

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 1
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

1. Purpose

The purpose of this program is to ensure the protection of all employees of UAA from the hazards associated with confined space entry. This document contains requirements for practices and procedures to protect employees from those hazards of entry into and work within permit required confined spaces.

Wherever possible, UAA will reduce the need for confined space entry. It is also UAA policy to eliminate all confined space hazards in order to reclassify permit-required confined spaces to non-permit required confined spaces, whenever possible. When confined space entry is necessary, all provisions of this document are to be followed.

2. Objective

UAA, in its continuing effort to provide employees with safe, healthful working conditions, and to comply with the Occupational Safety and Health Act is implementing the following program for confined space to protect people working at the University, by helping employees, student workers, faculty, staff, and outside contractors better understand confined space hazards.

3. Scope

This policy applies to UAA employees, student workers, faculty, staff, and outside contractors working at UAA facilities who work in and around confined spaces.

4. Definitions

Acceptable Entry Conditions - The conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

Alternate Entry Procedures - The procedures that may be used when the only hazard of a confined space, based upon monitoring and inspection data, is an actual or potential hazardous atmosphere in which continuous forced air ventilation alone is all that is needed to maintain the permit required confined space for safe entry.

Attendant - An individual stationed outside the permit space who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit Confined Space Entry Program.

Authorized Entrant - An employee who is authorized by the employer to enter a permit required confined space.

Blanking or Blinding - The absolute closure of a pipe, line or duct, by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 2
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

Confined Space - A space that:

- 1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- 2) Has limited or restricted means for entry or exit (for example, tanks vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- 3) Is not designed for continuous employee occupancy.

Double Block and Bleed - The closure of a line, duct or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Note: Alaska Administrative Code 8 AAC 61.1050 does not permit double block and bleed when the temperature is 32 degrees or less.

Emergency - Any occurrence (including any failure of hazard control or monitoring equipment) or event(s) internal or external to the confined space that could endanger entrants.

Engulfment - The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing

Entry - The action by which a person passes through an opening into a permit required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry Permit - The written or printed document that is provided by the employer to allow and control entry into a permit space. UAA will use the Confined Space Entry Checklist (Appendix B).

Entry Permit System - The employer's written procedures for preparing and issuing permits for entry and returning the permit space to service following termination of entry and designates by name or title the individuals who may authorize entry.

Entry Supervisor - The person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

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

- 1) Flammable gas, vapor, or mist in excess of 10 percent of its Lower Flammable Limit (LFL);

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 3
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

2) Airborne combustible dust at a concentration that meets or exceeds its LFL;

Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less.

3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

4) Atmospheric concentration of any substance which may exceed a permissible exposure limit;

Note: An airborne concentration of a substance that isn't capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects isn't covered by this definition.

5) Any other atmospheric condition that is immediately dangerous to life or health.

Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, 29 CFR 1910.1200, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot Work Permit - The employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately Dangerous to Life or Health (IDLH) - Any condition which 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.

Note: Some materials - hydrogen fluoride gas and cadmium vapor, for example - may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12 - 72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

Inerting - The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

Note: This procedure produces an IDLH oxygen-deficient atmosphere.

Isolation - The process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: 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; or blocking or disconnecting all mechanical linkages.

Lead Worker (Entry Supervisor) - The person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 4
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

required by this section. The term "Lead Worker" is utilized by the University of Alaska Anchorage wherever 29 CFR 1910.146 refers to the "entry supervisor."

Note: A Lead Worker also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of Lead Worker may be passed from one individual to another during the course of an entry operation providing the role switch is documented on the permit.

Lower Explosive Limit (LEL) or Lower Flammable Limit (LFL) - The lowest concentration (percentage) of a substance mixed with air, which will explode or produce a flash or fire when an ignition source is present.

Line Breaking - The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen Deficient Atmosphere - An atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen Enriched Atmosphere - An atmosphere containing more than 23.5 percent oxygen by volume.

Permissible Exposure Limit (PEL) - The exposure specified by OSHA 29 CFR 1910.1000, Table Z-1. In Alaska, PELs are designated in Title 8, Alaska Administrative Code, Chapter 61 in Table Z-1-A, which are more stringent for some substances than the federal code.

Permit Required Confined Space (permit space) - A confined space that has one or more of the following characteristics:

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

Permit Required Confined Space Entry Program - The employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

Prohibited Condition - Any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

Rescue Service - The personnel designated to rescue employees from permit spaces.

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 5
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

Retrieval System - The equipment (including a retrieval line, full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

Testing - The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space. Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

5. Authority and Responsibility

In addition to the roles and responsibilities outlined in the UAA Training Program, the following apply to the Confined Space Entry Program

EHS/RM

- Provide support upon request to assist in the determination and applicability of confined space
- Assist when needed in determination of declassification of a permit required confined space
- Provide guidance for the proper selection and use of appropriate air monitoring equipment, respiratory protection, ventilation equipment, rescue equipment and personal protective equipment to meet the requirements of this program
- Periodic audits of identified confined space locations to ensure no new hazards have been introduced that may require the use of the Permit Required Confined Space section of the Confined Space Entry Checklist
- Periodically audit work operations and documentation using canceled permits to evaluate the overall effectiveness of the Confined Space Entry Program and ensure that employees participating in entry operations are protected from permit space hazards.
- Assist Supervisors in identifying confined spaces encountered by their employees

Supervisor

- Identify personnel who will enter confined spaces
- Ensure all affected employees are aware of the locations of identified confined spaces, and can identify confined spaces in the workplace
- Ensure appropriate confined space entry equipment is available for affected employees
- Provide alternative access when an employee determines entry into a confined space can be avoided by using other means or tools eliminating the need to enter the confined space
- Ensure employees are properly trained in this Confined Space Entry Program and the use of the confined space permit

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 6
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

- Perform and assist in inspections of confined space entry equipment
- Identify and evaluate the hazards of permit required confined spaces before employees enter them
- Issuance and cancellation of confined space entry permits

Department Safety Coordinator

- Assist in the determination of confined space entry requirements
- Periodically observe confined space entries in the assigned department
- Assist in the selection of confined space entry equipment to provide employees when needed
- Perform and assist in inspections of confined space entry equipment

Employees

- Conduct inspections of confined space entry equipment prior to each use
- Promptly notify supervisor and remove any damaged or defective equipment from use
- Assess planned work to determine if confined space entry is required, and seek alternative access or work-methods to avoid the entry when possible
- Initiate and follow all aspects of the confined space entry permit as required
- Understand emergency procedures in case of an incident in a confined space

Outside Contractors

- Perform all work in compliance with the ir company's confined space entry program, which will be reviewed and approved by the EHS/RM department. If the company does not have a standard, they must comply with this program.

6. Hazards

Confined space accidents are of particular concern due to the hazards that they pose to the victim and subsequently to a rescue team who are going into the hazardous space to help the victim. Often injuries are exacerbated by the difficulty of getting the victim out of the area.

- Oxygen deficient atmospheres
- Harmful chemicals in the atmosphere
- Flammables
- Engulfment in materials or liquids
- Excessive heat or cold
- Difficulty in safe removal of injured workers

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 7
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

7. Engineering Controls

Engineering controls are design plans or changes to the working environment to prevent or reduce employee exposure to confined space hazards. The following example engineering controls should be considered in area design to reduce the risks of confined spaces, and will be referenced in the procedure section of this program:

- Mechanical ventilation
- Areas designed with proper accessibility to avoid confined spaces

8. Administration Controls

Administrative controls are safe work practices and procedures designed to reduce the risk of confined spaces. Examples of administrative controls include the following:

- Training for employees who work with confined spaces
- Placing signage on the entrance to confined spaces to prevent unauthorized access
- Ensuring compliance with the confined space entry checklist (Appendix B)
- Ensuring enough employees are trained to properly and have adequate equipment to perform permit confined space entry when required

9. Confined Space Entry Procedures

The following procedures are required for confined space entries.

Identifying Permit **Required** Confined Space Hazards

Each department will evaluate and document confined spaces in their area using the Departmental Confined Space Identification Form (Appendix A). The initial assessment should include the department supervisor or their designee, one person from the department familiar with confined spaces, **and an** EHS/RM representative upon request. Confined spaces to be identified include, but are not limited to, detached buildings, structures, sewers, trenches, tanks, vessels, containers, tunnels, vaults, manholes and property grounds that are configured so they could be entered by University employees, contractors, the public or visitors to the campus.

To identify a confined space, it must have the all three of the following per the definition of a confined space:

- Large enough and so configured that a person can bodily enter and perform assigned work.
- Have limited or restricted means for entry and exit.
- Not designed for continuous occupancy

Any space that requires a ladder to access or requires a worker to crawl or contort his or her body to enter or exit could be considered a confined space. Nonstandard staircases such as spiral stairs or ships'

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 8
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

ladders could also be considered to have limited access or restricted means of egress. Often, these spaces are located below grade or require descent into a space. There are also confined spaces, such as water tanks, HVAC systems, and wind turbines that are typically located aboveground. Other spaces, by virtue of the distance a worker would have to travel to exit the space in an emergency, may be considered to have limited means of exit.

These are spaces where employees would not normally be assigned for work. They are spaces where a desk, computer, or phone would not be placed but that might need to be entered for non-routine inspection, maintenance, or repair work. Utility vaults, crawl spaces, tanks, and below-grade structures are examples of spaces that typically are not designed for continuous human occupancy.

Signs

Confined Spaces should have posted signs, tags, or labels denoting them as confined spaces and prohibiting unauthorized entry. Whenever possible entry into a confined space will be locked to prevent entry by unauthorized personnel. If it is not possible to lock, the entrance will be evaluated to determine if lockable barriers can be installed to prevent unauthorized entry.

Signs, tags, or labels should have wording similar to the following:

Danger – Confined Space
Do Not Enter Without Authorization

Pre-Entry Evaluation and Entry Using the Confined Space Entry Checklist (Appendix B)

Prior to entry into a confined space, the supervisor, utilizing help from the Department EHS Coordinator and EHS/RM Department if needed, should use the Confined Space Entry Checklist (Appendix B) to evaluate the hazards associated with the confined space. When hazards are identified, plans should be made to eliminate or minimize the hazards. Depending on how the hazards are mitigated, the space may be determined to be a permit required confined space. In the event the space is determined to be a permit required confined space the Confined Space Entry Permit section on the bottom portion of the Confined Space Entry Checklist will be utilized. Below are the steps to be taken prior to entry into a confined space with the corresponding section on the Confined Space Entry Checklist.

Location (Section 1)

The confined space should be clearly identified on the checklist in a manner that all people working with the confined space understand the location. Considerations should be made for areas with similar spaces that there is a clear differentiation on the confined space to be entered.

Description (Section 1)

A detailed description of the space will assist personnel in correctly identifying the confined space. Use things like the identification number, type of space (tank, silo vault), the function of the space (fuel oil

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 9
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

waste, grain hopper), and/or its physical attributes (color, size shape).

Work Activities (Section 2)

Be sure to include the time and date range the permit is valid. Permits should not be made for more than one work shift, as hazards can change over time. The scope of the work to be performed in the confined space should be clearly identified.

Pre-Entry Evaluation/ Hazard Identification (Section 3)

All confined space entries should have a pre-entry evaluation. The intent is to ensure the confined space is evaluated prior to entry for existing and potential hazards that may arise during work. The identification and availability of a rescue team if one is required should be considered at this time. Upon completion of the evaluation in Section 3 of the Confined Space Checklist, it is determined there are no hazards the supervisor will sign off, and work can proceed. If any box is checked yes in section 3 of the Confined Space Checklist, steps must be taken to mitigate the hazards prior to entry.

Alternate Procedures (Section 4)

If the only hazard in the confined space is an actual or potential hazardous atmosphere and forced air ventilation alone can maintain a safe atmosphere for workers during entry, an alternate procedure may be used in place of a confined space entry permit.

The procedure must be written by the area supervisor and approved by the EHS/RM department prior to any employees entering the area.

The procedure must include the following:

- All the information included in sections one, two, and three of the confined space checklist
- List of atmospheric conditions in the space that need to be eliminated
- Description of continuous forced air ventilation methods used to eliminate atmospheric hazards
- Process used to ensure air source is clean and does not introduce any additional hazards
- Test methods used to determine the safe atmospheric levels prior to entry
- All entrants must have the opportunity to witness testing
- Methods used to continuously monitor the space for hazardous atmosphere during entry
- Process to clear all entrants immediately if a hazardous atmosphere is detected.
- If hazardous atmosphere is detected at any time, work must be stopped and the area must be exited, the area must be re-evaluated, and a permit issued if necessary
- The supervisor and all entrants must sign the procedure that they understand and accept the conditions to maintain a safe environment.

If for any reason the above steps cannot be completed, the permit section of the confined space checklist

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 10
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

must be completed and used prior to entry.

Note: The use of alternate entry procedures should be carefully managed. The history of confined space entry incidents in the United States indicates misuse, abuse or misunderstanding of alternate entry procedures, has resulted in injury and death to entrants and other workers.

Reclassification of Permit Required Confined Space Using Alternate Entry Procedures

A space classified by UAA as a permit required confined space may be reclassified as a non-permit confined space if there is not a hazardous atmosphere nor a potential of a hazardous atmosphere, and all hazards can be eliminated without entering into the confined space.

An alternate entry procedure must be written by the area supervisor and approved by EHS/RM department prior to any employee entering the area. The procedure must include the following:

- All information from sections one and two of the confined space checklist
- Description of methods used to eliminate all hazards and how that will be maintained during the time entrants will be in the confined space
- Certification, including a signature, from the employees that methods used to eliminate the hazard are in place and will be maintained during entry
- Process to clear all entrants immediately if a hazardous atmosphere is detected.
- If hazardous atmosphere is detected at any time, the area must be re-evaluated, and a permit issued if necessary
- The Supervisor and all entrants must sign the procedure that they understand and accept the conditions to maintain a safe environment.

If for any reason the above steps cannot be completed, the permit section of the confined space entry checklist must be completed and used prior to entry.

Note: The use of reclassification procedures should be carefully managed. History of confined space entry incidents indicates misuse, abuse, or misunderstanding of alternate entry procedures, which has resulted in injury and death to entrant and other workers.

Hazard Identification (Section 5)

If in section three of the Confined Space Checklist, any hazards do exist, the Entry Supervisor should complete the permit indicating the appropriate elimination, mitigation, and control measures to be implemented to ensure safe entry.

The Entry Supervisor should complete Section 5 and identify all actual and potential hazards on the permit and indicate methods to eliminate, control, or mitigate the hazards to reduce risk to an acceptable level. The Entry Supervisor should ensure personnel are informed about all hazards in and around the

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 11
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

space, including inherent hazards, introduced hazards, and adjacent hazards.

The Supervisor should identify all hazards and provide requirements to eliminate, control, or mitigate them on the permit. Where hazards are inherent, they should be recognized, and measures should be developed to reduce worker risk. Controls should be clearly outlined on the permit and be adequate to protect workers during the duration of the work to be performed in the confined space.

Atmospheric Monitoring (Section 5). The Supervisor should understand and include atmospheric monitoring requirements on the permits for applicable hazardous conditions, which include, but are not limited to, oxygen deficient, oxygen enriched, flammable or explosive, toxic, irritant/corrosive, or asphyxiating atmospheres. Atmospheric monitoring might be required intermittently or continuously. The frequency of monitoring depends on the work being performed and other potential introduced or adjacent hazards that could alter the atmospheric conditions in and around the confined space. The permit should detail what atmospheric monitoring should be done, by whom, and at what levels personnel should exit the space.

Atmospheric Ventilation (Section 5)

The Supervisor should understand ventilation methods and requirements. The Entry Supervisor should verify that ventilating a confined space with fresh air before and during confined space work can reduce or remove atmospheric contaminants. Ventilation, especially during warmer months, can also provide relief from thermal stress. The Confined Space Entry Permit section of the Confined Space Entry Checklist should outline what ventilation should be used prior to and during entry. If ventilation will block access into or out of the space, the permit should outline procedures to ensure worker safety during operations.

Personal Protective Equipment (PPE) (Section 5)

The permit should address Entrant and Attendant PPE requirements. Also, if workers need to carry escape devices or additional PPE for specific work, such as cleaning or painting, that equipment should also be addressed.

Other Permits. All additional permits needed for the confined space should be listed on the entry permit (e.g., hot work, line break, electrical work, etc.).

Grounding and Bonding. If the confined space or the ventilation or equipment brought into the space need to be grounded or bonded, then that information should be indicated on the permit as a control.

Communications (Section 6)

The Entry Supervisor should select and indicate on the permit the appropriate methods of communication, and should document how communication will be maintained, as follows:

- Verbal - Acceptable if line of sight is maintained
- Radio - Permit to indicate test intervals

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 12
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

- Rescue request - Permits indicate how rescue team will be notified

Rescue (Section 7)

Confined space rescue methods should be understood before entry into a confined space. Regardless of whether a confined space has hazards or not, the Supervisor should ensure rescue is available and appropriate to the space and operations. When the Confined Space Entry Permit section on the Confined Space Entry Checklist is filled out, a rescue plan that describes how rescue will be attempted. The rescue incident action plan should be available to Entry Supervisors, Attendants, and Entrants. The incident action plan should be attached to the entry permit. Where an emergency response team is required by the incident rescue plan, the team should be notified of applicable confined entries, including their location, hazards, and duration. The following are the four types of rescue:

- Self-Rescue: Rescue before needing assistance. The Entrants (or Attendants) identify a prohibited or dangerous condition and exit under their own power. Self-rescue should not be included in a permit.
- Attendant Rescue: The Attendant assists the Entrant to vacate the space. The Attendant may activate and use a rescue system (outside the confined space).
- Entry Rescue Available: There is a rescue service that has been identified, evaluated, and able to respond in a timely manner should there be a need.
- ~~Entry Rescue available: There is a rescue service that has been identified, evaluated, and able to respond in a timely manner should there be a need.~~
- Rescue Standby: A rescue service is standing by the confined space, ready and equipped to make immediate entry.

Entrant(s) (Section 8)

The following information should be clearly identified on the permit:

Name should be printed on the entry permit.

Entrant should sign the entry permit, indicating that they have been trained in confined space entry and have reviewed all the hazards associated with the permit- specific entry, including which condition changes would require their immediate evacuation. For multiple Entrants, a sign-in sheet can be attached to the permit.

Attendant(s) (Section 9)

The following information should be clearly identified on the permit:

Name/s ~~should~~ shall be printed on the entry permit.

The Attendants should sign the entry permit, indicating that they have been trained in confined space entry and have reviewed all the hazards associated with the permit specific entry. The Attendant must be aware of all potential hazards in the confined space, including possible behavioral effects related to

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 13
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

hazard exposure. An Attendant must remain in constant contact with the Entrant until relieved by another Attendant, maintain communication with the Entrant, monitor activities, and order evacuations where needed. The Attendant also performs non-entry rescue or summons a rescue team if necessary and cannot perform any other duty that might interfere with the primary duty of ensuring the safety of the Entrant. If the work or hazards change from what is stated on the permit, the Attendant should order Entrants to vacate, re-evaluate the space, and advise the Entry Supervisor to issue a new permit.

Entry Supervisor (Section 10)

The Entry Supervisor is responsible for all aspects of the entry and issuance of the entry permit. The Entry Supervisor should sign the permit, indicating that they have been trained in confined space entry and have reviewed all the hazards associated with the permit-specific entry. They must be aware of all potential hazards in each space and the standard operating procedures and equipment required for each entry.

Cancel Permit (Section 11)

Each permit should have an area on the permit to mark the permit as canceled. A permit can be canceled at the end of the work activity by the Attendant or Entrant, or at any time by the Attendant, Entrant, supervisor, or safety professional because of hazards. The reason the permit was cancelled should be documented on the permit, for example, work was completed, or conditions changed.

Rescue and Emergency Contact (Section 12)

The Confined Space Entry Permit section of the Confined Space Entry Checklist should indicate emergency rescue and contact information.

10. Inspection and Audits

The written program and confined space entry checklist will be audited annually by EHS/RM and if needed supervisors responsible for confined spaces in their departments. This review will include:

- Review of select completed permits from the previous year
- Review of employee training and documentation
- Review of confined space entry sign posting
- Review of any alternate procedures performed
- Review of any reclassification procedures
- Review of rescue resources

Based on the findings of the audit appropriate steps must be taken to ensure compliance with this standard, including update of the written program and retraining of affected employees.

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 14
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

11. Training

UAA employees who work in and around confined spaces will be trained in the following prior to working in a confined space including the following topics:

- General and specific duties and responsibilities
- Equipment, tool, PPE, respiratory protection, and monitoring instruments to be used for assigned work
- Type of confined space to be entered, and the associated hazards
- Atmospheric, physical, and chemical (toxic) hazard awareness, including, but not limited to, the identification, elimination, protection and control measures applicable to the proposed entry and work
- The physiological and psychological stresses associated with the specific task

Rescue training

All employees who may be required to perform any form of rescue must practice making permit space rescues before attempting an actual rescue, and at least every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual people from the actual or representative permit spaces. Representative permit spaces must, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.

Retraining on the components of the UAA Confined Space Entry Program should take place in the following conditions:

- Whenever a change occurs in operations, equipment, materials, procedures, guidelines, work assignment, or duties that creates or has the potential to create a hazard for which the employee has not been previously trained, educated, or qualified.
- Whenever UAA has reason to believe an employee requires retraining or additional education due to inadequacies in the employee's performance or skill or because the employee deviates from the Confined Space Entry Program permit requirements or procedures.

12. Program Evaluation

The Confined Space Entry Program shall be evaluated on an annual basis utilizing the protocols set forth by EHS/RM. The evaluation team will consist of a department safety coordinator and a designee from EHS/RM. EHS/RM will define the scope of the evaluation. The final report will be developed by the EHS/RM utilizing the information received during the evaluation. The deficiencies determined in the report will be documented and corrective action plans will be developed.

University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 15
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

13. References

- OSHA 29 CFR 1910.146
 - OSHA 29 CFR 1926, Subpart AA, 1201-1213
 - NFPA 350 - Guide for Safe Confined Space Entry and Work
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University of Alaska Anchorage		Section: EHS/RM
ADMINISTRATIVE SERVICES MANUAL		Program
EHS/RM Programs		Page: 16
Title: CONFINED SPACE ENTRY		Effective Date: 10/08/2018

14. Revision History

Revision Number	Date Revised	Description of Change	Revised By	Approved By
0	10/08/2018	Initial Issue		VC Shuford
1				
2				
3				

Appendix A



Departmental Confined Space Identification Form

Department : _____

Name: _____

Date: _____

- 1. Perform physical walkthrough of your department and identify any existing confined spaces
- 2. Send completed form to EHS/RM representative for review
- 3. Once final file a copy and provide EHS/RM with a copy of this completed form

Department	Location	Asset #	Confined Space Identified	Expected Hazards

Appendix B

Confined Space Entry Checklist

Confined Space Pre-Entry Evaluation																																	
1	Location of Confined Space:	Additional Description (EX; Location #, Risk Assessment #, etc.)																															
2	Description of Confined Space:																																
	Date Issued:	Time of entry/Issued:	Time permit expires (Max duration 1 shift):																														
	Description of work to be done:																																
3	<p>Initial confined Space safe work evaluation. If "yes" is indicated for any of the questions, entry is not permitted until hazards are identified and mitigated by us of the permits and authorized Entry Supervisor. If "No" is indicated for every question, work may proceed</p> <p>Evaluation Signature: _____</p> <p>If any Conditions change, Work Shall stop and the supervisor shall be contacted</p>																																
	Hazard Identification	Hazards present or potentially present (indicate "yes" or "No" in every box)																															
		Inherent Hazards	Introduced Hazards	Adjacent Hazards																													
	Mechanical/electrical (Springs, elevated parts, electric >50 volts)																																
	Physical engulfment by material																																
	Pneumatic/hydraulic/fluids gases (Lifts, agitators, etc.)																																
	Chemical /biological/ atmospheric																																
	*Atmospheric monitoring should be conducted unless assessment of the space determines no potential hazardous atmosphere hazard.																																
	**Insert parameters and document here																																
Confined Space Entry Permit																																	
4	<p>Alternate Procedure:</p> <p>Are alternate procedures allowed?: <input type="checkbox"/> Yes <input type="checkbox"/> No If alternate procedures are allowed, there should be a formal hazard assessment by a qualified person, including written formal procedures.</p> <p>If Yes and being used, Entry Supervisor must sign and date: _____</p> <p>Continuous ventilation and continuous monitoring, must be in place if alternative procedures are used.</p> <p>Are reclassification procedures allowed?: <input type="checkbox"/> Yes <input type="checkbox"/> No If reclassification procedures are allowed, there should be a formal hazard assessment by a qualified person, including written formal procedures.</p> <p>If Yes and being used, Entry Supervisor must sign and date: _____</p>																																
5	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #d3d3d3;"> <th style="width: 25%;">Energy Sources (Examples)</th> <th colspan="3">hazards present or potentially present (Check all that apply)</th> <th rowspan="2">Hazard Controlled by: If additional permits are used, indicate here in addition to other controls.</th> </tr> <tr style="background-color: #d3d3d3;"> <th></th> <th style="text-align: center;">Inherent Hazards</th> <th style="text-align: center;">Introduced Hazards</th> <th style="text-align: center;">Adjacent Hazards</th> </tr> </thead> <tbody> <tr> <td>Mechanical (springs, elevated parts, etc.)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Electrical (motors, agitators, etc.)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pneumatic/ hydraulic (lifts, agitators, etc.)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>fluid/ gases (CIP lines, nitrogen, steam, etc.)</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Energy Sources (Examples)	hazards present or potentially present (Check all that apply)			Hazard Controlled by: If additional permits are used, indicate here in addition to other controls.		Inherent Hazards	Introduced Hazards	Adjacent Hazards	Mechanical (springs, elevated parts, etc.)					Electrical (motors, agitators, etc.)					Pneumatic/ hydraulic (lifts, agitators, etc.)					fluid/ gases (CIP lines, nitrogen, steam, etc.)				
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	Other Hazards
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Appendix B

5	Unauthorized entry of personnel Noise > 84 dB Excessive heat or cold Falling objects Other permits: hot work, line break, LOTO, live electrical work						
Atmospheric Hazards: (record pre-entry and document continuously at least every two hours until exit)							
Bump Test required and completed <input type="checkbox"/> Yes							
Gas Tester : type model _____ Serial # _____				Pre-entry required AM/PM	Time AM/PM	Time AM/PM	Time AM/PM
Continuous monitoring required <input type="checkbox"/> Yes <input type="checkbox"/> No							
Percent of oxygen 19.5% to 22%							
Lower explosive limit <10% LEL							
Carbon Monoxide < 25 ppm							
Hydrogen Sulfide <5 ppm							
Other _____							
Tester Initials:							
Personal Protective Equipment required: (check box for all that apply)							
<input type="checkbox"/> Respirator		<input type="checkbox"/> Safety glasses w/side shields		<input type="checkbox"/> Hard hat			
Type: _____		<input type="checkbox"/> Goggles		<input type="checkbox"/> Face shield			
Model: _____		<input type="checkbox"/> Ear plugs/muffs		<input type="checkbox"/> Boots			
Cartridge/filter: _____		<input type="checkbox"/> Gloves Type: _____		<input type="checkbox"/> Disposal coveralls			
<input type="checkbox"/> Other Specify: _____							
6	Communications: Entrant: <input type="checkbox"/> Verbal (allowed only for line of sight) <input type="checkbox"/> Radio Emergency Rescue will be requested by: _____						
7	Rescue: (Check all that apply) <input type="checkbox"/> Full-body harness w/ "D" ring <input type="checkbox"/> Tripod <input type="checkbox"/> Fall-arresting equipment <input type="checkbox"/> Lifelines and safety or wrist harness <input type="checkbox"/> Emergency escape retrieval equipment <input type="checkbox"/> Emergency Response Team has been notified of entry, hazards, and duration (still use for alternate procedure, or reclassification) <input type="checkbox"/> Incident action plan has been completed and is available						
8	Entrant(s): I am aware of the hazards and their effects and will take the precautions required. _____ Print name, department, and phone. Signature						
9	Attendant(s): I am aware of the hazards and their effects. I will arrange for rescue from outside the space, if required. _____ Print name, department, and phone. Signature						
10	Entry Supervisor: I authorize entry into this confined space and verify that the hazards have been evaluated, control measures have been instituted, and the conditions are as indicated on this permit. _____ Print name, department, and phone. Signature						
11	Cancel Permit: This permit shall be canceled at the completion of the entry, or if hazards change, by placing a large "X" across both sides of the permit.						
12	Rescue & Emergency Contact Tel. no.: () - _____						