CONFINED SPACE ENTRY PROGRAM

Dowdy Corporation

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TAB 1:CONFINED SPACE ENTRY PROGRAMDowdy Corporation

1.1 INTRODUCTION

The purpose of the Dowdy Confined Space Program is to establish procedures that will ensure safe entry while performing tasks which require entry into confined spaces and permit-required confined spaces. This program is designed to provide the minimum safety requirements in accordance with the Confined Space Entry rules and regulations prescribed by the Occupational Safety and Health Administration's (OSHA). A copy of the standard is provided in Attachment A.

1.2 BACKGROUND

A confined space is defined as any location that has limited openings for entry and egress, is not intended for continuous employee occupancy, and is so enclosed that natural ventilation may not reduce air contaminants to levels below the threshold limit value (TLV). Examples of confined spaces include manholes, stacks, pipes, storage tanks, trailers, tank cars, pits, sumps, hoppers, bins, crawl spaces, attics, or sewer systems.

Entry into confined spaces without proper precautions could result in injury, impairment, or death due to:

- An atmosphere that is flammable or explosive;
- Lack of sufficient oxygen to support life;
- Contact with or inhalation of toxic materials; or
- General safety or work area hazards such as steam or high-pressure materials.

CLASSIFICATION OF CONFINED SPACES

Confined spaces are classified as "Non-Permit" or "Permit-Required," depending on hazardous conditions. According to OSHA, "Non-permit confined space" means 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. OSHA defines "Permit-required confined space (permit space)" as a confined space that has one or more of the following characteristics:

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

CONFINED SPACES

There are 3 type of confined space work areas that our employees are exposed to:

- Trenches
- Manholes
- Wet Well

1.3 RESPONSIBILITY

MANAGEMENT

- Monitor the effectiveness of the program.
- Provide atmospheric testing and equipment as needed.
- Provide personal protective equipment as needed.
- Provide training to affected employees and project supervisors.
- Provide technical assistance as needed.
- Review and update the program on at least an annual basis or as needed.

PROGRAM MANAGER – THE GENERAL MANAGER

- Ensure that a list of confined spaces at all Dowdy work sites is maintained.
- Review all canceled permits for lessons learned.
- Ensure training of personnel is conducted and documented.
- Coordinate with outside responders.
- Verify that equipment is in compliance with standards.
- Ensure that the project supervisor in charge of confined space work has completed all outlined responsibilities.

THE GENERAL MANAGER & PROJECT SUPERVISOR IN CHARGE OF CONFINED SPACE WORK

- Complete all pre-entry requirements before entry is authorized
- Designate qualified personnel to perform confined space monitoring, and maintain a list of monitoring equipment and the designated personnel.
- Confirm that the rescue team has simulated a rescue in a confined space within the past 12 months.
- Know the hazards that may be faced during entry, including the mode (how the contaminant gets into the body), signs or symptoms, and consequences of exposure.
- Fill out a Confined Space Entry permit, outline the pre-entry requirements, and obtain a permit review and signature from the authorized entry supervisor.
- Notify all involved personnel of the permit requirements.
- Post the completed permit in a conspicuous location near the space
- Determine the number of attendants required to perform the work.

- Confirm all attendant(s) know how to communicate with the entrants and how to obtain assistance.
- Post any required barriers and signs.
- Remain alert to changing conditions that might affect the conditions of the permits (i.e., require additional atmospheric monitoring or changes in personal protective equipment).
- Renew, change and reissue, or issue a new permit as necessary.
- Ensure periodic atmospheric monitoring is done according to permit requirements.
- Verify that all personnel doing the work and all support personnel adhere to permit requirements.
- Cancel the permit when the work is done.
- After entry, verify that the confined space has been safely closed and made sure all workers are cleared from the area.

COMPETENT PERSON

- Identify all confined spaces at each worksite.
- Be capable of identifying existing and predicable hazards in the surroundings or working conditions
- Determine if the conditions are unsanitary, hazardous, or dangerous to employees
- Have the authorization to take prompt corrective measures to eliminate them.
- Re-evaluate a confined space when there are changes in the use or configuration that might increase the hazards to entrants.
- Possess the authority to reclassify a non-permit required confined space to a permit-required confined space when necessary.

ENTRY SUPERVISORS

- Be qualified and authorized to approve confined space entry permits.
- Designate attendants
- Determine if conditions are acceptable for entry.
- Authorize entry and overseeing entry operations.
- Terminate entry procedures as required.
- Serve as an attendant, as long as the person is trained and equipped appropriately for that role.
- Ensure measures are in place to keep unauthorized personnel clear of the area.
- Check the work at least twice a shift to verify and document permit requirements are being observed (more frequent checks shall be made if operations or conditions are anticipated that could affect permit requirements).
- Ensure that necessary information on chemical hazards is kept at the worksite for the employees or rescue team.
- Confirm that a rescue team is available and instructed in their rescue duties (i.e., an onsite team or a prearranged outside rescue service).
- Ensuring that rescue team members have current certification in first aid and CPR

RESCUE TEAM LEADER – GENERAL MANAGER AND/OR PROJECT SUPERVISOR

- Ensure that appropriate rescue services are available and appropriately trained and have been instructed to respond immediately to rescue calls from the attendant or any other person recognizing a need for rescue from the confined space.
- Ensure that the rescue team has prepared appropriately, including the completion of a training drill using mannequins or personnel in a simulation of the confined space prior to the issuance of an entry permit for any confined space and at least annually thereafter.
- Confirm that a trained rescue team is on site at all times during work in a space where Immediately Dangerous to Life & Health (IDLH) conditions exist.

ATTENDANTS:

- Be knowledgeable of, and be able to recognize potential confined space hazards.
- Maintain a sign-in/sign-out log with a count of all persons in the confined space, and ensure all entrants sign in and out.
- Monitor surrounding activities to ensure the safety of personnel.
- Maintain effective and continuous communication with personnel during confined space entry, work, and exit.
- Order personnel to evacuate the confined space if he/she:
 - Observes a condition which is not allowed on the entry permit;
 - Notices the entrants acting strangely, possibly as a result of exposure to hazardous substances;
 - Notices a situation outside the confined space which could endanger personnel;
 - Notices a hazard within the confined space that has not been previously recognized or taken into consideration.
- Immediately summon the Rescue Team if entrant rescue becomes necessary.
- Keep unauthorized persons out of the confined space; order them out, or notify authorized personnel of an unauthorized entry.

Note: Attendants are not permitted to monitor several confined spaces simultaneously. Each confined space being entered must have individual attendants.

ENTRANTS/AFFECTED EMPLOYEES

Employees who are granted permission to enter a confined space shall:

- Read and observe the entry permit requirements.
- Remain alert to the hazards that could be encountered while in the confined space.
- Properly use the personal protective equipment that is required by the permit.
- Immediately exit the confined space when:
 - Ordered to do so by an authorized person;
 - Signs or symptoms of exposure are noticed;
 - A prohibited condition exists; or

- The automatic alarm system sounds.
- Alert attendant(s) when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

1.4 CONTRACTORS & SUBCONTRACTORS

HOST EMPLOYER RESPONSIBILITIES

When an employer (host employer) arranges to have employees of another employer (contractor) perform work that involves permit space entry, the host employer must take the following steps:

- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section
- Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the space, that make the space in question a permit space
- Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working
- Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces, to ensure that affected employees are appropriately protected from permit space hazards; and
- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.

Note: If there is no controlling contractor present at the worksite, the requirements for, and role of, controlling contactors must be fulfilled by the host employer or other employer who arranges to have employees of another employer perform work that involves permit space entry.

CONTROLLING CONTRACTOR RESPONSIBILITIES:

The Controlling Contractor is the employer that has overall responsibility for construction at the worksite. Before entry operations begin, the controlling contractor must:

- Obtain the host employer's information about the permit space hazards and previous entry operations; and
- Provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space:
 - The information received from the host employer;
 - Any additional information the controlling contractor has about the subjects; and
 - The precautions that the host employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.
- Coordinate with the entry employers(s) when:

- More than one entity performs permit space entry at the same time; or
- Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.
- After entry operations:
 - The controlling contractor must debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations;
 - Apprise the host employer of the information exchanged with the entry entities

ENTRY EMPLOYER RESPONSIBILITIES

In addition to complying with the permit space requirements that apply to all employers, each contractor who has been retained to perform permit space entry operations is responsible for:

- Obtaining any available information regarding permit space hazards and entry operations from the controlling employer, including:
 - The location of each known permit space;
 - o The hazards or potential hazards in each space or the reason it is a permit space; and
 - Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space.
- Coordinating entry operations with the controlling employer, when:
 - More than one entity performs permit space entry at the same time; or
 - Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.
- Informing the controlling employer of the permit space program that the entry employer will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.
- After entry operations, informing the controlling contractor in a timely manner of:
 - the permit space program followed and
 - any hazards confronted or created in the permit space(s) during entry operations

TAB 2:CONFINED SPACE ENTRY PROGRAM
(CONTINUED)

2.1 IDENTIFICATION SURVEY

A survey of the workplace is conducted periodically in order to identify confined spaces. Once identified, the information is communicated to personnel and appropriate confined space entry procedures are prepared. The prescribed procedures (Attachment D) must be followed prior to entry.

In the event that an identified confined space presents an air quality hazard, the pre-entry checklist in Attachment B will be completed in order to evaluate the air quality hazards.

The General Manager and/or other authorized personnel shall evaluate the potential for the following situations:

- flammable or explosive potential;
- oxygen deficiency; and
- presence of toxic and corrosive material.

2.2 HAZARD RE-EVALUATION

The General Manager and/or other authorized personnel shall identify and re-evaluate hazards based on possible changes in activities or other physical or environmental conditions that could adversely affect work. A master inventory of confined spaces shall be maintained (see section 1.2). The General Manager/ Project Supervisor will route any change in designation of a confined space to all affected personnel.

2.3 PRE-ENTRY HAZARD ASSESSMENT

A hazard assessment shall be completed by Authorized Personnel prior to any entry into a confined space. The hazard assessment should identify:

- the sequence of work to be performed in the confined space;
- the specific hazards known or anticipated; and
- the control measures to be implemented to eliminate or reduce each of the hazards to an acceptable level.

No entry shall be permitted until the hazard assessment has been reviewed and discussed by all persons engaged in the activity. Personnel who are to enter confined spaces shall be informed of known or potential hazards employed with said confined spaces.

A pre-entry checklist that can assist in preparing for a confined space entry is provided in Attachment B.

2.4 HAZARD CONTROLS

Hazard controls must be instituted to address changes in the work processes and/or working environment. Hazard controls must be able to manage the health hazards by eliminating the responsible agents, reduce health hazards below harmful levels, or prevent the contaminants from coming into contact with the workers.

ENGINEERING CONTROLS

Engineering controls are those controls that eliminate or reduce the hazard through implementation of sound engineering practices.

Ventilation is one of the most common engineering controls used in confined spaces. When ventilation is used to remove atmospheric contaminants from a confined space, the space shall be ventilated until the atmosphere is within the acceptable ranges. Ventilation shall be maintained during the occupancy if there is a potential for the atmospheric conditions to move out of the acceptable range. When ventilation is not possible or feasible, alternate protective measures or methods to remove air contaminants and protect occupants, if necessary, shall be determined by The General Manager and/or other trained/authorized personnel, prior to authorizing entry.

The following precautions shall be followed when conditions necessitate and can accommodate continuous forced air ventilation:

- Employees shall not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.
- Forced air ventilation shall be directed so as to ventilate the immediate areas where an employee is or will be present within the space.
- Continuous ventilation shall be maintained until all employees have left the space.
- Air supply or forced air ventilation shall originate from a clean source.

WORK PRACTICE (ADMINISTRATIVE) CONTROLS

Work practice (administrative) controls are those controls that eliminate or reduce the hazard through changes in the work practices (i.e., rotating workers, reducing the amount of worker exposure, and housekeeping).

PERSONAL PROTECTIVE EQUIPMENT (PPE)

If the hazard cannot be eliminated or reduced to a safe level through engineering and/or work practice controls, PPE should be used. The General Manager and/or other authorized personnel shall determine the appropriate PPE needed by all personnel entering the confined space, including rescue teams. PPE that meets the specifications of applicable standards shall be selected in accordance with the requirements of the job to be performed.

<u>Typical</u> personal protective equipment (PPE) and other equipment used for safe entry into confined spaces are listed below.

- PPE Fall Harnesses, Safety Glasses, Hearing Protection (ear plugs, ear muffs, etc.), Respirators (when needed), Protective Equipment for Welding, etc.
- Testing Oxygen Sensor/3-Gas Monitor

- Monitoring Oxygen Sensor/3-Gas Monitor
- Ventilating Fans
- Lighting Equipment Flashlights
- Ladders Extension Ladders, Step Ladders
- Tripods

Use the duty rosters in Attachment D to specify personal protective equipment (PPE) needs for each individual confined space.

2.5 **RE-CLASSIFICATION**

A confined space may be re-classified from a permit-required confined space to a non-permit confined space as long as certain conditions are met and procedures are followed. Provided below is a summary of the requirements for this process.

For exact language and details, see Section 1926.1203(e)(1) of the OSHA standard in Attachment A.

CONDITIONS THAT MUST BE PRESENT

- The space must pose no actual or potential atmospheric hazards (i.e., oxygen concentration, combustible gases, toxic materials)
- All hazards within the space must be eliminated without entry into the space

ACTIONS THAT MUST BE TAKEN

- Document the basis for determining that all hazards in the permit-required confined space have been eliminated via written certification. The certification must include the date the location of the space, and the signature of the person making the determination.
- Make available the certification that the confined space hazards have been eliminated to each employee entering the space (or the employee's authorized representative).
- If hazards arise within the declassified non-permit space, each employee in the space must exit the space. The space must then be reevaluated to determine whether or not it should be reclassified as a permit-required confined space.
- If it is necessary to enter the permit space to eliminate hazards, the entry must be performed using the procedures outlined in this program for entering a permit-required confined space. The company must perform testing and inspections during entry to demonstrate that the hazards within the confined space have been eliminated. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.

Attachment B has a form to document the steps taken to re-classify spaces from permit-required to non-permit required.

2.6 ENTRY PERMITS

The Confined Space Entry Permit is the most essential tool for assuring safety during entry in confined spaces with known hazards, or with unknown or potentially hazardous atmospheres. The entry permit process guides the supervisor and workers through a systematic evaluation of the space to be entered. The permit should be used to establish appropriate conditions. Before each entry into a permit required confined space, the General Manager and/or other authorized personnel will complete an entry permit. The person completing the entry permit will then communicate the contents of the permit to all employees involved in the operation, and post the permit conspicuously near the work location. A standard entry permit shall be used for all entries.

A standard entry permit shall contain the following items:

- 1. Space to be entered.
- 2. Purpose of entry.
- 3. Date and authorized duration of the entry permit.
- 4. Name of authorized entrants within the permit space.
- 5. Means of identifying authorized entrants inside the permit space (i.e., rosters or tracking systems).
- 6. Name(s) of personnel serving as attendant(s) for the permit duration.
- 7. Name of individual serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized the entry.
- 8. Hazards of the permit space to be entered.
- 9. Measures used to isolate the permit space and to eliminate or control permit space hazards before entry (i.e., lockout/tagout of equipment and procedures for purging, ventilating, and flushing permit spaces).
- 10. Acceptable entry conditions.
- 11. Results of initial and periodic tests performed, accompanied by the names or initials of the testers and the date(s) when the tests were performed.
- 12. Rescue and emergency services that can be summoned, and the means of contacting those services (i.e., equipment to use, phone numbers to call).
- 13. Communication procedures used by authorized entrants and attendant(s) to maintain contact during the entry.
- 14. Equipment to be provided for compliance with this Confined Space Program (i.e., PPE, testing, communications, alarm systems, and rescue).
- 15. Other information necessary for the circumstances of the particular confined space that will help ensure employee safety.
- 16. Additional permits, such as for hot work, that have been issued to authorize work on the permit space.

PERMIT SCOPE AND DURATION

The duration of an issued permit may not exceed the time required to complete the assigned task or job identified on the permit.

The entry supervisor shall terminate entry and take the following action when any of the following apply:

- Cancel the entry permit when the entry operations covered by the entry permit have been completed; or
- Suspend or cancel the entry permit and fully re-assess the space before allowing re-entry when a condition that is not allowed under the entry permit arises in or near the permit space and that a condition is temporary in nature and does not change the configuration of the space or create any new hazards within it; and
- Cancel the entry permit when a condition that is not allowed under the entry permit arises in or near the permit space and that is not temporary in nature and/or changes the configuration of the space or creates any new hazards within it.

The General Manager and/or other authorized personnel shall retain each canceled entry permit for at least one (1) year to facilitate the review of the Confined Space Entry Program. Any problems encountered during an entry operation shall be noted on the respective permit(s) so that appropriate revisions to the confined space permit program can be made.

2.7 ENTRY PROCEDURES

When entry into a confined space is necessary the entry supervisor shall initiate entry procedures, including the completion of a confined space entry permit. Entry into a confined space shall follow the standard entry procedure below, along with specific procedures that are called for by the particular job that requires confined space entry. Attachment D provides process duty rosters that provide job-specific procedures for the confined space entry work performed by Dowdy. If it is determined that entry procedures may not provide enough protection for employees, a new entry procedure which provides adequate protection shall be created. The process duty roster located in Attachment D of this program shall be updated prior to subsequent entries being authorized.

PRIOR TO ENTRY

The entire confined space entry permit shall be completed before a 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. The following conditions must be met prior to standard entry:

- 1. Affected personnel shall be trained to establish proficiency in the duties that will be performed within the confined space.
- 2. The entry supervisor shall test the internal atmosphere within the confined space or his designate with a calibrated, direct-reading instrument.
- 3. Personnel shall be provided with necessary PPE as determined by the entry supervisor.
- 4. Atmospheric monitoring shall take place during the entry. If a hazardous atmosphere is detected during entry:
 - personnel within the confined space shall be evacuated by the attendant(s) or entry supervisor until the space can be evaluated by the entry supervisor to determine how the hazardous atmosphere developed; and
 - \circ controls shall be put in place to protect employees before reentry.

OPENING A CONFINED SPACE

Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent anyone from falling through the opening. This barrier or cover shall protect each employee working in the space from foreign objects entering the space. If it is in a traffic area, adequate barriers shall be erected.

ATMOSPHERIC TESTING

Atmospheric test data are required prior to entry into a confined space. Testing is needed for two distinct purposes:

- 1. evaluation of the hazards of the permit space, and
- 2. verification that acceptable conditions exist for entry into that space.

Before entry into a confined space, the entry supervisor should make sure that testing for hazardous atmospheres is conducted. The internal atmosphere should be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and potential toxic air contaminants, in that order.

The atmospheric testing results must be revealed to the affected employees and entrants.

Testing equipment used in specialty areas shall be listed or approved for use in such areas by The General Manager. All testing equipment shall be approved by a nationally recognized laboratory, such as Underwriters Laboratories or Factory Mutual Systems.

The atmosphere within the space must be continuously monitored unless Dowdy can demonstrate that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. If continuous monitoring is used, the monitoring equipment must have an alarm that will notify all entrants if a specified atmospheric threshold is achieved, or that an employee will check the monitor with sufficient frequency to ensure that entrants have adequate time to escape. If continuous monitoring is not used, periodic monitoring is required. All monitoring must ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space, or that employee's authorized representative, must be provided with an opportunity to observe the required testing.

Provide an early-warning system that continuously monitors for non-isolated engulfment hazards. The system must alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.

Note: If a person must go into the space to obtain the needed data, then standard confined space entry procedures must be followed.

EVALUATION TESTING

The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity. 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. Evaluation and interpretation of these 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).

VERIFICATION TESTING

A confined space that may contain a hazardous atmosphere shall be tested for residues of all identified or suspected contaminants. 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. Results of testing shall be recorded by the person performing the tests on the permit. The atmosphere shall be periodically retested (frequency to be determined by the entry supervisor to verify that atmospheric conditions remain within acceptable entry parameters.

ACCEPTABLE LIMITS

The atmosphere of the confined spaces shall be considered to be within acceptable limits when the following conditions are maintained:

- Oxygen: 19.5 percent to 23.5 percent;
- Flammability: less than 10 percent of the Lower Flammable Limit (LFL); and
- 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)].

ISOLATION OF HAZARDS

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. Isolation may occur through the use of blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barriers to eliminate the potential for employee contact with a physical hazard.

In confined spaces where complete isolation is not possible because the space is large or is part of a continuous system (such as a sewer), the entry supervisor shall evaluate the situation and make provisions for as rigorous isolation as practical. Special precautions shall be taken when entering double-walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessels internal wall.

INGRESS/EGRESS SAFEGUARDS

Means for safe entry and exit shall be provided for confined spaces. Each entry and exit point should be evaluated by The General Manager to determine the most effective methods and equipment that will enable employees to safely enter and exit the confined space.

Appropriate retrieval equipment or methods shall be used whenever a person enters a confined space. The entry supervisor may waive use of retrieval equipment if use of the equipment increases the overall risks of entry or does not contribute to the rescue.

WARNING SIGNS AND SYMBOLS

All confined spaces that could be inadvertently entered shall have signs identifying them as confined spaces. Signs shall be maintained in a legible condition. The signs shall contain a warning that a permit is required before entry. Accesses to all confined spaces shall be prominently marked.

PRACTICES AND PROCEDURES IDENTIFIED BY DOWDY

At a minimum, the following practices and procedures are to be used or eliminate confined space hazards prior to entry.

- Ventilation
- Air Quality Testing
- Shoring
- Removal of Obstructions
- Housekeeping removal of scrap, wastes, etc.
- Isolation of hazards

EMERGENCY RESPONSE PLAN

Dowdy shall maintain a written plan of action that has provisions for conducting a timely rescue of individuals within a confined space, should an emergency arise. The written plan shall be kept onsite where the confined space work is being conducted. All affected personnel shall be trained on the Emergency Response Plan.

RETRIEVAL SYSTEMS AND METHODS OF NON-ENTRY RESCUE

Retrieval systems are to be available and ready when an authorized person enters a permit space, unless such equipment increases the overall risk of entry, or the equipment would not contribute to the rescue of the entrant. Retrieval systems should have a chest or full-body harness and a retrieval line attached at the center of the back near shoulder level or above the head. If harnesses are not feasible, or would create a greater hazard, wristlets may be used in lieu of the harness. The retrieval line must be firmly fastened outside the space so that rescue can begin as soon as anyone is aware that retrieval is necessary.

2.8 TRAINING

Training will be provided to each employee whose work is regulated by this Confined Space Program at no cost to the employee. Dowdy will ensure that the training provides the employee with the understanding, knowledge, and skills necessary for the safe performance of their duties in confined spaces.

This training must result in an understanding of the hazards in the permit space and the methods used to isolate, control or in other ways protect employees from these hazards, and for those employees not authorized to perform entry rescues, in the dangers of attempting such rescues.

TRAINING FREQUENCY

Training will be provided at the following frequencies:

- before the employee is first assigned duties within a confined space;
- before there is a change in assigned duties;
- when there is a change in permit space operations that presents a hazard for which an employee has not been trained; and
- when Dowdy has reason to believe that there are deviations from the confined space entry procedures required in this program, or that there are inadequacies in the employees' knowledge or use of these procedures.
- As needed in ordered to maintain employee competence in entry procedures and precautions

The training shall establish employee proficiency in the duties required in this program, and shall introduce new or revised procedures, as necessary, for compliance with this program.

GENERAL TRAINING

The training will be provided in a language and vocabulary that the employees understand. All employees who will enter confined spaces shall be trained in entry procedures. Personnel responsible for supervising, planning, entering, or participating in confined space entry and rescue shall be adequately trained in their functional duties prior to any confined space entry. Training shall include:

- Explanation of the general hazards employed with confined spaces.
- Discussion of specific confined space hazards employed with the facility, location, or operation.
- Reason for, proper use, and limitations of personal protective equipment and other safety equipment required for entry into confined spaces.
- Explanation of permits and other procedural requirements for conducting a confined space entry.
- A clear understanding of what conditions would prohibit entry.
- Procedures for responding to emergencies.
- Duties and responsibilities of the confined space entry team.
- Description of how to recognize symptoms of overexposure to probable air contaminants in themselves and co-workers, and method(s) for alerting the attendant(s).

Specific Training

Training for atmospheric monitoring personnel should include proper use of monitoring instruments, including instruction on the following:

- Proper use of the equipment;
- Calibration of equipment;
- Sampling strategies and techniques; and
- Exposure limits (PELs, TLVs, LELs, UELs, etc.).

Training for attendants must include the following (review prior to each entry):

- Procedures for summoning rescue or other emergency services; and
- Proper utilization of equipment used for communicating with entry and emergency/rescue personnel.

Training for Emergency Response Personnel shall include:

- Rescue plan and procedures developed for each type of confined space that is anticipated to be encountered;
- Use of emergency rescue equipment;
- First aid and CPR techniques; and
- Work location and confined space configuration to minimize response time.

VERIFICATION OF TRAINING

The General Manager should conduct periodic assessment of the effectiveness of employee training. Training sessions are to be repeated as often as necessary to maintain an acceptable level of personnel competence.

ATTACHMENT A: OSHA STANDARD FOR CONFINED SPACE ENTRY

Confined Spaces in Construction – 29 CFR 1926 Subpart AA

Scope	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1201
Definitions	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1202
General Requirements	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1203
Permit-Required Confined Space	https://www.osha.gov/laws-
Program	regs/regulations/standardnumber/1926/1926.1204
Permitting Process	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1205
Entry Permit	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1206
Training	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1207
Duties of Authorized Entrants	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1208
Duties of Attendants	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1209
Duties of Entry Supervisors	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1210
Rescue and Emergency Services	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1211
Employee Participation	https://www.osha.gov/laws-
	regs/regulations/standardnumber/1926/1926.1212
Provision of Documents to	https://www.osha.gov/laws-
Secretary	regs/regulations/standardnumber/1926/1926.1213

Attachment B:	CONFINED SPACE PRE-ENTRY
	CHECKLIST & RE-CLASSIFICATION
	Forms

CONFINED-SPACE PRE-ENTRY CHECKLIST

Checklist must be filled out whenever workers enter a permit-required space. A copy of the safe entry procedure must be available at the entry point to the confined space.

	<u>ок</u>	Action Needed
Did you survey the surrounding area to show it to be free of hazards such as drifting vapors from tanks, piping, or sewers?		<u>Inccucu</u>
Does your knowledge of industrial or other discharges indicate this area is likely to remain free of air contaminants while occupied?		
Are you certified in operation of the gas monitor to be used?		
Has a gas monitor functional test been performed this shift on the gas monitor to be used?		
Did you test the atmosphere of the confined space prior to entry?		
(a) Was oxygen content between 19.5 percent and 23.5 percent?		
(b) Was flammable vapor less than 10 percent of LEL/LFL?		
(c) Were tests for toxic materials less than TLV/PEL?		
Have all sources of hazards been isolated from the confined space?		
(a) Have all pipes been blanked?		
(b) Have electrical and mechanical hazards been locked and blocked?		
Is all rescue equipment called out in the safe entry procedure available outside the confined space?		
Will the atmosphere be continuously monitored while the space is occupied, if required by entry procedure?		
Have the facility emergency and rescue services been notified that a confined space entry is about to be made?		

NOTICE: If any of the above questions are answered "Action Needed," do not enter the confined space until the conditions are corrected.

Date: _____

Supervisor:

RE-CLASSIFICATION OF PERMIT-REQUIRED CONFINED SPACES

A Permit-Required Confined Space may be reclassified as a non-permit confined space if:

- 1. The space does not contain actual or potential atmospheric hazards; and
- 2. All hazards may be eliminated without entry into the space.

The reclassification is valid only while the confined space remains free from hazards. If hazards arise during the course of entry, the space must be evacuated immediately and re-evaluated for hazards.

The reclassification is valid only for the specific entry indicated below.

Location:

Space Duration:

Purpose of Entry:

Does the permit space pose an actual or potential atmospheric hazard?

 \Box No \Box Yes – do not continue.

Hazard Originally Existing in Space	Methods of Eliminating Hazard	Verified by:

Name

Signature

Date

Note: If hazards arise each employee in the space must exit immediately. The space must then be reevaluated to determine whether it must be reclassified as a permit space, in accordance with applicable provisions of the OSHA confined space standard.

ATTACHMENT C: ENTRY PERMIT

Confined Space Entry Permit								
GENERAL INFORMATION			PROCEDURES/EQUIPMENT			Г		
			Procedures/	'Equipm	ent (check a	all that appl	ly) Yes	No
Confined Space Location:			Isolation					
Purpose of entry:			Lockout/Ta	gout				
			Double blo	ck and bl	eed			
Date: Time: to			Blanking an	ıd Blindir	ng			
This entry permit is valid only for the da			Line breaki	ng/misal	ignment			
Additional Permits (Check only those th	at apply): Yes No		Inerting (spec	;ify)				
Hot Work			Ventilation					
Lockout/Tagout			Continuous	forced a	ir ventilatio	n		
Line Breaking			Local exhau	ıst ventil	ation			
Other (Specify)			Air Monitorin	g				
PERSO	ONNEL		Initial					
Entry Supervisor:			Periodic (i.e	e., 15-mi	nute interva	ls)		
Attendant(s):			Continuous	;				
Entrant(s)	Time In: Time Out:		Respirator	Protectio	on (specify) _		□	
			Personal Prot	ective/R	escue Equip	ment		
			Tripod with	Mechar	ical Equipm	ent		
			Full Body H	arness				
*Only Designated Personnel are Author	ized to Enter Permit Spaces		Portable Lig	ghting				
HAZ	ARDS			EMI	ERGENCY S	ERVICES		
Hazards (check all that apply)	Yes No		Provided by:					
Mechanical			Name:					
Electrical			Telephone	Number:				
Engulfment			Method of Su	ımmonin	g (Check all	that apply)	Yes	No
Configuration (entrapment)			Radio					
Atmospheric			Telephone (S	pecify)				
Oxygen deficient			Other (Specif	y)				
Oxygen Enrichment			Verification o	f Emerge	ency Services	s – Initials		
Explosive (gas/vapor)								
Explosive (dust)			Attendant/E	ntrant (check all tha	at apply)	Yes	No
Hydrogen Sulfide			Visual	(
Carbon Monoxide			Radio					
Other (i.e., Radiation, Noise,	Toxics)		Other (spec	cifv)				
				,,			_	
	AIR MO	ONITOF	RING					
Contaminant	Acceptable Exposure Level	Time	Reading	Time	Reading	Time	Reading	
Oxygen 19.5-23.5%					-			
Explosive (gas/vapor) <10% LFL								
Explosive (dust) < LFL (5 ft.								
visibility)								
Hydrogen Sulfide 10 ppm								
Carbon Monoxide 25 ppm		1						
	*Record calibration check on th	e back o	f this form	1	1	1		
Air monitoring conducted by:								
AUTHORIZA	ATION			CAI	VCELLATIO	N		
Entry Authorized by:		Entry	Cancelled by:					
			me: Date:					
		Signature: Date:						
Post Entry Permit at Entrance to Permit Space		Return completed Entry Permit to Appropriate Authority						

ATTACHMENT D: ENTRY DUTIES / PROCESS DUTY ROSTER

Process: Wet Wells
Entry Supervisor Entrants
iew confined space pre-entry checklist. Prior to entry, do a visible check of the well.
Entry SupervisorEntrantsriew confined space pre-entry checklist.Prior to entry, do a visible check of the wet well.or to entry, do a visible check of the wet well.Ensure the area is secured, support the attendant, and also ensure the barricades have been place near the entrance to alert other associates of the space.a laso ensure the barricades have been place or the entrance to alert other associates of the enspace.Ensure the area is secured, support the attendant, and also ensure the barricades have been place near the entrance to alert associates of the open space.ure that the atmospheric testing has been ppleted and the space has been properly titlated.Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.sign entry permit for the confined space.Use all equipment as required by the specific permit space entry procedures.ormunicate with the attendant as necessary to enable the attendant to alert entrants of the need to evacuate the space as required, and for attendant to be able to monitor status of entrants. Remain in contact with the 2-way radio at all times. Alert the attendant whenever:e The entrant detects a prohibited condition.The entrant detects a prohibited condition.e the antendary permit for the confined space, sign- and post upon completion.Exit from the confined space as quickly as possible whenever:e The order to evacuate is given by the attendant or the entry supervisor.Exit from the entry supervisor.
ing the entry.condition.vide entry permit for the confined space, signand post upon completion.Exit from the confined space a s quickly as possible whenever:• The order to evacuate is given by the
 attendan The entrained or symptomic situation

Process: Sewer/Manhole Entry			
Entry Supervisor	Entrants		
Prior to entry, do a visible check of the sewer/manhole.	Obtain the confined space entry permit and authorized signature(s).		
Ensure the area is secured, support the attendant, and also ensure the barricades have been place near the entrance to alert pedestrians of the open space (if necessary).	Complete a safe entry checklist prior to entering the confined space. Fill out and post the permit at or near the entrance of the sewer.		
Ensure that the atmospheric testing has been completed and the sewer has been properly ventilated (if required).	Know space hazards: engulfment, toxic/explosive/flammable gases, oxygen deficiencies, contaminated water, etc., including		
Check lighting and ventilation equipment, if applicable.	the signs and results of exposure. Use the correct personal protective equipment -		
Verify that entrants have proper training and knowledge of known hazards (gases, oxygen deficiencies, contaminated water), including the signs or symptoms and results of exposure.	goggles/ safety glasses, respirators, rubber gloves, etc. (if necessary). Maintain communication with standby person via 2-way radio and/or visual contact.		
Ensure that all entrants wear the proper protective equipment - goggles/ safety glasses, respirators, rubber gloves, etc. (if necessary).	Exit from permit space as soon as possible: when ordered to by authorized persons, when entrant notices or recognizes the signs or symptoms of		
If the sewer is deeper than 5 feet, retrieval equipment must be utilized (i.e., Fall arrest	exposure, and/or when a prohibited condition exists.		
harnesses, lanyards, and tripods) Ensure that adequate protection will be sustained during the entry.	Alert the standby person when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.		
Provide confined space entry permit for the sewer/manhole, sign-off and post upon completion.			

Process: Attic or Crawl Space Entry			
Entry Supervisor	Entrants		
Review confined space pre-entry checklist.	Prior to entry, do a visible check of the space to be		
Prior to entry, do a visible check of the space to be entered.	entered. Ensure the area is secured, support the attendant,		
Ensure the area is secured, support the attendant, and also ensure the barricades have been place near the entrance to alert pedestrians of the open space (if necessary).	and also ensure the barricades have been place near the entrance to alert pedestrians of the open space (if necessary). Know the hazards that may be faced during entry,		
Ensure that the atmospheric testing has been completed and the space has been properly ventilated (if required).	including information on the mode, signs or symptoms, and consequences of the exposure. Sign entry permit for the confined space.		
Check lighting and ventilation equipment, if applicable.	Use all equipment as required by the specific permit space entry procedures.		
Verify that entrants have proper training and knowledge of known hazards (Excess Heat, Electro-mechanical, Rodents, Insects, Etc.), including the signs or symptoms and results of exposure.	Communicate with the attendant as necessary to enable the attendant to alert entrants of the need to evacuate the space as required, and for attendant to be able to monitor status of entrants.		
 exposure. Ensure that all entrants wear the proper protective equipment (Coveralls, goggles/ safety glasses, respirators, rubber gloves). If the attic or crawl space is deeper than 5 feet, retrieval equipment must be utilized (i.e., fall arrest harnesses, lanyards, and tripods) Ensure that adequate protection will be sustained during the entry. Provide entry permit for the confined space, signoff and post upon completion. 	 Alert the attendant whenever: The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or The entrant detects a prohibited condition. Exit from the confined space as quickly as possible whenever: The order to evacuate is given by the attendant or the entry supervisor. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or the entrant detects a prohibited condition or an evacuation alarm is activated. 		

Process: T	rench Entry	
Entry Supervisor	Entrants	
Ensure the area is secured, support the attendant and also ensure the barricades (caution tape, etc.) Have been place near the entrance to alert pedestrians of the open space (if necessary). Ensure exit and entry compliance (ladders must be within 25 feet of the workers, extended 3- 4 feet above the top of the trench, and stabilized inside of protective equipment). Ensure that the atmospheric testing has been completed for all trenches 4 feet or deeper – ventilate or deny entry if necessary. Verify that entrants have proper training and knowledge of known hazards (gases, cave-ins, underground utilities, water), including the signs or symptoms, and results of exposure. Ensure that all entrants wear the proper protective equipment (hardhats, gloves, safety glasses, and steel toed boots). Ensure that adequate protection (trench boxes/shoring and/or sloping/benching, etc.) Will be sustained during the entry.	Complete a trench inspection form prior to entry. Ensure that egress equipment (typically ladders) is located with 25 feet of your location in the space. <u>Know space hazards (gases, cave-ins, underground utilities, water). Also understand</u> <u>the signs or symptoms, and results of exposure to</u> <u>the hazards.</u> Monitor the atmosphere for the duration of work inside all trenches 4 feet or deeper. Use the correct personal protective equipment (hardhats, gloves, safety glasses, and steel toed boots). Maintain communication with standby person via 2-way radio and/or visual contact. Exit from permit space as soon as possible: when ordered to by authorized persons, when entrant notices or recognizes the signs or symptoms of exposure, and/or when a prohibited condition exists. Alert the standby person when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.	

Process:		
Entry Supervisor	Entrants	

ATTACHMENT E: TRAINING DOCUMENTATION

OSHA's Employee Responsibilities

- Read the OSHA Poster at the workplace.
- Comply with all applicable OSHA standards.
- Follow all lawful employer safety and health rules and regulations and wear or use prescribed protective equipment while working.
- Report hazardous conditions to the supervisor.
- Report any work-related injury or illness to the employer, and seek treatment promptly.
- Exercise rights under the Act in a responsible manner.

ATTACHMENT F: New Hire Training Documentation

OSHA's Employee Responsibilities

- Read the OSHA Poster at the workplace.
- Comply with all applicable OSHA standards.
- Follow all lawful employer safety and health rules and regulations and wear or use prescribed protective equipment while working.
- Report hazardous conditions to the supervisor.
- Report any work-related injury or illness to the employer, and seek treatment promptly.
- Exercise rights under the Act in a responsible manner.

New Hire Training Summary:

he following information must be reviewed with associates at the time of initial assignment.

- Discuss specific confined space hazards associated with the facility, location, or operation Provide list of all of the company-specific confined space.
- Explain the hazards associated with confined spaces
 - Oxygen Deficiency; Combustibles; Toxic Materials; Electricity; Mechanical Hazards
- Explain permits and other procedural requirements for conducting a confined space entry Permit required confined space conditions are:
 - \circ $\;$ Contains or has the potential to contain a hazardous atmosphere; and/or
 - \circ $\;$ Contains a material that has the potential for engulfing an entrant; and/or
 - $\circ~$ Has an internal configuration such that an entrant could become trapped or asphyxiated; and/or
 - Contains any other serious safety or health hazard.
- Describe what conditions would prohibit or limit entry
 - No entrance is permitted into a confined space which contains a hazardous atmosphere unless the proper controls and procedures are in place to eliminate the hazardous atmosphere.
- Cover procedures for responding to emergencies
 - Talk about the company emergency response procedures & whether that includes inhouse responders or the local fire company.
- Duties and responsibilities of the confined space entry team (Review responsibilities for Entrant, Attendant, and Supervisor listed in Company written program)
- Reason for, proper use, and limitations of personal protective equipment and other safety equipment required for entry into confined spaces
- Description of how to recognize symptoms of overexposure to probable air contaminants in the new associate and co-workers, and method(s) for alerting the Attendant(s).

Upon completing the review of the above information, have new employees sign the new hire training log on the following page.

New Hire Training Log: Confined Space Entry

I have read the information contained in this document and understand the health and safety policies and procedures contained herein. I have been advised of my OSHA required employee responsibilities and hereby pledge to abide by them. I also understand that it is my responsibility to work safely and to notify my supervisor regarding any questions I have or unsafe working conditions that I observe. **Print Name** Signature Date