CONFINED SPACE/PERMIT REQUIRED CONFINED SPACE

After all is said and done, the bottom line is this:

a. A confined space is a space that:

   is large enough and so configured that an employee can bodily enter and perform assigned work; and

   has limited or restricted means for entry or exit. On the job site, these spaces may include: ventilation or exhaust ducts, bins and tanks, boilers, sewers, tunnels and open top spaces more than 4 feet in depth such as pits, tubs, and vessels; and

   is not designed for continuous employee occupancy.

b. A Permit-Required Confined Space is:

   a confined space that contains any recognized serious safety or health hazards. Recognized serious safety or health hazards would include, but not be limited to:

   1. contains or has a potential to contain a hazardous atmosphere.

   2. contains a material that has the potential for engulfing an entrant.

   3. has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.

Using the above criteria, we will evaluate the workplace to determine if any spaces are permit-required confined spaces and if any employees will enter permit spaces, we will develop and implement a written permit space program that is in compliance with Cal/OSHA §5156; §5157; and §5158.

This written program shall be available for inspection by employees and their authorized representatives.

Before any employee enters a permit required confined space, the hazards will be identified and evaluated.
DEFINITIONS

The Permit-Required Confined Space standard contains terms which must be understood by all those involved with entry to confined space, permit-required or not. These terms should be known to avoid miscommunication:

ACCEPTABLE ENTRY CONDITIONS: the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can enter safely into and work within the space.

ATTENDANT: an individual stationed outside one or more permit spaces who monitors the Authorized Entrants and who performs all Attendant's duties identified and assigned in our permit-required confined space program.

AUTHORIZED ENTRANT: denotes an employee who is authorized to enter a permit space.

BLANKING OR BLINDING: the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore, and is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

DOUBLE BLOCK AND BLEED: the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves, and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

EMERGENCY: any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

ENGULFMENT: the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system, or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

ENTRY: the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

ENTRY PERMIT (PERMIT): the document that is prepared to allow and control entry into a permit space and that contains the below listed information:

a. the permit space to be entered.

b. the purpose of the entry.

c. the date and authorized duration of the entry permit.

d. the authorized entrants listed in a manner that will allow the attendant to determine, for the duration of the permit, quickly and accurately which entrants are inside the confined space.
e. the names of personnel currently serving as attendants.

f. the name of the individual serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry.

g. the hazards of the permit space to be entered.

h. the measures used to isolate the permit space and to eliminate or control permit space hazards before entry, i.e., lockout or tagging of equipment, as well as procedures for purging, inerting, ventilating, and flushing permit spaces.

i. the acceptable conditions.

j. The results of initial and periodic tests accompanied by the names or initials of the testers and by an indication of when the tests were performed. Permit space conditions will be evaluated as follows:

1. testing of conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin. If isolation of the space is not feasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized. If entry is authorized, entry conditions shall be continuously monitored in the areas where Authorized Entrants are working.

2. testing and/or monitoring the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations.

3. testing for atmospheric conditions will be conducted in this order:
   1) oxygen; 2) combustible gases and vapors; and 3) toxic gases and vapors.

ENTRY SUPERVISOR: the person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required.

HAZARDOUS ATMOSPHERE: an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (i.e., escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

a. flammable gas, vapor, or mist in excess of 10% of its lower flammable limit.

b. airborne combustible dust at a concentration that meets or exceeds its lower flammable limit.

c. atmosphere oxygen concentration below 19.5% or above 23.5%.
d. atmospheric concentration of any substance for which a dose or permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or Table AC-1, Permissible Exposure Limits for Chemical Contaminants, and which could result in employee exposure in excess of its dose or permissible exposure limit.

e. any other atmospheric condition that is immediately dangerous to life or health.

HOT WORK PERMIT: the written authorization to perform operations capable of providing a source of ignition, i.e., riveting, welding, cutting, burning, and heating.

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH): any condition that poses an immediate or delayed threat to life, causes irreversible adverse health effects, or interferes with an individual's ability to escape unaided from a permit space.

INERTING: The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.  
[NOTE: This procedure produces an IDLH oxygen-deficient atmosphere.]

ISOLATION: the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of line, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources or energy; or blocking or disconnecting all mechanical linkages.

LFL: lower flammable limit.

LINE BREAKING: the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

NON-PERMIT CONFINED SPACE: a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

OXYGEN DEFICIENT ATMOSPHERE: an atmosphere containing less than 19.5 percent oxygen by volume.

OXYGEN ENRICHED ATMOSPHERE: an atmosphere containing more than 23.5 percent oxygen by volume.

PEL: Permissible Exposure Limit.
PERMIT-REQUIRED CONFINED SPACE: a confined space that has one or more of the following characteristics:

   a. contains or has a potential to contain a hazardous atmosphere.
   b. contains a material that has the potential for engulfing an entrant.
   c. has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
   d. contains any other recognized serious safety or health hazard.

PERMIT SYSTEM: our written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

PROHIBITED CONDITION: any conditions in a permit space that is not allowed by the permit during the period when entry is authorized.

RESCUE SERVICE: the personnel designated to rescue employees from permit spaces.

RETRIEVAL SYSTEM: the equipment (including a retrieval line, chest or full body harness, wristlets if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

STRATIFIED ATMOSPHERE: layered atmosphere.

TESTING: the process by which the hazards confronting entrants of a permit space are identified and evaluated. Testing includes specifying the tests to be performed in the permit space.

JOB SITE EVALUATION

The Entry Supervisor will evaluate the job site to determine if any spaces are permit-required spaces. Should a permit-required confined space(s) be identified, all exposed employees will be informed of the location and danger by posting a sign that reads:

   DANGER--PERMIT-REQUIRED CONFINED SPACE
   DO NOT ENTER

Personnel are not allowed in the Permit-Required Confined Space except under the provisions of this Program. The above sign shall remain in place unless the space is reevaluated and re-designated a non-permit confined space. By the same token, non-permit confined space(s) shall be reevaluated as configurations, uses, and changes in hazards are identified, and, if necessary, re-classified as a permit-required confined space.
In the absence of other guidelines, this Program will be used for all Permit-Space Entry by our employees. When working with a host employer who has permit spaces, we will:

Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of section 5157, section 5158 or section 8355, depending on which section applies to the contractor; (B) Apprise the contractor of the elements, including the hazards identified and the host employer’s experience with the space, that make the space in question a permit space; (C) Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working; (D) Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by subsection (d)(11); and (E) Debrief the contractor at the conclusion of the entry operations regarding the permit spaced program followed and regarding any hazards confronted or created in permit spaces during entry operations.

A decision flow chart will be used to identify permit-required confined spaces. [See page 21 of this program.]

As a general policy, no employee shall enter any confined space, permit-required or not, unless entry is dictated by work assignment. Entry of permit-required confined spaces will be made under the provisions of this Program.

STANDARD PROCEDURES FOR PERMIT-REQUIRED CONFINED SPACE ENTRY

PROCEDURES AND PRACTICES FOR SAFE ENTRY

The procedures, and practices necessary for safe permit space entry operations include, but are not limited to:

1. Specifying acceptable entry conditions;
2. Isolating the permit space;
3. Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;
4. Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards; and
5. Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.
MEASURES TO PREVENT UNAUTHORIZED ENTRY

Unauthorized entry while permit space is underway will be prevented by:

a. posting of the below sign:

   DANGER--PERMIT-REQUIRED CONFINED SPACE
   DO NOT ENTER

1. Warning the unauthorized persons that they must stay away from the permit space;

2. Advising the unauthorized persons that they must exit immediately if they have entered the permit space; and

2. Informing the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;

A roster system which allows the Attendant to keep track of the Authorized Entrants within the permit space will be used. The times in and out are recorded. This system accomplishes two major safety goals and one time management goal:

a. identifies who is actually in the permit-required space.

b. records the time of exposure to the hazardous condition(s).

c. documents the time required for accomplishing the assigned task.

ATMOSPHERIC TESTING

Note: Each authorized entrant or that employee's authorized representative will be provided an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces; each authorized entrant or that employee's authorized representative will be provided immediately with the results of any testing conducted in accord with section 5157.

Atmospheric testing is required for two (2) distinct purposes: evaluation of the hazards of the permit space and verification that acceptable conditions exist for entry into that space.

a. Evaluation testing. The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity to identify and evaluate any hazardous atmospheres existing or arising so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that space. Evaluation and interpretation of these data and development of the entry procedure should be reviewed by a technically qualified professional (e.g., OSHA consultation service, certified industrial hygienist, registered safety engineer, or certified safety professional) based on evaluation of all serious hazards.
b. **Verification testing.** The atmosphere of a permit space which may contain a hazardous atmosphere should be tested for residues of all contaminants identified by evaluation testing using permit specified equipment to determine that residual concentration at the time of testing and entry are within the range of acceptable entry conditions. Testing order should be oxygen, flammables, then toxics. Results of testing (i.e., actual concentration) should be recorded on the permit in the space provided adjacent to the stipulated acceptable entry condition.

*Duration of testing.* Measurement of values for each atmospheric parameter should be made for at least the minimum response time of the test instrument specified by the manufacturer.

*Testing stratified (layered) atmospheres.* When monitoring for entries involving a descent into atmospheres which may be stratified, the atmospheric envelope should be tested at a distance of approximately four (4) feet in the direction of travel and to each side. If a sampling probe is used, the entrant's rate of progress should be slowed to accommodate the sampling speed and detector response.

Periodic re-testing will verify the atmosphere remains within acceptable entry conditions.

**The decision making involves a hazard assessment of the below items.**

a. Does the atmosphere have an oxygen content of between 19.5% and 23.0% by volume?

b. Does the atmosphere contain or have a potential to contain a hazardous atmosphere?

c. Does the confined space contain a material with a potential for engulfing the entrant?

d. Does the confined space have an internal configuration capable of entrapping or asphyxiating the entrant?

e. Does the confined space contain any other recognized hazards?

Once it has been determined that the procedures for Permit-Required Confined Space operations will be implemented, the following actions will be taken:

a. the space will be secured and isolated to prevent non-authorized entry. Barriers, or some other protection as dictated by circumstance, will be erected or installed to protect entrants from external hazards such as pedestrians, vehicles, falling objects, etc..

b. the Pre-Entry Check List will be prepared.

c. a check will be made of the records of all personnel involved with the
operations to insure they have had appropriate training for the hazards involved. Material Safety Data Sheets will be made available.

d. before entry, a comprehensive rescue plan will be written and a check of the rescue team's qualifications will be made.

e. all feasible engineering controls will be implemented. The atmosphere will be purged, ventilated, inerted, and/or flushed to control or eliminate the hazardous atmosphere.

f. before entry, all personnel involved will review the Pre-Entry Check List and have a completed understanding of what the operations are to accomplish, the safety measures available, and the rescue plan.

g. all available data will be sought from our client concerning the space including its history, its hazards, their experience with the space and, if applicable, problems encountered. At the completion of the project, all information pertinent to the confined space operation will be provided to the client. Coordination of work and the assignment of one (1) Senior Attendant will be made.

Throughout the duration of an authorized entry into a permit confined space, conditions will be continually verified for acceptability.

ENTRY PERMITS

After all measures listed above: training; testing; identification of hazards; evaluation; specifying acceptable entry conditions; controlling the atmospheric hazards and other identified hazards through engineering controls, such as forced air ventilation, isolation, and control of hazardous energy (lockout/tagout); preparing a rescue plan; barricading; equipping the appropriate employees with personal protective gear and notifying them of all hazards involved with the entry, etc., the Entry Permit will be issued and signed by the Entry Supervisor.

The duration of the Entry Permit may not exceed the time required to complete the assigned task identified on the permit and will be terminated:

a. when the assigned task is completed.

b. when a condition that is not allowed under the entry permit arises in or near the permit space.

During Permit-Required Confined Space entry, employees will be provided, at no cost, the following:

a. testing and monitoring equipment to test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin and, if acceptable conditions exist, to
continually monitor conditions during the entry process to ensure that acceptable conditions are maintained.
b. ventilating equipment, if required, to maintain acceptable atmospheric conditions.
c. communications equipment, or a method of communicating, between the entrant(s) and the Attendant.
d. personal protective equipment should feasible engineering controls not adequately protect the entrants.
e. adequate lighting to provide safe working conditions and enhance the ability of entrants to safely and quickly evacuate the permit-required confined space in an emergency.
f. required equipment, such as ladders, for safe entry and exit for the Authorized Entrants.
g. rescue equipment, such as wristlets, life lines, and harnesses to extricate entrants in the event of an emergency. The Emergency Rescue Plan will be implemented so that rescue personnel are either on call or on station with adequate medical resources.

RESCUE AND EMERGENCY SERVICES PLAN

One of the most important elements of any Permit-Required Confined Space Program is the Rescue and Emergency Services Plan. **There shall be, as a matter of policy, at least one Attendant for each applicable confined space. In no circumstance will we have a single attendant monitoring more than one (1) confined space.** Regardless of the emergency, if only one Attendant is on duty, he shall not enter a Permit-Required Confined Space to attempt a rescue until replaced by a second Attendant.

Should an employee be assigned to be a member of a Rescue Team, that employee must have had documented training in:

a. proper use of personal protective equipment and rescue equipment.
b. the same training as required of the entrant.
c. a simulated rescue within at least twelve (12) months in the same type of confined space (i.e., representative space of the same general dimensions, opening size, hazard type, and accessibility.)

At least one member of the Rescue Team must be trained and certified in **basic first aid and cardiopulmonary resuscitation (CPR)** and that documentation will be on file. This person must also have training in bloodborne pathogens and exposure control.

**The attendant will ensure that only authorized rescue personnel identified on the entry permit be allowed to attempt a rescue.**

The Attendant will notify the rescue service **before** permit-required
confined space entry is made to coordinate a possible rescue before the fact. The rescue service will be informed of the exact location of the project, the hazards involved, the number of entrants, the types of protective equipment worn by the entrants, etc. If needed, a practice rescue will be accomplished. If a rescue effort is required, the attendant will call the rescue service immediately by phone. **If the entry involves a possible IDLH situation, the rescue service will be on-site while work is being performed.**

Non-entry rescue will be used by retrieval systems, where possible, in lieu of actual entry unless the retrieval system would contribute to the overall risk of the entrant.

Retrieval systems to be considered include:

a. a chest or full body harness with a retrieval line attached at the center of the entrant's back near shoulder level.

b. wristlets if they create a lesser danger to the entrant than the above.

c. a retrieval line attached to a mechanical lifting (pulling) device fixed to an anchorage outside the permit space.

Should a potential rescue be required to retrieve an entrant from a five (5) foot vertical drop, a mechanical retrieval device will be employed.

The Attendant will have on site the MSDS for all chemical substances to which the entrant will be exposed. The emergency responders as well as the treating hospital will be provided this information.

The rescue procedure to be used will be noted on the Entry Permit before entry.

**CONFINED SPACE ENTRY USING FORCED AIR VENTILATION FOR CONTROL OF HAZARDOUS ATMOSPHERE**

(NO OTHER HAZARDS ARE IDENTIFIED)

IF it can be demonstrated that the only hazard posed by the permit space is an actual or potential hazardous atmosphere; and

IF it can be demonstrated that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry; and

IF monitoring and inspection data supports the above; and

IF the initial entry of the permit space is necessary to obtain the above data, it is carried out by the complete Permit-Required Confined Space Program; and

IF the determinations and supporting data for the above are documented and made available to each employee who enter the permit space; then

ENTRY may be made provided:
THAT any conditions making it unsafe to remove an entrance cover have been eliminated before the cover is removed; and

THAT when the entrance covers are removed, the openings shall be promptly guarded by a railing, temporary cover, or other temporary barrier preventing an accidental fall through the opening, and protecting each employee working in the space from foreign objects entering the space; and

THAT before entering the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for the following conditions in the order given:

   a. Oxygen content.
   b. Flammable gasses and vapors.
   c. Potential toxic air contaminants; and

THAT there be no hazardous atmosphere within the space whenever any employee is inside the space; and

THAT continuous forced air ventilation shall be used, as follows:

   a. no employee may enter the space until the forced air ventilation has eliminated any hazardous atmosphere; and
   b. the forced air ventilation will be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space; and
   c. the air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space; and

THAT the atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere; and

THAT if a hazardous atmosphere is detected during entry:

   a. each employee shall leave the space immediately; and
   b. the space will be evaluated to determine how the hazardous atmosphere developed; and
   c. measures will be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place; and

THAT all the above is verified with a written certification that contains the date, location of the space, and the signature of the person providing the certification before entry and made available to each employee entering the space.
THEN we may use an alternate procedure for Confined Space Entry which does not require compliance with the following provisions:

a. Permit-Required Confined Space Program.
b. Permit System.
c. Entry Permit.
d. Duties of Authorized Entrants.
e. Duties of Attendants.
f. Duties of Entry Supervisors.
g. Rescue and Emergency Services.

In spite of the above, this type of confined space is still a Permit-Required Confined Space. We are only talking about authorized entry here. Remember, when the forced air ventilation has been removed, the hazardous atmosphere will return.

At first glance, this may seem like a way to avoid much of the paperwork and compliance requirements. To a small degree, it is. However, the confined space which falls under these provisions of the OSHA standard do require documented evaluation, training of employees, barricading of the area, a plan for emergency contingencies, and record keeping. Adherence to all applicable safety standards and practices must be maintained.

This is an alternate set of procedures which may or may not be used. If they are used, all employees should be aware that their safety is first and foremost. We are dealing with a space with only one hazardous condition (atmosphere) before any action (i.e., forced air ventilation) is taken. Before entry is made the hazardous atmosphere is made acceptable through continuous forced air ventilation and the safety of the atmosphere is periodically checked to ensure that the atmosphere remains safe whenever an employee is within the space in question.

**TRAINING**

Training shall be provided to each affected employee:

1. Before the employee is first assigned permit entry duties;
2. Before there is a change in assigned duties;
3. Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;
4. Whenever there is reason to believe either that there are deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.
Retraining (Refresher)

Retraining will be given when there is reason to believe either that there are deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

A certificate of training will be prepared certifying that the training required has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

AUTHORIZED ENTRANTS:

Authorized Entrants will be trained in:

a. an awareness of the hazards that may be encountered during entry, including: information on the mode, signs or symptoms, and consequences of the exposure.

b. proper use of monitoring equipment, ventilation equipment, communications equipment, personal protective equipment, lighting equipment, rescue equipment, entry and egress equipment, barriers to protect entrants from external hazards, and other equipment necessary for safe entry into and rescue from permit spaces.

c. the skills necessary to communicate with the Attendant should a reason for evacuation be present.

d. the requirement to alert the Attendant whenever:

1. the entrant notices a warning sign or symptom of exposure to a dangerous situation. An example of this may be a tingling of the skin, dizziness, or a headache. Consult the Material Safety Data Sheets for information on specific chemical hazards.

2. a prohibited condition is detected.

e. exit procedures which include the need to exit the permit space as quickly as possible whenever:

1. an order to evacuate is given by the attendant or the Entry Supervisor.

2. the entrant recognizes any warning sign or symptom of exposure to a dangerous situation.

3. a prohibited condition is recognized.
4. an evacuation alarm is activated.

ATTENDANTS:

Attendants will be trained in:

a. an awareness of the hazards that may be encountered during entry, including the mode, signs or symptoms, and consequences of the exposure.

b. an awareness of possible behavioral effects of hazard exposure in Authorized Entrants.

c. the method used to continuously maintain an accurate count of Authorized Entrants in the permit space and the use of a roster on the entry permit to readily identify who is in the permit space.

d. the requirement that, while an external rescue attempt may be attempted (such as the use of an external retrieval system), they may not attempt to enter a permit-required confined space to attempt a rescue under any circumstances unless:
   1. they are relieved by a second Attendant.
   2. they are thoroughly trained and certified in appropriate rescue techniques as required by the Rescue and Emergency Services Plan of this Program.

e. communication procedures, as necessary, with Authorized Entrants to monitor entrant status and alert entrants of the need to evacuate if one of the following conditions presents itself:
   1. a prohibited condition is detected by the Attendant.
   2. the Attendant detects the behavioral effects of hazard exposure in an Authorized Entrant.
   3. the Attendant detects a situation outside the space that could endanger the Authorized Entrants.
   4. the Attendant realizes that he/she cannot perform all the required duties of this Plan.

f. the procedures to summon rescue and other emergency services as soon as the Attendant determines that Authorized Entrants need assistance to escape from permit space hazards.

g. taking the following steps when unauthorized persons approach or enter a permit space while entry is underway:
   1. warn the unauthorized persons that they must stay away from the permit space.
2. advise the unauthorized persons they must exit immediately if they have entered the permit space.

3. inform the Authorized Entrants and the Entry Supervisor if unauthorized persons have entered the permit space.

h. the procedures for safe non-entry rescues as specified by our rescue procedure.

i. an awareness that no duties may be performed which might interfere with the Attendant's primary duty to monitor and protect the Authorized Entrants. The Attendant must remain outside the Permit Space during entry operations until relieved by another Attendant.

ENTRY SUPERVISOR:

The Entry Supervisor will be trained in:

a. an awareness of the hazards that may be encountered during entry including information of the mode, signs, symptoms, and consequences of the hazard exposure.

b. verification procedures, especially checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.

c. termination procedures. Operations will terminate when:
   1. the entry operations covered by the entry permit have been completed, or
   2. a condition arises in or near the permit space that is not allowed.

d. verifying that rescue services are available and that means for summoning them are operational.

e. an awareness that unauthorized personnel who enter or attempt to enter the permit space must be removed.

f. maintaining entry operations consistent with the terms of the entry permit. Whenever responsibility for a permit space entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, the entry operations must remain consistent with the terms of the entry permit and acceptable entry conditions must be maintained.
RESCUE AND EMERGENCY SERVICES:

Rescue and Emergency Services (Teams and/or Personnel) will be trained and knowledgeable in all areas applicable to Authorized Entrants as well as:

a. the use of personal protective equipment and rescue equipment.

b. rescue duties consistent with the permit space involved and the identified hazards or potential hazards.

c. first aid -- at least one (1) member of a rescue team will be certified in basic first aid and CPR.

d. Providing an effective means of communication between employees inside a confined space and a standby employee(s) when:
   1. the use of respiratory protective equipment, or
   2. when employees inside a confined space are out of sight of the standby employee(s).

All affected employees shall be trained in the use of such communication system and the system shall be tested before each use to confirm its effective operation.

Assigned rescue personnel must complete permit space simulated rescues at least once every twelve (12) months from representative permit spaces similar to the permit space in question with regard to size, configuration, hazards involved, accessibility, and opening size.

REVIEW OF PROGRAM

Canceled entry permits will be retained for at least one (1) year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation will be noted on the appropriate permit so this program may be revised to correct deficiencies before subsequent entries are authorized.

Additionally, this permit space program will be reviewed using the canceled permits retained [see previous paragraph] within 1 year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.

Note: A single review may be conducted covering all entries during a twelve (12) month period.

RE-DESIGNATION OF CONFINED SPACES

Confined spaces will be reevaluated and re-designated as appropriate. If all hazards, both atmospheric and non-atmospheric, are eliminated from a confined space, it shall be re-classified as a Non-Permit Confined Space. This will be accomplished provided that actual and potential hazards are eliminated.
If hazards arise within a permit space that has been declassified to a non-permit space, each employee in the space shall exit the space. The employer shall then reevaluate the space and determine whether it must be reclassified as a permit space.

Space be found to have a hazard, it shall be reclassified as a Permit-Required Confined Space.

Should a Non-Permit Confined Space, by virtue of altered configuration, use, addition, or identification of hazards become a Permit-Required Confined Space, its designation will change accordingly.

A confined space is one of the following:

a. a non-permit confined space not falling under the Confined Space standards.

b. a confined space whose one and only hazard is atmospheric and can be controlled by forced air ventilation. The Pre-Entry Check List provides this information.

c. a permit-required confined space; all hazards must be identified. The Pre-Entry Check List and Entry Permit provide this information.

Controlling and eliminating hazards are two distinct concepts. Controlling an atmosphere to make it acceptable (i.e., forced air ventilation) does not eliminate the hazard. Stop the forced air ventilation, and the hazard returns.

**SUMMARY**

All employees who, by virtue of their work assignments, fall under the provisions of this standard should have a comprehensive understanding of confined spaces and the potential dangers involved when working in them. Certain items can not be overemphasized; safety is so important. Most accidents are sudden and unexpected. It is much wiser to plan ahead for possible courses of action in response to potential danger than wait until an accident happens and find, for example, there is no external retrieval system or method of summoning qualified medical response.

Some of the provisions of this program may, on first review, seem unnecessary and/or harsh. One item is the requirement forbidding the Attendant trained in rescue, CPR and First Aid and having the proper safety equipment on site to enter a Permit-Required Confined Space to rescue a fellow worker until he/she is replaced by another Attendant. Another item is the requirement to evacuate the Permit-Required Confined Space immediately at the first sign of a problem.

An explanation of these two items might help to clarify the importance of the whole program.
Required Confined Space. The following information is assumed: the Authorized Entrant entered the space in question after the Pre-Entry Check List and Permit were issued; he/she is aware of the dangers and trained and qualified for entry; he/she has all the required personal protective gear and it is properly worn and functioning. The worker is down! The Attendant would, at the time of the emergency, have no additional information. Therefore whatever hazard fell the first worker would certainly fall the Attendant if the Attendant were to enter the space. No one would know there are now two people to rescue. Even if they did, by the time the Emergency Response Team arrived, they would now be dealing with two people instead of one. The time lost could be critical to the survival of the Authorized Entrant and to the unwitting Attendant who, while trying to save his friend, actually put his life at greater risk.

Let’s analyze the second case concerning immediate evacuation. Suppose you are in a smoke-free environment such as an office, a house, or room and someone lights a cigarette. Even a smoker can detect the odor in a few moments. This gives an indication of how fast the gases in an atmosphere mix even at room temperature (it would be faster at higher temperatures). Immediate evacuation means just that -- immediate. If an Authorized Entrant has just a few seconds to complete a work assignment in a permit-required confined space and is told by the Attendant to evacuate; a warning sign or symptom of exposure is noticed; a prohibited condition is observed; or an evacuation alarm is activated, the entrant must stop work at once and evacuate. Time is of the essence -- hazardous atmospheres may spread quickly. Other hazards (such as engulfment) can happen instantly with little or no warning. It is much easier to re-assess a situation and re-group from outside the permit-required confined space.

**SEWER ENTRY**

**Atmospheric monitoring.**

Entrants should be trained in the use of, and be equipped with, atmospheric monitoring equipment which sounds an audible alarm, in addition to its visual readout, whenever one of the following conditions is encountered: oxygen concentration less than 19.5 percent; flammable gas or vapor at 10 percent or more of the lower flammable limit (LFL); or hydrogen sulfide or carbon monoxide at or above their permissible exposure limit (PEL) (10 ppm or 25 ppm, respectively, measured as an 8-hour time weighted average (TWA)). Atmospheric monitoring equipment needs to be calibrated according to the manufacturer’s instructions. Substance specific devices should be used whenever actual contaminants have been identified. The instrument should be carried and used by the entrant in sewer line work to monitor the atmosphere in the entrant’s
environment, and in advance of the entrants' direction of movement, to warn the entrant of any deterioration in atmospheric conditions. Where several entrants are working together in the same immediate location, one instrument, used by the lead entrant, is acceptable.

**At least one employee CPR/First Aid trained employee will be on site during confined space entry operations.**
§5157, Appendix A

Permit-Required Confined Space Decision Flow Chart

Does the workplace contain Confined Spaces as defined by §5157(b)?

- Yes
  - Does the workplace contain Permit-required Confined Spaces as defined by §5157(b)?
    - Yes
      - Inform employees as required by §5157(c)(2).
      - Will permit spaces be entered? NO
        - Prevent employee entry as required by §5157(c)(3). Do task from outside of space.
    - NO
      - Consult other applicable Cal/OSHA standards. STOP
  - NO

- NO

Will contractors enter? YES

- Task will be done by contractors' employees. Inform contractor as required by §5157(c)(8)(A), (B) and (C). Contractor obtains information required by §5157(c)(9)(A), (B) and (C) from host.
- NO

Both contractors and host employees will enter the space? NO

- Coordinate entry operations as required by §5157(c)(8)(G) and (8)(1). Prevent unauthorized entry.
- Prevent unauthorized entry. STOP

Will host employees enter to perform entry tasks?

- YES
  - Both contractors and host employees will enter the space? NO
    - Coordinate entry operations as required by §5157(c)(8)(G) and (8)(1). Prevent unauthorized entry.
    - Prevent unauthorized entry. STOP
  - NO
    - Employer may choose to reclassify space to non-permit required confined space using §5157(c)(7). STOP
- NO

Can the space have known or potential hazards? NO

- Not a permit-required confined space. §5157 does not apply. Consult other Cal/OSHA stds.
- YES

Can the hazards be eliminated? YES

- Can the space be maintained in a condition safe to enter by continuous forced air ventilation only? YES
  - Space may be entered under §5157(c)(5). STOP
  - Permit not valid until conditions meet permit specifications.
- NO

Prepare for entry via permit procedures.

- Verify acceptable entry conditions (Test results recorded, space isolated if needed, rescue/rescuer and means to summon available, entrants properly equipped, etc.)
  - YES
  - Emergency exists (prohibited condition). Permit is void. Reevaluate program to correct/prevent prohibited condition. Occurrence of emergency (usually) is proof of deficient program. No re-entry until program (and permit) is amended. (May require new program.) CONTINUE
  - NO

Permit issued by authorizing signature. Acceptable entry conditions maintained throughout entry. Entry tasks completed. Permit returned and canceled.

Audit permit program and permit based on evaluation of entry by entrants, attendants, rescuers and preparers, etc.
Great Western Painting

EMERGENCY PHONE NUMBERS
(To be accessible to attendant)

AMBULANCE 911 [__________________]
(If no 911 Service Available)

FIRE 911 [__________________]
(If no 911 Service Available)

POLICE 911 [__________________]
(If no 911 Service Available)

EMERGENCY RESCUE SERVICE
NAME: ______________________
PHONE: ______________________

HOSPITAL
NAME: ______________________
PHONE: ______________________

MAIN OFFICE
Bob 208-371-

Patrick Evje
Safety Director
Work: ________________
Pager: ________________

OTHER:
_________________________
(Name/Title) Work: ________________
Pager: ________________

_________________________
(Name/Title) Work: ________________
Pager: ________________

_________________________
(Name/Title) Work: ________________
Pager: ________________

_________________________
(Name/Title) Work: ________________
Pager: ________________

When calling for EMERGENCY RESPONSE, this location is:

________________________________________________________________________________
Great Western Painting

PERMIT-SPACE INFORMATION & ATTENDANT DESIGNATION

CONFINED SPACE

DATE: ________________

SPACE IDENTIFICATION: _____________________________________________
SPACE LOCATION: _________________________________________________
CLIENT: ___________________________________________________________

1. Reasons the above confined space is designated a Permit-Required Confined Space:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

2. Special precautions taken to protect personnel in or around the above space:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

3. Specific hazards and experience with the above confined space:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

CLIENT UNDERSTANDING

I, ____________________________________________, have been provided the above (Client Representative) information and understand that permit space entry is allowed only through compliance with a Permit Space Program meeting the requirements of §5157. Permit-Required Confined Spaces.

In the event our employees and your company employees are working near or in the same Permit-Required Confined Space, the below listed person is designated as the one and only Senior Attendant. The person, listed below, will have authority over other Attendants.

________________________________________
(Designated Senior Attendant)

________________________________________ __________________________
(Client Representative Signature/Title) (Date)

_______________________________________ __________________________
(Date)

Patrick Evje
Safety Director

[A copy of this form will be kept at the job site during all operations.]
Great Western Painting

ENTRY ROSTER

CONFINED SPACE

DATE: ______________

SPACE IDENTIFICATION

SPACE LOCATION:

<table>
<thead>
<tr>
<th>AUTHORIZED ENTRANT</th>
<th>TIME IN</th>
<th>TIME OUT</th>
<th>TIME IN</th>
<th>TIME OUT</th>
<th>TIME IN</th>
<th>TIME OUT</th>
<th>TIME IN</th>
<th>TIME OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note: This Entry Permit must be used with the attached Pre-Entry Checklist. Additional pages may be added as necessary.

PERMIT VALID FOR ________ HOURS

CONFINED SPACE-HAZARDOUS AREA: ________________________

START

CONFINED SPACE IDENTIFICATION: ________________________

DATE: ________________

SPACE LOCATION: ___________________________________

TIME: ________________

PURPOSE OF ENTRY: ___________________________________

SUPERVISOR(S) in charge of crew: ________________________

AUTHORIZED ATTENDANTS: ____________________________

___________________________________    _____________________

___________________________________    _____________________

___________________________________    _____________________

___________________________________    _____________________

ATMOSPHERE (GAS) TESTER’S SIGNATURE & INITIALS: ________________________  ________________

ATMOSPHERE TESTING EQUIPMENT USED:

________________________________    ___________________________ __________________

(Type) (Model and/or Serial Number) (Calibration date)

________________________________    ___________________________ __________________

(Type) (Model and/or Serial Number) (Calibration date)

________________________________    ___________________________ __________________

(Type) (Model and/or Serial Number) (Calibration date)

________________________________    ___________________________ __________________

(Signature of Entry Supervisor/Date)  (Signature of Program Administrator/Date)

REVIEWED BY: (Confined Space Operations Personnel)

NOTE: The below listed persons, or their representative, have had the opportunity to observe the pre-entry atmospheric testing as well as any periodic testing that may be deemed necessary for employee safety.

________________________________    ___________________________ __________________

(Print Name) (Signature) (Print Name) (Signature)

________________________________    ___________________________ __________________

(Print Name) (Signature) (Print Name) (Signature)

________________________________    ___________________________ __________________

(Print Name) (Signature) (Print Name) (Signature)

________________________________    ___________________________ __________________

(Print Name) (Signature) (Print Name) (Signature)
## PRE-ENTRY CHECKLIST

This checklist is an integral part of our Permit System and MUST be maintained with the Entry Permit. All items on this Pre-Entry Checklist must be completed before entry.

For items that do not apply, enter N/A.

### INITIAL ATMOSPHERIC CHECK (BEFORE VENTILATION): TIME: ________________

<table>
<thead>
<tr>
<th>Tester's Acceptable Parameters</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen: %</td>
<td>%</td>
</tr>
<tr>
<td>Flammable gases and vapors:</td>
<td>% LEL</td>
</tr>
<tr>
<td>Potential toxic air contaminants:</td>
<td>PPM</td>
</tr>
</tbody>
</table>

*Hydrogen sulfide*: PPM < 10 PPM
*Carbon Monoxide*: PPM < 25 PPM

**METHOD OF ISOLATION (Atmospheric Conditions):** ______________________________________
_________________________________________________________________________________

**MEANS OF VENTILATION (To control Atmospheric Conditions):** ____________________________
_________________________________________________________________________________

### ATMOSPHERIC CHECK (AFTER VENTILATION & ISOLATION AND IMMEDIATELY PRIOR TO INITIAL ENTRY): TIME: ________________

<table>
<thead>
<tr>
<th>Tester's Acceptable Parameters</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen: %</td>
<td>%</td>
</tr>
<tr>
<td>Flammable gases and vapors:</td>
<td>% LEL</td>
</tr>
<tr>
<td>Potential toxic air contaminants:</td>
<td>PPM</td>
</tr>
</tbody>
</table>

*Hydrogen sulfide*: PPM < 10 PPM
*Carbon Monoxide*: PPM < 25 PPM

**NOTE:** mg/m³ may be substituted for PPM. See Table AC-1, Permissible Exposure Limits for Chemical Contaminants

*measured as an 8-hour time weighted average**
OTHER HAZARDS:

(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)  
(Engineering controls to control or eliminate the hazard to the extent feasible.)

__________________________________________________________________________

(Type, i.e., configuration, engulfment, unacceptable atmosphere, any recognized serious safety or health hazard)  
(Engineering controls to control or eliminate the hazard to the extent feasible.)

__________________________________________________________________________

HAZARDS NOT COMPLETELY ELIMINATED BY ENGINEERING CONTROLS AND SAFETY GEAR REQUIRED (i.e., respirators (specific type), special boots, gloves, suits, eye protection, etc.):

<table>
<thead>
<tr>
<th>HAZARD</th>
<th>SAFETY GEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(HAZARD)</td>
<td>(SAFETY GEAR)</td>
</tr>
<tr>
<td>(HAZARD)</td>
<td>(SAFETY GEAR)</td>
</tr>
<tr>
<td>(HAZARD)</td>
<td>(SAFETY GEAR)</td>
</tr>
</tbody>
</table>

COMMUNICATIONS PROCEDURES:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

[NOTE: Acceptable, non-electrical, suggestions include, but are not limited to, predetermined rapping sounds, tugs on a rope or line, air horn signals, voice communications]

3 of 6
**BELOW LISTED ITEMS MUST BE COMPLETED AND REVIEWED PRIOR TO ENTRY:**

NOTE: For items that do not apply, enter N/A.

<table>
<thead>
<tr>
<th>REQUIREMENT COMPLETED</th>
<th>DATE</th>
<th>TIME</th>
<th>REQUIREMENT COMPLETED</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock Out/De-energize/Try Out</td>
<td></td>
<td></td>
<td>Full Body Harness w/&quot;D&quot; ring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lines Broken/Capped/blanked</td>
<td></td>
<td></td>
<td>Emergency Escape Retrieval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purge-Flush &amp; Vent</td>
<td></td>
<td></td>
<td>Lifelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilation</td>
<td></td>
<td></td>
<td>Fire Extinguishers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure Area (Post &amp; Flag)</td>
<td></td>
<td></td>
<td>Lighting (Explosion Proof)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathing Apparatus</td>
<td></td>
<td></td>
<td>Protective Clothing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resuscitator-Inhalator</td>
<td></td>
<td></td>
<td>Respirator(s) (Air Purifying)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standby Safety Personnel</td>
<td></td>
<td></td>
<td>Direct reading gas monitor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoisting Equipment</td>
<td></td>
<td></td>
<td>Non-Sparking Tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All electric equipment listed</td>
<td></td>
<td></td>
<td>Powered Communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class I, Division I, Group D</td>
<td></td>
<td></td>
<td>Burning &amp; Welding Permit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCBA's for entry &amp; standby</td>
<td></td>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EMERGENCY AND RESCUE PROCEDURES**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rescue Procedures will be implemented by Company Employees.

Company Rescue Personnel have had training in:

a. Use of Personal Protective Equipment.

b. Use of Rescue Equipment.

c. Practiced simulated permit space rescue within the past 12 months for a space representative of the space for which this permit is issued.

Each member of the Rescue Team has had training in basic First Aid and cardiopulmonary resuscitation (CPR) and at least one (1) member is currently certified.

NAME OF CERTIFIED PERSON (CPR): _______________________________________

NAME OF CERTIFIED PERSON (1st AID): ___________________________________

Appropriate Material Safety Data Sheets are at the job site.

The retrieval line is affixed to the entrants and a fixed point outside the space or a mechanical device should the space be a vertical type more than five (5) feet deep.

All entrants will wear a chest or full body harness with a retrieval line attached at the center of the entrant's back neat shoulder level, or above the entrant's head.

Entrants will wear wristlets, in lieu of the above, should they create a lesser danger to the entrants.

4 of 6
Rescue procedures will be implemented by a rescue service consisting of persons who are not employees.

This rescue service has been provided with:

a. information on all hazards or potential hazards they may confront.

b. access to all permit spaces from which rescue may be necessary to enable the rescue service to develop appropriate rescue plans and practice rescue procedures.

SPECIFIC RESCUE PLAN FOR AN EMERGENCY IN THIS CONFINED SPACE:

___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________
___________________________________________________________________________________

5 of 6
**RECORD OF CONTINUOUS MONITORING**

[The results of continuous monitoring, if applicable, are to be recorded below every two (2) hours.]

<table>
<thead>
<tr>
<th>TESTS TO BE TAKEN</th>
<th>Permissible Entry Level</th>
<th>TIME/RESULTS</th>
<th>TIME/RESULTS</th>
<th>TIME/RESULTS</th>
<th>TIME/RESULTS</th>
<th>TESTER'S INITIALS</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT OF OXYGEN</td>
<td>19.5 to 23.5%</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
<tr>
<td>LOWER EXPLOSIVE LIMIT</td>
<td>Under 10%</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
<tr>
<td>*</td>
<td>**</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
<tr>
<td>*</td>
<td>**</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
<tr>
<td>*</td>
<td>**</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
<tr>
<td>*</td>
<td>**</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
<tr>
<td>*</td>
<td>**</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td><strong><strong>/</strong></strong>_</td>
<td>________</td>
<td>______</td>
</tr>
</tbody>
</table>

*8 Hour Time Weighted Average: Employee can work in area 8 hours (longer with appropriate protection).  
**Short term exposure limit: Employee can work in area up to 15 minutes.

This six (6) page Entry Permit and Pre-Entry Checklist as been prepared by the Entry Supervisor and reviewed by all personnel involved in this Permit-Required Confined Space Entry Operation.

ENTRY SUPERVISOR: 
(Name)  (Signature)  (Date)
 PRE-ENTRY CHECK LIST  
and 
CERTIFICATION OF COMPLIANCE  
for  
CONFINED SPACE ENTRY USING FORCED AIR VENTILATION  
FOR CONTROL OF HAZARDOUS ATMOSPHERE  
(NO OTHER HAZARDS ARE IDENTIFIED)  

PART 1  
I certify that the below listed confined space complies with the provisions of confined space entry using forced air ventilation for control of hazardous atmospheres where no other hazards are identified.

CONFINED SPACE IDENTIFICATION: ________________________ DATE: ________________  
SPACE LOCATION: ___________________________ TIME: ________________  
WORK TO BE ACCOMPLISHED IN CONFINED SPACE: ___________________________

PRE ENTRY CHECKLIST  
INITIAL ATMOSPHERIC CHECK (BEFORE VENTILATION): TIME: ________________ 

<table>
<thead>
<tr>
<th>Acceptable Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen: % %</td>
</tr>
<tr>
<td>Flammable gases and vapors:</td>
</tr>
<tr>
<td>% LEL</td>
</tr>
<tr>
<td>% LEL</td>
</tr>
<tr>
<td>% LEL</td>
</tr>
<tr>
<td>Potential toxic air contaminants:</td>
</tr>
<tr>
<td>PPM</td>
</tr>
<tr>
<td>PPM</td>
</tr>
<tr>
<td>PPM</td>
</tr>
</tbody>
</table>

[NOTE: mg/m³ may be substituted for PPM. See Table AC-1, Permissible Exposure Limits for Chemical Contaminants]  

METHOD OF ISOLATION: __________________________________________________________   
___________________________________________________________________________________  
MEANS OF VENTILATION: __________________________________________________________   
___________________________________________________________________________________  

1 of 2
### Atmospheric Check (After Ventilation & Isolation): Time: ____________

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Acceptable Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxygen</strong></td>
<td>&gt; 19.5% &lt; 23.5%</td>
</tr>
<tr>
<td><strong>Flammable gases and vapors</strong></td>
<td></td>
</tr>
<tr>
<td>(NAME)</td>
<td>&lt; 10.0%</td>
</tr>
<tr>
<td>(NAME)</td>
<td>&lt; 10.0%</td>
</tr>
<tr>
<td>(NAME)</td>
<td>&lt; 10.0%</td>
</tr>
<tr>
<td><strong>Potential toxic air contaminants</strong></td>
<td></td>
</tr>
<tr>
<td><em>Hydrogen sulfide</em></td>
<td>&lt; 10 PPM</td>
</tr>
<tr>
<td>(NAME)</td>
<td></td>
</tr>
<tr>
<td><em>Carbon Monoxide</em></td>
<td>&lt; 25 PPM</td>
</tr>
<tr>
<td>(NAME)</td>
<td></td>
</tr>
<tr>
<td>(NAME)</td>
<td></td>
</tr>
</tbody>
</table>

[NOTE: mg/m³ may be substituted for PPM. See Table AC-1, Permissible Exposure Limits for Chemical Contaminants]

---

### Permit and Check

**List Prepared By:** ________________________________________________

**Approved By:** ________________________________________________

**Reviewed by:** (Confined Space Operations Personnel)

**Note:** The below listed persons, or their representative, have had the opportunity to observe the pre-entry atmospheric testing as well as any periodic testing that may be deemed necessary for employee safety.

---

**The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.**

**If conditions are in compliance with the above requirements and there is no reason to believe conditions may change adversely, then proceed to the permit space pre-entry check list. Complete and post with this form. Maintain this form and supporting documentation for a period of one (1) year.**

**This permit and supporting documentation shall be kept at the job site. At completion of the job, this copy will be forwarded to the program administrator.**

2 of 2
I certify that the below listed confined space falls under the provisions of confined space entry using forced air ventilation for control of hazardous atmospheres where no other hazards are identified.

CONFINED SPACE PRE-ENTRY CHECK LIST

A confined space either is entered through an opening other than a door (such as a manhole or side port) or requires the use of a ladder or rungs to reach the working level. Test results must be satisfactory. This check list must be filled out whenever the job site meets this criteria.

1. Did your survey of the surrounding area show it to be free of hazards such as drifting vapors from any source? ☐ ☐
2. Does your knowledge of industrial or other discharges indicate this area is likely to remain free of dangerous air contaminants while occupied? ☐ ☐
3. Are you certified in the operation of the gas monitor to be used? ☐ ☐
4. Has a gas monitor functional test (Bump Test) been performed this shift on the gas monitor to be used? ☐ ☐
5. Did you test the atmosphere of the confined space prior to entry? ☐ ☐
6. Did the atmosphere check as acceptable (no alarms given)? ☐ ☐
7. Will the atmosphere be continuously monitored while the space is occupied? ☐ ☐

NOTE: If any of the above questions are answered "NO", DO NOT ENTER. Contact your immediate supervisor.

JOB LOCATION: ____________________________  DATE: ________________
COMPETENT PERSON NAME: __________________________________  SHIFT: ______________
COMPETENT PERSON SIGNATURE/DATE: ________________________________

EMERGENCY PHONE NUMBERS:

LOCAL FIRE DEPARTMENT (RESCUE): ____________________________
LOCAL FIRE DEPARTMENT (FIRE): ____________________________
ON-SITE EMERGENCY PHONE NUMBER: ____________________________
POLICE: ____________________________