(1 July 2020 – to date)

MINE HEALTH AND SAFETY ACT 29 OF 1996

Government Notice 967 in Government Gazette 17242 dated 14 June 1996. Commencement date: 15 January 1997 for all sections with the exception of sections 86(2) and (3), which came into operation on 15 January 1998. [Proc. No. 4, Gazette No. 17725, dated 15 January 1997].

DEPARTMENT OF MINERAL RESOURCES

GUIDELINE FOR THE COMPILATION OF A MANDATORY CODE OF PRACTICE FOR THE MANAGEMENT OF WORKING IN CONFINED SPACES AT MINES

Government Notice 29 in Government Gazette 42956 dated 17 January 2020.
Effective date: 1 July 2020.

I, **DAVID MSIZA**, Chief Inspector of Mines, under section 49(6) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and after consultation with the Council, hereby issues the guideline of a mandatory code of practice for the management of working in confined spaces at mines in terms of the Mine Health and Safety Act, as set out in the Schedule.

(Signed)
D MSIZA
CHIEF INSPECTOR OF MINES

SCHEDULE

Reference Number: DMR 16/3/2/4-B4
Last Revision Date: 30 April 2019
Date First Issued: First edition
Effective Date: 01 July 2020

DEPARTMENT OF MINERAL RESOURCES

MINE HEALTH AND SAFETY INSPECTORATE

GUIDELINE FOR THE COMPILATION OF A MANDATORY CODE OF PRACTICE FOR

THE MANAGEMENT OF WORKING IN CONFINED SPACES AT MINES

(Signed)
CHIEF INSPECTOR OF MINES

Prepared by:
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

CONTENTS

PART D: IMPLEMENTATION

1. Implementation plan
2. Compliance with this COP
3. Access to the COP and related documents

ANNEXURE 1: Roles and responsibilities

PART A: THE GUIDELINE

1. FOREWORD

1.1. Occurrences of **confined space** related incidents were reported in the South African mining industry over the past few years. Interventions to facilitate the management of safe entry and work in **confined spaces** is required.

1.2. Effective prevention and management of confined space incidents in the mines warrants the adoption, implementation and monitoring of formal and robust preventive measures amongst South African mines. The adoption and implementation of a guideline for working in **confined spaces** will promote a safer and healthier workplace in South African mining industry.

1.3. A research project (SIM 160606: Minimum standards for **confined spaces**) was undertaken by the **MHSC** via the **SIMRAC** to develop minimum standards to assist the South African mining industry to adopt and implement robust and effective strategies for the control of management of confined space incidents.

1.4. The **MHSC** subsequently instructed **MOHAC** to develop a guideline on the management of working in **confined spaces**.

2. LEGAL STATUS OF GUIDELINES AND COPs

2.1. In accordance with section 9(2) of the **MHSA**, an employer must prepare and implement a **COP** on any matter affecting the health or safety of employees and other persons who may be directly affected by activities at the mines if the **CIOM** requires it. These **COPs** must comply with any relevant guideline issued by the **CIOM** (section 9(3). Failure by the employer to prepare or implement a **COP** in compliance with this guideline is a breach of the **MHSA**.

3. THE OBJECTIVE OF THE GUIDELINE

3.1. This guideline has been developed to assist employers to set minimum standards, which, when adhered to, will assist the South African mining sector in the:

a) Management of working in **confined spaces**; and

b) Elimination of confined space related incidents.

4. DEFINITIONS AND ACRONYMS

a) **"Bump test"** means a brief exposure of gas monitor to gas to verify that the sensors respond and the instrument alarms function accordingly.

b) **"Confined space"** means an enclosed or partially enclosed space that is not intended or designed primarily as place of work. Due to its nature, a Confined Space poses particular hazards to personnel that include the potential for:

- An oxygen deficient or otherwise non-breathable atmosphere.
- An oxygen enriched environment supportive of combustion conditions
- An atmosphere that is explosive or flammable.
- An atmosphere that is toxic or contains harmful contaminants.
- Temperature levels that pose a hazard to personnel.
- Entrapment **risks** due to the nature of the Confined Space's entry and exit points.
- Engulfment **risks** due to the inrush of free-flowing solids or fluids.

Entry to a confined space is defined as a person's whole body, upper body or head being located within the confined space.

c) **"CIOM"** means Chief Inspector of Mines

d) **"COP"** means a Code of Practice.

e) **"DMR"** means Department of Mineral Resources.

f) **"MHSA"** means Mine Health and Safety Act, 1996 (Act 29 of 1996) as amended.

g) **"MHSC"** means Mine Health and Safety Council.

h) **"MOHAC"** means Mining Occupational Health Advisory Committee.

i) **"Permit"** means an official document giving someone authorization to do something.

j) **"Risk"** means the likelihood that occupational injury or harm to persons will occur.

k) **"SAMI"** means South African Mining Industry.

l) **"SIMRAC"** means Safety in Mines Research Advisory Committee.

m) **"Standby person / control attendant"** means a person located outside the permit space who controls and records Confined Space entry and performs other duties as defined by the **COP**.

5. SCOPE

This mandatory guideline covers the:

5.1. Management of working in **confined spaces**; and

5.2. Elimination of confined space related incidents for all employees at a mine.

6. MEMBERS OF TASK COMMITTEE

This guideline was prepared by members of a task team, which comprised of:

- Mr N. Mokhonoana (State) [Chairperson]
- Mr T. Motitimi (State)
- Ms. M. Hlapane (State)
- Adv. H. van Vuuren (Labour)
- Ms S. Nongingi (Labour)
- Prof. C.J. Badenhorst (Employers)
- Mrs. R. Engelbrecht (Employers)

PART B: AUTHOR`S GUIDE

1. The **COP** must, where possible, follow the sequence laid out in Part C: Format and content of the **COP**. The pages as well as the chapters and sections must be numbered to facilitate cross-reference. Wording must be unambiguous and concise.

2. It should be indicated in the **COP** and on each annexure to the COP whether:

2.1. The annexure forms part of the guideline and must be complied with or incorporated in the **COP**, or whether aspects thereof must be complied with or incorporated in the **COP**; or

2.2. The annexure is merely attached as information for consideration in the preparation of the **COP** (i.e. compliance is discretionary).

3. When annexures are used the numbering should be preceded by the letter allocated to that particular annexure and the numbering should start at one again. (e.g. 1, 2, 3, …A1, A2, A3, …).

4. Whenever possible illustrations, tables, graphs and the like, should be used to avoid long descriptions and/or explanations.

5. When reference has been made in the text to publications or reports, references to these sources must be included in the text as footnotes or side notes as well as in a separate bibliography.

PART C: FORMAT AND CONTENT OF THE COP

1. TITLE PAGE

1.1. The title page must include the following:

1.2. Name of mine;

1.3. The heading of the **COP**: “Mandatory code of practice for the management of confined spaces”;

1.4. A statement to the effect that the **COP** was drawn up in accordance with this guideline **DMR 16/3/2/4-B4** issued by the **CIOM**;

1.5. The mine’s reference number for the **COP**;

1.6. Effective date of the **COP**; and

1.7. Revision dates.

2. TABLE OF CONTENTS

The **COP** must have a comprehensive table of contents.

3. STATUS OF THE COP

3.1. This section must contain statements to the effect that:

3.2. The mandatory **COP** was drawn up in accordance with Guideline **DMR 16/3/2/4-B4** issued by the **CIOM**.

3.3. This is a mandatory **COP** in terms of sections 9(2) and (3) of the **MHSA**.

3.4. The **COP** may be used in an incident/accident investigation/inquiry to ascertain compliance and also to establish whether the **COP** is effective and fit for purpose.

3.5. This **COP** must be read in conjunction with other relevant and applicable **COP** such as the guideline for the compilation of a mandatory **COP** for an occupational health programme (occupational hygiene and medical surveillance) on personal exposure to airborne pollutants, guideline for the compilation of a mandatory **COP** for the right to refuse dangerous work and leave dangerous working places.

3.6. All managerial instructions or recommended procedures (voluntary **COPs**) and standards on the relevant topics must comply with the **COP** and must be reviewed to assure compliance.

4. MEMBERS OF THE DRAFTING COMMITTEE

4.1. In terms of section 9(4) of the **MHSA** the employer must consult with the health and safety committee on the preparation, implementation or revision of any **COP**.

4.2. It is recommended that the employer should, after consultation with the employees in terms of the **MHSA**, appoint a committee responsible for the drafting of the **COP**.

4.3. The members of the drafting committee assisting the employer in drafting the **COP** should be listed giving their full names, designations, affiliations and experience. This committee should include competent persons sufficient in number to effectively draft the **COP**.

5. GENERAL INFORMATION

5.1. The general information relating to the mine must be stated in this paragraph.

5.2. The following minimum information must be provided:

5.2.1. A brief description of the mine and its location;

5.2.2. The commodities produced;

5.2.3. The mining and/or processing methods or combination of methods used at the mine or surface works must be listed and their particular **risks** associated with these methods;

5.2.4. The unique features of the mine or surface works that have a bearing on the **COP** must be set out and cross referenced to the **risk** assessment conducted; and

5.2.5. Other relevant **COPs**.

6. TERMS AND DEFINITIONS

6.1. Any word, phrase or term of which the meaning is not absolutely clear or which will have a specific meaning assigned to it in the **COP**, must be clearly defined. Existing and/or known definitions should be used as far as possible. The drafting committee should avoid jargon and abbreviations that are not in common use or that have not been defined. The definitions section should also include acronyms and technical terms used.

7. RISK MANAGEMENT

7.1. Section 11 of the **MHSA** requires the employer to identify hazards, assess the health and safety **risks** to which employees may be exposed while they are at work, record the significant hazards identified and **risks** assessed. The **COP** must address how the significant **risks** identified in the **risk** assessment process must be dealt with, having regard to the requirements of sections 11(2) and (3) that, as far as reasonably practicable, attempts should first be made to eliminate the **risk**, thereafter to control the **risk** at source, thereafter to minimise the **risk** and thereafter, insofar as the **risk** remains, to provide personal protective equipment and to institute a program to monitor the **risk**.

8. ASPECTS TO BE ADDRESSED IN THE COP

The **COP** must set out how significant **risks** are identified and assessed in terms of the **risk** assessment process referred to in paragraph 7, and how it will be addressed. The **COP** must cover at least the aspects set out below:

8.1. Identification and register of confined spaces

The **COP** should ensure that:

8.1.1. **Confined spaces** are identified by a competent person through the mine's **risk** management process and access into the confined space shall be physically restricted using barriers to prevent unauthorised entry whenever possible.

8.1.1.1. The **risk** assessment should cover the following (but not limited to):

a) The health and safety **risks** associated with entering and working in a confined space;

b) The reportable accident on fined space;

c) The **risk** assessment must at least consider and record the following information:

(i) Hazards anticipated to be harmful to employee's health as well as those to be flammable, explosive and those that require monitoring.

(ii) Any potential **risk** of engulfment.

(iii) How the work itself may change or deteriorate workplace conditions.

(iv) Ventilation requirements for the duration of work inside the confined space.

(v) Any other control measures required for entry and work in a confined space.

(vi) Any other information critical to the health and safety of the employees entering and working in a confined space.

8.1.2. All confined spaces are recorded in a register;

8.1.3. A confined space risk assessment should be conducted before any work or entry is conducted;

8.1.4. A site-specific procedure is developed and implemented to ensure safe confined space entry and work;

8.1.5. Appropriate signage shall be posted at each entry point denoting that a permit is required prior to entry. Where signage is impractical other means of communication need to be used; and

8.1.6. All employees potentially involved in confined space entry or work are aware of the procedure and the register and are conversant with the contents and requirements thereof.

8.2. Appointments, roles and responsibilities

The **COP** should ensure that the following is clearly defined:

8.2.1. Appointments

8.2.1.1. A manager is appointed in writing to take accountability for all confined space entry or work on the mine;

8.2.1.2. A supervisor is appointed in writing to oversee specific confined space entry or work;

8.2.1.3. A person qualified in occupational hygiene techniques to measure levels of exposure to hazards is appointed in writing to test the atmosphere before and during confined space entry or work;

8.2.1.4. A confined space attendant/standby person shall be appointed in writing for every confined space entry or work; and

8.2.1.5. All other employees involved with confined space work.

8.2.2. Roles and responsibilities (see Annexure 1, for information purposes)

8.2.2.1. The **COP** should ensure that all the roles and responsibilities are clearly defined in relation to confined space/s.

8.2.2.2. All other employees involved with confined space work shall be trained of their roles and responsibilities, hazards that they will be exposed too in a confined space and record shall be kept thereof.

8.3. Control measures

The **COP** should ensure that:

8.3.1. No person enters a confined space or work inside a confined space without implementing a confined space procedure in relation to any relevant confined space **risks**, that render that work safe and without **risk** to health.

8.3.2. While planning activities requiring a potential entry in a confined space, alternative and safer methods shall always be considered. Whenever management discretion exists, the key principles guiding the application of the hierarchy of control shall be used to scrutinize the **risk** assessment process and explore all alternatives to avoid the need of having personnel enter **confined spaces**.

8.3.3. The hierarchy of control is applied when considering the control of confined space hazards, first considering elimination, engineering controls and administrative controls before resorting to personal protective equipment.

8.3.4. In managing **risks** associated with a confined space, all relevant matters must be considered, including:

8.3.4.1. Whether the work can be carried out without the need to enter the confined space;

8.3.4.2. The nature of a confined space;

8.3.4.3. The hazards associated with any airborne contaminant or unsafe level of oxygen;

8.3.4.4. If the work has to be carried out in the confined space:

a) The range of methods by which the work can be carried out; and

b) A task specific confined space rescue plan is developed and authorised by the person responsible.

8.4. Permit system

The **COP** should ensure that:

8.4.1. No employer must allow or direct a worker to enter a confined space to carry out work unless a confined space entry **permit** for the work has been issued. The **permit** process must include the following elements:

8.4.1.1. A risk assessment, including the need for a competent person monitoring identified hazards, concentrations of flammable and explosive substances;

8.4.1.2. Specify the work to be performed in the confined space;

8.4.1.3. Isolation procedures for airborne pollutants and other energy sources;

8.4.1.4. The requirement for control measures;

8.4.1.5. The sign-in and sign-out of all persons entering the confined space;

8.4.1.6. Display of the permit;

8.4.1.7. Communication equipment;

8.4.1.8. Safety specification of equipment to be taken into the confined space;

8.4.1.9. Barricading;

8.4.1.10. Rescue plan and equipment;

8.4.1.11. Standby person/Control Attendant; and

8.4.1.12. A completion procedure.

8.5. Energy isolation and lockout

The COP should ensure that:

8.5.1. All energy sources are identified and physically isolated or locked out before entry or work in the confined space is allowed;

8.5.2. harmful materials and airborne pollutants are identified and confirmed 'not present' before entry;

8.5.3. **confined spaces** surfaces are cleared prior to entry to remove materials that may fall on, or create a harmful atmosphere for personnel; and

8.5.4. Only intrinsically safe equipment is used inside **confined spaces** where flammable or potentially explosive atmospheres are likely. In certain **confined spaces** (e.g. inside metal tanks) suitable precautions to prevent electric shock must include the use of extra low voltage equipment (typically less than 25 V) and, where necessary, residual current devices.

8.6. Atmosphere

The **COP** should ensure that:

8.6.1. The atmosphere inside a confined space is safe and without **risk** to health as far as reasonable practicable before entry into and work inside a confined space is allowed.

8.6.2. Measures are implemented to ensure that a health and safe atmosphere is maintained throughout the entire period of confined space work.

8.6.3. The concentration of any harmful hazard/s identified in the atmosphere of the confined space is less than 5% of its lower explosive limit (LEL), so far as is reasonably practicable. If it is not reasonably practicable, and the concentration of any harmful hazard/s identified in the atmosphere of the confined space:

a) Is equal to or greater than 5% but less than 10% of its LEL—the employer must ensure that any worker is immediately removed from the space unless a suitably calibrated, continuous-monitoring flammable gas detector is used in the confined space; or

b) Is equal to or greater than 10% of its LEL—the employer must ensure that any worker is immediately removed from the confined space.

8.6.4. Where a flammable atmosphere may exist in a confined space and there is a risk of fire and explosion, all ignition sources in the vicinity must be controlled.

8.7. Atmosphere testing and monitoring

The **COP** should ensure that:

8.7.1. The atmosphere inside a confined space is tested prior to entering for relevant harmful, flammable substances and oxygen content. The testing may require specialized instrumentation to checking all extremities of the confined space without physically getting into the confined space (telescopic rod, vacuum pump, probe/hose).

8.7.2. Atmospheric monitoring is conducted by a competent person.

8.7.3. Monitoring requirements, e.g. frequency, are detailed on the confined space entry **permit**.

8.7.4. Atmospheric monitoring results are recorded on the confined space entry **permit** and be available at the entry point to the confined space.

8.7.5. If atmospheric monitoring cannot confirm a safe environment prior to entry, then personnel must not enter the confined space until further controls are implemented and the working atmosphere becoming safe for entry and work.

8.7.6. Atmospheric testing equipment have a current and valid calibration certificate. A **bump test** should be conducted before each day's use in accordance with the manufacturer's instructions.

8.8. Ventilation

8.8.1. The COP should ensure that where the **risk** assessment has identified the need for ventilation, then this must be covered by a documented procedure approved by a 12.1 Appointee.

8.8.2. If the maintenance of a safe oxygen level in a confined space is dependent on mechanical ventilation, equipment shall:

a) Be continuously monitored while the confined space is occupied; and

b) Have the control (include remote power supply) clearly identified, tagged and manned to guard against unauthorised interference.

8.9. Standby person/control attendant

The **COP** should ensure that a standby person/control attendant is utilised for Confined Space work.

8.9.1. The standby person/control attendant must:

8.9.1.1. Be trained and competent to undertake standby duties;

8.9.1.2. Be present at the entry/exit point at all times while personnel are in the confined space;

8.9.1.3. Not engage in any other work activity or task;

8.9.1.4. Control and record the movement of personnel into and exiting the confined space;

8.9.1.5. Be able to communicate with personnel inside the confined space and with key/rescue personnel at all times;

8.9.1.6. Not enter the confined space, even in an emergency; and

8.9.1.7. Knowledgeable about the rescue plan.

8.10. Personal protective equipment

The COP should ensure that:

8.10.1. Where it is not reasonably practicable to ensure the confined space contains a safe oxygen level, or safe levels of airborne contaminants, the employer shall ensure that:

a) Every person required to enter the confined space is provided with:

(i) Appropriate respiratory protective equipment (RPE) which would render sufficient protection against the contaminant encountered.

(ii) Where there is the risk of asphyxiation, the entrants are provided with self-contained breathing apparatus. Space other personal protective equipment to protect them from any other health or safety hazards which may be encountered in the confined space.

b) Where employees are required to make use of full body harnesses when working inside a confined space, lifelines must be attached to the harnesses and should run back to a point outside the confined space.

8.11. Communication

The COP should ensure that:

8.11.1. The employer shall ensure that a system of work is provided that would:

8.11.2. Enable adequate and effective communication:

a) Between involved role players outside the confined space;

b) Between those inside the confined space;

c) Between those inside the confined space and those outside; and

d) To summon help in case of an emergency.

8.12. Entry and exit procedures

The **COP** should ensure that:

8.12.1. The employer shall ensure that a system of work is provided that would keep formal record of confined space entry and exit.

8.13. Signs and barricading

The **COP** should ensure that:

8.13.1. The employer shall ensure that before any work in relation to a confined space starts, a system of work is provided that would ensure that the space is properly barricaded and appropriate signage posted.

8.14. Employee training

The COP should ensure that:

8.14.1. All employees involved with any work or responsibility in relation to a confined space, directly and indirectly, are made conversant with all requirements in terms of safe entry and work inside the confined space.

8.14.2. The training provided to relevant workers must be role based and cover appropriate information:

a) Each person's specific roles and responsibilities in relation to the confined space;

b) The nature of all hazards associated with a confined space;

c) The need for, and appropriate use of, **risk** control measures;

d) The selection, use, fit, testing and storage of any personal protective equipment;

e) The contents of any relevant confined space entry p**ermit**, and

f) Emergency and rescue procedures.

8.15. Maintenance of control measures

The **COP** should ensure that:

8.15.1. The employer shall ensure that a system of work is provided for the inspection and maintenance of control measures as an integral part of the safe system of work. Maintenance may involve visual checks, inspections, testing of equipment, preventative maintenance and remedial work. Equipment that should be regularly inspected include:

a) Atmospheric testing and sampling equipment;

b) Personal protective equipment including respirators;

c) Ventilation equipment;

d) Safety harness and lines; and

e) emergency and rescue equipment.

8.16. Confined space rescue plan

The **COP** should ensure that:

8.16.1. A task specific Confined Space Rescue Plan are developed by competent personnel that identifies the methods by which a rescue will be initiated, and personnel will be extracted from the Confined Space in the event of an emergency.

8.16.2. The plan must include details of the specific equipment required to be in place prior to entry and the location / number of rescue personnel to be available.

8.16.3. Rescuers shall be trained, fit to carry out their task and capable of using any equipment provided for rescue, e.g. breathing apparatus, lifelines, fire-fighting equipment.

8.17. Fitness to work

The **COP** should ensure that:

8.17.1. Every employee required to enter or work in a confined space is assessed and declared medically fit by an occupational medical practitioner, specifically for work in a confined space. The occupational medical practitioner shall take into account all potential hazards such as physical, chemical and psychological stresses (not limited to) associated with work in a confined space.

8.18. Record keeping

The **COP** should ensure that any confined space related documents/records are kept at the mine and made readily available.

8.19. System review

The **COP** should ensure that:

8.19.1. The mine's confined space procedure, risk assessment, entry permit and control measures are review and if necessary revise at appropriate intervals:

a) When there is any reason to believe that entry and work is not safe;

b) Any facet of the system is not applicable anymore;

c) Control measures do not minimise the risk as far as is reasonably practicable;

d) Before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control;

e) If a new hazard or risk is identified;

f) If the results of consultation indicate that a review is necessary;

g) If a health and safety representative requests a review;

h) After an incident occurred, and

i) At least every 24 months.

PART D: IMPLEMENTATION

1. IMPLEMENTATION PLAN

1.1. The employer must prepare an implementation plan for its **COP** that makes provision for issues such as organizational structures, responsibilities of functionaries and programs and schedules for this **COP** that will enable proper implementation of the COP. (A summary of/and a reference to, a comprehensive implementation plan may be included).

1.2. Information may be graphically represented to facilitate easy interpretation of the data and to highlight trends for the purpose of **risk** assessment.

2. COMPLIANCE WITH THIS CODE OF PRACTICE

2.1. The employer must institute measures for monitoring and ensuring compliance with the **COP**.

3. ACCESS TO THE CODE OF PRACTICE AND RELATED DOCUMENTS

3.1. The employer must ensure that a complete **COP** and related documents are kept readily available at the mine for examination by any affected person.

3.2. A registered trade union with members at the mine or where there is no union, a health and safety representative on the mine, or if there is no health and safety representative, an employee representing the employees on the mine, must be provided with a copy on written request to the manager. A register must be kept of such persons or institutions with copies to facilitate updating of such copies.

3.3. The employer must ensure that all employees are fully conversant with those sections of the **COP** relevant to their respective areas of responsibility.

ANNEXURE 1: Roles and responsibilities

1. Only trained employees can work in permit-required spaces

1.1. Confined space tasks employees are trained to understand and safely perform the jobs of:

a) Authorized entrants

b) Attendants

c) Entry supervisors

2. Authorized entrants enter and work in permit-required spaces

2.1. They must be able to:

2.1.1. Identify the space's hazards and potential consequences, as well as signs and symptoms of exposure.

2.1.2. Properly use any necessary equipment to:

a) Test, monitor, and ventilate the atmosphere in the space.

b) Communicate with others working in and outside the space.

c) Protect themselves from exposure to dangerous levels of toxins, power, equipment, etc.

3. Attendants stand outside the space to monitor and protect authorized entrants.

They must be able to:

3.1. Remain outside the space during entry operations.

3.2. Maintain accurate count of authorized entrants in the space.

3.3. Identify the space's hazards, exposure consequences, and signs that authorized entrants have been exposed to hazards.

3.4. Stay in constant contact with workers in the space.

3.5. Monitor activities in and outside the space that could affect entrant safety.

3.6. Order entrants to evacuate the space immediately if:

3.6.1. Conditions in or outside the space endanger authorized entrants.

3.6.2. Workers in the space show signs of dangerous exposure.

3.6.3. The attendant can't safely and effectively perform all his or her duties:

a) Summon rescue or emergency services or perform permitted nonentry rescues.

b) Keep unauthorized persons away from the space and alert authorized entrants and entry supervisor if such people enter the permit space.

4. Entry supervisors take responsibility for permits and safety procedures

4.1. They:

4.1.1. Identify the space's hazards, consequences, and signs of exposure.

4.1.2. Make sure the entry **permit** is complete and that:

a) Listed tests and hazard removal/controls have been completed;

b) Listed procedures are followed;

c) Listed safety, communications, and rescue equipment is in place; and

d) Rescue services are available.

4.1.3. Sign the **permit** and allow entry into the space.

4.1.4. Cancel the entry and **permit** when operations are completed or the permit expires or a dangerous condition arises.

4.1.5. Remove unauthorized individuals from the **permit** area.