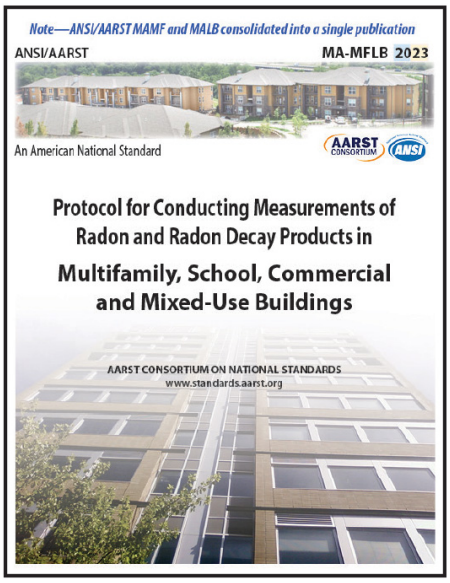
Public Review of More Proposed Addenda Updates to MA-MFLB 2023

Proposed addenda revisions to ANSI/AARST MA-MFLB are being published for public review:

Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Multi-Use Buildings

This standard of practice specifies procedures and minimum requirements when measuring radon concentrations in shared structures, or portions of shared structures, used for residential, non-residential, or mixed-use purposes to determine if radon mitigation is necessary to protect current and future occupants.



ANSI/AARST standards are available for review and for purchase at www.standards.aarst.org. A link to ensure you receive future public review notices can be found at www.standards.aarst.org/public-review.

Public Review: MA-MFLB addenda 26-6

COMMENT DEADLINE: **July 20th, 2026**

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: *MA-MFLB addenda 26-6*

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

Repeat the four bullet items above for each comment.

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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.

Notices

Rights 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.

TOPIC #1 DEVICE QUALITY CONTROL

These revisions clarify test device quality assurance.

2.8 Test Device Quality Control

Any person or team conducting radon or radon decay product measurements shall establish, maintain, and follow a *quality assurance* plan that complies with ANSI/AARST MS-QA (Radon Measurement Systems Quality Assurance) or a similar program as required by the authority having jurisdiction (AHJ) where the test is being conducted. ~~Among other things, MS-QA requires a system to record and monitor the results of *quality control (QC)* check measurements and training qualifications of staff.~~

2.8.1 *Reporting QA checks*

All *quality control (QC)* check measurements for *duplicates*, *comparison checks*, *spikes,* and *blanks* associated with a testing project shall be included in report documentation, as required in Section 8.4 (Additional Test-Data).

2.8.2 *On-site—Duplicate and comparison checks*

For each detector configuration, *duplicate* measurements, or *comparison checks* ~~associated with *continuous radon monitors (CRM)*~~, shall be:

a) ~~Not less than~~ A minimum of one and not fewer than 10% of all test locations ~~tested~~ during each initial and *follow-up test procedure*, and

b) Distributed as widely as possible across all buildings being tested during the same testing event.

2.8.3 *Blanks required*

The local office(s) directly implementing the testing project(s) shall conduct *blank quality control check* measurements for *charcoal adsorption detectors (CAD)*, *alpha track detectors (ATD)*, and *electret ion chamber detectors (EIC)* in compliance with requirements of both a) and b) of this Section 2.8.3.

a) Project Start-up

For local office(s) directly implementing a testing project or projects that require 50 test locations or more during the same 60-day period, *blanks* shall be conducted in accordance with Table 2.8.3.

Table 2.8.3 Project start-up
For *CAD*, *ATD,* and *EIC* detectors, no fewer than nine blanks that meet the following requirements are to be conducted before or in conjunction with initiating test deployments:
1. Three *lab-transit blanks* (to look for unexpected exposures during shipping or handling) shall be returned to the laboratory immediately, or in conjunction with, beginning detector deployment.
2. Three *office blanks* (to reveal any unexpected exposures during storage) shall remain where detectors are stored and be returned to the laboratory~~. per normal procedure for the field detectors.~~
3. Three *field blanks* (to reveal unexpected exposures onsite or from handling procedures) shall be deployed in the field and returned to the laboratory ~~per normal procedure for the field detectors~~.
Standard practice of conducting not less than 5% blanks for all testing locations shall resume when the number of test locations exceeds 180 in accordance with Section 2.8.3 b.

b) General Requirements (Blanks)

Project startup and throughout the testing project shall be subject to the following requirements:

1. The total number of blank measurements conducted and analyzed for each different detector configuration shall be a minimum of one and not fewer than 5% of all testing locations where the detector configuration is deployed. In addition:

   a. A portion of the required 5% *blanks* shall be field blanks with additional *blanks* dedicated to other evaluations, if and where deemed necessary, such as environments where test device inventories are stored (i.e., office blanks) and anomalies that might occur because of shipping (i.e., lab-transit blanks).

   b. ~~For meeting testing project reporting requirements in Section 8.4,~~ *Blank* measurement results associated with other *quality control* activities at ~~the~~ local office(s) implementing the testing project are acceptable to include for meeting test project reporting requirements in Section 8.4 (Additional Test-Data).

2. For *CAD* and *ATD* detectors where storage locations have not been evaluated and monitored, a minimum of one *blank* measurement shall be conducted before deployment for detectors that have been stored for more than 30-day durations. Alternatively, where storage locations are monitored under an ongoing program in accordance with requirements in ANSI/AARST MS-QA, monitoring records shall be made available upon request that verify inventories are stored in an environmentally controlled location that prevents unintended exposure to radon, high relative humidity and extreme temperatures beyond manufacturer's recommendations.

2.8.4 *Spiked measurements required*

For *CAD*, *ATD,* and *EIC* measurement methods, requirements a), b) and c) of this Section 2.8.4 are required to provide evidence of continued accurate measurement system operation by comparing reported *spike* analyses results to a recognized reference authority for radon concentration.

a) The number of *spiked measurements* conducted and analyzed for each detector configuration associated with the testing project(s) shall be not less than:

   1. 3% of *EIC* detectors deployed in the field; and ~~not less than~~
   2. 3% from each *lot* of *CAD* and *ATD* detectors deployed in the field .

   Exception: For each detector configuration associated with the testing project(s), the maximum required is six *spikes* per month for both *EIC* detectors and from each lot of CAD and ATD detectors with no less **than** three *spikes* conducted each year; ~~and~~

b) Detectors to be spiked shall be submitted to an approved reference chamber for exposure to a known concentration of radon soon after purchase of the devices. The reference chamber shall be instructed to send the exposed samples to the analyzing laboratory with dates and times of the chamber exposure. *Spikes* shall be identified as "QAQC" to the analyst or analysis laboratory.

   The professional shall compare the measured value reported by the analyzing laboratory to the known concentration value reported by the reference chamber for inclusion in QC evaluations and records. The analysis laboratory shall be promptly informed of the reference chamber values after receiving the test results from the laboratory; and

c) Spiked measurement results from *EIC* detectors and from each *lot* of *CAD* and *ATD* detectors associated with the testing project that are also associated with other quality control activities shall be acceptable to include for meeting test project reporting requirements in Section 8.4 (Additional Test-Data)

TOPIC #2 NOTIFICATIONS

These revisions clarify language relative to notifying staff who work at the buildings being tested.

2.9.1 *Prior notification of facilitating staff*

Once a testing activity is confirmed, the property management team shall be instructed in writing to distribute notices of radon testing ~~that inform and appropriately instruct individual~~ to the *facilitating staff* members, such as authorized building supervisors, maintenance staff, teachers, or office managers.

Notifications for *facilitating staff* shall comply with requirements in a) and b) of this Section 2.9.1.

a) Instructions shall be provided for distributing notices for both tested and non-tested units, and for posting of publicly viewable notices. The occupant notices provided shall include:
   1. Scheduled dates and times for test device placement and retrieval;
   2. Essential closed-building requirements portrayed in Table 4-A (Essential Closed-Building Protocol Requirements), and that these conditions are required no later than 12 hours before the test and throughout the test period for tests lasting up to 90 days;
   3. Information on how to obtain federal or state radon health guidance; and
   4. Local contact information for inquiries, such as the authorized building supervisor.

   Note—Exhibits 3 and 4 provide examples of occupant notifications.

b) In addition to coordination of access, instructions that include messages equivalent to those in Exhibit 5 shall be provided for duties required of ~~facilitating~~ building operations staff~~, such as~~ that commonly include closing windows and adjustments to HVAC units or controls.

TOPIC #3 TESTS CONDITIONS

These revisions clarify procedures relative to test conditions when testing larger buildings

4.1 Closed-building Protocol Requirements

Closed-building conditions, as they are for occupied conditions in winter heating seasons or summer cooling seasons, in accordance with Tables 4-A, 4-B, 4-C, and Section 4.2, are required to be:

a) initiated 12 hours prior to the test for tests lasting less than 72 hours, and

b) maintained throughout the test period for tests lasting up to 90 days.

Table 4-B: ADDITIONAL REQUIREMENTS FOR NEW CONSTRUCTION, RENOVATIONS, AND REPAIRS	
All openings to the exterior (due to incomplete construction, structural defect or disrepair)	These openings to the exterior shall be closed or sealed at least 12 hours before initiating the test
Heating/cooling systems active and set to a normal occupiable temperature	These items shall be completed or installed at least 12 hours before initiating the test
All windows and exterior doors are installed with hardware and seals	
All interior doors that separate units from hallways and other units or common areas are installed with hardware and seals	

The building envelope is complete, including roofing, all insulation, and exterior siding	
All wall and ceiling coverings to be completed, including interior drywall or paneling, but does not include decorative finishing of walls, floors, or ceilings	
All fireplaces and fireplace dampers are installed	

TOPIC #4 RETEST

These revisions clarify procedures relative to test conditions when testing larger buildings

5.4 The Extended Testing Option

5.4.1 Extended Testing shall be conducted in accordance with Table 5.4.

Note—This protocol builds upon those developed by EPA, relative to EPA's *"A Citizen's Guide to Radon."*

Table 5.4	Extended Testing Option—Required Procedure and Summary	
Step 1	*Initial Test*	Testing at each location is conducted using a single short-term device.
		Evaluations of occupied versus unoccupied radon concentrations are additionally recommended for non-residential locations.
Step 2	*Follow-up Test Options*	Retest locations that meet or exceed the action level, e.g., 4 pCi/L. Follow-up testing requirements allow the following options: [1, 2]
	a)	A second test with a short-term device is conducted. Where a first test is twice the action level or greater, this confirmation test should be conducted as soon as possible ~~without delay~~; or
	b)	Where a first test is less than twice the action level, testing can be conducted with a long-term test device for an extended period if the situation allows a closer evaluation of the annual average to radon concentrations; or
	c)	Evaluation of occupied versus unoccupied radon concentrations for non-residential locations.
Step 3	Decisions to Fix the Building	
	Mitigation decisions are to be based on the average of the two test results from short-term devices or the results from long-term testing [3, 4] Fix the building if the test results at any location in the building meet or exceed the action level, e.g., 4 pCi/L. Consider fixing the building if the results are greater than half the action level, e.g., between 2 and 4 pCi/L.	

[1] Where follow-up testing is not completed within 12 months after completing Step 1, the testing procedure shall be restarted with Step 1, in accordance with either Section 5.3 or this Section 5.4.

[2] Note—While decisions to mitigate at any time are not prohibited, the second test aids confidence that decisions are not being made based on a faulty test device or unexpected conditions.

[3] Note—Section 7.2 (When Two Test Results Disagree) provides requirements for when the test results from two short-term test devices disagree in terms of making a mitigation decision.

[4] Where evaluations of occupied versus unoccupied concentrations have been conducted in accordance with Section 5.2, report recommendations shall account for radon exposures indicated by the evaluation.

TOPIC #5 TESTS CONDUCTED AT DIFFERENT TIMES DISAGREE

These revisions clarify procedures and reporting when tests taken at different times disagree on whether mitigation is to be recommended.

7.2 When Two Test Results Disagree

7.2.2 Where test results disagree on exceeding the action level

b) Not Acceptable

If the higher test result is more than twice the lower test result:

1. For two collocated (side-by-side) tests conducted at the same time, a repeated collocated test for this location is required to get a valid measurement; and
2. For tests conducted at different times in the same location that disagree on exceeding the action level, test reports in Section 8.2.2 c (Follow-up testing procedures remaining) shall state that the higher test result is to be regarded as correct for making mitigation decisions unless the lower result is confirmed by additional testing initiated within one year.

   The test report shall further provide a statement that one of the options in Section 7.2.3 is required if desiring to conduct further testing. A description of one or more of the options in Section 7.2.3 applicable to the situation shall also be provided.

7.2.3 Where different test events disagree on exceeding the action level

a. Where to Test

   The choice of what room(s) in a building to place test devices shall be dependent upon the purpose of the evaluation. The purpose of the evaluation is permitted to be related to single test location(s), multiple rooms, or unique sectors of a building.

b. Test Procedure Options

   When attempting to determine if a lower test result is correct for making mitigation decisions, one of the following options for additional testing procedures is required.

   1. Option 1

      Testing was conducted with two collocated short-term or long-term test devices at each location. The test period shall include not less than the percentage of the year that agrees with the longest building operating condition each year when the building is significantly occupied, as identified in Normative Appendix A (Reporting Requirements for Building Operating Conditions), Tables A-1 through A-8; or

   2. Option 2

      Testing was conducted in accordance with Normative Appendix B (Fluctuation Analysis).

Exception: If hourly testing data already exists from previous testing events that were conducted in accordance with Normative Appendix B (Fluctuation Analysis). The data shall have been collected within the year before the most recent test event and after any renovation or repurposing of the building.

~~2. For two short-term detectors deployed at different times in the same location, obtaining confirmation on whether or not mitigation is warranted requires additional testing unless it is decided to proceed with mitigation.~~

~~This degree of uncertainty requires a precautionary stance to include that the higher test result shall be regarded as correct for making mitigation decisions unless further testing indicates otherwise.~~

~~Test results to be regarded as a more accurate reflection of occupant exposure to radon hazards shall be those that most closely align to the predominant normal occupied building operating condition for the location tested, as defined in Section 2.7.2.~~

~~When conducting confirmation testing:~~

~~a. the testing shall be conducted under building conditions that are representative of the predominant normal occupied building operating condition, as defined in Section 2.7.2.~~

~~b. testing shall be initiated within 1 year after initial testing unless the evaluation is relative to older, historic test results; and~~

~~c. the evaluations shall be permitted based on data from short-term or long-term test devices or data from evaluations of occupied versus unoccupied radon concentrations.~~

Normative Appendix B

FLUCTUATION ANALYSIS

B.1 Applicability

Procedures for analysis of fluctuating concentrations shall comply with this Appendix B when seeking evidence relative to mitigation decisions:

a) Where operating conditions in non-residential buildings are intentionally different when significantly occupied compared to unoccupied; or

b) Where testing conducted at different times disagree on whether to mitigate.

B.2 Summary of Practice

Conducted after completing test procedures required in Section 5 (Test Procedures / Options) or concurrent with Section 5:

a) Locations are chosen for the unit(s) or unique sectors of interest that will be representative of changing building operating conditions that cause concentration fluctuations.

b) A test device that can capture accurate measurements across short time periods of 4 to 8 hours is placed at each chosen location. A second device is placed side-by-side to achieve a quality assurance comparison check.

c) The average of all targeted hours collected over multiple days is reported for comparisons.

B.3 Preparation

B-3.1 *Test locations*

The choice of what room(s) to place the measurement devices shall be dependent upon the purpose of the evaluation. The purpose of the evaluation is permitted to be related to single test locations, multiple locations, or unique sectors of a building.

B-3.1.1 Specific Locations

The testing shall be conducted at locations within *unique sectors* of interest that will represent the common air volume or representative samples within *unique sectors*.

B-3.2 *Assessment of average conditions*

These procedures require avoiding as many influences on test results as possible that are outside of normal conditions that last the longest each year. Before scheduling the testing event, the procedure requires that persons conducting the test:

a) Identify the local annual average outdoor temperature across the recent decade(s), as indicated by the local weather bureau, or as indicated for the climate zone per Appendix A.

b) Identify a source that provides incremental weather change data for local weather. Example—https://www.timeanddate.com/weather/@z-us-64117/historic?month=2&year=2021

c) Know or find a way to estimate the annual average water table status and what locally constitutes high and low water tables. The WaterWatch website (https://waterwatch.usgs.gov/?id=wwlmap_viewer) published by the United States Geological Survey (USGS) can provide current details relative to estimating local water table status.

This information shall be recorded for inclusion in test reports as shown in Exhibit 8.3.2 (Reporting Comparisons of Building Operating Conditions).

B-3.3 *Documenting test conditions*

The test notification and implementation of closed-building procedures when conducting the test shall comply with Section 4 (Test Conditions) and related requirements. Information about the building and test conditions shall be recorded when initiating and completing the onsite data collection events that will be needed for reports Section B-6.3, to include:

1. If all exterior windows and doors, including garage doors, were kept closed as required in Section 4 (Test Conditions);
2. If normal occupied indoor temperatures of between 65˚and 80˚ F (18˚ - 27˚ C) were maintained;
3. The status of heating, cooling, or mixed HVAC operating conditions and any variable air distribution or outdoor air ventilation systems; and
4. General descriptions regarding weather events including snow or ice ground cover.

B-3.4 ***Measurement equipment***

These procedures require time-integrating test devices capable of accurate measurements for short durations that include:

a) Calibrated continuous radon monitors (CRM) that record hourly data with a sensitivity resolution of not less than 8 counts per hour, per picocurie per liter (37 Bq/m^3); or

b) Other time-integrating test devices, such as Electret Ion Chambers (EIC), that can be manually or mechanically opened and closed to result in an average concentration for specific time periods that repeat across multiple days.

B.4 Occupied Versus Unoccupied Concentrations

B-4.1 ***Purpose and scope***

The following procedure is required when evaluating if radon concentrations are higher or lower in portions of a building when significantly occupied compared to when unoccupied.

B-4.2 ***Measurement duration***

Deployment periods shall collect at least 72 hours of data to capture the fluctuation differences during at least three full day-to-night cycles.

B-4.3 ***Measurement devices***

This procedure requires at each test location:

a) At least one CRM collocated with another comparison or duplicate testing device; or

b) At least two collocated EIC devices plus a comparison or duplicate testing device where:

1. Simultaneously, each day, one EIC is to be opened while the other is closed each time mechanical systems switch between normal operation and the setback operation when the building is mostly unoccupied
2. The third duplicate or comparison check device shall be open for measurement of the entire test event duration.

B-4.4 ***Reporting Occupied Versus Unoccupied Concentrations***

Reported measurements shall include:

a) The average concentration indicated during occupied periods, and

b) The average concentration indicated during setback operation when the building is mostly unoccupied.

B-4.4.1 Quality Control

Quality control records kept shall include the duplicate or comparison check test device measurement and its relative percentage difference compared to the total average of both occupied and unoccupied test results.

B.5 Where tests disagree

B-5.1 *Purpose and scope*

Where tests conducted at different times disagree on whether to mitigate, this procedure is permitted to help characterize which test is closer to the annual average concentration exposure in residential occupancies and commercial occupancies that are significantly occupied both day and night.

Note—The factors related to fluctuations in soil gas entry and dilution are similar for all buildings. The magnitude of influence asserted by changes in weather-related conditions will however often be quite different for each building and *unique sectors* within a building.

B-5.2 *Measurement duration*

Deployment periods shall extend for at least 3 days to capture multiple events that each last for at least 4 hours when:

a) the local outdoor annual average temperature and other weather-related factors, and
b) building operating conditions that last the longest each year.

B-5.3 *Measurement devices*

This procedure requires at each test location:

a) At least one CRM collocated with another comparison or duplicate testing device; or
b) At least two collocated EIC devices functioning as duplicates that are open at the same time when outdoor temperatures are at or close to annual average temperatures for the location but otherwise closed.

   Noted challenges—The use of EIC or any device that does not provide hourly readings requires tracking outdoor temperatures in real time for determining when to open and close the detectors. This must be done manually unless an automated system has been developed.

B-5.4 *Reporting the evaluation*

Reported measurements shall be the average derived from the combined averages of the measurement events lasting at least 4 hours each day that best represent measurements during:

a) the local outdoor annual average temperature and other weather-related factors, and
b) building operating conditions that last the longest each year.

B-5.4.1 CRM

The CRM concentration reported shall be the average concentration from hourly data for each event that matches these criteria.

B-5.4.2 EIC

The EIC concentration reported shall be the average of the two devices.

B-5.4.3 Quality Control

Quality control records for both CRM and EIC devices kept shall include the relative percentage difference of the two collocated devices.

B.6 Additional Documentation

B-6.1 *Essential information*

All essential information required in Section 8.2 (Summary Reports), such as site location and scope of the measurement procedure, shall be included in the report.

B-6.2 *Summary of findings*

A summary statement of the test procedure results shall be provided in the report as additional evidence for helping to further characterize the annual occupant exposure at the locations tested. Where locations chosen could represent fluctuation trends in other parts of the building, the report shall include a summary of expectations in this regard.

B-6.3 *Reporting test conditions*

Information about the building and test conditions when initiating and completing the onsite data collection events from Section B-3.2 and comparison to annual building operating conditions in Section 8.3.2 (Test conditions) shall be included with reports.

Exhibit 8.3.2 Reporting Comparison of Building Operating Conditions			* Required data
Outdoor Temperatures		Prevailing Annually	Prevailing During the Test
	Average	*Average annual outdoor temperature* *	*Average outdoor temperature during test* *
Operating Condition			
	Heating Conditions	*yearly percentage* *	*percentage during test* *
	Cooling Conditions	*yearly percentage* *	*percentage during test* *
	Mixed Conditions	*yearly percentage* *	*percentage during test* *
Prevailing Operating Condition			
	Average	*prevailing operating condition* *	*prevailing during test* *
Condition less likely to inhibit the characterization of *radon* or soil gas hazard in indoor air		*conditions for clear characterization* *	*conditions during test* *
Water table elevation (general status)			*[ ] average [ ] low [ ] high* *

~~NORMATIVE APPENDIX B~~

~~EVALUATION OF OCCUPIED VERSUS UNOCCUPIED CONCENTRATIONS~~

~~When conducting an evaluation of occupied versus unoccupied radon concentrations as an additional line of evidence relative to mitigation decisions, the evaluation shall comply with requirements of this Appendix B.~~

~~B-1.1 *Measurement equipment or processes*~~

~~Devices, such as CRMs, or other testing processes that can accurately measure the difference between average radon concentrations during occupied compared to unoccupied conditions are required.~~

~~B-1.2 *Measurement duration*~~

~~Testing shall be conducted for durations of not less than 46 hours to achieve average concentrations at each location for at least two occupied days compared to two unoccupied nights, as proportional to the percentage of significantly occupied and unoccupied durations.~~

~~B-1.3 *Reporting the evaluation*~~

~~Reported measurements shall include:~~

~~a) The average radon concentration for the full measurement period;~~

~~b) One average derived from the combined averages of the occupied periods across a test duration; and~~

~~c) A second average derived from the combined averages of the unoccupied periods across a test.~~

~~B-1.4 *Simulation Testing*~~

~~When unable to test under the normal occupied operating condition for the building or unique sector, testing to simulate those conditions is permitted. Simulations to evaluate occupied versus unoccupied influences on radon concentrations shall be conducted by manipulating HVAC controls to simulate various HVAC operating conditions. The procedure shall include provisions a), b) and c) of this Section B-1.4.~~

~~a) The evaluation shall include:~~

~~1. Building operating conditions that simulate normal occupied operating conditions, in accordance with Section 2.7.4, and~~

~~2. Conditions required regarding minimum outdoor air ventilation and variable air distribution, as applicable, in accordance with Section 4.2;~~

~~b) Details that shall be recorded and provided in reports include:~~

~~1. HVAC control settings and duration of activation for each simulated condition, and~~

~~2. Radon concentration measurements associated with each simulated condition; and~~

~~c) The simulation measurements shall be made in each operational mode of concern for durations that are compatible with:~~

~~1. HVAC system capacity to achieve dynamic equilibrium for radon concentrations in the building or unique sector, and~~

~~2. Measurement device capabilities to achieve statistically accurate measurements for the duration of each operating condition.~~

~~*Informative advisory*—Simulations to evaluate occupied versus unoccupied radon concentrations should only be made in coordination with building staff responsible for HVAC operations.~~

TOPIC #6 NEW CONSTRUCTION

This addition harmonizes with ANSI/AARST MAH (*Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes*)

7.3 Post-Mitigation Testing Protocol

The following procedures are required to determine if additional mitigation efforts are warranted.

7.3.1 *New construction*

Buildings constructed with radon-resistant features that have not been activated with a fan are to be tested in accordance with one of the testing strategies specified in Section 5 (Test Procedures/Options). Where radon resistant features include a fan activated system, compliance with Section 7.3.2 and 7.3.3 is required.

TOPIC #7 SUMMARY REPORTS

This addition harmonizes with ANSI/AARST MAH (*Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes*)

8.2.2 *Summary of measurement results*

Summary reports shall provide a summary of information that is pertinent to further actions or procedures that may be required relative to mitigation decisions, to include information required in a), b), c), and d) of this Section 8.2.2.

c) Remaining follow-up testing procedures

Summary reports **shall** also list all locations that require testing or retesting for compliance with this standard, including:

1. confirmation testing to verify initial test results where a single passive detector was placed;
2. testing in units or dwellings where valid measurements have not been achieved, to include:
   a. where missing valid tests, identified in Sections 6.1 (Quality Control of Required Test Conditions) and 7.2.2 (Where test results disagree on exceeding the action level) exceed the number allowed in 6.2 (Quality Control for Number of Valid Tests); and
   b. where tests conducted at different times disagree on whether mitigation is warranted, in accordance with 7.2.2; and
3. post-mitigation clearance testing in accordance with 7.3.2 (Clearance Testing).

~~8.2.4 *Final Summary Reports*~~

~~Summary reports provided when all test procedures required by this standard are complete for the building(s) shall include a statement confirming that valid measurements were achieved at all required test locations unless missing valid tests exceed allowances in Section 6.2. Where exceeding those allowances, the summary report shall instead provide a description of efforts for locations where conditions could not be overcome to achieve the required number of valid tests.~~