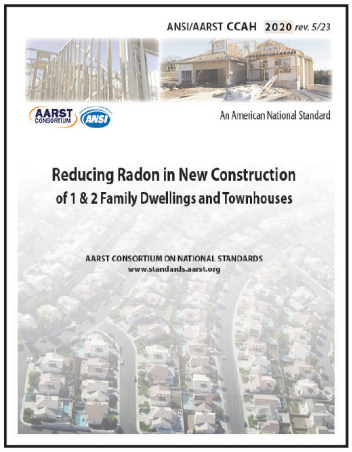
Public Review of Revisions

AARST CCAH 202x

Soil Gas Control in New Construction of One & Two Family Dwellings and Townhouses

The attached proposed revisions respond to comments from content publicly reviewed 5/17/24 to 7/1/24 for ANSI/AARST CCAH. The continuous maintenance project has sought to harmonize CCAH with more recent work on ANSI/AARST CC-1000 *(Soil Gas Control Systems in New Construction of Multifamily, School, Commercial and Mixed-Use Buildings)*.

ANSI/AARST standards are available for review at www.standards.aarst.org. Work related to this standard and a link to ensure you receive future public review notices can be found at www.standards.aarst.org/public-review.



Public Review: CCAH Revisions 10-2024

COMMENT DEADLINE: **November 3, 2024**

REQUESTED PROCESS AND FORM FOR FORMAL PUBLIC REVIEW COMMENTS

Submittals (MS Word preferred) may be attached by email to StandardsAssist@gmail.com

1) Do not submit marked-up or highlighted copies of the entire document.

2) If a new provision is proposed, text of the proposed provision must be submitted in writing. If modification of a provision is proposed, the proposed text must be submitted utilizing the strikeout/underline format.

3) For substantiating statements: Be brief. Provide abstract of lengthy substantiation. (If appropriate, full text may be enclosed for project committee reference.)

REQUESTED FORMAT

Public Reviewed Item and Its Date: CCAH Revisions 10-2024

- **Name:** Affiliation:
- **Clause or Subclause**:
- **Comment/Recommendation**:
- **Substantiating Statements**:

Repeat the four bullet items above for each comment.

Intellectual rights

NOTE: Commenters that choose to submit comments shall be deemed to have done so at their sole discretion and acceptance that work product resulting from comments and other participation shall be wholly owned by the publisher (AARST), to include all national and international publishing and intellectual rights associated with the work product creation and publication.

AARST Consortium on National Standards

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The Consortium Consensus Process

The consensus process developed for the AARST Consortium on National Radon Standards and as accredited to meet essential requirements for American National Standards by the American National Standards Institute (ANSI) has been applied throughout the process of approving this document.

Continuous Maintenance

This standard is under continuous maintenance by the AARST Consortium on National Standards for which the Executive Stakeholder Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard.

User Tools: User tools are posted online (www.standards.aarst.org/public-review) as they become available (such as templates for field notices, inspection forms, interpretations and approved addenda updates across time).

Notices

Notice of right to appeal: All directly and materially interested parties who have been, or will be, adversely affected by a decision made by a Standards Development Committee (SDC) or the Consortium Executive Stakeholder Committee (ESC) in the implementation of AARST Consortium on National Standards procedures have the right to appeal. Such policies and procedures can be found at www.standards.aarst.org/public-review.

Proposed substantive revisions (10/24) responding to comments from content publicly reviewed 5/17/24 to 7/1/24 for ANSI/AARST CCAH.

1.1 Scope

1.2 Limitations

1.2.2 *Combustible gas*

This standard does not address all practices needed for *mitigation* of potentially combustible soil gases.

SECTION 2: TERMS AND DEFINITIONS

Terms not defined herein have their ordinary meaning as defined in "Merriam-Webster's ~~Collegiate~~ Dictionary."

2.5 aggregate, n— A mixture of crushed stone or *gravel*, sand, clay and smaller particles. Commercially, aggregates are classified according to the size of the stones and percentages of sand, clay and silt. In the field, aggregate is commonly referred to as *gravel*.

~~2.10 collection wells, n— Pits designed as a soil gas *inlet* or to transition or join *trunks* or *branches* of an *inlet trunk network*.~~

~~2.13 depressurization, n— A negative **pressure** induced in one area with respect to another.~~

2.17 exhaust, n— A pipe or other piece of apparatus through which soil gases escape or are discharged to the atmosphere.

2.19 exhaust trajectory, n— The angle of the pipe or elbow at the point of exhaust. ~~with a straight line exhaust spread radius of 11°~~

2.20 exhaust vent piping, n— Air duct *trunk* or *branch* pipes that transfer air between *soil gas inlets* or *inlet trunk* networks within the *soil gas collection plenum* and outside air.

2.21 gas permeable aggregate, n— Generally defined as course-grained gravels or sands containing less than 5% fines. Note—Aggregates not considered gas permeable for the purposes of this standard include: Aggregates or soils with *interstices* between stones and sand that are < 0.05 inch (1 mm); Sands having > 10% sand fragments and clay or silt particles smaller than 0.05 inch (1 mm); and soils containing more than 10% high plasticity clay or silt, or expansive soils with a liquid limit ≥50%

2.23 Gravel, n— A term commonly used to mean *aggregate*, as defined in Section 2.5. Technically however, the term *gravel* is used to describe *aggregates* of naturally occurring fragmented stones and pebbles with water worn edges, such as found in riverbeds.

~~2.26 inlets, n— See *Soil Gas Inlets*.~~

2.28 Interstices, n— Small openings or spaces between objects, especially adjacent objects or objects set closely together.

2.36 PFE (pressure field extension test), n—A diagnostic procedure to evaluate the potential effectiveness and extent of an ASD system by using a shop vacuum or other fan or vacuum device to ~~draw air from~~ induce ~~relative~~ a pressure difference in the space below a slab, membrane or from the cavities inside a block wall relative to indoor air.

2.40 secondary trunks, n—Air *duct piping* that route only a portion of the system air volume capacity from more than one *soil gas inlet*.

2.43 soil gas collection well, n— A pit designed as a *soil gas inlet* or to transition or join multiple trunks or branches of an *soil gas inlet* trunk.

2.44 soil gas control, n— Planned control of soil gasses to reduce intrusion of *radon* concentrations or other pollutants into indoor air.

5.3.1 *Option 1—Aggregate (Gravel)*

Where the *gas permeable layer* is to be a 4-inch thick layer of nominally ≥ 3/4-inch (2 cm) with less than 5% fines, as specified in ASTM C33 for gravel sizes 5, 56, 57 or 6, *soil gas inlet* configurations shall comply with designs specified in a), b) or c) of this Section 5.3.1.

7.2 Provision for ASD Fan(s)

7.2.3 *Provision for ASD fan monitor(s)*

The predetermined location(s) for fan monitors~~, (e.g., pressure gauge)~~ shall be Identified and labeled during construction in accordance with Section 7.2.3.2. Fan monitors ~~locations~~ that are required in Section 10, Table 10.1.2 in the event the system is activated with a fan, include:

1) A mechanism to indicate if the fan is operating within the established operating range, such as a manometer pressure gauge; and
2) A mechanism to actively alert occupants of fan or other mechanical failure by way of audible, visual light or telemetric notification.

7.2.3.1 ~~Fan~~ System monitor locations shall be ~~readily accessible~~ provided with ready access to individuals responsible for system maintenance without destruction or significant disassembly of building components or finishes:

8.3 Straight-line Exhaust Trajectory (restrictions)

The *straight-line exhaust* trajectory with an *exhaust spread* radius of 11˚ shall be pointed away from openings in structures, building materials and the breathing space where individuals congregate or traverse that are within 20 feet (6 m) from the point of exhaust.

9.1 Labeling or Marking Required for All Systems

All labels shall be of durable materials and affixed in place such that they are capable of withstanding ambient conditions where mounted. All label lettering and other annotation on systems shall be of a color in contrast to the color of the background on which the lettering is applied. All label marking titles, as specified within each provision identified in Table 9.1, shall be provided in lettering of a height of not less than 1/4 inch (6.35 mm). Additional information on the labels, where appropriate shall have lettering of a height of not less than 1/8 inch (3.18 mm).

SECTION 10: ADDING ASD FANS

10.1 Converting to ASD ~~After Construction~~

Where not originally planned but it is later decided during or after construction ~~or~~ to activate the design by adding an *ASD fan*, the procedure shall comply with all provisions of this Section 10.1.