I. PURPOSE

Every year employees are killed as a result of hazardous conditions in confined spaces. Approximately 60% of these fatalities are would-be rescuers who enter these spaces in an attempt to retrieve the fallen individual(s), only to be overcome and become victims themselves.

As part of routine maintenance activities, IU Northwest employees and contractors are required to enter potentially hazardous enclosed spaces. Confined spaces may have atmospheric conditions and/or physical hazards present and include: manholes, crawl spaces, air handling units, cooling towers, pits, sumps, and sanitary and storm sewers. Toxic and/or flammable gases and vapors may accumulate in these locations as a result of insufficient ventilation and deficient oxygen levels may be present as the result of corrosion and/or organic debris digestion. In addition, limited access to these locations complicates the retrieval of anyone incapacitated.

In accordance with the OSHA standard, the regulations listed below provide minimum requirements for safe entry into these locations. This program contains the procedures and practices for safe entry into locations at IU Northwest that fall under these regulations.

II. REGULATIONS AND OTHER APPLICABLE STANDARDS

OSHA 29 CFR 1910.146, Permit-Required Confined Spaces

III. SCOPE

The provisions of this program pertain to locations required to be entered by an employee (or contractor) that either meet the definition as outlined in the above regulations and standards or those presented in the Section V (below).

IV. APPLICABILITY

This program shall apply to all personnel at IU Northwest (including contractors). Although OSHA does not specifically address students, as used in this program, the terms “employee” and “personnel” includes students.

V. DEFINITIONS

A. Acceptable Entry Conditions: Means the conditions that must exist in a space to allow entry and to ensure that the employees involved with a confined space entry can safely enter into and work within the space.

B. Attendant: An individual stationed outside one or more spaces who monitors the authorized entrants and who performs all attendant’s duties assigned in the employer’s confined space program.

C. Authorized Entrant: An employee who is authorized by the employer to enter a confined space.
D. **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.

E. **Confined Space:** Is defined as a space that...
   - Is large enough and so configured that an employee can bodily enter and perform assigned work; and
   - 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
   - Is not designed for continuous employee occupancy.

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

G. **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.

H. **Engulfment:** The surrounding and effective capture of a person by a liquid or finely divided solid (flowable) 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.

I. **Entry:** The act by which a person intentionally passes through an opening into a 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.

J. **Entry Permit:** The written or printed document provided by the employer to allow and control entry into a permit space and that contains the information specified in Section (f) of the Permit-Required Confined Spaces standard.

K. **Entry Supervisor:** The person (such as the supervisor, 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.

   **Note:** An entry supervisor may also serve as an attendant or as an entrant, as long as that person is trained and equipped as required by this program for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

L. **Hazardous Atmosphere:** An atmosphere that may expose employees to the risk of death, incapacitation, 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:
   - Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
   - 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.
• Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
• Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of 29 CFR 1910 and which could result in employee exposure in excess of its dose or permissible exposure limit;

   Note: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

• 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 Material Safety Data Sheets or Safety Data Sheets, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

M. Hot Work Permit: The employer’s written authorization to perform operations, which could provide a source of ignition, such as riveting, welding, cutting, burning, or heating.

N. Immediately Dangerous to Life or Health (IDLH): Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual’s ability to escape unaided from a permit space.

O. Inerting: Means 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.

P. 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 tag-out of all sources of energy; or blocking or disconnecting all mechanical linkages.

Q. 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.

R. 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.

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

T. Oxygen Enriched Atmosphere: An atmosphere containing more than 23.5 percent oxygen by volume.
U. **Permit-Required Confined Space (Permit Space):** 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.

V. **Permit-Required Confined Space 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.

W. **Permit System:** The employer's written procedures for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

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

Y. **Rescue Service:** The personnel designated to rescue employees from confined spaces.

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

AA. **Testing:** The process by which the atmospheric hazards that may confront entrants of a space are identified and evaluated. Testing includes specifying the tests that are to be performed in the space.

   **Note:** 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.

VI. **RESPONSIBILITIES**

A. **The Supervisor shall:**

   1. Identify confined space(s) encountered by his/her employees, submit a list of the confined spaces identified to IU Northwest EH&S, and post or distribute the list to affected employees. Update the confined space list annually and whenever there are changes affecting work conditions or when new confined spaces are identified. The list shall include:
      - a. Location
      - b. Reason for employee entry
      - c. Potential hazards
      - d. Status: confined space or permit-required confined space
   2. Ensure that all associated safety equipment is maintained and routinely inspected.
   3. Submit a list of affected employees to IU Northwest EH&S. Update the list of affected employees whenever there are additions or deletions.
   4. Attend level of training required of individuals they supervise (at minimum).
   5. Ensure affected employees receive training identified in Section H.
B. Employees shall:
   1. Notify the supervisor of any confined space encountered not on the confined space list.
   2. Notify the supervisor whenever work operations may require entry into a confined space.
   3. Sign-in/out on the roster at the entrance of the confined space.
   4. Attend required confined space training.
   5. Contact IU Northwest EH&S for the appropriate evaluation of the confined space and permit, if necessary.
   6. Comply with the requirements outlined when directly involved in entry of permit-required confined spaces.

C. Environmental Health and Safety shall:
   1. Develop the written Confined Space Program and revise the program as necessary.
   2. Inspect confined space locations to identify hazards. Evaluate the workplace to determine if any spaces are permit-required confined spaces.
      Note: Proper application of the decision flow chart in Appendix A would facilitate compliance with this requirement.
   3. Approve all monitoring equipment, safety equipment, and materials for safe work operations. Calibrate entry monitors in accordance with manufacturer’s specifications.
   4. Conduct, or make available, all employee training for the confined space program. Establish employee proficiency in the duties required, including new or revised procedures. Certification shall contain each employee’s name, signature of trainer, and date of training.
   5. Approve employees to serve as authorized attendant, entrant, or entry supervisor.
   6. Issue permit-required confined space permit as appropriate.
   7. Provide signage for confined spaces.
   8. Annually review completed permits and revise plan, as necessary.

D. Responding Fire Department shall:
   1. Assume the role of the rescue team.
   2. Ensure that at least one member of each rescue team maintains current certification in basic first aid and cardiopulmonary resuscitation (CPR).
   3. Inspect and maintain emergency retrieval equipment.
   4. Conduct rescue team practice at least annually, simulating permit space rescues in which team members remove dummies, mannequins or personnel through representative openings and portals whose size, configuration and accessibility closely approximate those of the permit spaces from which rescues may be required.

VII. WRITTEN PERMIT-REQUIRED CONFINED SPACE ENTRY PROGRAM
This Section outlines the practices and procedures to protect IU Northwest employees and contract employees from the hazards associated with permit-required confined space entry, as specified in OSHA’s Confined Space Standard 29 CFR 1910.146. It shall serve as the written program and shall apply to all permit-required confined spaces, or any non-permit-required...
space that becomes a permit-required space by introduction a new hazard, unless there is a more applicable standard.

A. General Requirements

1. Hazard Identification: The hazards of permit spaces shall be identified and evaluated prior to employees entering them. The completion of the confined space permit will serve as the means, practices, and acceptable entry conditions for safe permit space entry operations.

2. Hazard Communication: Signage shall be posted at entrances to all confined spaces to prevent any inadvertent or unauthorized entry. These postings shall be permanently affixed to the wall or door of the space and shall be large enough to be plainly visible to any entrant. In locations where permanent notices cannot be logically placed (sewer manholes or vaults located in roadways), temporary signs shall be posted along with the necessary barricades and fences and placed in plain view during the entire time the cover to the confined space is removed.

The signs shall contain the following type of information:

<table>
<thead>
<tr>
<th>DANGER CONFINED SPACE AUTHORIZED PERSONNEL ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANGER CONFINED SPACE ENTER BY PERMIT ONLY</td>
</tr>
<tr>
<td>WARNING CONFINED SPACE TRAINED PERSONNEL ONLY</td>
</tr>
</tbody>
</table>

3. Prevention of Unauthorized Entry: Unauthorized entry into permit spaces shall be prevented. Prevention measures include training, signs, and security measures. All employees in or around confined spaces shall attend confined space awareness training.

4. Identify Personnel: Designate the persons who are to have active roles (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee. At least one attendant must be identified and stationed outside the permit space for the duration of the entry operation.

   Note: Attendants may be assigned to monitor more than one permit space provided the duties described in Section C can be effectively performed for each permit space that is monitored. Likewise, attendants may be stationed at any location outside the permit space to be monitored as long as the duties described in Section C can be effectively performed for each permit space that is monitored.

5. Isolation of Confined Spaces: Prior to entering any confined space, all serious safety or health hazards known or suspected in the space shall be purged, drained and otherwise reduced to a zero-energy state by relieving any stored energy. Hot environments shall be ventilated and cooled to ambient temperature prior to entry. Sources of hazardous materials (either solid, liquid or gas) shall be isolated and secured by locking and tagging valves, use of blind flanges, plugging, or otherwise eliminated from use. Electrical sources or machinery whose inadvertent operation would cause injury shall be locked and/or tagged out.

There may be certain confined spaces where this isolation requirement is impractical, such as live sanitary sewers. If past experience indicated that an
upstream user of the system has the potential to discharge hazardous materials, which may result in a dangerous atmosphere in the space, then an outage must be scheduled and the user's lateral plugged until the work is completed.

6. **Confined Space Covers and Barricades**: When a confined space has both top and bottom openings, or access hatches or manways in both high and low positions, it is preferable to use the bottom or low entrance for safety reasons whenever practical.

Covers to confined spaces shall be removed with the appropriate tools designed for lifting and moving such items. Workers shall learn and demonstrate the proper techniques for lifting to avoid injury to the back. The area around the cover shall be kept free from snow, ice, debris, tools, equipment, or any other item which may create a falling hazard to the workers either inside or outside the confined space.

Any open manhole cover or hatch located in an area which may present a hazard to other workers, pedestrians or vehicular traffic shall be fenced or barricaded with the appropriate signs announcing the hazard attached to the fence or barricade.

7. **Air Monitoring Instrumentation and Test Procedure**: Air monitoring instrumentation shall be operated, maintained, and calibrated according to the manufacturer's instructions. The use, maintenance, and calibration shall be performed ONLY by trained personnel and records shall be kept describing maintenance and calibration.

The following protocol shall be followed when performing air sampling and monitoring for confined space entry authorization:

1. Prior to any use within a confined space, the instrument must be checked and calibrated according to the manufacturer’s instructions, including field testing and fresh air testing, as required.

2. When pre-entry testing or continuous monitoring is required as a condition of the confined space entry permit, the atmosphere within the confined space shall be tested for oxygen deficiency, combustible gases and toxins (in that order). The minimum acceptable levels of air quality are listed on the confined space entry permit and below:

   **Oxygen level**: not less than 19.5% nor greater than 23.5% by volume

   **Combustible gas**: concentration shall not exceed 10% of the lower explosive limit/lower flammable limit (LEL/LFL).

   **Toxic gas**: concentration shall not exceed the toxic guidelines of OSHA.

<table>
<thead>
<tr>
<th>Gas</th>
<th>OSHA (ppm)</th>
<th>ACGIH (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine</td>
<td>1 C (2006)</td>
<td>0.5 (1986)</td>
</tr>
</tbody>
</table>
3. If the standards listed above cannot be met, then the confined space shall not be entered. If the space is occupied and the continuous air monitor detects air quality falling outside of these acceptable standards, then the work must cease, the space evacuated, and a supervisor must be contacted immediately. The space may not be re-entered until the atmosphere returns to acceptable levels as measured by the air monitor.

4. Sources or ignition shall not be introduced into any confined space until air sampling and testing has determined that the space is free from a flammable or explosive atmosphere.

8. Confined Space Ventilation: Ventilation shall be required whenever preliminary air sampling detects a hazardous or potentially hazardous atmosphere. The ventilation shall be accomplished by discharging fresh, uncontaminated air into the space. Care must be taken to ensure that the blower or fan intake is located such that contaminated air is not drawn into the space. The discharge of the blower shall be located near the bottom of the space and aligned such that all corners of the space are purged.

When preliminary sampling indicated the atmosphere within the confined space is within acceptable limits, ventilation is not required. However, ventilation of the space provides an extra margin of safety and comfort for the workers.

The use of ventilation equipment to control fumes, dust, vapors, mists, or other corrosive or toxic materials to a concentration below the permissible exposure limit (PEL) within the space is preferred to the use of personal respiratory devices. The only time personal respiratory devices shall be used is when ventilation proves to be impractical or ineffective. Compliance with the IU Northwest Respiratory Protection Program is mandatory for respirator users.

9. Personal Protective Equipment (PPE): All personal protective equipment, including clothing, gloves, hard hats, shoes, respirators, eye protection, and hearing protection, shall be selected, used, inspected, and cleaned according to the manufacturers’ recommendations and any applicable OSHA regulations. When special protective equipment is required for specific hazards, contact EH&S for assistance in selecting the proper equipment. The purchase and repair costs for PPE shall be the responsibility of the department conducting the entry.

10. Electrical Lights, Tools and Equipment: All tools, equipment, communication devices and materials to be used in a confined space shall be either hand carried or lowered with a line into the space. All tools shall be selected for the type of conditions found within the space. The purchase and repair costs for tools shall be the responsibility of the department conducting the entry.

11. Hot Work in Confined Spaces: Any welding, brazing, cutting, heating, and grinding operations within a confined space requires a hot work authorization on the confined space entry permit. Continuous ventilation and air monitoring shall be performed during hot work when the potential exists for the creation of a hazardous atmosphere.
Welding operations or any other spark-producing work shall not be performed if 10% or more of the lower explosive limit/lower flammable limit (LEL/LFL) of any combustible gas exists in the confined space. Fire extinguishers shall be available at the worksite and a person standing fire watch is required. Welding cylinders and electric welding machines shall be kept outside the confined space, whenever possible.

12. Non-Entry Rescue Retrieval Systems: To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant.
   a. Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which the employer can establish presents a profile small enough for the successful removal of the entrant. Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.
   b. The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 m) deep.

13. Rescue: Rescue procedures and equipment shall be in place prior to entry into a permit space. Under no circumstances shall IU Northwest employees attempt an entry rescue in a permit-required confined space (non-entry rescue is permitted). The procedure for summoning rescue and emergency services is outlined on Form CS-2.

14. Miscellaneous Considerations: Additional precautions shall be taken for other hazards related to work in confined spaces such as heat stress, noise and personal hygiene. Workers shall not eat or drink while in confined spaces and shall exercise appropriate personal hygiene when confined work is completed.

15. Reevaluation: Reevaluate the permit space in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such reevaluation because the entrant or representative has reason to believe that the evaluation of that space may not have been adequate. Additionally, review entry operations when the employer has reason to believe that the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized.

B. Permit System
   1. The entry permit, Form CS-1, shall be completed before authorizing entry into the permit-required confined space. Before the entry begins:
      a. Hazard determination measures shall be documented by preparing an entry permit as outlined below.
b. The entry supervisor, identified on the permit, shall sign the entry permit to authorize entry.

c. Form CS-2 must be completed and delivered to the Gary Fire Department at least 24 hours before entry is to occur.

2. The entry supervisor shall terminate entry and cancel the entry permit when:
   a. The entry operation covered by the entry permit has been completed; or
   b. A condition that is not allowed under the entry permit arises in or near the permit space.

3. The supervising department shall retain each canceled entry permit for at least 1 year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation shall be noted on the permit so that appropriate revisions to the permit-required confined space entry program can be made.

4. Entry Permit
   The entry permit authorizing entry into a permit space shall identify:
   a. The permit space to be entered.
   b. The purpose of the entry.
   c. The date and duration of the authorized entry permit.
   d. The personnel, by name, of each entrant within the space.
   e. The personnel, by name, currently serving as attendants.
   f. The personnel, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry.
   g. The hazards of the permit space to be entered.
   h. The measures used to isolate the permit space and to eliminate or control permit space hazards before entry.
   i. The acceptable entry conditions.
   j. The results of initial and periodic tests accompanied by the names or initials of the testers and the time when the tests were performed.
   k. The rescue and emergency services available and the means (such as the equipment to be used and numbers to call) for summoning those services.
   l. The communication procedures used by authorized entrants and attendants to maintain contact during the entry.
   m. Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment to be provided.
   n. Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety.
   o. Any additional permits, such as for hot work, issued to authorized work in the permit space.

5. The authorized entry permit shall be made available at the time of entry to all authorized entrants, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations
have been completed. Each authorized entrant shall have the opportunity to observe the pre-entry and any subsequent testing or monitoring.

6. The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit in accordance with the purpose of the entry.

C. Duties

1. Duties of the Entry Supervisor(s)
   a. Know the hazards that may be faced during entry, including the mode, signs or symptoms, and consequences of the exposure.
   b. Verify, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
   c. Terminate the entry and cancel the permit as required when:
      i. The entry operation covered by the entry permit has been completed, or
      ii. A condition that is not allowed under the entry permit arises in or near the permit space.
   d. Verify that rescue services are available and that the means for summoning them are operable.
   e. Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
   f. Determine, whenever responsibility for a permit space entry operation is transferred to a different entry supervisor 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.

2. Duties of the Authorized Entrant(s)
   a. Know the hazards that may be faced during entry, including the mode, signs or symptoms, and consequences of the exposure.
   b. Use equipment properly in accordance with training received.
   c. Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.
   d. Alert the attendant whenever:
      i. The entrant recognizes any warning signs or symptoms of exposure to a dangerous situation, or
      ii. The entrant detects a prohibited condition.
   e. Exit from the space as quickly as possible whenever:
      i. An order to evacuate is given by the attendant or the entry supervisor,
      ii. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation,
      iii. The entrant detects a prohibited condition, or
      iv. An evacuation alarm is activated.

3. Duties of the Attendant(s)
a. Know the hazards that may be faced during entry, including the mode, signs or symptoms, and consequences of the exposure.
b. Be aware of possible behavioral effects of hazardous exposure in authorized entrants.
c. Maintain a continuous accurate count of authorized entrants in the permit space and ensure that the means used to identify authorized entrants accurately identifies who is in the permit space.
d. Remain outside the permit space during entry operations until relieved by another authorized attendant.
e. Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
f. Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders authorized entrants to evacuate the permit space immediately under any of the following conditions:
   i. If the attendant detects a prohibited condition;
   ii. If the attendant detects the behavioral effects of hazards exposure in an authorized entrant;
   iii. If the attendant detects a situation outside the space that could endanger the authorized entrants; or
   iv. If the attendant cannot effectively and safely perform all the duties required under this section.
g. Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.
h. Take the following actions when unauthorized persons approach or enter a permit space while entry is underway:
   i. Warn unauthorized persons that they must stay away from the permit space;
   ii. Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and
   iii. Inform the authorized entrants and entry supervisor if unauthorized persons have entered the permit space.
i. Perform non-entry rescue as specified by the rescue procedure.
j. Perform no duties that might interfere with the attendant’s primary duty to monitor and protect the authorized entrants.

4. Rescue and Emergency Services
a. Personnel assigned to a rescue team shall be provided with and trained to make proper use of the personal protective equipment, including respirators, and rescue equipment necessary for making rescues from permit spaces.
b. The rescue team shall be trained to perform the assigned rescue functions and shall be trained as authorized entrants.
c. Rescue teams shall practice making rescues at least once every twelve months by means of simulated rescue operations in which they remove dummies, mannequins, or personnel through representative openings and portals whose size, configuration and accessibility closely approximate those of the spaces from which rescues may be required.

d. Each member of each rescue team shall be trained in basic first aid and cardiopulmonary resuscitation (CPR) skills. At least one member of the rescue service holding current certification in first aid and CPR shall be available.

e. When IU Northwest arranges to have persons other than university employees perform permit space rescue, the university shall:
   i. Inform the rescue service of the hazards they may confront when called on to perform rescue at university facilities, and
   ii. Provide the rescue service with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plan and practice operations.

D. Conditions for Space Reclassification - Non-Permit to Permit Space

When there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, IU Northwest EH&S shall re-evaluate the space and, if necessary, reclassify it as a permit-required confined space.

E. Conditions for Space Reclassification - Permit to Non-Permit

A space classified as a permit-required confined space might be reclassified as a non-permit confined space under the following procedure:

1. If the permit space possesses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated.

2. If it is necessary to enter the permit space to eliminate the hazards, such entry shall be performed under the permit entry system of this program. If testing and inspection during that entry demonstrate that the hazards within the permit space are eliminated the space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.

3. The maintenance work area is responsible for documenting that all hazards in a permit space have been eliminated via a certification that contains the date, location of the space, and the signature of the person making the determination. The certification shall be available to each employee entering the space.

4. If hazards arise within a permit space that has been declassified to a non-permit space, each employee in the space shall exit the space. IU Northwest EH&S shall then reevaluate the space and determine whether it
must be reclassified as a permit-required confined space, in accordance with other applicable provisions of this program.

F. Duty to Other Employers (Contractors)

When IU Northwest arranges to have employees of another employer (contractor) perform work that involves permit space entry, the supervising department shall:

1. 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 29 CFR 1910.146.
2. Apprise the contractor of the elements, including the hazards identified and the university’s experience with the space that make the space in question a permit space.
3. Apprise the contractor of any precautions or procedures the university has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.
4. Coordinate entry operations with the contractor, when both university personnel and contractor person will be working in or near permit spaces. When employees of more than one employer are working simultaneously as authorized entrants in a permit space, the entry operations of one employer shall not endanger the employees of any other employer.
5. 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 and complete Form CS-4 and return to IU Northwest EH&S.

G. Contractor Requirements

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

1. Obtain any available information regarding permit space hazards and entry operations from the supervising department.
2. Coordinate entry operations with the supervising department, when both university personnel and contractor personnel will be working in or near permit spaces, as required by this program.
3. Inform the supervising department of the permit space program that the contractor will follow (including a copy of their written program and employee training documentation) and of any hazards confronted or created in permit spaces, either through a debriefing (see Form CS-4) or during the entry operation.
5. Provide all needed equipment to perform safe entry.

H. Training

Confined space awareness training shall be provided for university employees not required to enter permit-required confined spaces as a part of their job duties, but who work in proximity to these areas. Awareness training shall consist of:

1. Understanding what constitutes a confined space.
2. Identifying potential hazards requiring permit entry procedures.
Confined space entry training shall be provided for employees required, in the course of completing their job duties, to enter any location defined as a permit-required confined space. Training shall be provided to each affected employee:

1. Before the employee is first assigned duties under this program.
2. Before there is a change in assigned duties.
3. Whenever there is a change in permit space operations that presents a hazard about which an employee has not been previously trained.
4. Whenever the supervising department has reason to believe either that there are deviations from permit space entry procedures or that there are inadequacies in the employee’s knowledge or use of these procedures.

I. Program Review

Review the permit space program, using the canceled permits retained, within 1 year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.

Note: Employers may perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review is necessary.
**Form CS-1: IU Northwest Permit-Required Confined Space Entry Permit**

### A. Space Description

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Type of Confined Space</td>
<td></td>
</tr>
<tr>
<td>2. Location</td>
<td></td>
</tr>
<tr>
<td>3. Entry Purpose</td>
<td></td>
</tr>
<tr>
<td>4. Hazard Identification</td>
<td></td>
</tr>
<tr>
<td>5. Hazardous atmosphere, engulfment, internal configuration, other serious safety or health hazard (circle any that apply)</td>
<td></td>
</tr>
</tbody>
</table>

### B. Personnel

The following person(s) trained in confined space procedures are assigned work in connection with a confined space entry, in accordance with the confined space program:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Entrants:</td>
<td></td>
</tr>
<tr>
<td>10. Attendants:</td>
<td></td>
</tr>
</tbody>
</table>

### C. Type of Entry

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Permit-Required Confined Space</td>
<td></td>
</tr>
<tr>
<td>12. Alternate entry</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td></td>
</tr>
<tr>
<td>13. Reclassify space from Permit to Non-permit</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
</tr>
</tbody>
</table>

---

**Signature of Entry Supervisor**
### D. Safety Requirements

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Date/Time</th>
<th>Checked By</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td></td>
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<tr>
<td>15</td>
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<td>16</td>
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<td>21</td>
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<tr>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### E. Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Limit</th>
<th>Test Results</th>
<th>Equip. Name</th>
<th>Serial No.</th>
<th>Cal. Date</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.</td>
<td>% of OXYGEN (O&lt;sub&gt;2&lt;/sub&gt;)</td>
<td>19.5-23.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>% of LEL/LFL</td>
<td>&lt;10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>CARBON MONOXIDE (CO)</td>
<td>50 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>HYDROGEN SULFIDE (H&lt;sub&gt;2&lt;/sub&gt;S)</td>
<td>20 ppm (C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>OTHER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>TIME</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Note: Continuous/periodic tests shall be established before starting job. Any questions pertaining to test requirements, shall be referred to Environmental Health & Safety. Note: hazardous conditions under Section A, #5.*

### F. Personal Protective and Safety Equipment

- [ ] 29. Retrieval line/hoist
- [ ] 30. Hard hat
- [ ] 31. Safety harness
- [ ] 32. Hearing protection
- [ ] 33. Eye/foot protection
- [ ] 34. Fire extinguisher
- [ ] 35. GFI in wet environment
- [ ] 36. Gas/Oxygen/Toxicity detector(s)
- [ ] 37. Ventilation equipment
- [ ] 38. Respirators (specify):
- [ ] 39. Protective clothing (specify):
- [ ] 40. Gloves (specify):
41. Communication equipment (specify):

____________________________________________________________________________________

42. Others (specify):

____________________________________________________________________________________

G. Entry Procedures

43. Attendant understands duties

44. Entrant understands duties

45. Attendant has communication to rescue personnel

46. Rescue plan is in place

47. Pre-Entry briefing: I/We have reviewed this permit and are aware of the hazards and precautions necessary for performing the designated work in the confined space authorized by this permit. (Signed by all entrants & attendants)

<table>
<thead>
<tr>
<th>Name (Signature)</th>
<th>Name (Signature)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

48. Certification: I certify that all existing and potential hazards have been evaluated, necessary protective measures have been taken, and acceptable environmental conditions exist.

Printed Name: ___________________________ Signed: ___________________________ Date: ____________

(Entry Supervisor)

49. Emergency Phone Number: (IUPD) 219-980-6501 Other: ______________________________________

50. Permit cancelled/closed at: ________________ on: ________________ by: __________________

(Entry Supervisor)

Comments: __________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________
Form CS-2: Information Sent to Gary Fire Department (GFD) for Use with Emergency Recovery

Before each entry into a permit-required confined space:

1. Completed form (below) and permit must be faxed to the GFD headquarters at (219) 882 – 7453.
2. Call (219) 881 – 5252 and ask to speak with the on-duty Battalion Chief.
   a) Verify that fax was received.
   b) Ask if there are any questions or concerns.
   c) Verify means (phone number) to request rescue.
3. Notify IUPD of permit and contact with GFD (with method of requesting assistance).

Entry Site (Building or Street): ____________________________ Date: ____________________________

Location of Confined Space: ____________________________

Entry/Exit: ☐ Horizontal ☐ Vertical

Expected Time of Entry: __________am/pm Expected Expiration of Permit: __________am/pm

Type of ENTRY: ☐ Permit Space ☐ Non-Permit Space (circle one)

Reason for entry (work to be performed):
________________________________________________________________________________________
________________________________________________________________________________________

Number of persons performing entry: ____________________________

Contact person (Entry Supervisor): ____________________________

Contact phone number: ____________________________

Hazards Present in Confined Space (CHECK ALL THAT APPLY)

☐ Oxygen deficiency (discuss with fire department)
☐ Flammable gasses or vapors (discuss with fire department)
☐ Toxic gasses or vapors (discuss with fire department)
☐ Heat/cold (specify)
☐ Engulfment (specify)
☐ High pressure lines (specify)
☐ High voltage (specify)
☐ Configuration (specify)
☐ Other (specify)

Note: All entries are subject to inspection by GFD personnel prior to and during a scheduled entry.
**Form CS-3: Confined Space Evaluation**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Floor:</th>
<th>Room:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONFINED SPACE**

<table>
<thead>
<tr>
<th>1. Size</th>
<th>Is the space large enough or configured to permit bodily entry?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Access/Egress</td>
<td>Are there limited or restricted means of access or egress?</td>
</tr>
<tr>
<td>3. Occupancy</td>
<td>The space is not designed for continuous human occupancy.</td>
</tr>
</tbody>
</table>

**PERMIT-REQUIRED CONFINED SPACE**

<table>
<thead>
<tr>
<th>4. Hazard</th>
<th>a. Is there a potential or actual hazardous atmosphere?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If yes, explain:</td>
</tr>
<tr>
<td></td>
<td>b. Is there a potential for engulfment or entrapment?</td>
</tr>
<tr>
<td></td>
<td>c. Is the internal configuration such that an entrant may be trapped or asphyxiated?</td>
</tr>
<tr>
<td></td>
<td>d. Does the space contain any other serious safety or health hazard (e.g., mechanical, chemical, thermal, electrical, etc.)?</td>
</tr>
<tr>
<td></td>
<td>If yes, identify:</td>
</tr>
</tbody>
</table>

5. If the only hazard checked for question 4 was 4a., would continuous forced air ventilation be sufficient to maintain the confined space safe for entry?

6. Is objective monitoring data available to support question 5?

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

**Type of space determined:**

1. _____ Non-regulated space (NO, checked for one or more of questions 1-3)

2. _____ Non-permit confined space (YES, checked for questions 1-3 **ONLY**)

3. _____ Permit-required (YES, checked for questions 1-3 and any one (or more) of (4a) through (4d))

4. _____ Alternate procedure (YES, checked for questions 1-3, 4a, 5-6)

   **NOTE:** (4b) through (4d) **MUST** be **NO**.

5. _____ DO NOT ENTER

---

Signed

Date
Form CS-4: IU Northwest Permit-Required Space Entry - CONTRACTOR DEBRIEFING

Contractor: ____________________________________________________________________________________

Entry Location: __________________________________________________________________________________

Date: ____________________________________________

Was entry coordinated by IU Northwest employees?

• YES (If yes, attach copy of entry permit).
• NO

Reason for entry:
_____________________________________________________________________________________________
_____________________________________________________________________________________________

Additional hazards identified:
_____________________________________________________________________________________________
_____________________________________________________________________________________________

Additional hazards generated during entry:
_____________________________________________________________________________________________
___________________________________________________________________________________________

Contractor’s Representatives:
_____________________________________________________________________________________________
(Please Print) (Signature) Date:

IU Northwest:
_____________________________________________________________________________________________
(Please Print) (Signature) Date:
Form CS-5: Confined Space Data Sheet

NEED RESCUE ASSISTANCE? CALL 219-980-6501.

<table>
<thead>
<tr>
<th>Location:</th>
<th>Material in confined space:</th>
<th>Entry point:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hazardous atmosphere</th>
<th>O₂ deficient</th>
<th>O₂ enriched</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10% LEL/LFL</td>
<td>Toxic atmosphere</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engulfment</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Internal Configuration</th>
<th>Inward converging walls</th>
<th>Sloped floors</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Other serious safety of health hazard</th>
<th>Electrical</th>
<th>Vibration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mechanical</td>
<td>Heat/cold</td>
</tr>
<tr>
<td></td>
<td>Radiation</td>
<td>Poor communication</td>
</tr>
<tr>
<td></td>
<td>Noise</td>
<td>Other (specify):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other potential hazards</th>
<th>Heat stress</th>
<th>Poor lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum work room</td>
<td>Configuration</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

Precautions before entry:

<table>
<thead>
<tr>
<th>Isolate/LOTO</th>
<th>Ventilation</th>
</tr>
</thead>
</table>

Test atmospheres for:

<table>
<thead>
<tr>
<th>Oxygen</th>
<th>Hydrogen sulfide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustible atmosphere</td>
<td>Sulfur dioxide</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>Chlorine</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>Other (specify):</td>
</tr>
</tbody>
</table>

Precautions during entry:

<table>
<thead>
<tr>
<th>Monitor atmosphere</th>
<th>Harness with lifeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendant</td>
<td>Safety hoist</td>
</tr>
<tr>
<td>PPE (specify)</td>
<td>Continuous ventilation</td>
</tr>
</tbody>
</table>

Obstacles which might hinder extraction:

<table>
<thead>
<tr>
<th>Ladders</th>
<th>Access to confined space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small exits</td>
<td>Equipment in space</td>
</tr>
<tr>
<td>Sharp corners</td>
<td>Other (specify):</td>
</tr>
</tbody>
</table>
APPENDIX A TO §1910.146—PERMIT-REQUIRED CONFINED SPACE DECISION FLOW CHART

Does the workplace contain Confined Spaces as defined by §1910.146 (b)? NO

Does the workplace contain Permit-required Confined Spaces as defined by §1910.146(b)? NO

Consult other applicable OSHA standards

STOP

YES

Inform employees as required by §1910.146 (c)(2).

Will permit spaces be entered? NO

YES

Prevent employee entry as required by §1910.146 (c)(3). Do task from outside of space.

Will contractors enter? YES

NO

Task will be done by contractors' employees. Inform contractor as required by §1910.146 (c)(8)(i), (ii) and (iii). Contractor obtains information required by §1910.146 (c)(9)(i), (ii) and (iii) from host.

Both contractors and host employees will enter the space? NO

YES

Coordinate entry operations as required by §1910.146 (c)(8)(iv) and (d)(11). Prevent unauthorized entry.

Will host employees enter to perform entry tasks? YES

NO

Prevent unauthorized entry. STOP

YES

Does space have known or potential hazards? NO

YES

Not a permit-required confined space. 1910.146 does not apply. Consult other OSHA standards.

Can the hazards be eliminated? YES

NO

Employer may choose to reclassify space to non-permit required confined space using §1910.146 (c)(7). STOP

Can the space be maintained in a condition safe to enter by continuous forced air ventilation only? YES

NO

Space may be entered under §1910.146 (c)(5). STOP

Prepare for entry via permit procedures.

Verify acceptable entry conditions (test results recorded, space isolated if needed, rescuers/means to summon available, entrants properly equipped, etc.)

YES

NO

Permit issued by authorizing signature.

Acceptable entry conditions maintained throughout entry.

YES

NO

Entry tasks completed. Permit returned and canceled.

Audit permit program and permit based on evaluation of entry by entrants, attendants, testers and preparers, etc.

Spaces may have to be evacuated and re-evaluated if hazards arise during entry.

Emergency exists (prohibited condition). Entrants evacuated entry area. (Call rescuers if needed). Permit is void. Reevaluate program to correct/prevent prohibited condition. Occurrence of emergency (usually) is proof of deficient program. No re-entry until program and permit is amended. (May require new program.)

CONTINUE
Appendix B: Conditions for Permit Entry without a Permit (Alternate Procedures)

The alternate procedure below may be used, provided that the following conditions are met:

1. All employees involved in the entry (entry supervisor, entrant and attendant) shall have received the training required by this program.
2. The only existing hazard in the permit space is an actual or potential hazardous atmosphere;
3. Continuous forced air ventilation is sufficient to maintain a safe atmosphere for entry;
4. Monitoring and inspection data is developed showing that the only existing hazard was atmospheric and that forced air ventilation is adequate in removing the hazard, and this information is documented and made available to each entrant; and
5. Ventilation and monitoring of the space is adequately conducted without entry. If entry is necessary, all procedures of permit entry must be followed.

For entries performed without a permit, which meet the set conditions above, the following entry procedure shall be used and documented using Form CS-1:

1. Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.
2. When entrance covers are removed, the opening shall be promptly guarded by a railing, cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.
3. Before an employee enters the space, the internal atmosphere shall be tested with a calibrated direct-reading instrument for the following conditions and in the order given:
   a. Oxygen content,
   b. Flammable gases and vapors, and
   c. Potential toxic air contaminants.
4. There may be no hazardous atmosphere within the space whenever any employee is inside.
5. Continuous forced air ventilation shall be used, as follows:
   a. An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
   b. The forced air ventilation shall be directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space; and
   c. The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
6. The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.
7. If a hazardous atmosphere is detected during entry:
   a. Each employee shall leave the space immediately;
   b. The space shall be evaluated to determine how the hazardous atmosphere developed, and;
   c. Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.
8. The authorized entry supervisor shall verify that the space is safe for entry and that the measures required in conditions for space Reclassification - Permit to Non-Permit (Section E) have been taken. This is accomplished by a written certification containing the date, the location of the space, and the signature of the person providing the certification. The certification shall be made available to each employee entering the space.
Appendix C: Known Confined Spaces and Permit-Required Confined Spaces

All confined spaces on the IU Northwest campus will be considered permit-required confined spaces until such time that evaluation and testing can be completed that proves the confined space can be reclassified otherwise. Locations of the confined spaces and their status (confined space or permit-required confined space) will be provided to the Physical Plant employees for their reference. The purpose for entry into each confined space/permit-required confined space is generally recognized as being for the maintenance of campus resources.

<table>
<thead>
<tr>
<th>BUILDING NAME</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
<th>CS OR PRCS¹</th>
<th>HAZARDS²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table available upon request.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>