CENTRAL ARIZONA PROJECT

CONFINED

SPACE ENTRY PROGRAM

REVISED OCTOBER 1, 2019

1.0 PURPOSE

The purpose of this document is to specify procedures for Central Arizona Project (CAP) employees to identify, safely enter, work in, and exit from confined spaces. It also is to ensure compliance with the Occupational Safety and Health Administration standard for Permit-Required Confined Spaces, §29 CFR 1910.146, and 29 CFR 1926.1200.

2.0 POLICY

2.1 It is CAP's policy that every entry into a confined space by company employees will be made in accordance with the procedures contained herein. All requests or proposals for contractors to bid on work to be performed within a confined space will contain statements informing contractors of CAP's requirement for a written Permit-Required Confined Space program and mandating their compliance with all Federal, State, and Local requirements related to entry into confined spaces.

2.2 Under no circumstances will CAP employees enter into any confined space that has an atmosphere that has not been tested and determined to be acceptable for continuous breathing. If an unusual circumstance arises that makes it necessary for workers to enter a confined space with an atmosphere that does not present acceptable breathing conditions as outlined in section 6.2, prior approval must be obtained from the Environmental, Health, and Safety Department Manager or designee.

2.3 Compliance with instructions and procedures contained in this Confined Space Entry Program is mandatory. Willful disregard for this program or any of its provisions will result in corrective action as outlined in the CAP policy on Corrective Action.

3.0 SCOPE

This procedure applies to all CAP employees entering or working in confined spaces and to all contractors performing work in confined spaces within Central Arizona Water Conservation District's facilities or owned properties. Contractors using their own company confined space entry program must have the program approved as outlined in Section 11.0 of this program.

4.0 DEFINITIONS

The CAP Confined Space Entry Program uses the same definitions as are found in the Occupational Safety and Health Administration (OSHA) standards, with the following additions:

"Immediately Dangerous 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 a permit space.

"Serious hazard(s)": By definition, a confined space must include one or more of four characteristics to be considered a permit-required confined space. Characteristic number four is:

> "Contains any other recognized *serious safety or health hazard*."

OSHA has clarified that a serious safety or health hazard, as used in this context, is one that is immediately dangerous to life or health. The question that must be determined is whether the resulting exposure to a hazard in a confined space will impair the employee's ability to perform self-rescue. If an existing or potential hazard within a space could impair the employee's ability to self-rescue, then the hazard would be considered "serious" and should be addressed during the pre-entry evaluation of the space, including noting both it (the hazard) and appropriate control procedures on the entry permit.

5.0 IDENTIFICATION OF PERMIT-REQUIRED CONFINED SPACES

An extensive survey has been conducted of potential confined spaces at CAP. Many, but not all of the spaces identified as confined spaces have been labeled with a cautionary red and white placard similar to this one:

A listing of the general types of confined spaces at CAP is provided as Attachment B to this program. Since all spaces are not labeled (and many are not practical to label due to their type, configuration and location) it is important that appropriate employees be trained and able to recognize if a space meets the definition of a confined space. If in doubt, consult the EH&S department.

6.0 IDENTIFICATION OF POTENTIAL HAZARDS

Many types of hazards can exist within confined spaces at CAP facilities. The following are a few of the more common:

6.1. Engulfment: Engulfment is the surrounding or capturing of an individual by a liquid or a finely divided, loose (flowable) solid substance (e.g., sand, grain, sawdust, etc.). Injury or

death is caused by crushing, collapsing of the lungs, and/or suffocation or drowning. Water is a common engulfment hazard at CAP.

6.2 **Hazardous Atmosphere**: Hazardous atmospheres account for the majority of fatalities that occur in confined spaces. A hazardous atmosphere in a CAP confined space can be created through decomposition of aquatic life (ammonia), application of chemical coatings, or other work processes.

Because all confined spaces at CAP are initially considered permit-required confined spaces, any effort to enter or reclassify the space must first include atmospheric monitoring. Such monitoring must be conducted in the following sequence and results must be within the noted ranges/limits:

I. oxygen concentration: must be maintained between 19.5% and 23.0%;

II. combustible gases/vapors: must be maintained at less than 10% of the lower explosive limit (LEL);

Note: combustible vapors will not register on the meter properly if oxygen levels are outside the range noted above.

III. Toxic gas/vapor: carbon monoxide must be less than 25 ppm and hydrogen sulfide less than 5 ppm.

Note: If concerns arise regarding other toxic contaminants employees should not enter the space until the EH&S department has been consulted.

6.3 **Mechanical and electrical hazards**. Confined spaces may also pose mechanical hazards created by moving equipment or parts and energized systems. It is important to first identify any mechanical hazards present and effectively deactivate the system in accordance with standard hazardous energy control procedures.

6.4 **Other hazards**: To the extent that they may create a situation that prevents an entrant from self-rescuing – and therefore a situation that is immediately dangerous to life or health (see definition of "serious hazard" in section 4.0) – other hazards may also need to be considered and addressed before entry, including:

- corrosive chemicals such as acids, cleaning solutions, etc.;
- snakes, rodents, scorpions, and spiders;
- chemical reactions from products stored in confined spaces;
- welding, spray painting, grinding, brazing, sand blasting;
- inerting with non-flammable gases (MIG and TIG welding);

7.0 ENTRY PROCEDURES

The following procedures are to be used for all entries into all confined spaces on CAP property by CAP personnel. **It is CAP policy to treat every confined space as a permit-required space unless and until it is proven to be a non-permit required space.** By following proper procedures to eliminate or control any potential or existing serious hazards (see definition), employees should be able to reclassify most every space from a permit-required space to a non-permit required space. However, the fact most spaces can be reclassified does not relieve employees from the duty to comply with these entry procedures – including the duty to complete all relevant portions of an entry permit – for every confined space entry. Your life or the life of a coworker may depend on adherence to safe entry procedures – every time!

7.1 Initial space evaluation: *A safe confined space entry begins with the proper identification of all potential or existing serious hazards within the space. If necessary, contact the asset owner to assist in the identification of all such hazards.*

7.1.1 Once the potential or existing serious hazards of the space have been identified, use a computer or other device to open a new confined space entry form in Content Server. (A link to the confined space workflow is located in the Safety Resource Center.) Complete the following information on page one of the permit (items in red are required for printing).

7.1.1.1 Work order number

7.1.1.2 Space to be entered

7.1.1.3 Purpose of entry

7.1.1.4 Location of space entry point

7.1.1.5 Duration date(s) and times

7.1.1.6 Hazards and controls (Note: for every potential or existing serious hazard, you **MUST** indicate the method(s) that will be used to eliminate or control the hazard. If help is needed to identify hazards and controls, check with the asset owner and/or the EH&S department.)

7.1.1.7 Equipment required for entry

7.1.2 If the space can be reclassified to a non-permit space, select the "entry coordinator" and click "submit."

7.1.3 If the space cannot be reclassified to a non-permit space, you must select the appropriate "entry supervisor," list the "entrants" and "attendants" and list appropriate rescue procedures on the permit.

7.1.4 Select the appropriate supervisor for the project

7.1.5 Once the form has been submitted, you will receive an email with a link to the final form.

7.1.5.1 Click on the link to open the form and print the form/permit.

7.1.5.2 Closeout the workflow by clicking "submit" at the bottom of page two.

7.1.5.3 If necessary, make sufficient copies to post one at each entry point. Plastic sleeves are available in the warehouse for posting in the elements.

Note: An entry form is valid for seven (7) days. If space entry will occur more than seven days, a new form will need to be completed.

7.2 **On Site Procedures:** Proceed to the workspace entry location. Be sure to bring the printed form and sufficient copies for posting at each entry location. Be sure to bring a calibrated monitor and enough tubing to reach to the bottom of the space. If necessary, obtain a monitor and accessories from the EH&S office. Finally, be sure to bring railing or other fall protection if you will be over a vault or similar opening.

7.2.1 Re-evaluate the space, without entry, to be sure all serious safety and health hazards have been identified and control measures are in place. All hazards and control methods must be listed on page one of the form. If unforeseen hazards and controls are found record those in writing on the form.

7.2.1.1 Have all non-atmospheric hazards been identified and eliminated or controlled?

7.2.1.1.1 **No**: STOP! Do not proceed until this is accomplished.

7.2.1.1.2 **YES**: Proceed to step 7.2.2

7.2.2 Conduct atmospheric testing: Once all non-atmospheric hazards have been identified and either eliminated or controlled, proceed to the atmospheric check. Open the confined space and test the internal atmosphere using a calibrated monitor. Note: if the space is equipped with a ventilation system, do not turn it on at this time.

Vertical spaces (i.e., vaults): The atmosphere inside the space must be tested every 10 feet of depth. All sampling is conducted from outside the space. Connect a length of tubing to the meter sufficiently long to reach the bottom of the space. Place the end of the tube approximately two or three feet into the space. Wait one minute to ensure the sampled air reaches the meter. Lower the tube 10 feet and wait an additional minute. Repeat this process for each additional 10 feet of space depth.

Horizontal spaces: The atmosphere is tested using a horizontal sampling probe which can be obtained from EH&S. The first readings are taken prior to any entry into the space. Extend the probe to its fullest length, and with the meter running, insert the probe two or three feet into the space. Wait one minute to be sure the meter samples the air from that portion of the space. Next, insert the probe as far into the space as possible without bodily entry and wait again as the meter samples the air. Continue sampling in front of you as you enter further into the space.

7.2.2.1 Record the atmospheric testing results on the permit. Sampling results must be within the following limits to prove the absence of an atmospheric hazard within the space.

7.2.2.1.1 Oxygen level between 19.5% and 23.0%

7.2.2.1.2 Combustible gases at or below 10% of the lower explosive limit (LEL),

7.2.2.1.3 Carbon monoxide less than 25 parts per million (ppm), and

7.2.2.1.4 Hydrogen sulfide less than 5 ppm.

7.2.2.2 Are the atmospheric monitoring results within acceptable limits?

7.2.2.2.1 **Yes**: If the atmosphere tests within the allowable limits and other IDLH atmospheric hazards will not be introduced during the scheduled work, the space may be reclassified as a non-permit required space and entry may proceed following a Pre-Job Briefing (See section 7.2.3). Be sure to make any required notifications (i.e., to the Control Center).

7.2.2.2.2 **No**: If the atmosphere does not test within the allowable limits, the space may NOT be reclassified to a non-permit space. Rather, employees should ventilate the space with the installed ventilation system or with a portable power ventilator for 30 minutes and then repeat the atmospheric testing. To properly ventilate the space with the portable unit, ducting should be lowered to the bottom of the space so that the introduced fresh air will force the contaminated air out of the space.

7.2.2.2.2.1 If the repeat testing results in an atmosphere within allowable limits, the space may be entered under OSHA's alternate entry procedures. However, in this circumstance – where power ventilation has made the atmosphere safe for entry – the ventilation system must remain operational during the entire entry and the atmosphere maintained safe for entry at all times. Prior to entry write Alternate Entry at the top of the permit form.

7.2.2.2.2.2 If the repeat testing does not result in a safe atmosphere, the space must remain classified as a permit-required confined space. Entry into the space may NOT proceed without further guidance from the EH&S department.

7.2.2.3 Note regarding atmospheric monitoring: If the space to be entered has aquatic life decay (i.e., decaying quagga mussels), contact the EH&S department to obtain an ammonia monitor. A space with ammonia levels less than 25 ppm can be reclassified to a non-permit space. A space with ammonia levels greater than or equal to 25 ppm will remain a permit space

but can be entered using OSHA's alternate entry procedures if continuous forced air ventilation will reduce those levels to less than 25 ppm.

7.2.3 Pre-job briefing: Prior to entering the confined space – but after all serious hazards including actual or potential atmospheric hazards have been identified, and eliminated or controlled – conduct a pre-job briefing following the talking points listed on the pre-job briefing form and the confined space form.

7.2.4 Space entry: After ensuring all serious hazards within the space have been eliminated or isolated, including any actual or potential atmospheric hazards, the pre-job briefing has been conducted, and any required notifications have been made, the space may be entered. At this time, if there is an installed ventilation system that has not been turned on, turn it on now.

7.2.4.1 The air monitor must be taken into the space to provide a continuous air quality test during the entry. Additional air monitor readings only need to be recorded on the permit if the space is left unoccupied and then reentered, such as after lunch or other break or at the start of a new work shift. As long as acceptable entry conditions are maintained – and no other serious hazards are introduced – the space will remain a non-permit required space without further entry obligations for the duration of the permit (not to exceed 7 days).

7.2.5 Permit-required confined space: If after following the above procedures all serious safety and health hazards in a confined space cannot be eliminated or controlled, the space must remain classified as a permit-required space. In all such cases, potential entrants must do all of the following:

7.2.5.1 **Contact the EH&S department for assistance in entering the space**; AND

7.2.5.2 Provide onsite crews and resources, either internal (CAP) or external (3rd party), to ensure the ability to immediately rescue space entrant(s); AND

7.2.5.3 Provide all entrants with all necessary PPE or other gear to ensure their safety.

7.3 Post space-entry procedures: Following completion of work within a confined space, the entry permit and all other appropriate documentation must remain with the work order package.

8.0 DUTIES

Individuals involved in confined space entry have specific duties, depending upon their role. The following descriptions highlight some of those duties.

8.1 **Entrant:** Any trained and certified CAP employee or contractor, properly entering a confined space, is designated as an Authorized Entrant. An entrant's job is to complete the scheduled work in a safe manner. This requires that the entrant know the potential hazards associated

within a specific permit space, be able to recognize the signs or symptoms of exposure, and understand the consequences of exposure to the hazard(s). The entrant must have an opportunity to observe the atmospheric testing and know the results of any testing completed on the space.

All entrants must exit from the confined space as quickly as possible when any of the following occur:

- the Attendant or Entry Supervisor orders an evacuation,
- the entrant recognizes any warning sign or symptom of exposure to a hazardous substance,
- the entrant detects a prohibited condition,
- an alarm is activated on the confined space air monitor.

8.2 **Attendant**: All Permit Required confined space entries require a trained employee to be designated as the attendant. The primary duty of the attendant, when employees are inside the confined space, is to remain outside the confined space and maintain communication with the employee(s) inside the space and monitor their status. In the event of an emergency or other condition requiring space evacuation, the attendant orders an evacuation and summons rescue and emergency services.

The attendant **will not** perform other duties that may interfere with the Attendant's primary duty to monitor and protect the authorized entrant(s).

Entries into spaces that have been reclassified to non-permitted do not require an attendant. If the complexity of entry into a non-permitted space warrants it a hole-watch can be designated to handle some or all of the duties of an attendant.

8.3 **Entry Supervisor**: Every permit-required space entry requires an entry supervisor who has overall accountability for safe entry operations. The entry supervisor must verify the existence of acceptable entry conditions and the presence/availability of rescue and emergency medical services; authorize the entry (which is evidenced by a signature on the permit); oversee entry operations; remove unauthorized persons from the space; and terminate the entry operations when necessary.

8.4 **Entry Coordinator**: The Entry Coordinator is the lead responsible person "on-site" during any Permitted or Non-Permitted confined space entries. In cases where the work crew Supervisor is on-site, they fulfill the duties of the Entry Supervisor. In cases where the Entry Supervisor cannot be on-site during a confined space entry, then the Entry Coordinator assumes the Entry Supervisor's duties at the entry site, as listed above in Section 8.3.

When completing an online confined space form, the Entry Coordinator must be the person originating the on-line form. At the bottom of page 1 of the on-line form the Entry Coordinator should select their name from the drop-down list and e-sign the document in the adjacent space. The box is labeled "Entry Coordinator. Your electronic signature

indicates your agreement to serve as the Entry Coordinator, assuming the on-site responsibilities of the Entry Supervisor in their absence.

9.0 EMERGENCY PROCEDURES

Planning for emergencies should be a part of any confined space entry, but such planning is REQUIRED when entry is made into a permit-required confined space. Additionally, on-site rescue services or the ability for CAP to perform non-entry rescue are also required for any permit-required space entry. (Note: Entry into a non-permit required spaced does not require on-site rescue services or the ability for non-entry rescue since any serious or life-threatening hazards have already been eliminated or controlled. In the event of an emergency, entry may be made into the space as needed to render aid. See section 9.2 below.)

9.1 Permit Required Confined Space Rescue. "Rescue" means the retrieval of a *permit-required* space entrant who has become debilitated due to a medical condition or to hazards within the space. A rescue can be accomplished either by entry into the space, or by non-entry.

9.1.1 Rescue via space entry: Entry into a permit-required confined space for purposes of rescue will ***only*** be conducted by outside emergency services. Under no conditions are CAP employees allowed to enter a permit-required confined space to attempt rescue of another employee. Rescue services are provided by organizations under contract to CAP or by a few qualified municipal fire departments.

Prior to issuing a permit-required confined space entry permit, the Entry Supervisor must make contact with an appropriate rescue service to ensure the following:

- The rescue service is available for call-out to conduct confined space entry rescue during hours that CAP personnel will enter a permit-required confined space,
- The rescue service can reach the site of the permit required confined space entry to initiate rescue entry within a reasonable time period. For example:
    - if the permitted space has a toxic atmosphere approaching the IDLH, the rescue service should be on-site during all entry operations;
    - if the permitted space has a hazardous atmosphere with concentrations above the PEL but less than one-half of the IDLH, then the rescue service should be within 5 to 10 minutes of effecting a rescue;
    - if the permitted space has a hazardous atmosphere with concentrations less than or equal to the PEL, then the rescue service should be within 10 to 15 minutes of effecting a rescue.
    - If rescue services could, at any time during the entry, be more than 15 minutes away from effecting a rescue, then the service must be on-site during the Permit Required confined space entry.

Note: If the off-site rescue service receives another call for service, their dispatcher must notify the Entry Team and the team must suspend entry operations until the service is again on stand-by.

If a rescue operation has been undertaken and Entrant(s) are being transported to a medical facility for further care, a copy of any SDSs for chemicals in use inside the space will be provided to the rescue service and will accompany them to the medical facility.

9.1.2 Rescue via non-entry (i.e., self-retrieval): Non-entry rescue means the removal of an Entrant(s) by an outside crew of one or more persons who do not enter the confined space. Some confined spaces are configured in such a way that non-entry retrieval can be accomplished by the outside Attendant(s) or other personnel. If the configuration of the space is such that the Entrant(s) must work some distance away from the entry point, travel over or under interior piping systems, or move around corners into other areas of the confined space, then non-entry retrieval is not possible and outside rescue services must be acquired.

For effective non-entry retrieval, each Entrant should have an assigned Attendant with a retrieval davit-arm or tripod and hoist system for that Entrant. In the event of an emergency requiring non-entry retrieval there would not be time to retrieve one Entrant and then lower the hoist system for the second or third Entrant.

All Entrants entering into permit-required confined spaces greater than 4 feet in depth will wear a full-body harness. Confined space depths greater than 4 feet are covered by the CAP Fall Protection Program and the harness will be provided and operated according to the Fall Protection requirements. The harness can also facilitate retrieval and/or rescue procedures.

9.2 Rescue or Retrieval from Non-Permit Spaces: Outside rescue services and non-entry retrieval equipment are not required for Non-Permit Confined Spaces. The fact that the spaces are non-permit spaces means any serious or life-threatening hazards within the space have been eliminated or controlled. As such, any confined space trained employee may enter the space to assist in a rescue or retrieval or provide first aid.

Always verify that hazards have not returned to the space or that the controls for the hazards have not failed before allowing entry into the space. Any time a control for a confined space fails, the entrants must immediately exit the space and be accounted for. Reentry into the space will not occur until the reason for the failure has been identified and corrected.

If two or more employees are working together inside a non-permit required confined space and one employee appears to be having problems and needs to exit the space, the other employee(s) may assist in the exit procedures. Note the readings on the air monitor.

10.0 HOT WORK

Hot work such as riveting, welding, cutting, burning, and heating may need to be conducted by CAP employees in confined spaces. In those situations, work will proceed after ensuring the confined space is continuously monitored, continuously ventilated, and a Hot Work Permit is posted at the entrance to the space.

11.0 CONTRACTORS AND CONTRACTOR WORK

Whenever outside contracted personnel are to be engaged in activities involving entry into confined spaces, the outside contractor must comply with the requirements of the OSHA Confined Space Standards (29 CFR §1910.146 or 29 CFR §1926.1200). The outside contractor will provide a copy of their written confined space entry program for review by the CAP EH&S Department prior to confined space work on Central Arizona Project properties.

The Bureau of Reclamation Safety and Health Standard (revision 2001) states in 14.4.1(m) "If confined spaces are to be entered by contractors or other outside entities who do not normally work in that facility, either alone, or in conjunction with the facility staff, the program must describe the coordination and controls which will be applied to such outside entity to assure a safe entry into a confined space".

Furthermore, OSHA's Confined Spaces in Construction standard requires permit confined space entry communication and coordination between contractors and the host employer. To achieve those requirements, the following actions will be taken:

11.1 CAP will inform the outside contractor of:

- The location of each known permit space.
- The hazards or potential hazards in each space or the reason it is a permit space; and
- Any precautions that have previously been used for the protection of employees in the space.

11.2 Each contractor with whom CAP has a contractual relationship will:

- Provide formal documentation of their company's confined space entry procedures to CAP's Engineering Project Manager and EH&S Department.
- Obtain from CAP information about permit space hazards and previous entry operations.
- Coordinate entry operations with the CAP's EH&S Department and CAP's Control Center.
- Provide the following information to any of their subcontractors that will make entry into the permit space:
    - Information received from CAP
    - Any additional information the contractor has about the location of permit spaces, hazards of those spaces and precautions for entering the spaces.
    - The precautions that CAP or the contractor implemented for protection of employees in the permit spaces.

- Inform the Engineering Project Manager of any entry procedures that will be followed and of any hazards anticipated to be created during the entry operation.

11.3 **Entry contractors**. Prior to entering a permit space, each entry contractor must:

- Obtain all of the information regarding permit space hazards and entry operations, and
- Inform the controlling contractor and CAP of the permit space program that the entry contractor will follow.

11.4 CAP and all contractors must coordinate permit space entry operations if more than one employer enters the space at the same time, or entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed. Sufficient coordination shall occur so that there is only one entry permit covering all employers. Multiple entry permits into the same space shall not be used.

11.5 After contractor entry operations, CAP and the controlling contractor must debrief all contractors who entered the space regarding any hazards confronted or created within the space.

ATTACHMENT A

CONFINED SPACE CLASSIFICATION FORM AND PERMIT

Central Arizona Project
Confined Space Entry Form

Form to be posted at job site during all entry activities

Date Entered _____

Entry Number _____ Work Order _____

Entered By _____ Work Order _____

General Information

Space to be entered: test Purpose of entry: test

Location of space entry point: _____ Duration: Date: _____ to _____

Time: _____ to _____

CONFINED SPACE HAZARDS (initial hazards present)

- ☐ Flammable/Combustible Gases or Vapors
- ☐ Combustible/Abrasive Dusts or Welding Fumes
- ☐ Toxic Gases or Vapors
- ☐ Fall Hazards
- ☐ Mechanical/Electrical Hazards
- ☐ Inadequate Illumination
- ☐ Contaminants from Adjacent Areas
- ☐ Engulfment/Impingement Hazards
- ☐ Other _____
- ☐ No Hazards Found

HAZARD CONTROL PROCEDURES (Attendant/Entrant)

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- ☐ No Controls Needed

AIR MONITOR TYPE/MODEL _____ SERIAL NUMBER _____ CALIBRATION DATE _____

PRE-ENTRY RESULTS	O2 (min.)	O2 (max.)	Combustible	H2S	CO	Other	Initials

☐ Continuous air monitoring was conducted during entry into this non-permit space. _____(initials)

EQUIPMENT REQUIRED FOR ENTRY: (check all that apply)

- ☐ Retrieval equipment
- ☐ First aid kit / AED
- ☐ Harness
- ☐ Fire extinguishers No. _____ each
- ☐ Other: _____

Communications
- ☐ Voice
- ☐ Radios
- ☐ Phones

Respirators
- ☐ 1/2 face APR
- ☐ Full face APR
- ☐ Full face Airline
- ☐ PAPR

Protective Equipment Items
- ☐ Hard hats
- ☐ Gloves
- ☐ Boots
- ☐ Face shield
- ☐ Aux. Lighting
- ☐ Coveralls
- ☐ Hearing Protection
- ☐ Goggles
- ☐ Blast Hood

AUTHORIZATION TO RECLASSIFY TO NON-PERMIT. I have reviewed the above information and can verify that this confined space is safe to reclassify to a Non-Permitted Confined Space Entry situation.

Entry Coordinator ▼

Signature Entry Coordinator

Central Arizona Project

Confined Space Entry Form

Form to be posted at job site during all entry activities

Work Order _____

Entry Number _____

Work Order _____

PRE-ENTRY PREPARATION (check after completed)

- ☐ Notification of affected departments/services
- ☐ Contractors notified of permit conditions/hazards

Isolation Methods:

- ☐ Barriers/Signs ☐ Check Gates
- ☐ Stop Logs ☐ Discharge Valve Closed
- ☐ Other _____

EMERGENCY/RESPONSE

- ☐ Non-entry Retrieval (explain)

_____

_____

- ☐ On-Site Rescue (name & phone)

_____

_____

AUTHORIZED ENTRANT(S) (Name and Employee #)

1. Select One	6. Select One	1. Select One
2. Select One	7. Select One	2. Select One
3. Select One	8. Select One	3. Select One
4. Select One	9. Select One	4. Select One
5. Select One	10. Select One	5. Select One

AUTHORIZED ATTENDANT(S)

Reporting Employee / Entry Coordinator

Signature Reporting Employee

Signature Reporting Employee

AUTHORIZATION OF ENTRY SUPERVISOR. I have reviewed the above information and have verified that these confined space entry conditions are accurately represented in this entry permit.

Authorized Supervisors

Select One

Comments

Max Chars

Permit is to be kept on-site during all authorized entries. After completing of the work, the permit is marked "CLOSED" by the Entry Supervisor and the closed permit is submitted to Maintenance Control with the work packet.

Central Arizona Project
Confined Space Entry Form

Form to be posted at job site during all entry activities

Entry Number _____

Work Order _____

Work Order _____

ADDITIONAL MONITORING EQUIPMENT

TYPE & MODEL	SERIAL NUMBER	CALIBRATION DATE

SUPLEMENTAL ENTRY/COMMUNICATION/AIR MONITORING LOG

Confined Space Employee Log				
Employee	Time In	Time Out	Time In	Time Out

Communication Log		
Time	Time	Time

AIR MONITORING RESULTS/TIMES

	Time Air Monitoring Conducted/Noted								
	Date								
Condition Monitored	Acceptable Conditions	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM
O2 (min.)	>19.5%								
O2 (max.)	<23%								
Flammability	<10% LEL								
H2S	<5 ppm								
CO	<25 ppm								
Tester's Initials									

	Time Air Monitoring Conducted/Noted								
	Date								
Condition Monitored	Acceptable Conditions	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM	Result : AM/PM
O2 (min.)	>19.5%								
O2 (max.)	<23%								
Flammability	<10% LEL								
H2S	<5 ppm								
CO	<25 ppm								
Tester's Initials									

Permit is to be kept on-site during all authorized entries. After completing of the work, the permit is marked "CLOSED" by the Entry Supervisor and the closed permit is submitted to Maintenance Control with the work packet.

ATTACHMENT B

GENERAL INVENTORY OF CONFINED SPACES AT CAP

CANAL	Float Wells
	Turnouts
	Meter vaults
	Manholes
	Siphon access manways
	Blowoff vaults
	Siphons
PUMPING PLANTS	Oil tanks
	Sump Pits
	Air receiver tanks
	Suction Side manways
	Discharge Tube manways
	Water storage tanks
	Motor Brake air tanks
	Air-handling units
	Transducer Vaults
	Diesel fuel tanks
	Cable chases
	Surge tanks
	Drain valve vaults
	Flow control vaults
HEADQUARTERS	Gasoline fuel tanks
	Sewer system manholes
	Air pollution control devices
	HVAC fan cabinets