SAFETY RULES FOR CONTRACTORS

AIGA 015/05

Asia Industrial Gases Association

298 Tiong Bahru Road, #20-01 Central Plaza, Singapore 168730
Tel : +65 6276 0160 • Fax : +65 6274 9379
Internet : http://www.asia.org

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KEYWORDS

- CONTRACTOR
- SAFETY
- SAG

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ASIA INDUSTRIAL GASES ASSOCIATION
298 Tiong Bahru Road #20-01 Central Plaza Singapore 168730
Tel: +65 62760160 Fax: +65 62749379
Internet: http://www.asiaiga.org

Acknowledgement

This document is adopted from the European Industrial Gases Association, IGC document 118/04 : Safety Rules for Contractors. Acknowledgement and thanks are hereby given to EIGA for permission granted for the use of their document.

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1 Introduction

It is all AIGA member companies' HSE policy to ensure that each person (employees, contractors, visitors, . . .) at the site works in a safe and healthy environment and to maintain an incident-free site.

The principal health, safety and environmental objectives of AIGA members are to:

- Protect the health and well being of personnel during work site activities and ensure that safety is the prime consideration in their execution.
- Achieve zero fatalities, zero lost time injuries, zero restricted work and medical treatment injury cases.
- Ensure against contamination and disruption to the surrounding environment and work site.
- Meet or exceed requirements of environmental regulations.

2 Scope and purpose

2.1 Scope

This document is intended for use by the AIGA member companies to provide recommendations on how to plan and safely execute contracted work. Although many recommendations of this document may apply, it is not intended to cover service works and sub-contracted transportation works which may have to follow specific rules.

2.2 Purpose

The aim of AIGA member companies is to provide a work environment in which incidents cannot happen. Conditions which may cause accidents must be identified and corrected in a timely way in order to accomplish this aim. The purpose of this document is primarily preventive: it shall be the guide for AIGA member companies and contractors.

3 Definitions

Company: The company purchasing external contractor's service.

Contractor: Is an outside undertaking or person, called upon by a company to perform a task in the installation of the latter, whether in the form of contract work or service work.

Contract work: This is any service performed by a contractor under the terms of an order placed by a Company, specifying that, for a lump sum, a daily fee or according to price lists, clearly defined work must be performed by the personnel belonging to the contractor and under the latter's authority.

HSE: Abbreviation of Health, Safety and Environmental

Service work: This is any service performed by a contractor under the terms of an order placed by a company, specifying, for a determined or undetermined period, the availability of persons, whose qualification is determined by the company, to perform work in the company's installations under the company's authority, without this work being explicitly described in advance in the company's order.

Sub-contractor: Where the contractor, who has signed a contract with the company, in its turn signs a contract with another contractor, the latter becomes a secondary contractor, i.e. a sub-contractor.

Work area (or site): Means the geographic locations on, under, in, at or through which the work or a part of it is to be performed.

Work: Means all works and services required to be performed by contractor to fully comply with its contract.

Accident/Incident: For the purposes of this guide the words accident and incident are synonymous. Any time accident is used in the text it also includes incident and vice versa. An accident is an unplanned event, which has caused (or could have caused) loss in the form of injury, illness, environmental or property damage, or business interruption.

Hazard: A potential source of harm.
Risk: The chance or probability of exposure to a hazard, combined with the consequences of such exposure
Risk assessment: A structured and systematic procedure for identifying hazards, evaluating risks and prioritising decisions in order to reduce risks to a tolerable level

Safety: Freedom from unacceptable risk of harm.

4 Selection of contractor

The company decides for itself, which contractor is the most competent for the specific work. Works with limited or low HSE risks may require less extensive supervision and following up than those with high HSE risk. Other factors, which should be taken into account when selecting a contractor, include the criticality of the work and possible experience of contractors in earlier contracts, qualification, training, HSE performance, HSE certification, etc,

It is the company responsibility to evaluate the ability of the contractor to perform the work and then to adjust the HSE requirement accordingly. As well, the company is responsible for defining which requirements included in this document are relevant for the execution of the contract.

The company shall ensure that all local HSE requirements regarding the selection of contractors are applied.

4.1 Contract work risk level

It is the company responsibility to evaluate the level of risk to people, property, process or environment of the work the contractor is asked to perform.

As an example, high risk work could be:
- Turnkey projects
- Major construction
- Demolition
- Excavation
- Non routine maintenance
- Elevated work
- Confined space work
- Work deemed to be of sufficiently high risk to warrant imposition of these controls to ensure safe management of the work

Similarly, low risk work could be:
- Security
- Garden services
- Window cleaning
- Minor painting
- Plumbing/building repairs and similar minor civil engineering work
- Servicing of office equipment and other office works
- Other similar activities with low risk potential

When evaluating the level of risk of the contracted work, company management may also keep in mind the number of workers, activity, work duration, surroundings and overall activities, etc.

Also refer to section 6.

4.2 Contractual agreements

The company manager (see 5.1) is responsible for ensuring the contractual agreement between the company and the contractor covering the work is appropriate and proportional to the scope of work and the level of risk.

For High Risk works the company management should develop a formal contract process including:

- Invitation to Tender (e.g. covering requirements for risk assessments and method statements for the work, legislative compliance, work carried out under a safe system of work i.e. Permit to Work, contractor induction at company site, Safety-Health-Environmental Plan)
- Tender Review Process (company to carry out a suitable contractor selection and evaluation)
- Contractor Safety, Health and Environmental Review (review safety, health and environmental questionnaire completed by the contractor)
- Contractor Insurance Questionnaire (review contractors' public/product liability insurance details) safety,
- Contractor Checklist (to be completed by contractor and returned to company for review)
- Contractor Post-work Review (at the completion of the contract to be completed by the company to record the performance of the contractor)
- General Terms of Contract.

For Low Risk works, the company management should develop general terms of contract for minor works and pre-qualify contractors to develop a pool of pre-authorised contractors for the type of work falling within the scope of low risk work.

4.3 Sub-contractor selection

Contractors may employ or use sub-contractors. For each, the contractor shall request written permission of the company. When such permission is granted it shall be on the express understanding that the contractor is also responsible for ensuring sub-contractor's compliance with the terms of contract.

5 Company & contractor responsibilities

5.1 Company

Company manager

For the purpose of this document, the Company Manager is the company's employee who has been delegated by the senior management of the company to be responsible for the work to be done (e.g. a plant manager, a site manager, a project manager, etc.).

The overall responsibilities of the company manager are to ensure that the HSE objectives of the company are met on all work carried out on the site including contracted works.

The company manager may delegate part of his HSE responsibilities to an HSE company representative to co-ordinate HSE activities within the site facility.

Company HSE representative

For all relevant HSE matters, the Company HSE representative is the contact and cooperates with the staff of the different contractors. This person ensures that deputies are appointed in the event that this person has to leave the site. Depending on the level of risk, the responsibilities of the HSE Representative may include all or some of the following:

- Monitoring that the contracted work is carried out according to the procedures defined and complies with health, environment and safety requirements,
- Monitoring that all supervisors of the company and contractors present on the site have received good information about objectives, strategies and plans and the adequate training,
- Promoting measures, which can prevent incidents and injuries for contractors' employees,

- Stopping work of any contractor's employee which is not executed in accordance with HSE and/or work permit and/or a safe manner,
- Reviewing and reporting the safety items with the contractors,
- Tours and inspects the site with a periodicity in accordance with the risk level,
- In addition, depending on local legal requirements, maintaining the HSE files.

5.2 Contractor manager

For the purpose of this document, the Contractor Manager is the contractor's employee who has received responsibility and authority delegation from its senior management for the work to be done (e.g. a construction manager, a project or contract manager, etc.).

The Contractor Manager responsibilities are to ensure that the HSE objectives of the ғ company are met and that the contracted work is carried out in accordance with the company's HSE requirements. This manager has the overall responsibility of all work carried out in the scope of the contract.

The responsibilities of the Contractor Manager may include all or some of the following:

- Ensuring the work is done according to the procedures defined and complies with the company HSE requirements,
- Making sure the contractor HSE policy conforms to company safety regulations already in force,
- Ensuring all contractor and sub-contractors supervisors and employees on the site have received proper information and adequate training regarding risks, hazards, safety measures and procedures on the site,
- When required, reports HSE matters such as new risk identification, incidents or near misses to the Company HSE Representative,
- Acts in accordance with approved safety procedures/regulations for safety and property protection.
- Stops sub-contractors employees' work which is not executed in accordance with company or contractor HSE requirements, procedures and/or work permit and/or a safe manner.
- Reviews with the company representative the safety of the work activities
- Prepares safety reports including up to date safety statistics
- Ensures that reports are presented in accordance with the procedures for all incidents and injuries.
- Cooperates with the staff of other contractors and its own sub-contractors employees in all relevant HSE matters.
- Reviewing and reporting the safety items with the sub-contractors,
- Tours and inspects the site with a periodicity in accordance with the risk level,
- In addition, depending on local legal requirements, the contractor manager maintains the HSE files on the contracted work,
- Must nominate a deputy in case the contractor manager has to leave the site.

On the request of the company, the Contractor Manager will designate an HSE Contractor Representative to whom this person may delegate part of the HSE responsibilities to coordinate HSE matters on the contracted work.

5.3 Sub-contractors

Sub-Contractors shall follow the same HSE rules as required for the first rank contractor. These rules shall be part of the contractual specifications placed by the contractor. The contractors and sub-contractors shall provide evidence that adequate resources will be available to implement the HSE rules correctly.

5.4 Suppliers

Equipment and machinery suppliers who are required to deliver, erect, dismantle or maintain these equipments will conform to same rules as for sub-contractors. They will provide sufficient operation information and drawings to meet company HSE requirements.

6 Risk management

Also refer to section 4.1.

For high-risk work activities under its control, the contractor shall be required to produce a detailed document of risk assessment of the work activities. The work activities risk assessment should be conducted with a team to include the contractor's or sub-contractor's personnel, contractor HSE representative and company representatives, dependent on the level of risk and complexity.

The work activities risk assessment shall be reviewed and approved by the company manager or their delegate prior to starting the activity.

Risk assessment should include the following:

- Description of the work activity,
- Identification of hazards and potential causes of accidents associated with the activities,
- Health and environmental issues (noise, light, smell, vibration, wastewater, waste, emission to air)
- Recommended procedures, precautions or controls required to mitigate the hazards,
- Detailed time schedule per trade and activities,
- Safety and environmental protection equipment to be used,
- Personnel protective equipment required,
- Company/contractor employee training,
- Work permit as needed.

7 Communication among parties

7.1 HSE Company/Contractors meetings

On award of the contract an HSE kick-off meeting will be held and attended by Company, the contractor and sub-contractors representatives and any other necessary party.
Agenda items should include:

- Nature and scope of work,
- Company and contractor's HSE plans,
- Mutual responsibilities,
- Security,
- Working procedures,
- First aid and emergency procedures
- Audits, reviews, inspections,
- Incident/accident reporting,
- Training.

Then, HSE meetings shall be organised among all parties involved to review HSE matters with a periodicity depending on the risk level appreciation of the work being contracted.

The goal of these meetings is to review HSE situation, to have a critical review of HSE matters and to take all necessary actions to improve HSE on site. Formal minutes of meetings should be issued by company HSE representative and distributed to all concerned parties. The number and names of workers in attendance shall be recorded.

As an example, the agenda for the HSE meeting could be organised around the following guidelines:

- Minutes of the last meeting,
- Contractor‘s HSE report (See note 1 below)

- HSE matters arising,
- Accidents, incidents and near misses, including lessons learned
- HSE messages and campaigns
- Forthcoming activities and anticipated concerns,
- Feedback from personnel,
- Follow-up on HSE actions items.

Note 1: *Depending on the contract requirements, the contractor shall prepare a monthly HSE report. This report shall be submitted to the company representative. This report shall summarize HSE activities and may include:*

- *Survey of all (near-miss) incidents and reported unsafe acts or hazardous situations,*
- *Report from contractors' HSE meetings,*
- *Audit and inspection reports*
- *Any significant HSE event*
- *In addition, the following monthly data shall be provided:*
  - *Total hours worked by contractor and subcontractors,*
  - *Near Misses,*
  - *First aid,*
  - *Medical treatment,*
  - *Loss time accidents*
  - *Fatalities*
  - *Fires*
  - *Spills*
  - *Motor vehicle accidents*
  - *HSE training completed*

7.2 HSE Contractors' meetings

According to the size of the contracted work and to the level of risk involved, HSE meetings may be organised by the contractor as follows.

Daily briefing meetings

Daily briefing meetings shall be given at start of each shift. The HSE contractor representative shall conduct these, in a language understood by the workforce. These briefings shall address the application of HSE rules and procedures to the hazards of current work.

HSE Contractor/Sub-contractors meetings

The contractor and sub-contractor workers' representatives shall attend these HSE meetings. As per example, topics include:

- Statistics and results
- Fire prevention
- Incident investigation
- Scaffoldings
- Housekeeping
- Protection of the environment, etc.…

The feedback from the contractor's workers needs to be developed through their supervision and management to the company.

Any advice on HSE issues, generated by personnel should be tabled at the periodic HSE review meeting with the company. The conclusion of these discussions should be reported back to the work force.

7.3 HSE communication to workers

As necessary, in order to promote safety awareness, posters and notices may be posted in key locations around the site. HSE bulletins should be issued to inform employees about particular issues and about progress in achieving objectives and results.

8 Work Permit Procedure

8.1 Permit for safe work

Depending on the appreciation of the level of risk during the contracted work activities, a work permit system will be applied by the company according to its standard procedures.

The work permit system shall be implemented according to AIGA 011/04 “Work Permit Systems”. It must be signed by the contractor manager or its HSE representative and it is the contractor’s responsibility to communicate to its employees and sub-contractors employees the hazards, and safety measures that have to be put in place according to the work permit.

The work permit(s) will be displayed at the work site in a designated location.

Different kinds of work permits may be issued such as General work permit, Hot work permit, Confined space entry, Electrical work, Excavation, etc. See Appendix 1 for additional information.

Further recommendations are available in AIGA documents 008/04 Hazards of inert gases and 005/04 Fire hazards of oxygen and oxygen enriched atmospheres.

8.2 Lock out/Tag out procedures

Whenever necessary, a lock out / tag out procedure shall be implemented in order to assist in protecting workers against injury that may occur due to the accidental start up of or release of energy from equipment that are being worked upon (e.g. pressure, springs, heat and electricity).

See Appendix 1 for further information.

9 Other HSE Guidelines

9.1 Protective equipment

Specific personal protective equipment (PPE) including clothing might be required during work and should be defined after the full risk analysis of the work to be performed.

For further information, please refer to Appendix 2.

9.2 Cranes and lifting equipment

All cranes and lifting equipment, whether owned by contractor or hired, must carry relevant test certificates and thorough examination reports, together with the manufacturer’s handbook. This documentation must be submitted to the company for inspection before use (or shipment to site).

Only qualified operators and trained riggers, authorised by the contractor, shall be allowed to operate cranes. The contractor must be able to prove, to the satisfaction of the company, the competence of its employees to operate such equipment prior to its use. Operators must be qualified for each make and model of crane operated.

Crane operators or other competent persons must carry out daily inspections and enter these in the crane register. In addition contractor will implement a regular inspection and maintenance program to ensure that all components of the lifting devices are in good conditions.

For further information, please refer to Appendix 3.

9.3 Portable electrical equipment and hand tools

Tools need to be kept in good condition and used for their intended purpose according to manufacturer’s recommendations.

For further information, please refer to Appendix 4.

9.4 Material handling

The contractor shall make available mechanical equipment as necessary for the purpose of the contracted work in preference to manual handling.

For further information, please refer to Appendix 5.

9.5 Equipment for elevated works

Ladders, scaffolds and barriers, will be made available by the contractor whenever necessary.

For further information, please refer to Appendix 6.

9.6 Welding and cutting

For all welding, cutting and grinding activities, the contractor will only use competent and authorised welders and all welding activities will be subject to a hot work permit.

For further information, please refer to Appendix 7.

9.7 Hazardous substances

Hazardous substances must not be used where a practicable safe alternative exists. All hazardous substances purchased for site whether by contractors or subcontractors shall be shipped with a Safety Data Sheet. All SDS shall be collected by the contractor's HSE representative and be freely available for inspection by any worker.

All hazardous substances must be stored in accordance with the manufacturer's instructions and employees using those substances must be trained in their safe use. Combustible material must be kept away from ignition sources.

The contractor shall implement a safe system of work and provide all relevant PPE to ensure that the risks associated with the use, handling, storage and disposal of such substances are minimised. He/she will ensure that any person handling such substances has received instructions regarding the hazards, the system of work to be adopted and the actions required in the event of spillage.

The contractor's HSE instructions to workers may include the identification of risks, HSE precautions, spillage, waste and emission control procedures.

In addition, any work involving the usage of X-ray equipment shall be executed in strict accordance with legal regulations and by qualified people. Warning signs and barricades will be used when required.

9.8 Emergency procedures

Emergency site procedures shall be communicated to the contractor's manager or HSE Representative at the start of the work (e.g. during the first HSE meeting). Prior to starting work, the Company shall ensure that all contractors' employees are fully aware of the company emergency procedures (refer also to section 11).

<u>Fire fighting and Protection</u>

It is the responsibility of the contractor to train its employees (and/or sub-contractor's employees) in fire prevention.

Depending on the contract terms, it will be also the responsibility of the contractor to provide appropriate fire fighting equipment (e.g. fire extinguishers, etc.) on the work site. Tags must be used to indicate condition and date of inspection of fire extinguishers and damaged or malfunctioning or empty fire extinguishers shall be replaced immediately.

After raising the alarm, all fires shall be immediately reported to the company manager (or his/her representative on duty), and to the contractor and Company HSE Representatives.

Gas Leak mitigation

Any contractor's employee discovering a leak (e.g. when using a portable detector) must alert all personnel in the immediate vicinity and shall immediately leave the work area and go to a designated safe location. The leak must be reported immediately to the company manager and/or the company HSE representative.

9.9 Housekeeping

The contractor shall make sure workers adhere to housekeeping requirements of the company site. See Appendix 8 for further information.

9.10 Waste

Proper waste management is an environmental issue. The generation of waste has to be avoided or minimized. If waste is generated the contractor has to take all practical steps to ensure that all wastes are properly, safely and legally managed from the point at which they are created to the point of disposal.

General waste

Disposal of general waste generated during contractor's work at site is not allowed at the plant site.
If waste disposal is part of the contract or accepted by the plant manager/coordinator it must be advised where the disposal should be made, preferably supervised by the plant manager/coordinator.

Hazardous waste

Hazardous waste has the potential to cause air, soil or groundwater pollution if not handled or disposed of properly.

9.11 Health and fitness for duty

The contractor is responsible for defining and implementing health and fitness requirements for each type of duty (e.g. avoiding vertigo in elevated works and claustrophobia in confined spaces, etc.).

9.12 First Aid service

Depending on contract terms, the contractor will provide the work area with a first aid service for contractor's personnel. Where such service is provided, only qualified personnel shall be employed.

In all cases, the company first aid service shall remain available.

All first aid treatment will be recorded.

9.13 Workers welfare

Depending on company site and on the contracted work to be done, in some instances, sanitary and mess facilities might have to be provided by the contractor. Such facilities shall be in line with local legislation. Refer to Appendix 9 for further information.

9.14 Vehicular traffic

Vehicular traffic should be kept at a minimum.

On the company site, the local road traffic laws are applicable and other specific site rules may apply (see Appendix 10 for further information) and it is the contractor's responsibility to ensure that they are observed.

9.15 Miscellaneous regulations and rules of conduct

All contractors' employees are required to conform to the rules of the company site.

10 Security procedures

The company will communicate site security and access rules to the contractor. It is the responsibility of contractor's manager to ensure its employees, sub-contractor's employees and visitors comply with these rules.

A complete list of all personnel present on site must be available and kept updated.

Company security personnel are authorised to conduct security inspections at all times, including search of personnel, toolboxes, vehicles etc. as considered necessary.

11 Training

Depending on the level of risk and/or complexity of the contracted work, the contractor is responsible for contracted work HSE training for all its personnel working on the job site. The contractor is also responsible for identification of any additional training requirements in order to maintain required competency levels. The contractor shall produce an HSE plan identifying the HSE training requirements of contracted work and implementation of the plan.

All contractor and sub-contractor's personnel will be required to attend a HSE induction training carried out by a company representative prior to authorisation to enter the construction site and/or commencing work. As a minimum, this training should include a presentation of the site hazards, safety and security rules and emergency procedures. Depending on the appreciation of the level of risk for the contracted work, other relevant HSE subjects will be presented (see Appendix 11 for further information).

A training register of all personnel who have been inducted, received additional training or re-training shall be maintained by contractor.

12 Inspections and audits

With a frequency defined by the company, it is the responsibility of the contractor's manager to organise regular audits and/or inspections of the work to be supported by checklists and inspection report forms. Any non-compliance shall be rectified as soon as practicable. An investigation may be instituted, depending on the nature and/or frequency of occurrence of the non-compliance

The basic purpose of the audits is to assess the reliability, efficiency and effectiveness of the various components of the HSE management system of the contractor.

The contractor shall report a summary of all inspections to the company manager. This report will include the principal unsafe conditions or acts which were observed and the corrections made or recommended.

Depending on the requirements of the contract, documentation shall be kept by the contractor HSE Representative for review on request by the Company HSE Representative and for auditing.

See Appendix 12 for further information.

The company‘s management reserves the right to make audits and/or inspections, and review the contractor's activity in this field at any time.

13 Reporting / Investigation of accidents and incidents

All incidents shall be reported immediately to the company HSE representative and be recorded by the contractor HSE representative. They may include:

- Fatalities
- Lost time accidents
- Recordable work injuries
- Vehicle accidents
- Equipment failure
- Fires
- Environmental
- Security violations
- Near misses and other recordable incidents
- Unsafe or hazardous situations

The primary objective of these investigations is to determine root causes and to develop measures to prevent recurrence, therefore all incidents shall be investigated as per the company standard procedures and then be discussed during the periodic safety meeting. Incidents requiring more detailed investigations shall be performed by a team of experienced individuals including company and contractor representatives.

14 Bibliography

- AIGA 005/04 "Fire hazards of oxygen and oxygen enriched atmospheres"
- AIGA 011/04 "Work permit systems"
- AIGA 008/04 "Hazards of inert gases"
- AIGA 013/05 "Incident/accident investigation and analysis"
- AIGA 006/04 "Good environmental management practices for the industrial gas industry"

All documents available from AIGA's website: www.asiaiga.org

APPENDIX 1: Work Permit

Hot work permit

A Hot Work Permit is required for any activities that introduce a potential ignition source of any kind to the work site, including but not limited to activities such as:

- Welding
- Cutting
- Brazing
- Burning
- Grit-blasting
- Use of electrical power tools (such as drill, sander, grinder)
- Use of matches or lighters (smoking should not be allowed on site)
- Driving vehicles into an area with the risk of explosive atmosphere

This permit shall be issued and signed daily. All hot work activities require the use of trained fire watch personnel.

Lock out / Tag out

Lock out is the placement of a lockout device on an energy-insulating device, in accordance with the local applicable regulation, insuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed. Examples of lockout devices include, but are not limited to the following: Keyed locks, bolted slip blinds, blank flanges, locking hasps in which a keyed lock may be placed.

- All lock out devices shall be identified by means of an information tags, and shall be used exclusively for energy control purposes. They shall be substantial enough to prevent removal with the use of excessive force.
- Each set of locks, operations, mechanical and electrical locks shall be keyed different.
- The authorised person placing a lockout device shall be identified by means of an information tag.
- Tag out is tag that are securely attached to an energy isolating device to indicate that the device may not be activated and that the equipment may not be operated.
- Tag out devices and their means of attachment shall be designed to prevent accidental removal.
- Tag out shall be weather resistant.
- The tags shall be approved and in accordance with local applicable regulation.

Excavation permit

An Excavation permit is required prior to any and all excavation (including hand digging) to be performed on site.

- The Work Permit shall be approved by the company prior to start of the work.
- Barricading and sign posting of all excavation work is mandatory.
- No one is permitted in an excavation while equipment is working near the edge.
- Excavations deeper than 1.5 meter must be provided with a ladder for access.
- All dirt must be piled at least 1.5 metres or the depth of excavation back from the excavation edge whichever is the greater.
- Excavations must be inspected after the rain. Measures should be taken to prevent flooding.

Entry into Confined Spaces

The contractor shall not enter or commence work in any excavation, tank, vessel, pipe or chamber or other confined space, until a valid permit to work has been issued by the company

Typical examples of a confined space are an open pipeline, or any vessel including towers, tanks, drums, etc.

No person shall enter any confined space before a work permit has been issued and the stated requirements adhered to.

The main requirements to be adhered to prior to entering a confined space are:

- Atmospheric test must be carried out immediately before work commences
- Regular atmosphere tests must be carried out and recorded
- Rescue equipment must be available at the scene where work is to be carried out
- A standby man must be available for the duration of the work at the entrance to the confined space to assist those working and to raise the alarm in event of emergency.
- The work permit shall be displayed at the entrance into a confined space.

APPENDIX 2: Personal Protective Equipment

Additional safety measures to be included whenever necessary:

- All employees have to familiarise themselves with where and how safety equipment is to be used and contractor shall be responsible to train his/her employees on the correct use and maintenance of personal protective equipment
- Defined areas where hard hat, safety shoes, glasses, protective clothes are required
- Eye and face protective systems (e.g. full face shield over spectacles for grinding and cutting activities) must be used for all operations where there is potential eye or face injury.
- Suitable and approved hearing protection will be provided by contractors and worn by all employees engaged in activities where the noise level equals or exceeds first action level of 85 dB (A). The EU-Noise-Directive 2003/10/EC will lower this limit to 80 dB (A) as of 2005. (linked to framework Directive 89/391/EC).
- The wearing of short trousers and shirts without sleeves will not be permitted.
- Where there is potential for inhalation of toxic vapours or gases by any employees, the contractor management will provide adequate respiratory protection.
- Use of safety harnesses is mandatory for any work being carried out as per local regulation above ground level unless work is being carried out from a safe work platform or where alternative fall protection is provided.
- The contractor's management to provide suitable hand protection for all employees engaged in activities where injuries to their hands can occur.
- The contractor's employees shall not perform work until proper protective equipment is worn.

The following non-exhaustive list presents required safety equipment to be worn and/or used during work, when necessary, inside specific designated areas.

- Safety Glasses
- Safety shoes
- Helmet
- Noise protection
- Breathing apparatus
- Fireproof clothes
- Safety harness
- Appropriate Walkie-Talkie
- Escape mask
- Portable O2 gas and/or flammable and/or toxic gas detector
- Appropriate protection when chemicals handling
- Extinguisher
- Safety shower
- Eye wash

APPENDIX 3: Cranes and Lifting Equipment

Additional safety measures to be included whenever necessary:

Crane

- Cranes must not be used to hoist people for elevated work
- The operator must inspect the machine including safety devices before starting.
- The operator has full responsibility for the safety of a lift and may not make a lift until safety is assured.
- The operator must understand and be able to determine the crane's capacity.
- A copy of the load chart must be in the crane whenever it is being operated.
- Accessible areas within the swing radius of the rotating superstructure counter weight of a crane shall be barricaded to prevent people from being struck or crushed by counter weight.
- The load shall not be swung over other people and no individuals shall position themselves under a load.
- The load must be controlled from the ground by means of taglines.
- Crane outriggers must be levelled and fully extended and on solid compacted soil when making a lift. Outriggers should be supported if necessary.
- No part of the crane, load, hoist (load and boom) lines, boom and tag line shall come within 5 metres of energised electrical line.
- Crane contractors shall be approved by company

Hooks, shackles, beam lamps and slings

- Only one eye in a hook. Use a shackle to hold two or more eyes.
- All hooks must have a safety latch or be mouthed (steel erection and shake-out hooks are exceptions).
- Always place a load in the centre of a hook and never on the edge.
- Get approval from your supervisor before rigging from any structural member to ensure that it will support the load raised.
- Never use plate grips, tongs, pipe clamps etc. as substitutes for beam clamps.
- Hooks, shackles and beam should be inspected and approved before use. Do not exceed the capacity marked on the equipment.

Chain hoists

- A chain hoist must be used within its rated capacity.
- Make sure that the capacity is marked on the equipment.
- Chain hoists are designed so that one person can operate the hand chain to lift the maximum load for the chain hoist.
- Do not leave an unsecured and unattended load hanging on a chain hoist.
- Do not stand or have any part of the body below a load suspended on a chain hoist.
- Do not wrap the load chain around the load to be lifted.
- Every chain hoist should be inspected before making a lift. Your visual check should include the hooks for any irregularities, the chain for wear or damage from abusive treatment.
- Use softeners, where possible, to obtain a "bite" on material rigged.

Ropes

- Wire: inspect for frays, kinks, broken wires and worn spots before using.
- Fibre: inspect for excessive broken fibres, worn out and deteriorated inner and outer strands before using.

APPENDIX 4: Portable Electrical Equipment and Hand Tools

Additional safety measures to be included whenever necessary:

- People should be trained in the safe use of tools and equipment applicable to their trade.
- Tools or guards are not to be altered. "Home-made" tools are not permitted.
- Personal tools are subject to inspection at any time.
- Tools subject to impact (chisels, star drills) tend to "mushroom". Keep them dressed to avoid flying fragments. Use tool holders.
- Don't force tools beyond their capacity or use "cheaters" to increase their capacity.
- Portable Electrical equipment and tools must be "double insulated" or earthed.
- Trigger locks, on all power tools shall be removed.
- Air supply to pneumatic tools must be shut off and "bled down" before disconnecting.
- Only qualified and authorised personnel may execute work on electrical equipment and installations.

APPENDIX 5: Material Handling

Additional safety measures to be included whenever necessary:

When handling materials, workers shall strictly use the mechanical equipment available on the site. They should further more observe the following recommendations:

- Consider your back, lift with the legs, keep back straight; do not use your back muscles.
- Use gloves when handling sharp or abrasive objects or where splinters are possible.
- Know the weight of objects to be handled. If weight is excessive or the size of the object is cumbersome, get help or consult your supervisor.
- Get rigging instruction from your supervisor before beginning.
- Know the capacity of the handling device (crane, forklift) that you intend to use.
- Use tag lines to control loads.

APPENDIX 6: Equipment for Elevated Work

Additional safety measures to be included whenever necessary:

Ladders

- Ladders are to be soundly constructed and maintained.
- Ladders are to be inspected before and after use and any observed defects must be reported to our supervisor for repair or disposal.
- Ladders must be fitted using non-slip feet, the frame should be firm and in a good state or repair.
- Non-conductive ladders must be used for electrical work.
- While ascending or descending a ladder, do not carry anything that will prevent you holding on with both hands.
- Wooden ladders are allowed on the site if approved by the safety engineer.
- No ladder must be worked on without it being secured or held in position.

Scaffolds

- Each scaffold shall be inspected and "tagged" before it is released for use.
- All scaffolds must be erected by a competent worker authorised by the contractor.
- Rolling and tower scaffolds with a height greater than three times the minimum base dimension shall be guided or tied-off while being used.
- Rolling scaffolds shall be free of men, material and equipment before being moved.
- All hydraulic platforms shall only be operated by a trained operator.
- Scaffolds structures may not be used to support any load (e.g. pipe spools, structural steel, concrete form work etc.) unless the safety representative has been consulted and the necessary modifications carried out and approved by him/her.

Barriers

- Protective barricades are required around excavations, holes or openings in floor or roof areas, edges of roofs and elevated platforms, around certain types of overhead work and wherever necessary to warn people against falling in, though or off. Protective barricades must be of a physical nature.
- Protective barricades may be built of timber, metal poles, cable and wood post and chain.
- Flashing / blinking lights must be used on roadblocks after dark

APPENDIX 7: Welding and Cutting

Additional safety measures to be included whenever necessary:

- Only competent and authorised workers may use welding and cutting equipment.
- Welders shall check their equipment before use for:
  - Damage insulation on welding leads, electrode holders and connections.
  - Faulty earth clamps gauges, pressure reducers, flashback arrestors and torches.
  - Worn or damaged hoses.
- Fire extinguishers shall be available at the welding/cutting site.
- All workers engaged in welding and cutting activities shall be dressed with the appropriate protective clothing and equipments
- A flashback arrestor shall be fitted on oxy/fuel system immediately downstream of the pressure regulator and a non-return valve shall be fitted in each gas supply system at the torch.
- Compressed gas cylinders shall not be taken into confined spaces or buildings or placed on scaffolds.
- Valves of compressed gas cylinders shall always be closed and secured by protection caps except when in use.
- Compressed gas cylinders shall always be secured to prevent falling, and shall be protected from being struck by moving equipment and falling objects.
- Oxygen cylinders when in storage shall be separated from fuel gas cylinders or combustible material in accordance with local rules or regulations.
- Handle all gas cylinders with care, as follows:
  - Lift to upper levels with certified cages only.
  - Do not strike an arc on cylinders.
  - Do not use cylinders as rollers.
  - Do not lift with slings or by protective cap.

APPENDIX 8: Housekeeping

Topics to be included whenever necessary:

- Work locations, equipment and buildings are to be kept clean and orderly at all times.
- All work areas are to be free of dangerous projections or obstructions, and are to be maintained free of rubbish, oil, grease and water.
- All toilet facilities, including hand basins should be maintained in a clean and hygienic condition.
- No food should be kept in work areas.
- Flammable waste must be stored in metal containers located at a safe distance from any possible ignition source.
- Leave your place of work tidy when your work is finished so that nobody will run the chance of falling over something.
- For that matter, do not be disorderly during your work either. Take care in what you do.
- All stacking of material must be made on ground that is level and all stacks must be neat and stable.
- All circular objects must be suitably locked to prevent them from rolling.
- To protect the environment and save expenses:
    - Do not allow products to run off into the soil, but collect them or have them suctioned of.
    - Spillage of oil, grease, etc. must be cleaned up as soon as it is practicable.
    - All scrap or refuse bins must be clearly marked as to the type of scrap or refuse that must be deposited in them.
    - Scrap and refuse bins must be removed by the contractor on a regular basis.
    - Clean up any leakages and prevent the spread of bad smells.
    - Ensure that oil or chemical products do not leak away into soil, cooling water or sewer system. This can cause difficulties for subsequent water treatment.
    - Pay attention to household refuse,
    - Metal or chemical waste should be deposited separately in containers.
- Hazardous substances have to be handled and used in accordance with legal requirements and good practice.
- Hazardous waste has to be properly, safely and legally managed from the point of creation to the point of final disposal.

APPENDIX 9: Welfare Facilities

Facilities to be included whenever necessary:

- Sufficient toilet facilities, showers and wash hand basins shall be provided and cleaned on a daily basis.
- Proper ventilation/ air conditioning shall be provided.
- All toilets or other sanitary facilities shall be provided with adequate lighting and heating. They shall be kept clean and in working order.
- The floor, walls and ceiling of sanitary conveniences, closets, lavatories, urinals, sinks and showers shall be of a finish that can be easily cleaned.
- All sanitary conveniences and washrooms shall have window openings to the outside air, or provided with ventilation systems, which change the air at least six times per hour.
- Showers and lavatories shall be provided with an adequate supply of water, the floor of the shower shall have adequate drainage. Hot and cold water to all washbasins and showers. Soap shall be available in all communal sanitary conveniences.
- A supply of water for drinking and, where necessary, access to shade to prevent potential heat stress.
- Adequate changing/drying facilities for workers
- Mess room with sufficient seating capacity.

APPENDIX 10: Vehicles and Traffic

Topics to be included whenever necessary:

- It is not permitted to block roads with vehicles, equipment or work operations without special consent.
- Driving elsewhere than on the Site roads is not permitted.
- Overtaking is not allowed.
- Parking is only permitted in approved parking locations.
- Impeding access to fire hydrants is not permitted.
- All vehicles must have a gate pass to access on site.
- Always take into consideration that you are on a work site where unexpected traffic situations can occur.
- No person is allowed to drive a motor vehicle on the site unless he/she is in possession of a valid driver's license and valid full insurance for the vehicle in question.
- Observe Company site speed limits on all roads.
- Look for the Company traffic signs.
- The wearing of seat belts is compulsory whilst driving on the site.
- Employees walking on the road must do so facing the oncoming traffic towards them where possible.
- Personnel shall only ride in vehicles when sitting on seats designed for that purpose
- Drivers shall give pedestrians the right of way.

APPENDIX 11: Training

HSE induction

The following subjects shall be covered whenever necessary:

- Scope of work
- Hazards
- Facility alarms, evacuation procedure and meeting points
- Smoking
- Reporting of accidents
- First aid facilities
- Fire prevention and suppression
- Housekeeping
- Ergonomics
- Auditing
- Drug and alcohol policy
- Incident & injury culture
- Company site rules and procedures
- Driving on site
- Protective clothing, minimum site requirements
- Noise
- Radiography
- Permit to work system
- Scaffolding and tagging
- Manual handling
- Hot work including gas cylinder storage and use, spark containment
- Respiratory protection
- Electrical equipment
- Working at heights, safety harnesses, lifelines
- Hazardous materials, contaminated land
- Lifting and heavy lifting
- Confined spaces
- Site Security
- Environmental issues
- Local issues
- Health issues

Supervision induction

In addition to basic HSE induction, all supervisions shall attend a further induction. Subjects covered in this induction shall be:

- Accident/incident investigations
- HSE Inspection
- HSE Plan
- Job safety analysis – method statement
- Conducting briefing meetings
- Permit to work system procedures
- Incentives

APPENDIX 12: Inspections and Audits

Inspections

The inspections may include:

- Work permits
- Personnel safety equipment
- Tools
- Safe working methods
- Safety Data Sheets
- Procedures
- Safety communications and notices
- Equipment
- Order and tidiness

Audits

The key elements to be audited could be:

- HSE Policy
- Work organisation
- HSE plan and its implementation on the work site
- HSE measuring system
- Statistics
- Work risk assessments, corrective actions and their follow-up
- Minutes and list of attendance of all HSE meetings
- Inspection and Audit reports
- Accident/incident investigation results, corrective actions and their follow-up
- Employee training records
- Equipment certification documentation,