



**UNITED STATES MARINE CORPS**  
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10 Feb 2014

MARINE CORPS LOGISTICS BASE ALBANY ORDER 5100.12B

From: Commanding Officer, Marine Corps Logistics Base Albany  
To: Distribution List

Subj: CONFINED SPACE SAFETY PROGRAM

Ref: (a) 29 Code of Federal Regulations, Section 1910.146  
(b) NAVMC DIR 5100.8 (NOTAL)  
(c) MCLBAO 11320.2F

Encl: (1) Confined Space Safety Program Procedural Guidance

1. Situation. This order revises the requirements established for entering confined spaces aboard Marine Corps Logistics Base (MCLB) Albany and meets the requirements of references (a) and (b) where applicable.

2. Cancellation. Base Order 5100.12A.

3. Mission. Leaders at all levels are responsible for implementing the requirements and procedures within this order to prevent injuries or illnesses during confined space operations.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Confined space entry can result in serious injury, illness or death. This can lead to unnecessary suffering to victims, reduce morale, and degrade an organization's capabilities. The intent of this program is to eliminate, or reduce to acceptable levels, all foreseen hazards associated with the entry or work in confined spaces. Integrating controls and countermeasures into high risk confined space entry operations can prevent injuries, illnesses or deaths.

(2) Concept of Operation. The Confined Space Safety Program (CSSP) aboard MCLB Albany will be implemented by applying the program elements identified in enclosure (1) throughout MCLB Albany and all tenant commands.

b. Subordinate Element Missions

(1) MCLB Albany Confined Space Program Manager (CSPM)

(a) Assist base units and tenant activities where needed in determining functional area applicability for CSSP requirements.

(b) Provide guidance and follow-up resolution support for deficient CSSP requirements.

(c) Coordinate subject matter expert support to resolve confined space safety issues not specifically addressed or supported by the order.

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(d) Provide assistance where needed or as requested to expedite critical confined space safety deficiency corrective action.

(e) Monitor CSSP awareness and refresher training as directed or requested in support of improving program effectiveness.

(f) Convene and chair CSSP forums as may be needed to disseminate information and obtain feedback in support of program compliance and effectiveness.

(2) MCLB Albany activities and tenant organizations whose employees must enter confined spaces will:

(a) Comply with the CSSP guidance outlined in the references and herein.

(b) Provide recurring CSSP awareness training where applicable.

(c) Report CSSP deficiencies and request support where available resources do not support immediate corrective action.

(d) Provide feedback and recommendations in support of improving overall program effectiveness.

c. Coordinating Instructions. The MCLB Albany CSPM will coordinate program element applicability as outlined in this Order for all organizational and tenant activities. CSSP requirements not specifically addressed within the scope of this Order will be referred to the MCLB Albany CSPM for resolution.

5. Administration and Logistics. The CSPM will ensure this Order is maintained current with all regulatory requirements. Recommended changes concerning the contents of this Order may be forwarded to Risk Management, Public Safety Division via the appropriate chain of command.

6. Command and Signal

a. Command. This Order is applicable to MCLB Albany and all tenant commands and organizations to include contractors.

b. Signal. This Order is effective the date signed.

  
DONALD J. DAVIS

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Chapter 1

Program Responsibilities and Requirements

1. Discussion. It is imperative that MCLB Albany activities and tenant organizations that are responsible for the development, documentation and administration of the CSSP, fulfill the confined space duties as directed in this Order to meet requirements of references (a) and (b).

2. Commanding Officer. The Commanding Officer will appoint in writing one person from the Risk Management Office as the command CSPM).

3. Installation Safety Manager

a. Provide staff supervision over the CSPM.

b. Ensure that the CSPM is trained, qualified, and certified to perform his or her duties.

Budget for anticipated confined space resources and training requirements related to CSSP administration.

4. CSPM

a. Serve as Program Manager of this program.

b. Establish and maintain a program which ensures safe confined space entry.

c. Develop a written confined space entry program that includes permitting requirements and procedures.

d. Provide the training, resources and expertise required to assist supervisors with hazard evaluation in Permit-Required Confined Spaces (PRCS).

e. Perform atmospheric testing and issue entry permits.

f. Submit budget requests for anticipated confined space resources and training requirements related to CSSP administration.

g. Perform confined space reclassification evaluations.

h. Determine PRCS eligible for alternate PRCS Entry Procedures.

i. Provide atmospheric testing and entry permit services to those subordinate commands, divisions or tenant activities aboard the installation without a Confined Space Technician (CST), or to subordinate commands, divisions or tenant activities whose CST is not authorized to perform atmospheric tests on the space needing to be entered.

j. Train, certify, and provide appointment letters for all CSTs.

k. Maintain all required CSSP documents and records such as issued entry permits, training records, and applicable references.

l. Coordinate with contractor personnel performing work in PRCSS aboard MCLB Albany.

m. Review all construction plans of new building projects for confined space requirements.

n. Review all building plans of existing buildings for confined space requirements.

o. Ensure proper operating condition of all instruments. Ensure that all CSTs know the proper manner of use for each instrument that they will be required to use. Ensure that all of the instruments used by the CSTs are properly maintained and calibrated.

p. Maintain an inventory of all confined spaces located on MCLB Albany.

q. Ensure an annual confined space rescue drill is performed by the Base Fire Department.

r. Review this program annually and document the results.

5. Director, Installation and Environment (I&E) Division. Provide maps of base facilities and utilities with all manhole and confined spaces identified.

6. Director, Communication Information & System Division (CISD)

a. Ensure CISD telecommunication workers comply with the provision of this Order.

b. Ensure contract personnel entering into telecommunication manholes comply with Paragraph 14.

Note: Telecommunication workers are not exempt from the provision of this Order by complying with OSH Telecommunications Standard, 29 CFR 1910.268, because all telecommunication manholes at MCLB Albany are classified as PRCSS.

7. CSTs

a. Complete and maintain an accurate PRCSS Hazard Evaluation Form for each PRCSS in their command, division, or activity.

b. Perform atmospheric testing and issue entry permits for PRCSSs in their command, division, or activity for which they are authorized.

c. Maintain a record of permits issued.

d. Perform periodic or follow-up atmospheric testing at the request of the CSPM.

e. Consult with the CSPM for technical assistance.

f. Properly use, maintain and calibrate required instruments and equipment.

g. Provide a copy of the completed permit to the CSPM as soon as entry operations are completed.

8. Resident Officer-in-Charge of Construction (ROICC). The ROICC will:

a. Invite the CSPM to participate in the planning of any new construction, or renovations to existing structures that may create or modify existing PRCSS.

b. Notify the CSPM of pending contracts that may involve contractor entry or work in existing PRCSS.

c. Notify the CSPM when contractors perform work aboard the base that involves permit space entry so the following information exchange can occur:

(1) Notify the contractor that the workplace contains PRCSS and that entry is allowed only through compliance with a permit space program meeting the requirements of 29 CFR 1910.146.

(2) Apprise the contractor of the elements that make the space PRCSS.

(3) Notify the contractor of any previous experience with the space, including known or potential hazards and established entry procedures.

(4) Notify the contractor of any precautions or procedures that have been implemented to protect workers in or near permit spaces where contract personnel will be working.

(5) Ensure contractor compliance with Paragraph 14.

9. Commanders, Commanding Officers and their Directors or Officers-in-Charge of Tenant Activities

a. Ensure personnel under their command are informed of the hazards of confined spaces and the provisions of this Order.

b. Provide the necessary resources to their workers to ensure compliance with this Order. These resources include additional training and equipment.

c. Recommend personnel in their command, division, or activity to the CSPM for CST appointment.

d. Inform employees in accordance with Chapter 2 Paragraph 5.

10. MCLB Albany Fire Chief. The MCLB Albany Fire Chief will:

a. Provide rescue and emergency services for confined space entry operations aboard MCLB Albany including services to contractor personnel.

b. Ensure that rescue and emergency personnel are properly trained.

- c. Provide the equipment necessary for confined space rescue.
- d. Grant Hot Work Permits when required on the Confined Space Entry Permit (only after the atmosphere has been monitored and determined to be safe for entry).
- e. Ensure each member of the Confined Space Rescue Team (CSRT) is provided with, and trained on, the personal protective equipment and rescue gear used to perform confined space rescues.
- f. Ensure each CSRT member is trained to perform assigned rescue duties and training required of authorized entrants under this program.
- g. Assist in identifying and selecting appropriate retrieval and entry equipment.
- h. Ensure each member of the CSRT participates in a confined space rescue drill at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative non-permit spaces. Representative non-permit spaces will, with respect to opening size, configuration, and accessibility simulate the types of permit spaces from which rescue is likely to be performed. The annual practice rescue drill will be coordinated with the CSPM.
- i. Ensure each member of the CSRT is trained in First Aid and in Cardiopulmonary Resuscitation (CPR). At least one member of the rescue team holds a current certification in First Aid and CPR. Emergency Medical Technician training, paramedic training, and certification meet and exceed this requirement.

11. Entry Supervisor. The entry supervisor will:

- a. Ensure the proper procedures and practices necessary for safe entry operations are developed and implemented including, but not limited to the following:
  - (1) Verify acceptable entry conditions.
  - (2) Isolate the permit space.
  - (3) Purge, inert, flush, or ventilate the permit space as necessary to eliminate or control atmospheric hazards.
  - (4) Provide pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards.
  - (5) Verify that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.
- b. Ensure that the completion of these measures and any other requirements specified by the CSPM or CST are documented on the entry permit.

c. Terminate the entry and cancel the permit when acceptable entry conditions are not met or maintained.

12. Persons Entering a Confined Space (Entrants). The persons entering the PRCS must:

a. Be familiar with the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

b. Be familiar with the proper use of all tools and equipment to be used within the confined space.

c. Communicate with the attendant as necessary to enable the attendant to monitor entrant's status and to enable the attendant to alert entrants of the need to evacuate the space.

d. Alert the attendant whenever he/she:

(1) Recognizes a warning sign and symptoms of exposure to a dangerous situation.

(2) Detects a prohibited condition.

e. Evacuate the confined space as quickly as possible whenever:

(1) An order to evacuate is given by the attendant or the entry supervisor.

(2) Recognizes any warning sign or symptom of exposure to a dangerous situation.

(3) Detects a prohibited condition.

13. Attendants. The On-Scene Safety Advisor (Attendant) will:

a. Be familiar with the hazards that may be faced during entry, including information on the mode, signs and symptoms and consequences of the exposure.

b. Be aware of all possible behavioral effects of hazard exposure in authorized entrants.

c. Continuously maintain an accurate count of authorized entrants in the PRCS and ensure that the means used to identify authorized entrants accurately identifies who is in the space.

d. Remain outside of the PRCS during entry operations until the conclusion of the operation or relieved by another qualified attendant.

e. Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of need to evacuate.

f. Monitor the activities inside and outside of the PRCS to determine if it is safe for entrants to remain in the space.

g. Order the authorized entrant(s) to evacuate the PRCS immediately under any of the following conditions:

(1) The attendant detects a prohibited condition.

(2) The attendant detects the behavioral effects from exposure to hazardous materials in the authorized entrant.

(3) The attendant detects a situation outside of the PRCS that could endanger the entrants.

(4) The attendant cannot effectively and safely perform all of his duties required under this program.

h. Summon rescue and emergency services as soon as the attendant determines that the authorized entrants may need assistance to escape from the PRCS.

i. Take the following actions when an unauthorized person(s) approach or enter a PRCS while an entry is underway:

(1) Warn unauthorized person(s) to stay away from the PRCS.

(2) Advise the unauthorized person(s) that they must exit immediately if they have entered the PRCS.

(3) Inform the authorized entrants and the entry supervisor if unauthorized person(s) have entered the PRCS.

j. Perform non-entry rescue.

k. Never enter a PRCS that they are responsible for attending.

l. Perform no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

14. Contractor Personnel. Contractor Personnel aboard MCLB Albany will:

a. Execute their own confined space entry program and are not authorized to enter PRCSs under a government issued permit.

b. Use the MCLB Albany Fire Protection Branch rescue and emergency services.

c. Inform the Contracting Officer's Representative (COR) of their intent to enter a PRCS.

d. Obtain any available information regarding permit space hazards and entry operations from the CSPM through the COR.

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- e. Coordinate entry operations with the CSPM when both base employees and contractor personnel will be working in or near a PRCS.
- f. Inform the CSPM of any hazards discovered or confronted.

## Chapter 2

### Identification and Control Measures for Confined Spaces

1. Discussion. The purpose of identifying all confined spaces and PRCS is to ensure that all workers are aware that certain confined space hazards are present in designated spaces within their work areas. The confined space decision flow chart is provided in Appendix C to assist in this effort.

2. Identification of Confined Spaces. Commanders, Commanding Officers and their Directors or Officers-in-Charge of Tenant Activities in coordination with the CSPM will evaluate their workplaces to identify spaces that may be expected to be entered. Confined space means a space that:

- a. Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- b. Has limited or restricted means for entry or exit; and
- c. Is not designed for continuous employee occupancy.

Note: All spaces that meet the criteria in Chapter 2 Paragraph 2 will be considered to be confined spaces. Consideration will be given to spaces that may not be in the same geographic location as the command, but are controlled by that command. For example, an electrical manhole located in the Plant Production Albany crane area would be considered an I&E Division workplace because I&E Division workers would enter the manhole even though it is located in another command's area.

3. Identification of PRCS. Confined spaces will be evaluated to determine if they meet one or more of the following characteristics of a PRCS:

- a. Contains or has the 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 floor which slopes downward and tapers to a smaller cross-section.
- d. Contains any other recognized serious safety or health hazard.
- e. Meets one or more of the above characteristics will be designated as a PRCS.

4. Identification of Non-PRCS. Confined spaces that do not meet one or more characteristics of a PRCS and do not contain, or have the potential to contain any atmospheric hazard capable of causing death or serious physical harm will be designated as a non-permit confined space. Examples of non-permit confined spaces include ventilated walk-in freezers or coolers; open-top spaces less than 4 feet deep, such as pits and excavations, or utility rooms.

5. Hazard Warning. Commanders, Commanding Officers and their Directors or Officers-in-Charge of Tenant Activities will inform all workers the presence of each PRCS and inform responsible supervisors the restrictions regarding entry into their PRCS's. In addition, each PRCS will be posted with a sign or any other equally effective means, indicating the existence and location of the PRCS.

NOTE: A sign reading "DANGER—PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER" (or similar language) may be used.

6. Sealing and Limited Access of Confined Spaces. If it is determined that no one will ever enter the space either because the work will be done outside, or because no employee will ever be expected to enter the space, measures will be taken to effectively seal the space entrances. Measures to effectively seal a space include welding the openings shut or covering accesses with concrete. Once sealed, the spaces will no longer be considered to be part of the CSSP as entry into these spaces will no longer be possible. If it is determined that base employees or qualified contractors may enter the space, less permanent measures will be implemented to prevent unauthorized entry. Such measures include: locking, chaining, or bolting space entrances closed.

7. Entry of a PRCS. If the Commanders, Commanding Officers and their Directors or Officers-in-Charge of Tenant Activities decide that workers will enter the PRCS, they will ensure that their supervisors comply with the requirements in Chapter 6, Permit Requirements, and make this Order available for their review.

### Chapter 3

#### Evaluation of Confined Space Hazards

1. Discussion. The processes described in Chapter 2 identified the PRCs in all work areas. The next logical step is to look at each of these spaces and identify a list of known hazards for each space. This Chapter describes the process to evaluate and document the known hazards of these spaces.

2. PRCS Hazard Evaluation. Supervisors, with the assistance of the CSPM or CST, will evaluate and document each PRCs in their respective work areas. A copy of the completed hazard evaluation will be retained by the CSPM. The CSPM will review and forward it to the CST of the area to be reviewed prior to issuing any permits for entry into the space. Such evaluations will include, but are not limited to the following considerations:

a. The contents or previous contents of the space which may result in the presence of flammable, toxic, or oxygen deficient or enriched atmosphere.

b. The location and configuration of the space, including restricted areas, obstructions, remoteness, etc., which may interfere with or inhibit movement, ventilation, rescue efforts, etc.

c. The potential hazards from the external environment such as proximity to compressed gas storage areas, petroleum storage areas, or piping and ducting that could affect the atmosphere within the space.

d. The types of operation which are conducted in the space, particularly those which, by the very nature of the process, produce toxic materials, flammables, or ignition sources.

e. The fixtures, devices, or equipment within the space that create or contribute to hazardous conditions including piping, conduits, ducts, machinery or pressurized lines.

f. The presence of other hazards such as slippery surfaces, deteriorated ladders, irritant or caustic materials.

g. The boundary or adjacent spaces and their contents to ensure that fire or explosion are not caused in these spaces by the operation in the confined space.

## Chapter 4

### Atmospheric Testing

1. Discussion. Atmospheric testing is the single most important step in preventing confined space fatalities. Atmospheric testing of confined spaces by a CSSP representative is required only if workers must enter the space.

2. Authorized Atmospheric Testing Personnel. Atmospheric testing of confined spaces will be done by either the CSPM or CST using calibrated, direct reading instrument. The CSTs are authorized to test only those spaces or types of spaces specified in their appointment orders. They may also perform follow-up or periodic atmospheric testing when required by the CSPM.

3. Safety Precautions for Atmospheric Testing Personnel. Initial atmospheric testing will be performed outside of the space. Testing the interior of the space may be done by drop tests or insertion of sample probes and hoses into the space.

4. Atmospheric Tests and Acceptable Entry Conditions. Tests for the following conditions will be performed using calibrated, direct reading instruments. The test will be performed in the order given below:

a. Oxygen Contents. Acceptable oxygen range for safe entry is 19.5% to 23.5% by volume. An oxygen meter reading of other than 20.8% and outside of the meter drift range inherent to the device will be investigated by the atmospheric tester to determine the cause of oxygen displacement or consumption.

b. Flammable Gases and Vapors. Acceptable entry level is less than 10% of the Lower Explosive Limit (LEL) of the gas for LEL calibration.

c. Toxic Contaminates. Toxic materials known or expected to be present, will be measured and compared to the applicable standards.

d. Workers may not enter or occupy a space if a hazardous atmosphere is detected.

5. Continuous or Follow-up Atmospheric Testing. Continuous or periodic (follow-up) atmospheric testing may be required if the space being entered cannot be isolated because the space is large or is part of a continuous system such as a sewer or steam tunnel. It may also be required if the work being conducted in the space has potential of changing the atmospheric conditions in the space. The atmospheric tester will determine if continuous or periodic atmospheric testing is required. If a hazardous atmosphere is detected during continuous or periodic atmospheric testing:

a. Workers will leave the space immediately.

b. The space will be evaluated to determine how the hazardous atmosphere developed.

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c. Measures will be implemented to eliminate the hazardous atmosphere before any subsequent entry takes place.

## Chapter 5

### Confined Space Reclassification

1. Discussion. Reclassification of a PRCS to a non-permit confined space is a useful and cost effective tool for meeting the federal regulatory requirements of confined space entry. It is especially well suited for a PRCS in which work in that PRCS eliminates all hazards and involves subsequent entries by several parties. Reclassification of a PRCS should be pursued whenever possible provided all hazards in a space have been eliminated and documented proof exists that all hazards in the space have been eliminated.

2. Request for Reclassification. If a supervisor believes, based on the elimination of a hazard, that a PRCS meets the conditions for reclassification as a non-permit confined space, the supervisor shall request the CSPM to re-evaluate the PRCS. If work is planned in a space that could introduce or re-introduce hazards that were previously eliminated or non-existent, the supervisor shall notify the CSPM requesting the place be re-evaluated to determine if it must be reclassified as a PRCS.

3. Hazard Upgrade. When there are changes in the use or configuration of a non-permit confined space or when work must be done in the space that might increase the hazard to the entrants, the space will be re-evaluated and reclassified, if necessary as a PRCS.

4. Hazard Downgrade. A space classified as a PRCS may be reclassified as a non-permit confined space under the following conditions:

a. If the PRCS poses no immediate danger to life or health (IDLH), actual or potential atmospheric hazards and if all hazards are eliminated without entering the space, the space can be designated a non-permit confined space for as long as the non-atmospheric hazard remains eliminated. Eliminating or removing hazards include washing, rinsing, cleaning, isolating, blanking, blinding, double block and bleeding and implementing lockout/tagout precautions.

b. If it is necessary to enter the PRCS to eliminate hazards, such entry will be performed using the procedures specified in enclosure (1) Chapter 5, Permit Requirements. If testing and inspection during that entry demonstrate that the hazards within the space have been eliminated, the PRCS may be reclassified as a non-permit confined space for as long as the supervisor will request the CSPM to re-evaluate the PRCS.

c. If the hazards arise within a PRCS that has been reclassified to a non-permit confined space, workers will exit the space. The supervisor will notify the CSPM requesting the space be re-evaluated to determine if it must be reclassified as a PRCS.

5. Documentation. The re-evaluation process will include a written document stating the basis and rationale for the determination that all hazards have been eliminated. The document will contain the date, location of the space

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and the signature of the CSPM. This document will be made available to each worker entering the space.

## Chapter 6

### Permit Requirements

1. Discussion. Confined Space Entry Permits can be used as a checklist to ensure that all safety measures have been completed prior to entry into a PRCS. They can also provide an important source of documentation that all known hazards have been mitigated prior to entry into a PRCS.

2. Request for Permit. If entry into a PRCS is required, the supervisor of the workers requiring entry will request an atmospheric test and entry permit from the CSPM or CST. The request, which may be verbal, will include the space location, description of the space and the type of work to be performed in the space. The supervisor should notify the CSPM or designated representative as soon as they are aware that entry into a space is required, even if the required entry date is several weeks away as preparations to the space may have to be made prior to actual entry.

3. Pre-entry Inspection for Acceptable Entry Conditions. Supervisors will ensure the following requirements are fulfilled prior to and during PRCS entry operations:

a. Measures are implemented to prevent unauthorized entry into PRCS such as those cited in Chapter 2 Paragraph 5.

b. Hazard evaluations have been conducted on the space and documented as instructed in Chapter 3 Paragraph 2.

c. Procedures and practices necessary for the safe entry operations are developed and implemented including, but not limited to, the following:

(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.

(5) Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.

NOTE: Completion of these measures and any other requirements specified by the CSPM or CST will be documented on an entry permit in accordance with reference (a).

d. Entry equipment is provided, maintained, and users are properly trained on the following:

(1) Ventilating equipment needed to attain acceptable entry conditions.

(2) Communications equipment necessary to ensure communication between the attendant and entrants, to monitor their status and alert them of the need for evacuation.

(3) Personal Protective equipment when feasible engineering and work practice controls do not adequately protect workers.

(4) Lighting equipment needed to enable safe work in and exit from the space in case of emergency.

(5) Barriers and shields necessary to protect entrants from external hazards.

(6) Equipment, such as ladders, needed for safe ingress and egress.

(7) Rescue and emergency equipment needed to retrieve entrants and provide emergency services to rescued employees, except the equipment provided by the rescue services.

(8) Any other equipment necessary for safe entry into and rescue from a PRCS.

e. Atmospheric conditions of the PRCS are evaluated prior to entry per the atmospheric testing procedures in Chapter 4 Paragraph 4.

f. At least one attendant is outside the PRCS for the duration of the entry operations.

g. Communications equipment is provided to enable an attendant to respond to an emergency in one or more spaces without distraction from the attendant's responsibilities, if multiple spaces are to be monitored by a single attendant.

h. Ensure workers with active roles in entry operation, entry supervisors, attendants, and entrants are designated and trained on their duties and responsibilities. Training will include reviewing with workers the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for toxics which may be present in the space.

i. Each authorized entrant must use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, or above the entrant's head, or other point which will ensure that the entrant will present the smallest possible profile during removal. The other end of the retrieval line will be attached to a mechanical device of fixed point outside of the PRCS in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device will be available to retrieve personnel from vertical type permit spaces more than 5 feet deep.

j. If an injured entrant is exposed to a substance for which an MSDS, SDS or other similar written information is required to be kept at the work site, that the MSDS, SDS or written information will be made available to the medical facility treating the exposed entrant.

NOTE: While the ultimate responsibility for these requirements lies with the supervisor, CSSP representatives are prepared to assist and provide technical advice to ensure workers remain safe during PRCS operation.

4. Entry Permit. The entry permit contains administrative information, the results of atmospheric testing, entry requirements, and the names of entry operation participants. When completed, it documents the accomplishment of measures required in this Order. The only authorized entry permit for use by government personnel aboard this base will be provided by the MCLB Albany Risk Management Office. The permit is available to the CSTs from the CSPM. Contractor personnel will be provided their own permit from their employer.

5. Permit Posting. Once the pre-entry inspection has been completed in accordance with Chapter 6 Paragraph 3 the entry permit will be completed in full and signed by the entry supervisor before workers may enter the PRCS. This will provide documentation that all known hazards in the PRCS have been mitigated. The completed permit will be made available at the time of entry to all authorized entrants, by posting it at all entrances so that entrants can confirm that pre-entry preparations have been completed.

6. Permit Termination. The duration of the permit will not exceed the time required to complete the assigned task during that shift; normally 8 hours. The Entry Supervisor will terminate entry and cancel the permit when:

- a. Operations have been completed.
- b. An atmospheric condition that is outside of the acceptable entry levels arises in the permit space.
- c. One or more of the requirements for authorized entry as specified on the permit has been breached, interrupted or has failed.

Note: The Entry Supervisor will inform the CSPM or CST of any problems encountered during entry operations so that appropriate revisions to the CSSP can be made. Upon completion of entry operation a copy of the permit will be sent immediately to the CSPM.

7. Alternate PRCS Entry Procedures. Alternate PRCS Entry Procedures: Reference (a) contains provisions for slightly less stringent PRCS entry requirements for spaces in which the only risk to entrants is a hazardous atmosphere. Alternate PRCS entry procedures will be used only for those spaces that have a continuous atmospheric monitoring system. The CSPM is responsible for designating PRCSs eligible to be entered using alternate procedures and for coordinating entry procedures with the respective supervisor.

## Chapter 7

### Training

1. Discussion. The key to the success of the CSSP, or any program, is to have a fully trained staff to carry out the tasks and elements of the program. Training will be conducted and documented to ensure that all persons involved in this program are aware of their roles and responsibilities as well as the proper manner to carry them out. Training will be provided so that all employees involved in confined space entry acquire the understanding, knowledge and skills necessary for the safe performance of their duties.

2. The minimum specific training requirements for each position are listed below.

3. CSPM's Training Requirements. The CSPM will complete the Navy Confined Space Safety course (CIN: A493-0030) or equivalent.

4. Confined Space Technicians' Training Requirements. The CSTs will be trained and appointed in writing by the CSPM. The CSTs will be recertified as requirements dictate. CST training will include:

- a. A review of this order and familiarization with 29 CFR 1910.146.
- b. Responsibilities of position.
- c. Permitting procedures and filling out an entry permit.
- d. Proper use, maintenance and calibration of atmospheric testing equipment.
- e. Use and limitations of personal protective equipment.
- f. Procedures for the spaces they are authorized to perform atmospheric testing on.
- g. Demonstrated performance on atmospheric testing and completing an entry permit.

5. Supervisors' Training Requirements. Confined Space Entry training for supervisors will be provided by the CSPM. This training will be arranged at the request of the supervisors' organizational leadership.

6. Entry Team Members' Training Requirements. Entry supervisors, attendants, and/or entrants will be trained by their respective supervisors. Training will include a review of this order, identification of the hazards in the PRCs in their work area, and their duties and responsibilities as described in this order. Appendix D may be used to ensure team members are currently familiar with confined space entry duties by the CSPM or CST prior to issuing each permit. The Risk Management Office has confined space training resources and available to entry supervisors, attendants and entrants.

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7. CSRT Members' Training Requirements. The MCLB Albany Fire Protection Branch will provide rescue and emergency services. Each member of the CSRT will be trained to perform the assigned rescue duties and the duties of the entrants. Training courses will be approved and coordinated through the CSPM.

APPENDIX A

GLOSSARY

1. Acceptable Entry Conditions. Conditions that must exist to allow entry and ensure that workers safely enter into and work with the permit space.
2. Attendant. An individual stationed outside one or more permit spaces to monitor the safety of the authorized entrants inside, and who performs all attendants' duties assigned to this program.
3. Authorized Entrant. A worker authorized by the entry supervisor to enter a PRCS.
4. Blanking or Blinding. The absolute closure of a pipe, line or duct by fastening a solid plate (such as a special blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
5. Confined Space. A space that:
  - a. Is large enough and so configured that a worker can bodily enter and perform assigned work.
  - b. Has limited or restricted means for entry or exit (tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that have limited means of entry).
  - c. Is not designed for continuous occupancy.
6. Confined Space Program Manager (CSPM). The property trained, qualified and appointed in writing by the Commanding Officer or designated representative of the Risk Management Office responsible for the administrative and technical aspects of the CSSP.
7. Confined Space Technician (CST). Personnel recommended by the Supervisor and appointed in writing by the CSPM, who are authorized to perform space hazard evaluations, atmospheric tests and issue entry permits for spaces or classification of spaces identified in their appointment orders.
8. Double Block and Bleed. The closure of a line, duct, or pipe by closing and locking or tagging a drain or vent valve in the line between the two closed valves.
9. Emergency. Any occurrence (including failure of hazard control or monitoring equipment) or event internal or external to the space that could endanger entrants.
10. Engulf. 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.

11. Entry. The action by which a person passes through an opening into a PRCS with the intent of entering the space. Entry includes ensuring 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.

12. Entry Permit. The written or printed document that is completed by the entry supervisor in conjunction with the confined space representative (atmospheric tester); to allow and control entry into a PRCS.

13. Entry Supervisor. The person responsible for determining if acceptable entry conditions are present at a PRCS where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry. An Entry Supervisor may also serve as an attendant or as an authorized entrant as long as that person is trained and equipped as required for each role he or she fills. The duties of the Entry Supervisor may be passed from one individual to another during the course of an entry operation.

14. Hazardous Atmosphere. An atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a PRCS), injury, or acute illness from one or more of the following causes:

a. Flammable gas, vapor, or mist in excess of 10% of its LEL.

b. Airborne combustible dust at a concentration that meets or exceeds its LEL. This concentration in which the dust obscures vision at a distance of five feet or less.

c. Atmospheric oxygen concentration below 19.5% or above 23.5%.

d. Atmospheric concentration of any substances listed by OSHA in 29 CFR 1910 subpart G, "Occupational Health and Environmental Control," or in subpart Z "Toxic and Hazardous Substances," above the numerical value of the Permissible Exposure Limit (PEL).

e. Any other atmospheric condition that is an IDLH.

NOTE: For air contaminants for which OSHA has not determined a dose or PEL, other sources of information such as the American Conference of Governmental Industrial Hygienists Threshold Limit Values, MSDSs, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

15. Hot Work Permit. The base Fire Department's written authorization to perform operations capable of providing a source of ignition. Examples of Hot Work include all flame heating, welding, torch cutting, brazing, carbon arc gouging, or any work which produces heat by means greater than or equal to 400 degrees Fahrenheit. Hot Work also includes operations involving other sources of ignition such as spark or arc producing tools of equipment, static discharges, friction, impact, open flames, ambers, non-explosive proof lights, fixtures, motors or equipment in the presence of flammable materials or flammable atmospheres. Hot Work Permits are issued by MCLB Albany Fire Protection Branch in accordance with reference (c).

16. Immediate Danger to Life or Health (IDLH). Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from the PRCS.
17. Inerting. The displacement of the atmosphere in a confined space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible. This procedure produces an IDLH oxygen deficient atmosphere.
18. Isolation. Positively preventing any unwanted form of energy (or other agent with serious potential for hazard) from entering a PRCS. Methods include: blanking or blinding, misaligning or removing sections of lines, pipes, or ducts, double block and bleed system, lock-out or tag-out of all sources or blocking or mechanical linkages.
19. 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.
20. Oxygen Deficient Atmosphere. An atmosphere containing greater than 23.5% oxygen by volume.
21. Oxygen Enriched Atmosphere. An atmosphere containing greater than 23.5% oxygen by volume.
22. Permit-Required Confined Space (PRCS). A confined space that has one or more of the following characteristics:
  - a. Contains or has the 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 into a smaller cross-section.
  - d. Contains other recognized serious safety or health hazard.
23. Prohibited Condition. Any condition in a PRCS that is not allowed by the permit during the period when entry is authorized.
24. Rescue Service. The personnel designated to rescue workers from permit required confined spaces. The base Fire Department provides confined space rescue aboard MCLB Albany.
25. Retrieval System. The equipment (including a retrieval line, chest or full body harness, and a lifting device or anchor) used for non-entry rescue of workers from PRCSs.
26. Testing. The process by which the hazards that may confront entrants of a PRCS are identified and evaluated.



APPENDIX C

DUTIES AND RESPONSIBILITIES OF ENTRY TEAM

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Entry Supervisor

- Know the hazards.
- Verify all requirements.
- Terminate entry and cancel the permit.
- Verify that rescue services.
- Unauthorized individuals, keep out.
- Enforce permit conditions.
- Verify that entrants are medically fit and qualified.
- Ensure team knows responsibilities and their duties.

Entrants

- Know the hazards you may face during entry.
- Know the proper use of your equipment.
- Communicate with the attendant.
- Alert the attendant when:
  - You recognize a warning sign or symptom of exposure.
  - You recognize a dangerous situation.
  - You detect a prohibited condition.
- Exit the space as quickly as possible when required.

Attendant

- Know the hazards that may be faced during entry.
- Be alert for behavioral effects of hazard exposure.
- Continuously maintain an accurate count of entrants.
- Remain outside the space during entry operations.
- Communicate with entrants.
- Monitor activities-evacuate space if:
  - You detect a prohibited condition.
  - You detect the behavioral effects of hazard exposure.
  - You detect a danger outside the space.
  - You cannot effectively and safely perform all the duties.
- Summon rescue and emergency.
- Unauthorized persons, keep out.
- Perform non-entry rescue.
- Do nothing that might interfere with your duty to monitor and protect the entrants.