

1. PURPOSE

To insure any work performed in a confined space is carried out in the safest most efficient manner possible, while complying with current OSHA Standards and other relevant regulations.

2. SCOPE

2.1 This policy applies to all employees of Associated Asphalt and contractors, both permanent and temporary who may have to enter, supervise or attend an entry into a confined space.

2.2 This policy must be followed in addition to the Safe Work Permit Procedure and Lockout/Tagout Energy Control Procedures (ECPs). Hazard identification and energy isolation are required by OSHA Standards and will be accomplished using the safe work permit and lockout/tagout procedures.

3. RESPONSIBILITY

The EHS Director is responsible for the implementation and maintenance of this procedure. Terminal Managers, or their designees, are responsible for implementation and training employees in order to comply with this general procedure.

4. DEFINITIONS

4.1 **“Attendant”** – Trained person stationed outside the confined space that monitors the entrants while working in the space & performs the duties outlined in this procedure.

4.2 **“Bump Test”** – Passing a known mixture & concentration of gas over the sensors of the instrument. Faster than full calibration.

4.3 **“Contractor”** - Any person working at the Associated Asphalt who is not an Associated Asphalt Employee.

4.4 **“Confined Space”** – Is **a)** Large enough for a person to bodily enter & perform assigned work; **b)** Has limited or restricted means of entry/egress; & **c)** Is not designed for continuous occupancy. (1910.146)

4.5 **“Entrant”** – One who has been trained & authorized to enter a confined space & is able to perform the work assigned.

4.6 **“Entry”** – Occurs when **any** part of the body breaks the plane of the opening into the space.

4.7 **“Entry Permit”** – A document that allows & controls safe entry and the specific work in the space. Must be completed prior to entry and posted at or near the entry portal

4.8 **“Entry Supervisor”** – Person responsible for determining the planned entry & work in the space is safe. Also responsible for terminating the permit when work is complete or if an unsafe condition occurs making it necessary to do so.

4.9 **“Non-Permit Confined Space”** – Does not contain or have the potential to contain any of the four aspects (**a** thru **d**), listed in §4.10.

4.10 **“Permit Required Confined Space” (PRCS)** – A confined space with one or more of these characteristics: **a)** Contains or has the potential for a hazardous atmosphere; **b)**

Contains a material that could engulf or entrap an entrant; **c)** Has inward converging sides or floor that slopes down & tapers to a narrow opening; **d)** Contains any other recognized serious safety or health hazard. (1910.146)

4.11 “PPM” – Parts Per Million, used to measure small concentrations of compounds.

4.12 “STEL” – Short Term Exposure Limit; A specific concentration of a harmful substance which can be safely tolerated, unprotected, over short time periods. Typically, no more than 15 minutes per hour, with a one-hour separation between STEL exposures. No more than four STEL exposures are permitted in an eight-hour period.

4.13 “TWA” – Time Weighted Average. A term used to define exposure concentrations considered safe for an unprotected individual when calculated over an 8-hour period.

5. PROCEDURE

5.1 After the initial determination and marking or listing of confined spaces, an annual assessment shall be made to determine if any new spaces have been added. Those spaces shall be identified per this procedure, and if significantly different from the existing spaces, specific training shall be conducted prior to entry.

5.1.1 Spaces determined to be ‘Permit Required’ may be marked with a **DANGER** sign.

5.1.1.1 When a sign is used, it shall read **PERMIT REQUIRED
CONFINED SPACE – DO NOT ENTER.**

5.1.1.2 When posting a sign is impractical (for example, high temperature of the mounting surface would destroy the sign) an alternative location as close to the confined as possible should be found. Signs may be posted on nearby poles or on sign posts.

5.1.2 Signs/Lists, coupled with necessary permit required confined space training will be used to notify affected employees of the existence of confined spaces. The training will also help affected employees evaluate unmarked spaces for proper application of this procedure & the relevant OSHA Standard.

5.2 Prior to entry, all affected personnel will be given awareness training. Specific training in the duties of an Entrant, Attendant, and Entry Supervisor will be given to those individuals expected to perform one or more of these functions.

5.3 Entrants shall:

5.3.1 Know the hazards of the confined space.

5.3.2 Know how to properly use all equipment required for safe confined space entry.

5.3.3 After the pre-entry reading, if the work area in the space is too far from the entry portal, an Entrant shall take additional readings immediately upon reaching the work area. Check at three levels: foot, waist, and head. Call out these readings to the attendant. Be aware of air *stratification* in the space.

- 5.3.4 Continuously monitor atmosphere in the work area of the space.
- 5.3.5 Communicate atmospheric readings at periodic intervals, maximum of 30 minutes, to the attendant.
- 5.3.6 Alert the attendant whenever a dangerous situation or new hazards are found.
- 5.3.7 Exit the space **IMMEDIATELY** upon indication of an unsafe condition developing; when the 4-gas monitor alarms; radio failure; **OR** when ordered by the attendant

5.4 **The Attendant** shall:

- 5.4.1 Maintain a copy of the permit at the entrance location
- 5.4.2 Know the hazards that may be faced during confined space entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- 5.4.3 Know possible behavioral effects of hazards.
- 5.4.4 Continuously maintain accurate count of entrants by logging the name and time each person enters and exits the space on the back of the permit
- 5.4.5 Stay at the portal until relieved by another authorized attendant or the permit is terminated.
- 5.4.6 Log atmospheric readings called out by the entrant(s), (See 5.3.5)
- 5.4.7 Maintain communication with the entrant(s).
- 5.4.8 Remove the entrant(s) immediately should unsafe conditions develop, including radio failure.
- 5.4.9 Remove an entrant(s) immediately should he exhibit the behavioral effects of hazardous exposure or any other prohibited condition occur.
- 5.4.10 Summon rescue and emergency services when emergency exit from permit space is necessary, and prevent unauthorized personnel from attempting entry.
- 5.4.11 Performs non-entry rescue, only after calling for help via established communication paths.
- 5.4.12 Keep all unauthorized persons & hazards from entering.
- 5.4.13 Have no other duties while attending the entry.
- 5.4.14 Communicates with other work groups in the area to ensure that work done by one group does not endanger the other.
- 5.4.15 **NEVER** enter the space for any reason **UNLESS** trained for the circumstance and relieved by a competent, trained attendant.

DANGER: To often would be rescuers become victims. DO NOT TAKE SHORT CUTS

5.5 **The Entry Supervisor** is responsible for safe entry & execution of the work. Prior to allowing entry, the entry supervisor shall:

- 5.5.1 Complete and review with all entrants and the attendant the safe work, hot work, and confined space entry permits in accordance with Associated Asphalt Procedures.
- 5.5.2 Know the hazards that may be faced during confined space entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- 5.5.3 Review the tools and PPE required with the entry team and attendant;
- 5.5.4 Review the communications method & type – both primary & back-up.
 - 5.5.4.1 A cell phone is not an acceptable primary communication device.
 - 5.5.4.2 Any communication device should be evaluated to be sure it is safe to use, and is functional in the intended space.
 - 5.5.4.3 **Voice is not an effective means of back-up communication in a tank.** (See 5.3.5 & 5.4.7)
- 5.5.5 Verify everything is in working order & safe to use;
- 5.5.6 Take or witness the pre-entry atmospheric readings and documentation. The monitor probe must project into the space as close as practical to the work area, or at least 3 feet, for a minimum of 3 minutes.
- 5.5.7 Sign the permit & make sure it is posted near the entry portal.

NOTE: Upon signing, the Supervisor is certifying the entry & work have been planned, reviewed to be safely performed, & emergency procedures are adequate.

While entry is underway, the entry supervisor shall:

- 5.5.8 Assume responsibility for removing unauthorized individuals who enter or who attempt to enter the permit space during entry operations
 - 5.5.9 Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained
- 5.6 The standard permit form used by Associated Asphalt facilities is included in Appendix A. Copies **shall** be printed in color.
- 5.6.1 The Permit **MUST** be completed, signed and posted at or near the entry portal prior to entry.
 - 5.6.2 Read all notes and follow any instructions on the form.
 - 5.6.3 The permit is valid for **NO MORE** than **12 hours**, and **MUST** be terminated at that time, **OR WHEN THE WORK IS COMPLETED** – **whichever is earlier.**
 - 5.6.3.1 The permit **SHALL NOT** be written for a period longer than the time it takes to do the job based on experience or a reasonable estimate.

- 5.6.3.2** If it takes longer than originally estimated, either terminate the permit & issue a new one or mark the extended time on the original document and have the Entry Supervisor initial the change.
- 5.6.4** A new permit must be issued each shift or every 12 hours for extended jobs.
- 5.6.5** All terminated permits must be kept on file, on site for a minimum of one year.
- 5.6.6** It is **recommended** that the permit form be used as a checklist for Non-Permit required entries.
- 5.7** When no work is being performed in the confined space or upon completion of work, the entry portal **must** be secured against unauthorized entry.
- 5.7.1** The method used must be substantial enough to prevent a reasonable attempt to enter.
- 5.7.2** For example, a grid of #3 rebar welded to form a grate with 6” by 6” openings that could be bolted in place over the portal in at least four places, or any equivalent means.
- 5.8** Atmospheric testing shall be done prior to entry **and** at a minimum of each 1/2 hour that work in the space continues.
- 5.8.1** Associated Asphalt has selected the QRAE II as its standard 4-gas monitor for this purpose. This instrument may also be used for carbon canister checks.
- 5.8.2** The instrument contains sensors for Oxygen (O₂); Lower Explosion Limit (LEL); Carbon Monoxide (CO); Hydrogen Sulfide (H₂S); and other toxic gases if potentially present.
- 5.8.3** Alarm limits are preset as follows: O₂ 19.5%-23.5%; LEL - >2%; CO (asphyxiant) 30ppm; & H₂S (toxic) 1 ppm; and other toxic gas at 50% of the PEL. The instrument will also alarm if the pump port is blocked. The PEL is 50 ppm (8-hr) for CO and 50 ppm (10-minute ceiling) for H₂S.
- 5.8.4** The monitor shall be bump tested prior to each use & undergo a full calibration when indicated. Since the instrument is fully automatic, it complies with the testing sequence in the OSHA standard. The order is O₂, LEL, & Toxics.

6.0 RECLASSIFYING A PERMIT-REQUIRED CONFINED SPACE

6.1 When May a Confined Space Be Reclassified? - If a permit-required confined space:

- i. Can be exited by walking on a level surface, **AND**
- ii Poses **ONLY** potential atmospheric hazards which can be eliminated by continuous forced ventilation and if other hazards exist that can be controlled or eliminated without entering the space,

The permit-required confined space may be reclassified as a non-permit confined space. This reclassification lasts as long as all hazards within the atmospheric hazards remain eliminated.

6.2 What is Required to Reclassify a Confined Space? – Reclassification requires approval of the Terminal Manager or his designee and completion of the form provided in Appendix B. The information required by Appendix B shall be available at the job site and attached to the safe work and confined space permits.

NOTE: Periodic monitoring and a Safe Work/Hot Work Permit must be done for any work (such as painting or welding) that may produce a hazardous atmosphere regardless of whether the confined space has been reclassified. Process changes require that the confined space be re-evaluated. Be aware that changes outside of the confined space may endanger those within.

7.0 TRAINING AND AUTHORIZATION

Only trained individuals may serve as entrants, entry supervisors, or attendants as defined in Section 4.

7.1 Initial Training - shall be given to newly hired employees within the first 90 days of employment, if practical. Until properly trained, employees cannot participate in work involving confined spaces.

7.2 Refresher Training - will be conducted at least every three years for ALL Employees.

7.3 Training will be conducted by the EHS department or other competent person.

7.4 Training Certification - Training shall be certified when it has been completed. The written certification shall contain each employee's name, the trainer(s) signature and the training date(s).

8.0 CONTRACTORS

Contractors working at Associated Asphalt must have a confined space entry program that meets the requirements of 29 CFR 1910.146, at minimum.

9.0 REVIEW AND RECORDS RETENTION

The Terminal Manager or EHS shall review and revise (if necessary) confined space procedures:

9.1 Retain Closed Confined Space Permits on Site for at Least 12 Months.

9.2 Perform Reviews Quarterly at Each Location –If no entry has been performed during the most recent quarterly period, no review is necessary.

9.2 When Deficiencies Are Found – Findings of the review shall be shared with the EHS Director.

Title: Confined Space Entry Policy

Document No.: 1808-3



REFERENCE

OSHA Standards for Permit Required Confined Spaces 29 CFR 1910.146

APPENDICES

Appendix A – Combined Safe Work Permit



Combined
Permit.docx

Appendix B – Confined Space Reclassification Form



Appendix B -
Confined Space Assi

Appendix C – Training Verification Form



Appendix C -
Training Verification