BGIS UK & Europe
Sub-contractor
Confined Space, Safety Rule Book

This document has been put together by the BGIS UK & Europe QHSE Team to identify the minimum Qualifications, standards and behaviours that will be expected by BGIS, from Sub-contractors who will be undertaking confined space entry into any confined space that is under the control of BGIS UK & Europe.

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Contents

1. Glossary of Abbreviations

ACoP	– Approved Code of Practice
AE	– Authorising Engineer
AP	– Authorised Person
CAE	– Co-ordinating Authorising Engineer
CS	– Confined Space(s)
HSE	– Health and Safety Executive
PiC	– Person in Charge (AKA 'Top Man')
PPE	– Personal Protective Equipment
PTW	– Permit to Work
RIDDOR	– Reporting of Injuries, Diseases and Dangerous Occurrence Regulations
RPE	– Respiratory Protective Equipment
SRB	– Sub-contractor Confined Space Safety Rule Book
SSOW	– Safe System of Work
UK	– United Kingdom
WAH	– Work at Height

2. General

This document has been put together by the BGIS UK & Europe QHSE Team to identify the minimum Qualifications, standards and behaviours that will be expected by BGIS UK & Europe, from Sub-contractors who will be undertaking confined space entry into any confined space that is under the control of BGIS UK & Europe

It is the Sub-contractor's responsibility to ensure that they have read, fully understood and can meet the requirements of this document. They must ensure that all documents have been fully completed, all documents and supporting evidence forwarded to, and approved by the BGIS UK & Europe AP (CS).

Failure to comply with all the requirements of this document will result in the Sub-contractor not being allowed to proceed with any agreed works involving confined space.

Any Sub-contractor undertaking work involving confined space entry, may be subject to a snap H&S audit at any time during the work. The Sub-contractor is to fully cooperate with the BGIS UK & Europe QHSE Team. Failure to meet the required standard during a Snap H&S Audit may result in the work being stopped and or terminated.

3. Roles, Responsibilities & Duties

Authorised Person (Confined Spaces) (AP (CS))

The AP (CS) is the individual responsible for the practical implementation and application of the BGIS UK & Europe Confined Space Policy, the procedures within it and the associated SSOWs for the tasks involving confined space entry, for the sites and locations for which they have been appointed. They are responsible for issuing the CS PTW.

Person in Charge (Confined Spaces) (PiC (CS)) (Also known as the 'Top Man')

The role of the PiC (Confined Spaces) is to directly control the entry into a confined space, but not to enter the space.

The duties of the PiC (Confined Spaces) are to:

a. return all required documentation completed, to the AP (CS) prior to attending site to conduct the confined space entry.

b. ensure that adequate emergency arrangements are in place before commencing the works

c. ensure that all necessary safety equipment is available, safe and suitable for use prior to entry into the confined space

d. ensure that all members of the Work Team are adequately trained and medically fit to carry out the work required. Evidence of the fitness and training of the Work Team must be provided to the AP (CS) prior to attending site to conduct the confined space entry.

e. be fully conversant with the BGIS UK & Europe Confined Space, Safety Rule Book. Able to ensure compliance with the conditions set out in the SSOW, Permit to Work and agreed Safety Programme.

f. ensure that the Work Team are aware of the method of work set out in the agreed Safety Programme; the means of communication; the emergency arrangements and the requirements of the BGIS UK & Europe Confined Space, Safety Rule Book.

g. to carry out a Peak Reading Pre-Entry Gas Test and complete the Confined Space Gas Monitoring Record.

h. in conjunction with the AP (CS), ensure that a Confined Space Hazard Assessment, Confined Space Work Risk Assessment and Safety Programme for each confined space operation is prepared and agreed.

i. ensure that the only work carried out is that for which the Permit to Work is valid

j. stop work, and withdraw all personnel, tools, plant and equipment from the confined space if for any reason the conditions of the Safety Programme, Permit to Work cannot be met

k. report to the AP (CS) any accident, dangerous occurrence, defects found or other exceptional incidents occurring during occupation of the confined space

l. always be present at the confined space work site when any work within the confined space is being carried out, you must not leave the point of entry or enter the confined space.

Work Team (Confined space)

The role of the work team is to enter the confined space to undertake the work.

Members of the Work Team are to:

a. follow the direction of the PiC in accordance with the safety rules and procedures and any agreed Permit to Work.

b. take reasonable care in the promotion of the health and safety of themselves and of any other person who may be affected by their actions or omissions

c. only use equipment for which they have been trained and in the manner in which they have been trained

d. report to the PiC any defects found in the tools, plant and equipment to be, or being, used in the works

e. where more than one member of a Work Team enters a confined space, one person is to be nominated by the PiC to lead the entry team and be in direct control of their activities in the confined space. This function is separate from the PiC role.

f. inform the PiC (CS) or AP (CS) if they do not feel confident or competent to enter the confined space or undertake the task, if they do not feel well or fit enough, or any other reason that may put themselves or others in danger.

4. Safe Working Procedures

Guidance on the procedures to be adopted when working within a confined space is given in the Health and Safety Executive (HSE) Approved Code of Practice, HSE ACoP L101, “Safe work in confined spaces”.

Permit to Work (PTW)

All entries into any confined space that is under the control of BGIS UK & Europe require a Permit to Work (PTW) to be issued. The Permit to Work will be issued only at the point of entry and at the time of the work.

A Permit to Work will not be issued for a period longer than eight hours or beyond the end of the working shift, whichever is the shorter, this will be issued by an BGIS UK & Europe, AP (CS). Work must not commence without a PTW issued by an BGIS UK & Europe, AP (CS).

Prior to issuing a Permit to Work to the Person in Charge, the Authorised Person (Confined Spaces) will ensure that:

- a suitable and sufficient Hazard Assessment, Confined Space Risk Assessment and Work Risk Assessment is in place
- permission for the intended task has been obtained from the Property Manager / Facilities Manager and any other person responsible for the day to day operation of the facility affected by the intended work
- the proposed Work Team is suitably trained in Confined Space working and members are considered competent to carry out the allotted task.
- The Work Team’s employer has confirmed that they are medically and physically fit to undertake the task
- other Authorised Persons and Responsible Persons etc. in other disciplines are advised of the works where applicable

Action on loss of PTW

If the Person in Charge loses the original Permit to Work, they are to notify the Authorised Person (Confined Spaces) as soon as possible after discovery of the loss, withdrawing the CS team if they need to leave the CS location to find the AP (CS).

The Authorised Person (Confined Spaces) will then issue a new Permit to Work to the Person in Charge. Re-issue of a Permit to Work is to follow the same procedures as that for the initial issue.

If the circumstances so require, the Authorised Person (Confined Spaces) may direct that work is to be stopped as soon as the loss is noticed, until such time as a new Permit to Work is issued.

When the work has been stopped due to loss of documentation, the loss is to be recorded by the Authorised Person (Confined Spaces) in the Confined Spaces Operating Record. Parts 3 and 4 of the PTW duplicate copy are to be defaced with the words, “ORIGINAL COPY OF PERMIT LOST” written in large print, diagonally across the face of the document. Parts 3 and 4 of the duplicate copy are also to be signed by the Person in Charge and Authorised Person (Confined Spaces) respectively, to acknowledge the loss.

Ordering cessation of work

The Authorised Person (Confined Spaces), or Person in Charge, may stop the work if for any reason they consider it necessary. Where the work is stopped by the Authorised Person (Confined Spaces) or Person in Charge, the Permit to Work is to be withdrawn and cancelled.

In circumstances where the Authorised Person (Confined Spaces), or Person in Charge, stops the work, the Person in Charge is to:

- withdraw all persons and, if safe to do so, all equipment, tools and instruments from the place of work
- advise all persons under their control that they are no longer permitted to enter the confined space
- take steps to prevent further access to the confined space and otherwise make the site safe
- report to the Authorised Person (Confined Spaces) and complete Part 3 of the duplicate copy of the Permit to Work recording that the work has been stopped and the point of work has been made safe
- return the original Permit to Work to the Authorised Person (Confined Spaces).

Assessment of competence

The Authorised Person (Confined Spaces) will assess the competence of the Work Team utilising a combination of the following:

- evidence of suitable training of the Work Team members.
- demonstrated capability and familiarity with the equipment to be used (e.g. the ability to carry out functional tests on any atmosphere monitoring equipment to be used)
- satisfactory responses to questions on the general nature of confined space hazards.
- a professional approach and demeanour

Where the Authorised Person (Confined Spaces) is not satisfied that the Work Team is suitably competent, the work will not proceed further and a Permit to Work will not be issued.

Required Documents to be completed

Confined Space Hazard Assessment (QHSE-751)

A Confined Space Hazard Assessment (QHSE-751) will be completed by the BGIS UK & Europe AP (CS) and sent to the Sub-contractor with the other required confined space documents. This will assist the Sub-contractor in planning for the confined space entry. The Sub-contractor will still need to assess the CS for potential hazards and risks.

Confined Space work Risk Assessment (QHSE-752)

A copy of the Confined Space Work Risk Assessment (QHSE-752) template will be sent to the Sub-contractor to complete. The BGIS UK & Europe template must be used to ensure

uniformity and a greater degree of control over the high-risk activity. This must be completed by the Sub-contractor and returned to the BGIS UK & Europe AP (CS).

Method Statement

A method statement must be completed by the Sub-contractor and returned with the Confined Space work Risk Assessment (QHSE-752).

Confined Space Safety Programme (QHSE-753)

A Safety Programme is to be prepared for each Confined Space entry. The Safety Programme differs from a Work Method Statement for a task or activity, in that it is concerned only with the safety measures that are required in order to allow the work to proceed without incident.

A copy of the Confined Space Safety Programme (QHSE-753) template will be sent to the Sub-contractor with the other confined space documents that are to be completed. This must be completed by the Sub-contractor and returned to the BGIS UK & Europe AP (CS).

Sub-Contractor Confirmation Checklist (QHSE-756)

A Sub-Contractor Confirmation Checklist (QHSE-756) must be completed and returned with the other required documents.

5. Atmospheric Conditions Testing

When opening the entrance to a confined space, the possibility of exposure, to both employees and non-employees, in the vicinity of a confined space from vented gases must be considered.

When opening confined spaces and carrying out purging/venting of a confined space, precautions should be taken to protect those outside the confined space from exposure to toxic, flammable, irritating gases and vapours etc.

Ensure that the area is clear of non-operational personnel and suitably barriered off. The gas monitor must be in calibration date and switched on, checked, placed next to the entrance and monitored for the detection of any released gasses.

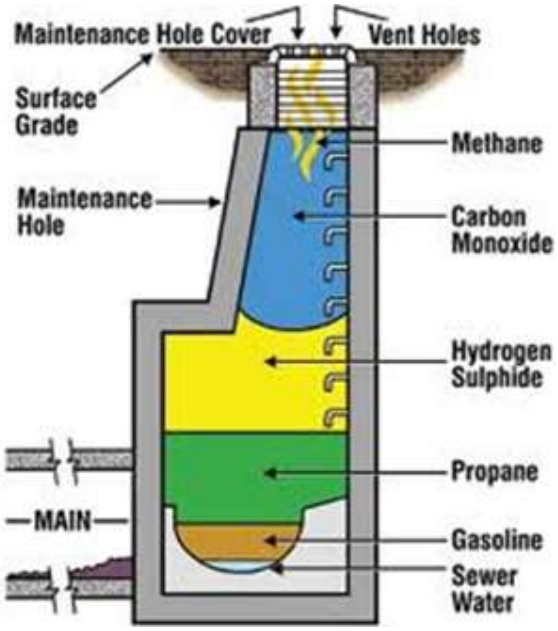
Before proceeding with an entry, Peak Reading gas tests for oxygen content, flammable atmospheres, and the presence of hazardous substances, as appropriate, must be made through open access points. This is known as the “Peak Reading Pre-Entry Gas Test”.

Testing must be carried out by a competent person using a suitable gas monitor which is correctly calibrated. Readings must be recorded on the PTW.

The gas monitor must have the following minimum features / functionality;

- ATEX Rated
- IP Rated
- Able to monitor the following 4 main gas hazards as a minimum;
  - Oxygen O2
  - Methane CH4
  - Hydrogen Sulfide H2S
  - Carbon Monoxide CO
- Monitor any additional gas hazards identified by the risk assessment.
- Multiple types of alarm including audible 95dB alarm, bright LED's warning lights, and vibrating alerts to provide warning of gas hazards.
- A positive safety indicator light for a visual assurance of operational and compliance status.

These are the minimum requirements, gas monitors that do not meet these criteria will not be accepted!



The PiC must check all levels of the confined space, as different types of gas will sit at different levels.

This is because gases are either heavier or lighter than air, some gases are the same as air and will mix at the same level.

It is important to cover as much area in the confined space as possible without entering.

The gas monitor must be set at either “Peak Reading” or “Hold”. This will give you accurate readings of the hazardous areas.

Below is a table identifying the four main gas hazards, the readings required and the alarm levels.

The four main gas hazards

Gas	Reading Required	Alarm Level
Oxygen O2	20.9%	Upper 23% / Lower 19%
Methane CH 4 (Lighter than air)	0%	20% LEL
Hydrogen Sulphide H2S (Heavier than air)	0 PPM	LTEL (8 hrs) 5PPM STEL (15 min) 10PP
Carbon Monoxide CO (Same as air so will mix)	0 PPM	LTEL (8 hrs) 20 PPM STEL (15 min) 100 PPM

You may need to monitor for other gas hazards, these should be identified in your risk assessment.

Where debris and sludge lie immersed in liquids, small pockets of gas may form and adhere to the debris or sludge, the pockets will remain if the liquid is still or slow moving. When the liquid is disturbed, for example by an entrant, the pockets coalesce and burst liberating a local concentrated cloud of gas. Therefore, this should be taken into consideration during the pre-entry procedures.

Continual gas monitoring is vitally important as part of the safe system of work.

Emergency procedures

Effective arrangements for emergency procedures must be incorporated within the safe system of work and verified at permit issue. The procedures will depend on the nature of the confined space, the risks identified and consequently the likely nature of an emergency rescue.

Typical arrangements may include:

- Identified means of effective communication from inside the confined space to people outside;
- The means of raising the alarm;
- Provision for night and shift work, weekends and times when the premises are closed, e.g. holidays;
- Provision of suitable rescue and resuscitation equipment dependent upon the likely emergencies that could occur for the specified task;
- Where such rescue and resuscitation equipment are provided, evidence of training in correct operation;
- Capabilities of rescuers (rescuers need to be properly trained people, sufficiently fit to carry out their task, ready at hand, and capable of using any equipment provided for rescue, e.g. breathing apparatus, lifelines and fire-fighting equipment);
- Provision of suitable control measures to protect rescuers against the cause of the emergency;
- Shut down procedures, for example adjacent plant, before attempting the emergency rescue;
- The provision of trained first aiders to make proper use of any necessary first aid equipment provided;
- Communication arrangements with local emergency services, emergency services location and typical response time, information about the particular dangers in the confined space to be provided upon arrival.

6. Confined Space Categories

The confined space categories for each site will be decided by the BGIS UK & Europe AP (CS). There are three categories of CS, Low Risk, Medium Risk and High Risk. Minimum training requirements to enter these CS's are listed in the next section.

7. Training

Introduction

This Section deals with the technical training requirements for those involved in the conduct or management of work in confined spaces.

Any training must have been provided by a reputable and accredited training provider. OGS reserve the right to refuse any training certificates that they deem unacceptable.

Anyone who will be entering a confined space or managing confined space operations must have attended a recognised face to face training course that includes a practical element so that attendees have received hands on experience with the equipment. Certificates from on-line training courses will not be accepted by BGIS UK & Europe

Sub-contractors will be required to submit copies of training certificates and evidence of the course content.

Confined Space Work Team (including Person in Charge)

All members of a Confined Spaces Work Team are required to have received suitable and sufficient information, instruction and training to enable them to carry out their duties. In addition, those likely to be involved in an emergency rescue within a confined space should also be trained for that purpose. Guidance on the content of such training is given in the Health and Safety Commission Approved Code of Practice, HSE ACoP L101.

The above training requirements may be satisfied by a combination of attendance on formal training and experience, certificates for on-line training will not be accepted by BGIS UK & Europe.

BGIS UK & Europe has three confined space designations, these are Low Risk, Medium Risk and High Risk. Each site will have a Confined Space Register that will identify each confined space on site and the risk level allocated to it.

The risk level for a confined space may increase due to the type of work activity planned to be undertaken in the confined space, the BGIS UK & Europe AP (CS) for that site will confirm if this is the case.

The following training will be required for each confined space risk classification;

Low Risk:

Level 2 Award in Working in Low Risk Confined Spaces:

This unit covers entry into low risk confined spaces. Learners will be shown how to safely access low risk confined spaces and how to monitor the atmosphere to ensure the space is safe to work in. The unit also covers how to identify low risk confined spaces with associated lone working and the application of appropriate procedures.

Course overview:

Prepare to work safely in low risk confined spaces
Enter and exit confined spaces safely
Use equipment and tools safely and in accordance with manufacturers' specifications
Follow procedures and work safely
Deal with emergencies
Use appropriate behaviour for working in low risk confined spaces
Use appropriate water industry knowledge for working in low risk confined spaces
Apply relevant water industry standards for working in low risk confined spaces

The candidates should be assessed by:

Direct observation of an entry into a realistic low risk confined space
Written exam
This course does not cover the use of Emergency Escape Breathing Apparatus or Breathing Apparatus.

Medium Risk: (Entrant)

Level 2 Award in Working in Medium Risk Confined Spaces:

This unit covers entry into Medium risk category confined spaces. Learners will be shown how to safely enter into these category confined spaces including the different requirements of access equipment for medium risk confined spaces. Monitoring the atmosphere and having a structured plan of action in place to deal with any anomaly, along with reporting procedures. The use of self-contained escape breathing apparatus as part of the planned means of self-rescue.

Course overview:

Prepare to work safely in medium risk confined spaces
Enter and exit confined spaces safely
Prepare and use escape breathing apparatus in accordance with manufacturers' specifications
Use equipment and tools safely and in accordance with manufacturers' specifications
Follow procedures and work safely
Deal with emergencies
Use appropriate behaviour for working in medium risk confined spaces
Use appropriate water industry knowledge for working in medium risk confined spaces
Apply relevant water industry standards for working in medium risk confined spaces
The candidates should be assessed by:

Direct observation of an entry into a realistic medium risk confined space
Written exam

This course does not cover the use of full Breathing Apparatus.

Medium Risk: (PiC) (Top Man)

Level 2 Award in Working in Medium Risk Confined Spaces: (Top Man) (Non-entrant)

This unit covers overseeing entry into medium risk category confined spaces. Learners will be shown how to safely control entry into these category confined spaces including the different requirements of access equipment for medium risk confined spaces. Monitoring the atmosphere and having a structured plan of action in place to deal with any anomaly, along with reporting procedures. The procedures for using and selecting appropriate self-contained escape breathing apparatus for planned means of self-rescue.

Following successful completion of the course the learners will be certified to oversee entry into a medium risk confined space but not to enter themselves.

Course overview:

Prepare to work safely in medium risk confined spaces
Oversee entry and exit at confined space in capacity of non-entrant
Use equipment and tools safely and in accordance with manufacturers' instructions
Follow procedures and work safely
Deal with emergencies
Use appropriate behaviour for working in medium risk confined spaces
Use appropriate water industry knowledge for working in medium risk confined spaces (non-entrant)
Apply relevant water industry specific knowledge for working in medium risk confined spaces

The candidates should be assessed by:

Direct observation of the learner overseeing work in a medium risk confined space
Written exam

High Risk: (Entrant)

Level 2 Award in Working in High Risk Confined Spaces:

This unit covers entry into High Risk category confined spaces. Learners will be shown how to safely enter into these category confined spaces including the different requirements of access equipment for high risk confined spaces. Monitoring the atmosphere and having a structured plan of action in place to deal with any anomaly, along with reporting procedures. The use of self-contained breathing apparatus for both self-rescue and under abnormal conditions.

Course overview:

Prepare to work safely in high risk confined spaces
Enter and exit confined spaces safely
Prepare and use self-contained open circuit breathing apparatus in accordance with manufacturers' specifications
Use equipment and tools safely and in accordance with manufacturers' specifications
Follow procedures and work safely
Deal with emergencies

Use appropriate behaviour for working in high risk confined spaces
Use appropriate water industry knowledge for working in high risk confined spaces
Apply relevant water industry standards for working in high risk confined spaces

The candidates should be assessed by:

Direct observation of an entry into a realistic high risk confined space
Written exam

High Risk: (PiC) (Top Man)

Level 3 Award in Top Man / Person for High Risk Confined Spaces:

This unit covers overseeing entry into High Risk category confined spaces.
Learners will be shown how to safely control entry into these category confined spaces. Monitoring the atmosphere and having a structured plan of action in place to deal with any anomaly, along with reporting procedures. The procedures for using and selecting appropriate self-contained breathing apparatus. This role also extends to interpretation, planning, supervision, coordination and accountability for the team and the work being undertaken in the confined space during both planned work and emergency situations. This includes specifying the emergency rescue team.

In this regard, the role is autonomous and pitched at a higher level than is generally seen of a traditional 'top-man' as they will be responsible for committing a work team in potentially non-routine environments, which is a significant departure in terms of responsibility, skills and competence of the traditional 'top-man'.

Following successful completion of the course the learners will be certified to oversee entry into a high risk confined space but not to enter themselves.

Course overview:

Prepare to act as a safety attendant for teams working in confined spaces
Oversee safe entry and exit to confined spaces
Monitor work team to ensure procedures are followed
Deal with emergencies
Use appropriate behaviour for working in high risk confined spaces
Use appropriate water industry knowledge for working in high risk confined spaces
Apply relevant water industry standards for working in high risk confined spaces

The candidates should be assessed by:

Direct observation of the learner overseeing work in a high risk confined space
Written exam

Confined Space - Emergency Rescue:

Level 3 Award in Emergency Rescue & Recovery of Casualties from Confined Spaces:

This qualification is for those persons who are part of a dedicated rescue team. The event will cover all aspects of planning, strategy, communications and emergency evacuation of a

casualty. The event will be practical and theoretical with a staged emergency recovery leading to an assessment of abilities, with a structured report in line with the water industry and emergency services.

Course overview:

Prepare to work safely in confined spaces under emergency conditions
Enter and exit confined spaces safely
Prepare and use breathing apparatus in accordance with manufacturers' specifications
Use rescue equipment safely and in accordance with manufacturers' instructions
Follow procedures and work safely
Deal with emergencies
Use appropriate behaviour for carrying out emergency rescue and recovery of casualties from confined spaces
Use appropriate water industry knowledge for carrying out emergency rescue and recovery of casualties from confined spaces
Apply relevant water industry standards for carrying out emergency rescue and recovery of casualties from confined spaces

The candidates should be assessed by:

Direct observation of a rescue in a confined space
Written exam

8. Health Requirements

General

All workers who may have cause to enter a confined space are expected to have a reasonable standard of physical fitness. The level of fitness will depend upon the task to be performed.

For work in the close confines of a confined space, consideration must be given to the physical build of such workers.

A person, who is required to enter or work in a confined space, must be deemed capable to do so by their employer. If the employer is aware of any medical concerns about an individual, then medical advice should be sought before a decision is made about their suitability for work in a confined space.

The Sub-contractor is to ensure that they have considered the physical aspects of the work, and this has been identified in the confined space risk assessment.

Advisory Information

The following information is provided as advice to the employer, when considering an entrant's physical demeanour, prior to allowing entry to the Confined Space.

As a guide, an operative who regularly work in confined spaces and / or wears breathing apparatus should be free from:

a. history of fits and blackouts
b. heart disease
c. deafness and / or perforated eardrums
d. Meniere's disease involving loss of balance
e. tendency to claustrophobia
f. severe or recurrent back pain
g. severe visual impairment
h. lack of sense of smell
i. any temporary disability which may restrict normal duties

Any person, who is likely to come into contact with sewage and / or wastewater, must consider having inoculations against the bacterial and viral infections associated with this work.

This may include:

a. Typhoid
b. Tetanus
c. Poliomyelitis
d. Hepatitis A.

Any person likely to come into contact with sewage, contaminated water, soil or infected animals must be made aware of the symptoms of Weil's disease (Leptospirosis) and their employers must comply with HSE requirements regarding providing them with documentation.

A number of substances have been proved to cause dermatitis including: mineral oils (e.g. diesel and other fuels), certain industrial chemicals (e.g. alkalis, nickel salts, mercury compounds), insecticides, formaldehydes, synthetic resins, glass fibre, solvents and de-greasers (e.g. paraffin or turpentine), tar pitch or other coal tar products. Therefore, any person expected to work in a confined space must be made aware that personal hygiene measures, skin care and cleanliness greatly reduce the risk of bacterial and viral infections and industrial dermatitis.

9. To Be Completed and Returned by The Sub-Contractor

- Confined Space Work Risk Assessment (QHSE-752)
- Confined Space Safety Programme (QHSE-753)
- Sub-contractor confirmation checklist (QHSE-756)
- Copies of Confined Space training certificates and evidence of course content
- Calibration Certificates for Gas monitors that will be used on the day of the CS entry
- The Task RAMS

BGIS UK & Europe AP (CS) to review and approve all documents and evidence before any work can be approved to proceed.