations with - or with the possibility of - reduced oxygen levels and/or toxic and explosive gases.

- Breathing apparatus
  This type of RPE utilises a supply of breathing quality air from an independent source e.g. an air cylinder, a breathing air compressor/cascade etc. A common type of breathing apparatus used for Confined Space entry is Self Contained Breathing Apparatus (SCBA). This is a device where the breathing set has its own independent supply of breathing air i.e. a closed air system. Another common type of breathing apparatus used in Confined Space Entry is airline breathing apparatus where breathing air is supplied to the wearer through an airline independent from the ambient atmosphere. This type of breathing apparatus removes the need to carry cylinders which may be cumbersome into an already confined space.

Where RPE is provided or used in connection with confined space entry or for emergency or rescue, it should be suitable for the purpose for which it is intended i.e. correctly selected and matched both to the task and the wearer. RPE to be used for Confined Space entry/rescue will not normally be suitable unless it is breathing apparatus.

Breathing apparatus in the category of “escape breathing apparatus” is intended for use as a respiratory protection device designed to enable the wearer to escape where there is the risk that the atmosphere may become hazardous or oxygen deficient. It is simple to put on and intended for escape purposes only. Such breathing apparatus generally provides air to the user for a short period of time - duration subject to make and type. Therefore, the escape route should be planned in advance to ensure the user will have enough time to reach a safe area before the air supply of the escape unit is depleted.

Escape breathing apparatus should only be used for escape purposes and never for normal working and it should be made available only where the type provided is suitable for the hazard expected in the emergency situation. This should be established by each Site through its Risk Assessment.

- Face-fit testing
  The performance of tight/close fitting facepieces - e.g. full face mask, a half mask, or a filtering facepiece, often referred to as a disposable mask - irrespective of whether they are used in negative pressure respirators, power assisted respirators or compressed air supplied breathing apparatus, including positive pressure breathing apparatus, relies heavily on the quality of the seal/fit of the facepiece to the wearer’s face. An inadequate fit will significantly reduce the protection provided to the wearer and open the possibility of inward leakages of airborne contaminants. To ensure that the selected RPE has the potential to provide adequate protection for individual wearers, before entering a confined space, tight/close fitting RPE should be tested for seal/fit by the person who will use the particular RPE in question. This is known as face-fit testing.

  RPE face-fit testing should be conducted by a competent person and should include both qualitative and quantitative fit testing. Qualitative fit testing is a pass/fail test based on the wearer’s subjective assessment of the leakage via the face seal region of a test agent. Quantitative fit testing provides a numerical measure of the seal/fit. These tests give an objective measure of face-fit. They require specialised equipment and are more complicated to carry out than qualitative methods.

All RPE should be certified to a recognised International standard e.g. CEN, NFPA, ISO, and every person who will use RPE of any type, should be given adequate and suitable training in the wearing and use of the RPE that they will be required to wear. The extent of the training that is required should depend on the type of equipment, the complexity and performance of the equipment, the work environment in which it will be used and the needs of the people being trained. Training should cover both the use and pre-use testing of the equipment and it should be on-going to ensure that all who might be required to use RPE will have on-going competence in its use.

All RPE should be properly stored, inspected and maintained at all times based on the manufacturers’ recommendations, Best Industry Practice and appropriate legislation. Specifically with regard to RPE, there should be a clear segregation between equipment that is ready for use and that which is awaiting refill, inspection, repair or maintenance.

10. Permit-to-work procedure:

A permit-to-work is formal written documentation which is issued following a formal check undertaken to ensure that all the elements of a safe system of work are in place prior to personnel making entry into a confined space. The essential component of a permit-to-work is a written procedure which includes but is not limited to

- how the system of work is to operate,
- who may authorise particular jobs and
- who is responsible for specifying and implementing the necessary precautions.

The permit-to-work should be a written and signed statement ensuring both the establishment of safe conditions for the work to commence and the maintenance of safe conditions for the duration of the work, including the provision of emergency arrangements. Additionally, the permit-to-work should identify the method of informing personnel carrying out the work of the exact identity, location, nature and extent of the job, hazards involved and precautions to be taken.

Furthermore, the permit-to-work should address the system for ensuring the safe hand-back of the workplace following the completion of the job and in the case of confined space entry, after the space is vacated.

11. Persons entering Confined Spaces:

Persons who will be working in the Confined Space should

- be physically, mentally and technically capable of working in Confined Spaces,
- where applicable, have demonstrated competence in the wearing of the Respiratory Protective Equipment (RPE) to be used for confined space entry/access at least to the following levels:
    - passed a Claustrophobic test for RPE in confined spaces,
    - demonstrated the correct donning, operational use and doffing of the RPE to be used,
    - demonstrated an understanding of the safety features and wearer limits and warning devices provided within the equipment
    - certified/re-certified as having these competencies within the previous 12 months.

- where applicable have completed face-fit testing to ensure the effectiveness of the facemask seal on the face to ensure the best possible face seal is achieved,

Those persons who will be expected to be engaged in any Emergency Response/Rescue activity in a Confined Space should have additional competences which include but are not limited to

- being physically, mentally and technically capable and having the practical training/ experience to engage in emergency response/rescue situations in Confined Spaces,
- having completed face-fit testing to ensure the effectiveness of the facemask seal on the face to ensure that the best possible face seal is achieved between the RPE being used and the Wearer.

- having been certified as a Breathing Apparatus wearer at the minimum level of competence to the requirements of the International JOIFF Diploma Unit 14 “Operational Use of SCBA and Associated Equipment” - or equivalent.

All entrants into a Confined Space and those supporting internal operations from outside the space - including managers and supervisors and those who are authorised to write permits to enter into confined spaces - should be trained and certified as competent and re-certificated at regular intervals not exceeding one year.

12. Considerations for Building a Confined Space Entry Team:

During the development of this Guideline questions were raised about the competences required by persons who will enter confined spaces and the possible make up of an entry team. The final decision as to who shall enter a Confined Space rests entirely with the employer/person responsible for the site. This decision should be based on risk assessments, information on which is given in Clause 4 of this Guideline. Factors that should be taken into account in the risk assessments include but are not limited to site procedures, availability of competent personnel and suitable equipment, preparedness in case of emergency etc.

In emphasising where responsibility will always rest, it might however be useful to some Users of this Guideline in their consideration of building a confined space entry team to have an outline of some suggested job roles that might be allocated to each member of a team. These suggestions are for guidance only.

In building a Confined Space Entry Team, job role allocation might be considered under 5 headings:

<u>1. Entrants.</u>
These persons enter and work in confined spaces. All such persons must be trained in the potential hazards of confined spaces, the effects of exposure to common atmospheric contaminants found in confined spaces, details on permit to work and other safety procedures dealing with confined space entry, how to recognise situations requiring entry be terminated, the proper use of all safety equipment available and used for confined space entry at the site in which they have responsibility etc.

<u>2. Attendants.</u>
These persons stay outside of the confined space at all times. Their job is to manage the work systems of the entrants and monitor for safe work conditions at the site of confined space entry. They must be well trained and maintain knowledge/skills and be briefed to perform specific duties during the entry and the procedures to follow if a prohibited condition occurs and also of emergency procedures. This knowledge/skill should include the correct operation of any external rescue equipment that may be required to be utilised.

<u>3. Entry Supervisors.</u>
These persons have overall responsibility for the safety of the confined space entry. They issue entry permits, brief entrants and attendants, maintain responsibility for overall supervision of the entries and possess extensive training and experience in the recognition of confined space hazards, assignment of proper safety controls, permit procedures, briefing procedures, supervision of entry tasks etc.

4. Atmospheric Testers.
These persons are responsible for air testing. They should have detailed training in recognising different hazardous atmospheres – or potentially hazardous atmospheres - in confined spaces, operation and calibration of the gas detectors used on site, use of the testing equipment on site, proper field testing techniques etc.

5. Rescuers.
These persons carry out rescue from the confined space and require extensive training in procedures and the use of all items of rescue equipment on site at least once per year.

Personnel in confined space teams should train together at regular intervals of sufficient frequency to maintain competence. This training should include exercises that simulate conditions that may occur on the site for which they are responsible. This training should also include realistic emergency rescue simulations relevant to the site.

The Organisation for Emergency Services Management

The overall aim of JOIFF is to work to improve standards of safety and of the working environment in those sectors in which its members operate. Membership of JOIFF offers the following:

Shared Learning/Information dissemination:
JOIFF aims to fill the information vacuum that exists in the Industries represented by its members, by sharing valuable information through its email cascade amongst all its membership and to work to ensure that members benefit from the misfortunes of some to ensure that the same mistakes are not repeated. An archive of all this information is available to Members for reference purposes through a password system, on the JOIFF website.

Work on the generation of Guidelines, Codes of Practice and Standard Operating Procedures, together known as the JOIFF Standard, is on-going. A number of the JOIFF Guidelines are available to all for free download from the JOIFF website as are all edition of the JOIFF quarterly newsletter, The Catalyst, since its publication began in 2001.

Accredited Training: JOIFF has developed a recommended training path for emergency responders based on series of training courses/programmes which it has accredited. Training is carried out in modular form on Company sites under the supervision of JOIFF approved instructors supplemented with specialist training at JOIFF approved training establishments. JOIFF accredited Training is audited to ensure that training is consistent with the agreed JOIFF syllabi, site and instructor requirements.

Technical Advisory Group:
JOIFF participates with Technical and Regulatory Organisations on policy making matters that effect its members with a view to improving standards of safety and of the working environment in Industry worldwide.

Full Membership of JOIFF, the Organisation for Emergency Services Management, is open to any Industrial/Commercial Organisation that has nominated emergency response personnel. Corporate Membership is open to Organisations which do not fully comply with the requirements for full membership but who wish to support JOIFF. Members of JOIFF are Organisations represented by their hazard manager or equivalent position with nominated deputies.

JOIFF welcomes applications for Full and Corporate Membership.

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