



Confined Space Entry Program

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I. POLICY

It is the policy of the City of Redlands that all employees, while working within a confined space, or administering the confined space entry program, adhere to these standard operating procedures. Confined spaces are of particular concern because of their increased likelihood for incidents occurring due to toxic and/or flammable gases and vapors that may accumulate because of insufficient ventilation, and for oxygen levels to become deficient as the result of corrosion and/or organic debris digestion. In addition, limited access to these locations introduces complications with the retrieval of anyone incapacitated, should an incident occur.

II. AUTHORITY

California Code of Regulations, Title 8, Sections 5156-5159

III. SCOPE

This program applies to all City employees working in areas in which are exposed to the atmospheric conditions and/or physical hazards present in enclosed spaces included, but not limited to, pipelines, sewers, silos, sumps, tanks, tunnels, valve pits, vaults, vessels, and wet wells.

IV. DEFINITIONS

- A. **Acceptable Entry Conditions-** the conditions that must exist in a confined space to allow entry to and ensure that employees involved with confined space entry can safely enter and work within the space.
- B. **Attendant-** an individual stationed immediately outside one or more permit-required confined spaces who monitors the authorized entrants and who performs all attendants' duties assigned in this program.
- C. **Authorized Entrant-** an employee who is authorized by the City of Redlands to enter a permit-required confined space.
- D. **Confined Space-** a space that is large enough and so configured that an employee can bodily enter and perform assigned work, has limited or restricted means for entry or exit, and is not designed for continuous employee occupancy. Examples of confined spaces include boilers, storage tanks, sewer manholes, electrical manholes, crawl spaces, ventilation and exhaust ducts, pits, vats, vessels, vaults, pump or lift stations, septic tanks, pipelines, tunnels, elevator pits, trenches, and excavations.
- E. **Emergency-** any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit-required confined space that could endanger entrants.
- F. **Engulfment-** any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit-required confined space that could endanger entrants.
- G. **Entrant-** any employee who enters a confined space.
- H. **Entry Permit-** the written or printed document that is provided by the City to allow and control entry into a permit-required confined space.

- I. **Entry Supervisor-** an employee of the City responsible for determining if acceptable entry conditions are present at a permit-required confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as necessary.
- J. **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 permit- required confined space), injury, or acute illness from one or more of the following causes:
 - 1. An oxygen-deficient atmosphere containing less than 19.5% oxygen by volume or an oxygen enriched atmosphere containing more than 23.5% oxygen by volume
 - 2. A flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL) or lower explosive limit (LEL); a hazardous atmosphere of airborne combustible dust
 - 3. Having a concentration of any toxic substance above the VOSH permissible exposure limit (PEL) or the ACGIH threshold limit value (TLV)
 - 4. Any other atmospheric condition that is immediately dangerous to life or health
- K. **Immediately Dangerous to Life or Health (IDLH)-** any condition that poses an immediate or delayed threat to life, which would cause irreversible adverse health effects, or that would interfere with an individual's ability to escape unaided from a permit-required confined space.
- L. **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.
- M. **Permit-Required Confined Space-** a confined space that has limited or restricted means of exit and contains, or has the potential to contain, a hazardous atmosphere or a potential for engulfment and is not intended for continuous employee occupancy, and/or 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 small cross section or contains any other recognized serious safety and health hazard.
- N. **Qualified Person-** an entry supervisor who is trained to recognize and evaluate the anticipated hazard(s) of the confined space and who shall be capable of specifying necessary control measures to assure worker safety.
- O. **Rescue Team-** those persons designated by the City prior to any permit-required confined space entry to perform rescues from confined spaces.
- P. **Retrieval System-** the equipment used for non-entry rescue of persons from permit- required confined spaces, including retrieval lines, chest or full body harness, and a lifting device or anchor. A retrieval line is primarily used in vertical confined spaces and shall not be used in confined spaces consisting of horizontal tunnels or spaces where obstructions could increase the hazard to the entrant during emergency non-entry removal.
- Q. **Testing-** The process by which the hazards that may confront entrants to a permit-required confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit-required confined space.
- R. **Lock Out/Tag Out-** Placing locks or tags on the energy isolating device to prevent the unauthorized re-energizing of the device or circuit while work is being performed by personnel.

V. GENERAL PROGRAM RESPONSIBILITIES

RISK MANAGEMENT

- A. Review permits of confined space entries submitted by Managers or Supervisors within 24 hours of entrance;
- B. Review and grant approval of a contractor's confined space pre-qualifications prior to execution of a contract with the City;
- C. Coordinate necessary training and consult on the necessary Personal Protective Equipment (PPE) for the hazards that may be present during the entry;
- D. Annually review all entry permits with Departments tasked with their maintenance; and
- E. Respond to inquiries from City employees and supervisors regarding the program.

DIRECTORS, MANAGERS, AND SUPERVISORS

- A. Ensure proper training has been received by entry and rescue teams prior to any entries;
- B. Submit notices to Risk Management at least 24 hours prior to scheduled entry;
- C. Provide proper equipment for entry and rescue teams;
- D. Ensure confined space assessments have been conducted prior to entry;
- E. Ensure all permit required confined spaces are posted; and
- F. Ensure rescue team is available and at access during entry into spaces with Immediately Dangerous to Life or Health (IDLH) atmosphere.

AFFECTED EMPLOYEES

- A. Review and follow program requirements, with any questions or concerns being conveyed to immediate Supervisors or Risk Management; and
- B. Report any previously unidentified hazards associated with confined spaces.

VI. OPERATIONAL POSITIONS AND RESPONSIBILITIES

ENTRY SUPERVISOR

Entry supervisors are responsible for the overall permit space entry and must coordinate all entry procedures, tests, permits, equipment, and other relevant activities.

- A. Prior to entry, know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- B. Prior to entry, verify that the permit is accurately completed, all tests specified by the permit have been conducted, and all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;
- C. Terminate the entry and close the permit when the entry is complete and/or there is a need for terminating the permit;
- D. Verify that rescue services are available and that the means for summoning them are operable;
- E. Remove unauthorized persons who enter or attempt to enter the space during entry operations; and

- F. Determine when responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and ensure that operations performed within the space remain consistent with the permit terms and acceptable entry conditions are maintained.

ENTRY ATTENDANT

At least one attendant is required outside the permit space into which entry is authorized for the duration of the entry operation.

- A. Prior to entry, know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- B. Prior to entry, know the possible behavioral effects of hazard exposure on entrants;
- C. Continuously maintain an accurate count of entrants in the permit space and ensure a means to accurately identify authorized entrants;
- D. Remain outside the permit space during entry operations until relieved by another attendant.
 - 1. Once properly relieved, the former attendant may participate in other permit space activities, including rescue if they are properly trained and equipped.
- E. Communicate with entrants as necessary to monitor entrant status and alert entrants of any need to evacuate;
- F. Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space;
- G. Order the entrants to immediately evacuate if the attendant detects a prohibited condition, detects entrant behavioral effects of hazard exposure, detects a situation outside the space that could endanger the entrants, or if the attendant cannot effectively and safely perform all the attendant duties;
- H. Summon rescue and other emergency services as soon as the attendant determines the entrants need assistance to escape the permit space hazards;
- I. Perform non-entry rescues as specified by that rescue procedure and entry supervisor;
- J. Refrain from engaging in other duties that may interfere with the attendant's primary duty to monitor and protect the entrants; and
- K. Take the following action when unauthorized persons approach or enter a permit space while entry is under way:
 - 1. Warn the unauthorized persons that they must stay away from the permit space.
 - 2. Advise unauthorized persons that they must exit immediately if they have entered the space.
 - 3. Immediately inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.

ENTRANT

The entry supervisor must authorize all entrants to enter permit spaces. Prior to entry, entrants must have received the required training, be provided, and understand the required proper equipment and have reviewed the entry procedures and permit.

- A. Prior to entry, know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- B. Properly use the equipment required for safe entry;

- C. Communicate with the attendant as necessary to enable the attendant to monitor the status of the entrants and alert the entrants of the need to evacuate the space, if necessary;
- D. Alert the attendant whenever; the entrant recognizes any warning signs or symptoms of exposure to a dangerous situation, or any prohibited condition is detected; and
- E. Exit the permit space as quickly as possible whenever the attendant or entry supervisor gives an order to evacuate the permit space, the entrant recognizes any warning signs or symptoms of exposure to a dangerous situation, the entrant detects a prohibited condition, or an evacuation alarm activated.

VII. PROGRAM

A. Entry Standard Operating Procedures

1. PRIOR TO ENTRY

- a. The entire confined space entry permit shall be completed before standard entry. Entry shall be allowed only when all requirements of the permit are met, and it is reviewed and signed by an entry supervisor.
- b. Prior to standard entry, affected personnel shall be trained to establish proficiency in the duties that will be performed within the confined space.
- c. The internal atmosphere within the confined space shall be tested with a calibrated, direct reading instrument.
- d. A bump test or full calibration of direct-reading portable gas monitors shall be made before each day's use in accordance with manufacturer's instructions, using an appropriate test gas. If the instrument fails a bump test, it must be adjusted through a full calibration before it is used.
- e. Personnel shall be provided with the necessary PPE as determined by the entry supervisor.

2. OPENING A CONFINED SPACE

- a. Any conditions making it unsafe to remove an entrance cover shall be eliminated or remediated before the cover is removed.
- b. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other adequate temporary barrier that will provide notice of the opening and attempt to mitigate the potential for anyone to fall through the opening.
- c. This barrier or cover shall protect each employee working in the space from foreign objects entering the space. If it is erected within a traffic area, adequate barriers shall be placed to provide notice of the work being conducted and attempt to prevent interjection of road legal vehicles into the workspace.

3. ATMOSPHERIC TESTING

- a. Atmospheric test data is required prior to entry into a confined space to evaluate the hazards of the permit space, and to verify that acceptable conditions exist prior to entry of that space.
- b. If an individual is required to enter the space to obtain the needed data, then Confined Space Entry Procedures shall be followed.
- c. Before entry into a confined space, entry attendants shall conduct testing for hazardous atmospheres.

- d. The internal atmosphere shall be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and potential toxic air contaminants, in that order.
 - e. Testing equipment used in specialty areas shall be listed or approved for use in such areas.
 - 1. All testing equipment shall be approved by a nationally recognized laboratory, such as Underwriters Laboratories, Factory Mutual Systems, or an equivalent as determined by Risk Management.
4. EVALUATION TESTING
- a. The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity.
 - b. The analysis shall identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed, and acceptable entry conditions stipulated for that space.
 - c. Evaluation and interpretation of this data, and development of the entry procedure should involve a technically qualified professional (i.e., consultant, certified industrial hygienist, registered safety engineer, or certified safety professional).
5. VERIFICATION TESTING
- a. A confined space that may contain a hazardous atmosphere shall be tested for residues of all identified or suspected contaminants.
 - b. The evaluation testing should be conducted with specified equipment to determine that residual concentrations at the time of testing and entry are within acceptable limits with the results of testing being recorded on the permit by the person performing the tests.
 - c. The atmosphere shall be periodically retested (frequency to be determined by entry supervisor) to verify that atmospheric conditions remain within acceptable entry parameters.
6. ACCEPTABLE LIMITS
- a. The atmosphere of the confined spaces shall be considered within acceptable limits when the following conditions are maintained:
 - 1. Oxygen: 19.5 percent to 23.5 percent.
 - 2. Flammability: less than 10 percent of the Lower Flammable Limit (LFL); and
 - 3. Toxicity: less than recognized American Conference of Governmental Industrial Hygienists (ACGIH) exposure limits or other published exposure levels [i.e., OSHA Permissible Exposure Limits (PELs) or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs)].
7. ISOLATION & LOCKOUT/TAGOUT SAFEGUARDS
- a. All energy sources that are potentially hazardous to confined space entrants shall be secured, relieved, disconnected, and/or restrained before personnel are permitted to enter the confined space.
 - b. Equipment systems or processes shall be locked out and/or tagged out as required by the City of Redlands Lockout/Tagout Program prior to permitting entry into the confined space.
 - c. In confined spaces where complete isolation is not possible, entry supervisor shall evaluate the situation and make provisions for as rigorous an isolation as practical.

1. Special precautions shall be taken when entering double-walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall.
- d. Where there is a need to test, position, or activate equipment by temporarily removing the lock or tag or both, a procedure shall be developed and implemented to control hazards to the occupants.
 1. Any removal of locks, tags, or other protective measures shall be done in accordance with the City of Redlands Lockout/Tagout Program.

8. INGRESS/EGRESS SAFEGUARDS

- a. Means for safe entry and exit shall be provided for confined spaces.
 1. Each entry and exit point shall be evaluated by the entry supervisor to determine the most effective methods and equipment that will enable employees to safely enter and exit the confined space.
- b. Appropriate retrieval equipment or methods shall be used whenever a person enters a confined space.
 1. Use of retrieval equipment may be waived by the entry supervisor if use of the equipment increases the overall risks of entry or does not contribute to the rescue.
 2. A mechanical device shall be available to retrieve personnel from vertical confined spaces greater than five (5) feet in depth.

B. Permit Required Confined Space Entry Regulations

1. IDENTIFICATION/ SURVEY OF CONFINED SPACES

- a. At the discretion of Risk Management, surveys will be conducted to develop an inventory of those locations and/or equipment throughout the City that meet the definition of a confined space/permit confined space. This information shall be communicated to personnel, and appropriate confined space procedures shall be followed prior to entry.
- b. Recognized confined spaces will be logged in the Confined Space Inventory.
- c. Since this list is subject to continual updates, inclusion alone should not be relied upon to identify whether a location qualifies as a confined space.

C. Code Safe Practice Confined Space

1. EMPLOYEE ENTRY

- a. The following requirements apply to all employees who enters or are involved in the entry:
 1. Understand the procedures involved in confined space entry.
 2. Review the specific procedure approved for each entry.
 3. Understand how to use entry and rescue equipment.
 4. Recognize any warning signs or symptoms of exposure to hazardous conditions.
 5. Alert entry attendant(s) when a prohibited condition exists and/or when warning signs or symptoms of a potential exposure exist. **IMMEDIATELY EXIT** the confined space when:
 - a. Ordered to do so by an authorized person;
 - b. Upon notice or recognition of signs or symptoms of exposure;
 - c. Upon notice or recognition of the existence of a prohibited condition; or
 - d. Upon the sounding of an automatic alarm.

D. Confined Space Entry Permits

Confined space entry permits must be completed before any employee enters a permit required confined space.

1. The permit must be completed and signed by an authorized member of management before entry.
2. Permits will expire before the completion of the shift or if any pre-entry conditions change.
3. Permits will be maintained on file for 12 months.

E. Rescue and On-Site Emergency Services

All emergencies should be immediately called in to 911 emergency services, department managers, and Risk Management upon occurrence of the incident.

1. EMERGENCY SERVICES

- a. Managers and Supervisors will ensure that standby persons at the site are trained and immediately available to perform rescue and emergency services. The following requirements apply to all employees who enter permit spaces to perform rescue services:
 1. The manager and supervisors will ensure that each member of the rescue service is provided with, and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.
 2. Each member of the rescue service shall be trained to perform the assigned rescue duties and shall receive the training required of authorized entrants.
 3. Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, from the actual permit spaces or from representative permit spaces.
 4. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.
 5. Each member of the rescue service shall be trained in basic first aid and cardiopulmonary resuscitation (CPR).
 6. All members of the rescue service shall hold current certification in first aid and CPR.

2. NON-ENTRY RESCUE

- a. When self-rescue is not possible due to unconsciousness or incapacitation of an entrant, non-entry rescue should be initiated. Under this method, mechanical equipment is used to physically extract, lift, pull, or otherwise remove entrants from the confined space without requiring any additional persons to enter the space.
- b. Non-entry rescue equipment typically consists of a body harness, non-conductive cable or rope, winch, and tripod that can be operated from outside of the confined space by the attendant. Non-entry rescue reduces the risk of collateral injury to rescuers but is only effective on simple vertical or clear horizontal spaces.
- c. Since mechanical retrieval of unconscious or incapacitated entrants from complex, convoluted spaces can cause serious injuries from entanglement, strangulation, and blunt force impacts. This method of retrieval must be carefully evaluated before implementation.

3. ENTRY RESCUE

- a. Entry rescues are the most dangerous form of confined space rescue since they require additional persons to enter the space that caused injury or exposure to the entrant(s). Attempts should only be made by those appropriately trained and possessing active certification in first aid/CPR, self-contained breathing apparatus usage, rescue/retrieval equipment, and rescue training.
- b. An entry rescue plan must be developed prior to implementing this level of rescue responsibility, and include consideration of these the following elements:
 1. Placement of barricades for crowd/traffic control;
 2. Integration of additional ventilation options;
 3. Integration of additional controls for other potential hazards (e.g., cave-ins, fire, etc.);
 4. Usage of appropriate personal protective equipment;
 5. Usage of explosion-proof lighting equipment;
 6. Redundant methods of communication;
 7. Development of a standby rescue team;
 8. Development of victim removal procedures and subsequent necessary equipment; and
 9. Availability of emergency vehicles and medically trained personnel.

F. Outside Contractors

1. Managers and supervisors are required to inform all contractors of this program and defer any inquiry to Risk Management.
2. Contractors must also make a copy of their Permit Required Confined Space Entry Program available to Risk Management for review.
3. Contractors are expected to enforce their Permit Required Confined Space Entry Program at all times while performing work for the city, including requiring those who fail to follow the program requirements to leave the premises.
4. If there is a conflict in procedures between the two programs, notification will be sent to Risk Management for their opinion on how best to proceed. If Risk Management is unavailable, then the obligation will fall upon the City's entry supervisor. If that is not possible, then the City's policy will take precedent over that of the Contractor's.
5. Contractors with an insufficient program will not be allowed to begin work until their program meets or exceeds the requirements of this program.

G. Violations of Permit Required Confined Space Entry Program

1. Employees who violate the permit required confined spaces procedures may be disciplined according to, and to the full extent of, the City of Redlands' applicable Personnel Policy.
2. Employees may also be required to attend retraining on the procedures or policies of which they were found to be in violation.

VIII. RECORDS

All training records prepared in association with the Confined Space Entry Program will be maintained by the Office of Human Resources/Risk Management.

IX. ADDITIONAL REFERENCES

<https://www.dir.ca.gov/title8/5157.html>

Attachment A

Confined Space Evaluation Form

Date: ___/___/___ **Department:** _____ **Facility:** _____

Location: _____

Equipment Used: _____ **Evaluator:** _____
Print Name & Title- Must be a Supervisor with training in Confined Space Entry

Confined Space

1. Size	Is the space large enough or configured to permit bodily entry?	Yes	No
2. Access/Egress	Are there limited or restricted means of access or egress?	Yes	No
3. Occupancy	The space is not designed for continuous human occupancy?	Yes	No

Permit Required Confined Space

4. Hazard	a. Is there a potential or actual hazardous atmosphere? If yes, explain _____	Yes	No
	b. Is there a potential for engulfment or entrapment?	Yes	No
	c. Is the internal configuration such that an entrant may be trapped or asphyxiated?	Yes	No
	d. Does the space contain any other safety or health hazard (e.g., mechanical, chemical, thermal, electrical, etc.)? If yes, identify _____	Yes	No
5. If the only hazards checked for question 4 above were "a" and "d", would continuous forced air ventilation be sufficient to maintain the confined space safe for entry? And 5 a. Can hazards from question "d" be eliminated?		Yes	No
6. Is objective monitoring data available to support question 5?		Yes	No

Based on the answers to the above questions, define the type of confined space.

- Type of space determined:**
- 1. ___ Non-regulated space ("No" checked for one or more of questions 1-3)
 - 2. ___ Non-permit confined space ("Yes" checked for questions 1-3 only)
 - 3. ___ Permit required ("Yes" checked for questions 1-4 only)
 - 4. ___ Alternate space ("Yes" checked for questions 5, 5 a., and 6)

Evaluator Signature: _____ **Date:** ___/___/___

Attachment B
Permit-Required Confined Space Permit

Date:	Time Issued:	Time Expires:	Site location :
Purpose of entry:			
Entry Supervisor:	Department/Division:	Contact #	

Communication procedures:

Rescue procedures:

MINIMUM REQUIREMENTS TO COMPLETE AND REVIEW PRIOR TO ENTRY

Note: For Items that do not apply, enter N/A in the blank.

REQUIREMENTS COMPLETED	✓	REQUIREMENTS COMPLETED	✓
Lockout/De-energize/Tagout		Full Body Harness w/"D" Ring	
Line(s) Broken-Capped-Blank		Emergency Escape Retrieval Equipment	
Purge-Flush and Vent		Lifelines	
Ventilation		Fire Extinguishers	
Secure Area (Post and Flag)		Lighting (Explosive proof)	
Respirator(s)		PPE	
Standby Safety Person(s)		Other	
Hot Work Permit		Other	

Permissible Levels	Pre-Entry	Follow-Up Testing Results							
Oxygen (O ²) (>19.5% & < 23.5%)									
% LEL (< 10 %)									
Carbon Monoxide (CO) (< 25 ppm)									
Hydrogen Sulfide (H ² S) (<10 ppm)									
Other*									
Time Monitoring Taken									

Emergency Phone Numbers	
Concentra Medical Center: (909) 884-1500	Department Supervisor:
Emergency Medical Services: 911	Risk Management: (909)798-7514 Ext. 1729

This permit must be posted at Confined Space location. This Permit is valid for one (1) work shift only.
Submit copy to Safety Specialist within five days of entry completion.

Attachment C
Alternate Method 5157 (c)(5)
Confined Space Entry
Certification

Date:	Location:	Volume of Space:
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1. Is this confined space listed as an alternate method space?	Yes	No
2. Before the cover is removed, has any condition that would make it unsafe to remove the cover been eliminated?	Yes	No
3. Before the cover is removed, has the atmosphere just beneath the cover been tested?	Yes	No
4. Is the opening guarded by temporary railing? * Only applicable if opening poses a fall hazard to employee(s).	Yes	No
5. Has the internal atmosphere been tested with a calibrated, direct-reading instrument before employee(s) enter the space?	Yes	No
6. Is continuous forced air ventilation ducted to the immediate area where the entry employee(s) will be working?	Yes	No
7. Will the internal atmosphere be tested continually, and results logged every 15 minutes to ensure that a hazardous atmosphere does not accumulate?	Yes	No

IF:

- Any condition other than a hazardous atmosphere exists before entry
 - A hazardous atmosphere develops during the entry
 - Any of the above questions has a "NO" answer

THEN:

The entry will be canceled, all entrants will immediately exit the space and the Permit Required Confined Space procedures will be followed.

Certification

The pre-entry measures required by 5157(c)(5)(B) have been taken and this confined space is safe to enter. (To be executed by an Authorized Employee trained to the level of Entry Supervisor.)

Print Name

Signature

This certificate must remain on site for the duration of the entry and be available for review by all entrants or their authorized representative.

Instrument Make/Model:	Calibration Date: ___/___/___
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Test Performed By:

Initial Testing

Time: _____ AM PM		
Under the Cover	50% Space Depth	Work Zone
Oxygen: _____ % (>19.5% & < 23.5%)	Oxygen: _____ % (>19.5% & < 23.5%)	Oxygen: _____ % (>19.5% & < 23.5%)
% LEL _____ (LEL < 10%)	% LEL _____ (LEL < 10%)	% LEL _____ (LEL < 10%)
Hydrogen Sulfide: _____ PPM (<10 PPM)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Hydrogen Sulfide: _____ PPM (<10 PPM)
Carbon Monoxide: _____ PPM (<25 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)

Periodic Log of Continuous Monitoring of Work Zone Atmosphere (15 min. intervals)

Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)
Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)
Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)
Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)
Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)
Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)
Time: _____ : AM/PM	Oxygen: _____ % (>19.5% & <23.5%)	%LEL _____ (LEL <10%)	Hydrogen Sulfide: _____ PPM (<10 PPM)	Carbon Monoxide: _____ PPM (<25 PPM)

Time Out: _____ : _____ AM/PM



Attachment D

Permit – Required Confined Space Decision Flow Chart

