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5. Keeps all unauthorized individuals away from the confined spaces during entry operations.
6. Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

RESCUE AND EMERGENCY SERVICES

Only *S.C. Swiderski, LLC* personnel that have been trained in **Confined Space Rescue may enter permit spaces to perform rescue operations.** *S.C. Swiderski, LLC* will use the retrieval systems to remove personnel in confined spaces. Emergency services will be contacted immediately to assist *S.C. Swiderski, LLC* personnel.

To facilitate non-entry rescue, retrieval systems (body harness, or wristlets and lifeline) shall be used whenever an entrant is within a confined space. Retrieval systems shall meet the following requirements:

1. Each entrant shall use a chest or full body harness with a retrieval line attached at the center of the entrants back near shoulder level, or above the entrant's head. Wristlets may be used when the use of a body harness would create an additional hazard or interfere with the retrieval through a small man-way entrance.
2. 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 attendant becomes aware that rescue is necessary. A mechanical device shall be made available to retrieve personnel from a vertical entry permit space more than five feet in depth.

MINIMUM ENTRY REQUIREMENTS

The minimum entry requirements for any CSE are listed as follows. Additional requirements may be necessary due to site specific requirements and are also to be used when making any entry.

1. **Physical entry shall not be made into an unknown atmosphere.** All such areas must be checked prior to entry using an appropriate monitoring instrument(s). Air monitoring is to continue during all entries. All areas of the confined space must be monitored for oxygen, combustibility (% LEL), and toxins. **Record the findings on the Entry Permit.**

Safe atmospheric parameters for entry into a confined space without requiring the use of respiratory protection:

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Oxygen:	19.5% to 23.5%
Combustibility:	< 10% LEL
CO:	< 35 PPM

contain asbestos, unless specifically instructed to do so by the Program Coordinator or his/her designated representative.)

9. **No entry is to be made without a completed, signed entry permit form**, placed or posted in close proximity to the entryway so that it is visible to entry personnel and can be checked immediately for completeness prior to entry (refer to permit procedures and Low-Hazard Confined Space section as shown below).
10. **Retrieval systems (lifelines) are always to be used in permitted confined space entries.**
11. A ladder or other appropriate means are to be used to ensure the safe entry and exit from a confined space when applicable.

CUTTING, WELDING AND BRAZING REQUIREMENTS

Cutting, welding, and brazing operations in confined spaces are specifically referenced in Subpart Q, Welding, Cutting and Brazing, 1910.252 (a) (4) Confined Spaces, 1920.252 (b) (4) Work in Confined Spaces, 1910.252 (c) (2) (i) (c) Ventilation for general welding and cutting, and in subpart J, Welding and Cutting, 1926.353 (b).

Mechanical ventilation shall be provided in confined spaces and the ventilation shall be at the minimum rate of 2,000 cubic feet per minute per welder except where an approved supplied air respirator is provided and used. All welding and cutting operations carried on in confined spaces shall be adequately ventilated to prevent the accumulation of a toxic atmosphere or possible oxygen deficiency. This applies not only to the welder, but also to helpers and other personnel in the immediate area. All air replacing that is withdrawn shall be clean and respirable. **Oxygen shall never be used for ventilation.**

Welding or cutting involving flux, coverings, or other materials that contain fluorine compounds; zinc-bearing base or filler metals or metals coated with zinc-bearing compounds and metals containing lead or involving metals coated with lead-bearing materials, including paint, requires that local exhaust ventilation or supplied air respirators or self-contained breathing apparatus shall be used to protect the workers performing the operation and those in the immediate area.

S.C. Swiderski, LLC does not have the air monitoring equipment available to perform atmospheric tests for the following compounds to determine that the worker's exposure is within the acceptable concentrations defined by 1910.1000, beryllium-containing base or filler metals, cadmium-bearing or cadmium-coated base metals and mercury-bearing materials including paint.

Any welding or cutting operations involving these 1910.1000 compounds will require the employee to wear a supplied air respirator, SAR or SCBA (Confined Space Hot Work Permit, Exhibit "B").

LOW-HAZARD (NON-PERMIT) CONFINED SPACE

For the purpose of this document, a low hazard confined space will mean any confined space of less than four feet in depth that is **known not to have contained any hazardous material and AIR MONITORING indicates that the atmosphere is safe for**

3. Apprise the contractor of any precautions or procedures that *S.C. Swiderski, LLC* has implemented for the protection of employees in or near the permit spaces where contractor personnel will be working.
4. Coordinate entry operations with the contractor(s) when both *S.C. Swiderski, LLC* personnel and contractor(s) personnel will be working in or near permit spaces.
5. *S.C. Swiderski, LLC* on-site supervisor will debrief the contractor at the conclusion of the entry operations regarding the procedures followed and regarding any hazards confronted.

UNAUTHORIZED ENTRY

Only trained and authorized personnel may enter a confined space. *S.C. Swiderski, LLC* shall ensure that only qualified *S.C. Swiderski, LLC* employees make any entry into a confined space.

In addition, reasonable measures are to be taken to ensure that no unqualified individuals enter the confined space while it is under *S.C. Swiderski, LLC* control and responsibility. This includes securing hatchways, replacing manholes and placing of warning signs.

TRAINING

All employees must be trained to be able to recognize hazardous conditions, properly use monitoring equipment, space preparation, entry and work procedures, the permit system and emergency response actions.

Training shall be provided to each affected employee:

1. Before the employee is first assigned duties covered under this plan.
2. Before there is a change in assigned duties.
3. Whenever there is a change in permit space operations that present a hazard about which an employee has not previously been trained for.
4. Whenever the on-site supervisor has reason to believe that there may be a deviation required from the entry procedures required by this plan or that there are inadequacies in the employee's knowledge or use of the requirements of this plan.
5. Annually, a refresher program will be provided to all affected employees.

Confined space-entry training will include:

1. The written program and its requirements.
2. The proper use of air monitoring equipment.

3. The proper use and limitations of body harnesses, lifelines, retrieval systems, and other personal protective equipment.
4. The proper use of all respiratory equipment.
5. The typical hazards that may be encountered and the consequences of exposure to hazards.

PERMIT SPACE ENTRY PROGRAM REVIEW

The Safety & Compliance Manager will review the confined space entry program annually or whenever there is a change required or a deficiency corrected to ensure the safety of the employees.

The confined space entry permit and all cancelled entry permits will be reviewed annually to ensure that employees are using the permit system correctly and that all the necessary information on the permit exists and is properly being completed.

Employees are encouraged to report any deficiencies, program improvements, etc., to the attention of the Safety Manager.

- [Visit the OSHA web page on Confined Spaces](#)
- [OSHA Compliance Guide \(.pdf\)](#)

Confined Spaces Permit Requirements

Scope & Application

This section contains requirements for practices and procedures to protect employees from the hazards of entry into permit-required confined spaces.

Definitions

Acceptable entry conditions mean 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.

Attendant means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.

Authorized entrant means an employee who is authorized by the employer to enter a permit space.

Blanking or blinding means 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.

Confined space means a space that:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and

Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of the 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% of its lower flammable limit (LFL);

(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% or above 23.5%.

(4) The atmospheric concentration of any substance for which a dose is published in Group 14 for Radiation and Radioactivity or a permissible exposure limit is published in section 5155 for Airborne contaminants 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 the ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

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

Note: For air contaminants for which a dose is not published in Group 14 for Radiation and Radioactivity or a permissible exposure limit is not published in section 5155 for Airborne contaminants, other sources of information such as: Safety Data Sheets, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

A **"hot" work permit** means the employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediate Danger to Life or Health (IDLH) means 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.

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.

Permit-required confined space program (permit space program) means 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.

Permit system means the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

A **prohibited condition** means any condition in a permit space that is not allowed by the permit during the period when an entry is authorized.

Rescue service means the personnel designated to rescue employees from permit spaces.

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

Testing means 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. If electronic or thermal equipment is used to perform such tests, and the possibility exists of an explosive substance or a hazardous atmosphere due to flammable gases and vapors, then the testing equipment must be approved for use in such explosive or flammable conditions.

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.

(c) General requirements

(1) The employer shall evaluate the workplace to determine if any spaces are permit-required confined spaces.

Note: Proper application of the decision flow chart in [Appendix A](#) ([Appendix A.pdf](#), size=49kb) would facilitate compliance with this requirement.

(2) If the workplace contains permit spaces, the employer shall inform exposed employees and other employees performing work in the area, by posting danger signs or by any other equally effective means, of the existence, location of and the danger posed by the permit spaces.

*Note: A sign reading "**DANGER — PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER**" or using other similar language would satisfy the requirement for a sign.*

(3) If the employer decides that its employees and other employees performing work in the area will not enter permit spaces, the employer shall take effective measures to

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, temporary cover, or other temporary barriers 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 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 the space.
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 so 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.
 - 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

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- c. Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.
8. The employer shall verify that the space is safe for entry and that the pre-entry measures required by subsection (c)(5)(B) have been taken, through a

(D) If hazards arise within a permit space that has been declassified to a non-permit space under subsection (c)(7), each employee in the space shall exit the space. The employer shall then reevaluate the space and determine whether it must be reclassified as a permit space, in accordance with other applicable provisions of this section.

(8) When an employer (host employer) arranges to have employees of another employer (contractor) perform work that involves permit space entry or confined space entries covered by sections 5158 or 8355, the host employer shall:

(A) Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section, section 5158 or section 8355, depending on which section applies to the contractor.

(B) Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the space, that make the space in question a permit space.

(C) Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.

(D) Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by subsection (d)(11); and

(E) Debrief the contractor at the conclusion of the entry operations regarding the permit spaced program followed and regarding any hazards confronted or created in permit spaces during entry operations.

(9) 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:

(A) Obtain any available information regarding permit space hazards and entry operations from the host employer.

(B) Coordinate entry operations with the host employer, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by subsection (d)(11); and

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(C) Inform the host employer of the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.

(d) Permit-required confined space program (permit space program)

(F) Barriers and shields as required by subsection (d)(3)(D);

(G) Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;

(H) Rescue and emergency equipment needed to comply with subsection (d)(9), except to the extent that the equipment is provided by rescue services; and

(I) Any other equipment necessary for safe entry into and rescue from permit spaces.

(5) Evaluate permit space conditions as follows when entry operations are conducted:

(A) Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the areas where authorized entrants are working;

(B) Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations, and

(C) When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.

(D) Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces;

(E) 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;

(F) Immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted in accord with subsection (d).

Note: Atmospheric testing conducted in accordance with Appendix B would be considered as satisfying the requirements of this subsection. For permit space operations in sewers, atmospheric testing conducted in accordance with

Appendix B, as supplemented by Appendix E, would be considered as satisfying the requirements of this subsection,

(6) Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations;

revise the program to correct deficiencies found to exist before subsequent entries are authorized; and

Note: Examples of circumstances requiring the review of the permit space program are: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or near-miss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program.

(14) Review the permit space program, using the canceled permits retained under subsection (e)(6) 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.

Appendix C presents examples of permit space programs that are considered to comply with the requirements of subsection (d).

(e) Permit system

(1) Before entry is authorized, the employer shall document the completion of measures required by subsection (d)(3) by preparing an entry permit.

Note: Appendix D presents examples of permits whose elements are considered to comply with the requirements of this section.

(2) Before entry begins, the entry supervisor identified on the permit shall sign the entry permit to authorize entry.

(3) The completed permit shall be made available at the time of entry to all authorized entrants or their authorized representatives, 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.

(4) The duration of the permit may not exceed the time required to complete the assigned task of the job identified on the permit in accordance with subsection (f)(2).

(5) The entry supervisor shall terminate entry and cancel the entry permit when:

(A) The entry operations covered by the entry permit have been completed; or

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(B) A condition that is not allowed under the entry permit arises in or near the permit space.

(6) The employer shall retain each canceled entry permit for at least 1 year to facilitate the review of the permit space program required by subsection (d)(14). Any problems

(10) The results of initial and periodic tests performed under subsection (d)(5) accompanied by the names or initials of the testers and by an indication of when the tests were performed;

(11) The rescue and emergency services that can be provided on-site and additional service that can be summoned and the means such as the equipment to use and the numbers to call) for summoning those services;

(12) The communication procedures used by authorized entrants and attendants to maintain contact during the entry;

(13) Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this section;

(14) Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety, and

(15) Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.

(g) Training

(1) The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.

(2) Training shall be provided to each affected employee:

(A) Before the employee is first assigned duties under this section;

(B) Before there is a change in assigned duties;

(C) Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;

(D) Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by subsection (d)(3) or that there are inadequacies in the employee's knowledge or use of these procedures.

(3) The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section

(4) The employer shall certify that the training required by subsections (g)(1) through (g)(3) has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

(3) Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under subsection (f)(4) accurately identifies who is in the permit space;

(4) Remains outside the permit space during entry operations until relieved by another attendant;

Note: When the employer's permit entry program allows attendant entry for rescue, attendants may enter a permit space to attempt a rescue if they have been trained and equipped for rescue operations as required by subsection (k)(1) and if they have been relieved as required by subsection (i)(4).

(5) Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space under subsection (i)(6);

(6) Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions;

(A) If the attendant detects a prohibited condition;

(B) If the attendant detects the behavioral effects of hazards exposure in an authorized entrant;

(C) If the attendant detects a situation outside the space that could endanger the authorized entrants; or

(D) If the attendant cannot effectively and safely perform all the duties required under subsection (i);

(7) Initiate on-site rescue procedures and, if necessary, summon additional rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;

(8) Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:

(A) Warn the unauthorized persons that they must stay away from the permit space;

(B) Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and

(3) Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under subsection (f)(4) accurately identifies who is in the permit space;

(4) Remains outside the permit space during entry operations until relieved by another

(C) Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;

(9) Performs non-entry rescues or other rescue services as part of the employer's on-site rescue procedure; and

(10) Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

(j) Duties of entry supervisors

The employer shall ensure that each entry supervisor:

(1) Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;

(2) Verifies, 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;

(3) Terminates the entry and cancels the permit as required by subsection (e)(5);

(4) Verifies that rescue services are available and that the means for summoning additional services are operable;

(5) Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and

(6) Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

(k) Rescue and Emergency Services

The employer shall ensure that at least one standby person at the site is trained and immediately available to perform rescue and emergency services.

(1) The following requirements apply to employers who have employees enter permit spaces to perform rescue services.

(A) The employer shall ensure that each member of the rescue service is provided with, and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.

(B) Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants under subsections (g) and (h).

(C) Each member of the rescue service shall practice making permit space rescues

(4) If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

(I) Employee Participation

(1) Employers shall consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by subsection (c).

(2) Employers shall make available to affected employees and their authorized representatives all information required to be developed by this section.

(m) Appendices. Appendices A through E serve to provide information and non-mandatory guidelines to assist employers and employees in complying with the appropriate requirements of this section.

[Appendix A](#)

[Appendix B](#)

[Appendix C](#)

[Appendix D](#)

[Appendix E](#)

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Other Confined Space Operations

(a) Scope

For industries and operations specified in section 5156(b)(2) this section prescribes minimum standards for preventing employee exposure to dangerous air contamination, oxygen enrichment, and/or oxygen deficiency in confined spaces, as defined in subsection (b).

Note: Implementing a permit-required confined space program in accordance with section 5157 shall meet the requirements of this section.

(b) Definitions

(1) Confined Space. A space defined by the concurrent existence of the following conditions: