

# A (Very) Brief Introduction to the Major ANSI/AARST Radon Standards

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May 31, 2023

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# National Policy Review

Overview of federal and state radon requirements

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# HUD Multifamily Housing Radon Notice

- HUD Radon Announcement 2/4/2013
  - Requires radon testing be included in environmental reports for FHA-insured multi-family housing mortgages
  - Elevated levels will have to be mitigated
- HUD MAP 2020 Listed Projects
  - Requires use of **ANSI/AARST MAMF-2017 with 1/2021 REVISIONS**
    - 100% ground-contact unit testing, 10%/minimum 1 unit off ground contact
  - Requires national certification for measurement activities
  - Requires state-issued certification/license for measurement activities in states with adopted requirements
    - Can be an issue of dual-certification

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# FHFA Multifamily Housing Radon Requirements

Federal Housing Finance Agency (FHFA) radon requirements to Fannie Mai and Freddie Mac

- In effect June 30, 2020
- Required radon elements
  - Radon testing at multifamily Enterprise-backed properties
  - Minimum of 25% of ground contact units tested in all buildings associated with the properties
    - Certification States: Radon testing **SHALL** follow current adopted radon measurement standards
  - Allow an environmental professional to manage radon testing procedure (national policy)
    - Certification States: testing **MAY ONLY** be conducted by a state-certified measurement professional

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## MN Radon Standards

- Minnesota Administrative Rules
  - Radon measurement device performance requirements
    - ANSI/AARST MS-PC-1015 or successor standard  
Performance Specifications for Instrumentation Systems Designed to Measure Radon Gas in Air

Source: <https://www.revisor.mn.gov/rules/4620.7500/>

## KS Radon Standards

- KDHE Division of Public Health Radiation Control Section
  - ANSI-AARST Standards Under Review for Adoption
    - Single-Family
      - ANSI/AARST MAH-2019  
Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes
      - ANSI/AARST SGM-SF-2017 with 12/2020 REVISIONS  
Soil Gas Mitigation Standards for Existing Homes
    - Large Buildings
      - ANSI/AARST MAMF-2017 with 1/2021 REVISIONS  
Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily Buildings
      - ANSI/AARST RMS-MF-2018 with 12/2020 REVISIONS  
Radon Mitigation Standards for Multifamily Buildings
      - ANSI/AARST MALB-2014 with 1/2021 REVISIONS  
Protocol for Conducting Measurements of Radon and Radon Decay Products In Schools and Large Buildings
      - ANSI/AARST RMS-LB-2018 with 12/2020 REVISIONS  
Radon Mitigation Standards for Schools and Large Buildings Not To-Be Adopted ANSI-AARST Standard

## KS Radon Standards

- KDHE Division of Public Health Radiation Control Section
  - ANSI-AARST Standards Under Review for Adoption
    - Not to be adopted
      - Radon in Water
      - Quality Assurance
      - RRNC standards

## IA Radon Standards

- Iowa Department of Health and Human Services
  - Effective March 15, 2023
    - Measurement
      - ANSI/AARST MAH-2019  
Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes
      - ANSI/AARST MAMF-2017 with 1/2021 REVISIONS  
Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily Buildings
      - ANSI/AARST MALB-2014 with 1/2021 REVISIONS  
Protocol for Conducting Measurements of Radon and Radon Decay Products In Schools and Large Buildings
      - ANSI/AARST MS-QA 2019  
Radon Measurement Systems Quality Assurance

## IA Radon Standards

- Iowa Department of Health and Human Services
  - Effective March 15, 2023
    - Mitigation
      - EPA RMS, **and**
      - ASTM E-2121

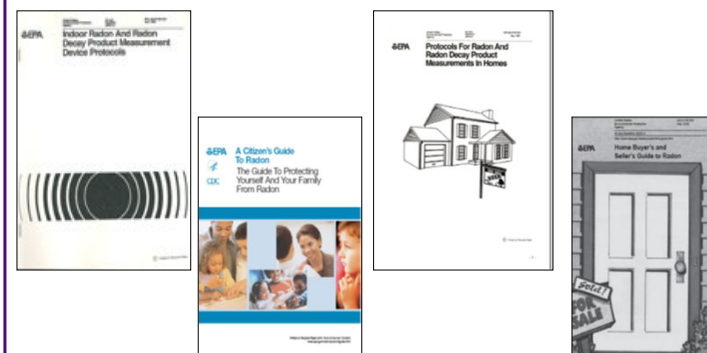
## NE Radon Standards

- Nebraska Department of Health and Human Services
  - ANSI-AARST Standards Under Review for Adoption
    - ANSI/AARST MAH-2019  
Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes
    - ANSI/AARST MA-MFLB 2022  
Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings
    - ANSI/AARST  
Soil Gas Mitigation Standards for Existing Homes
  - Still in the review process with no expected date
    - Specific rules/regulations to follow

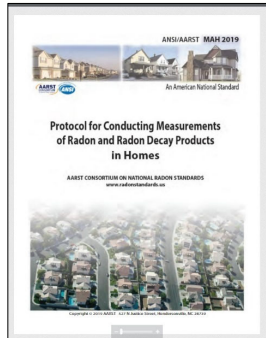
## Practice changes from the EPA Measurement Protocols to the AARST MAH Standard

Pay attention to the SHOULDLS that became SHALLS...

## EPA Radon Measurement Protocols and Parallel Consumer Documents



## AARST Radon Standards



<https://standards.aarst.org/>

## Measurement Protocol Differences

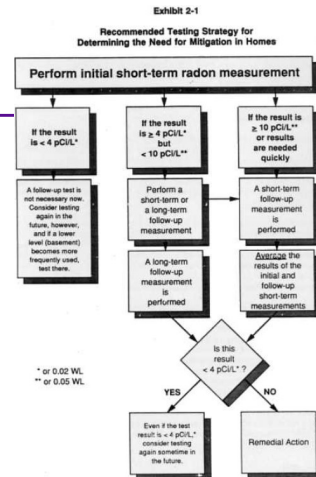
- EPA: When to test a single-family building
  - For areas with significant closed-building habitation
    - Can be tested **ANY TIME OF YEAR**
  - For areas without any significant closed-building operation
    - Evaluate across multiple seasons
- AARST MAH**

**Informative Advisories:**

- 2.2.1 **Test at the earliest opportunity.**  
Homes can be tested at any time of the year.
- 2.2.2 **Test whenever moving to a new residence**  
To prevent the possibility of long-term exposure to a radon hazard, take the opportunity to test in association with moving into any new or existing home or dwelling.
- 2.2.3 **Severe weather**  
Avoid testing during unusual local severe weather if the test period is less than 4 days. When severe conditions occur during a test, retesting may be appropriate.
- 2.2.4 **Seasonal considerations**  
While some buildings respond differently to seasonal changes, tests conducted when a heating system operates both day and night are more likely to provide a clear characterization of potential radon hazards.

## EPA Extended Testing Protocol

- Short- or long-term measurements made in the lowest **LIVED-IN** level of the house



## AARST MAH Extended Testing Protocol

- Conducted in the lowest level of the home **OCCUPIED**

5.3 The Extended Testing Protocol

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

Table 5.3 Extended Testing Protocol (Required Procedure and Summary)	
Step 1	<b>Single Short-Term Test</b> Testing is conducted using a short-term detector at each test location.
Step 2	<b>Retest</b> locations where the initial short-term tests meet or exceed the action level, e.g., 4 pCi/L. If the first short-term test is twice the action level or greater, a second short-term test is to be conducted without delay. <sup>1</sup> If the first short-term test exceeds the action level but is less than twice the action level, either a second short-term test or a long-term test is to be conducted.
Step 3	<b>Decisions to Fix the Building</b> Mitigation decisions are to be based on the long-term test results or the average of the two short-term test results. <sup>2</sup> <b>Fix the building</b> if test results meet or exceed the action level, e.g., 4 pCi/L. Consider fixing the building if results are greater than half the action level, e.g., between 2 and 4 pCi/L.
<sup>1</sup> 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	
<sup>2</sup> Note—If two short-term test results disagree in terms of making a mitigation decision, see Section 7.2	

## EPA Time-Sensitive Protocol



- Options
  - Sequential testing
  - Simultaneous testing
  - Single test with Continuous Radon (CR) or Continuous Working Level Monitor (CW).
- Outlined in EPA's Home Buyer's and Seller's Guide

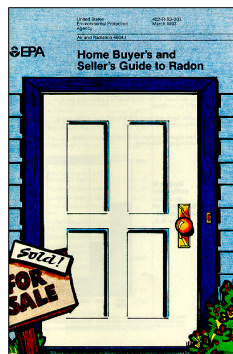
## AARST MAH Time-Sensitive Testing Protocol

- Conducted in the lowest level of the home that **COULD** be occupied

5.2 The Time-Sensitive Testing Protocol  
 Note—This protocol builds upon protocols developed by EPA relative to EPA's "Home Buyer's and Seller's Guide to Radon".

Step 1 Options	Simultaneous Testing	Continuous Monitor
	Tests are to be conducted using two short-term test devices at the same time in the same location, 4 to 8 inches (10-20 cm) apart.	Tests are to be conducted using a monitor that records retrievable hourly measurements.
Step 2	<b>Decisions to Fix the Building</b> Mitigation decisions are to be based on the average result from a continuous monitor or the average of two test results conducted at the same time in the same location. <sup>1</sup> <b>Fix the building</b> if test results meet or exceed the action level, e.g., 4 pCi/L. Consider fixing the building if results are greater than half the action level, e.g., between 2 and 4 pCi/L.	
<sup>1</sup> Note—If two short-term test results disagree in terms of making a mitigation decision, see Section 7.2		

## EPA Closed-Building Conditions



- For ANY short-term test
  - Closed-house conditions **SHOULD** be maintained as much as possible
  - For tests <96 hours
    - SHOULD** be maintained 12 hours prior to the test
    - SHOULD** be maintained during the test as much as possible

## AARST MAH Closed-Building Conditions

- Closed-building conditions (per winter heating season) are **REQUIRED** when short-term results are used for mitigation decisions
  - Initiated 12 hours prior to a test <96 hours
  - Maintained thru the test for tests <91 days

Windows	Keep closed on all levels of the building including areas not being tested
Exterior doors (except for momentary entry and exit)	Set to normal occupied operating conditions with temperature settings between 65° and 80° F (18° - 27° C)
Heating and cooling systems	Set to the lowest seasonal ventilation condition that occurs during the year
Systems that temporarily ventilate with outdoor air for seasonal comfort or energy savings	Do not operate
Whole-house fans	Avoid excessive operation
Fireplaces (that burn solid, liquid or gas fuels unless a primary/normal source of heat for the building)	Required building operation also includes components itemized for clarification in Exhibit 1
Clothes dryers, range hoods and bathroom fans	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 prior to initiating the test
Heating/cooling systems active and set to a normal occupied temperature	These items shall be completed or installed at least 12 hours prior to initiating the test
All windows and exterior doors installed with hardware and seals	
All insulation and exterior siding	
All wall and ceiling coverings to be completed including interior drywall or paneling; does not include decorative finishing of walls, floors or ceilings	
All fireplaces and fireplace dampers installed	

## Actions Based on Test Results

### Action Level Guidance

#### Action Level Guidance

Countries worldwide have adopted *action levels* for radon exposures. The *action level* observed should comply with the guidance of the country, state or local jurisdiction of authority where the test is being conducted.

**U.S. Action Level.** The following *action level* descriptions reflect guidance from the United States Environmental Protection Agency (EPA):

- **4 pCi/L or greater** ( $\geq 150 \text{ Bq/m}^3$ )  
Fix the building. The higher the radon concentration, the more quickly action should be taken to reduce the concentrations.

- **Below 4 pCi/L** ( $< 150 \text{ Bq/m}^3$ )  
Consider fixing the building if test results indicate that radon concentrations are greater than half the *action level*, such as between 2 and 4 pCi/L (75 and 150 Bq/m<sup>3</sup>).

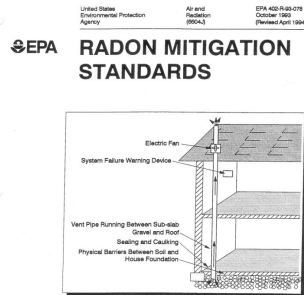
With observation that hazards from radon are virtually the same for radon concentrations that are near *action level* thresholds, it is noteworthy that the World Health Organization recommends limiting *long-term* exposures to less than 2.7 pCi/L (100 Bq/m<sup>3</sup>).

When measurement devices indicate concentrations lower than about 2.0 pCi/L (75 Bq/m<sup>3</sup>), test data should normally be interpreted as being lower than the test device can accurately measure.

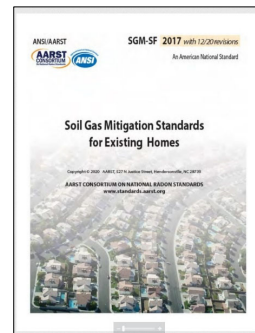
## Practice changes from the EPA Mitigation Protocols to the AARST SGM Standard

Yeah, this got a bit more complicated...

## EPA Radon Mitigation Standard



## AARST Radon Mitigation Standard



<https://standards.aarst.org/>



## Significant SGM Mitigation Changes

### Four Significant Changes in Mitigation under the AARST-ANSI SGM

- Labeling requirements

- All labels **SHALL**
  - Be made of durable materials
  - All lettering **SHALL** be in color contrast to the background
- Primary labels
  - A system description label **SHALL** be placed on a primary component of each system
  - Label duct piping: interior duct piping **SHALL** be marked not less than one label per floor
  - Disconnect switches **SHALL** be labeled to indicate function
  - Sealed components **SHALL** be labeled to indicate function

## Significant SGM Mitigation Changes

### Four Significant Changes in Mitigation under the AARST-ANSI SGM

- Labeling requirements



## Significant SGM Mitigation Changes

### Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System Monitoring

- All fan-driven mitigation systems **SHALL** include a viewable operating range monitor
  - Includes a continuous display
  - Has start-up values clearly marked
- In addition to viewable operating range features, a monitoring mechanism is **REQUIRED** that actively alerts occupants in the event of a mechanical failure, which **SHALL**
  - Provide an audible alert, or
  - Visual light alert, or
  - Telemetric notification

## Significant SGM Mitigation Changes

### Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System Monitoring Cont.

- **REQUIRED** for ALL system monitors
  - System monitors **SHALL** be protected from the elements and durable for the ambient environmental conditions
  - System monitors **SHALL** be labeled as such
  - Battery operated components **SHALL NOT** be used unless equipped with a low-power warning feature
  - Components requiring electricity **SHALL** be on non-switched circuits and designed to reset automatically when power is restored
  - Components requiring electricity for indication of system failure **SHALL NOT** be powered by the same branch as the system fan



## Significant SGM Mitigation Changes

Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System monitoring requirements



## Significant SGM Mitigation Changes

Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System Exhaust Discharge Changes
  - The exhaust point for all soil gas vent systems **SHALL** be located outdoors
  - Exhaust trajectories of 45 degrees **SHALL NOT** encounter openings/points of congregation within 10 ft
  - Exhaust trajectories of 11 degrees **SHALL NOT** encounter openings/points of congregation within 20 ft
  - Point of exhaust **SHALL** be located not less than 10 feet above grade
    - Not less than 10 ft horizontally AND not less than 4 ft above operable openings

## Significant SGM Mitigation Changes

Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System Exhaust Discharge Changes
  - The exhaust point **SHALL** be not less than 10 ft above or horizontal to the side of exterior flooring surfaces
  - The exhaust point **SHALL** be directed upward at an angle that DOES NOT deviate more than 45 degrees from vertical
  - The exhaust point **SHALL** be
    - Not less than 1 ft above a pitched roof at the point penetrated
    - Not less than 6 inches above the edge of the roof when ASD is attached to the side of the building, and
    - Not less than 18 inches above a flat roof

## Significant SGM Mitigation Changes

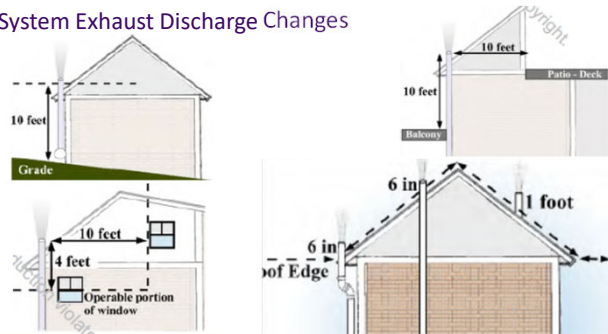
Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System Exhaust Discharge Changes
  - The exhaust point **SHALL** be permitted below the edge of the roof IF all of the following are complied with
    - A written justification **SHALL** be recorded in the OM&M
    - The exhaust point **SHALL NOT** be less than 20 ft above grade
    - Testing **SHALL** be conducted within the occupiable area immediately adjoining the discharge point

## Significant SGM Mitigation Changes

Four Significant Changes in Mitigation under the AARST-ANSI SGM

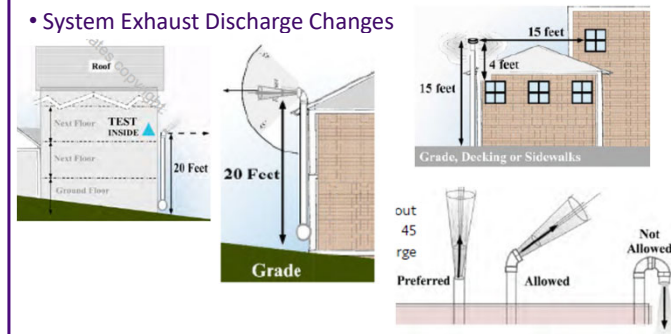
- System Exhaust Discharge Changes



## Significant SGM Mitigation Changes

Four Significant Changes in Mitigation under the AARST-ANSI SGM

- System Exhaust Discharge Changes



## Significant SGM Mitigation Changes

Four Significant Changes in Mitigation under the AARST-ANSI SGM

- Pressure Field Extension (PFE) Testing required
  - ASD diagnostic analysis
    - With vacuum applied at the chosen suction point, evidence **SHALL** be sought to characterize the distance PFE can be achieved across the targeted *soil gas collection plenum(s)*
  - ASD PFE vacuum analysis
    - Once goals for PFE distance are achieved, measurements **SHALL** be made to quantify air pressure differences under the slab or membrane relative to indoor air
    - Jobsite logs **SHALL** include the values measured in this effort to characterize vacuum strength needed for ASD design
    - The measurements **SHALL** be made with a micromanometer or equivalent differential pressure gauge that is capable of reading to 1/1000-inch water column (0.25 Pa)

## Business Considerations

A non-comprehensive list of things to think about

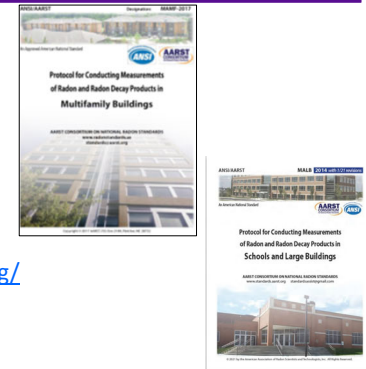
- Project Considerations
  - 'Ask me anything BUT for time!'
  - Cost projections
    - Staffing, devices, report development
- Business practice reminders
  - Certification states **NOT LIKELY** to recognize the lower-tier measurement certification AARST-NRPP offers in non-certification states
  - Certification states **LIKELY REQUIRE** the state-certified measurement professional to be on-site during measurement work

# How does large building measurement differ from single-family structures?

I don't have 118 CRMS...

# AARST Radon Measurement Protocols

- AARST Protocol for Radon Measurement in Multi-family Buildings
- Protocols for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings
- AARST-ANSI Standards
  - <https://standards.aarst.org/>

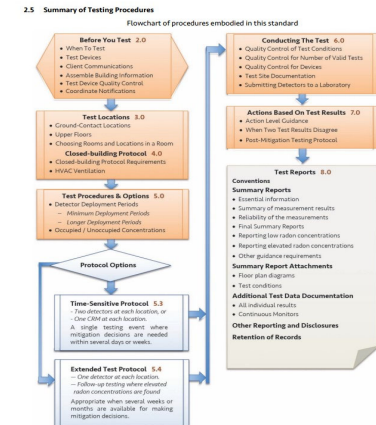


# Measurements in Large Buildings

Primary differences between single-family and large building measurements

- When to test a large building
  - Buildings that **ARE** significantly occupied day and night
    - Can be tested **ANY TIME OF YEAR**
    - Residential-only or mixed use residential/other
  - Buildings that **ARE NOT** significantly occupied day and night
    - Measurements **SHALL** be conducted at a time representative of normal occupied conditions

# Summary of Testing Procedures



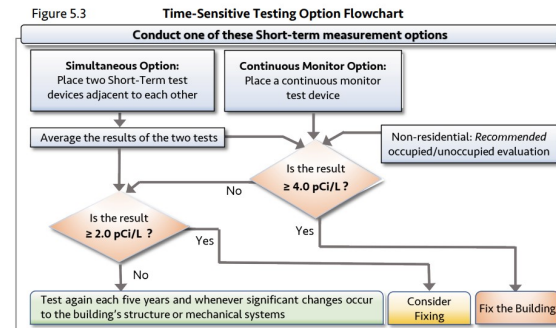
## Measurements in Large Buildings

Primary differences between single-family and large building measurements

- Client communications
  - Not only between you and your client, but **ALL** occupants of the structure being measured
- Building investigation
  - Identification of **ALL** HVAC zones
  - Identification of **ALL** identified measurement locations (and devices needed for coverage)
    - **INCLUDING** QC devices

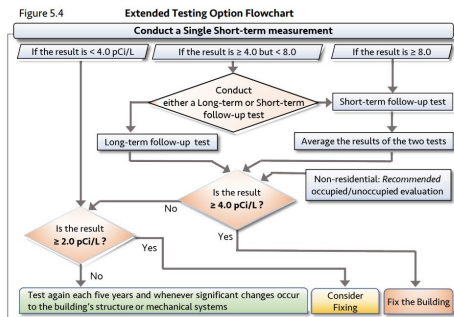
## Testing Procedures & Options

### Time-Sensitive Testing Option



## Testing Procedures & Options

### Extended Testing Option



## Actions Based on Test Results

### Action Level Guidance

#### Action Level Guidance

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## Business Considerations

A non-comprehensive list of things to think about

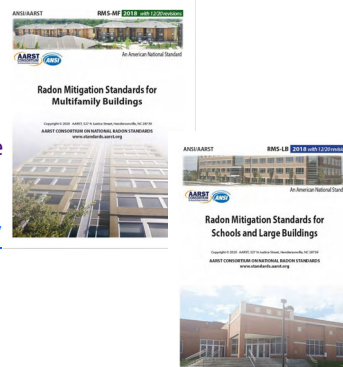
- Device types (and numbers)
  - Purchase and storage of large numbers of devices
  - QC associated with those devices
- Project bid development
  - ‘Ask me anything BUT for time!’
  - Cost projections
    - Staffing, devices, report development
- Business practice changes
  - Insurance levels
  - Permanent/temporary staffing concerns

## How does large building mitigation differ from single-family structures?

You have HOW MANY HVAC systems?!

## AARST Radon Mitigation Protocols

- AARST Radon Mitigation Standards for Multifamily Buildings
- AARST Radon Mitigation Standards for Schools and Large Buildings
- AARST-ANSI Standards
  - <https://standards.aarst.org/>



## Mitigation in Large Buildings

Primary differences between single-family and large building mitigation activities

- Standards’ scope
  - Addresses WHOLE building consideration
    - Apply when implemented to PORTIONS of a large building, or
    - Individual unit/dwelling of a large building
- When building portions include
  - Non-residential purposes and/or
  - Elaborate HVAC systems
  - Refer to RMS-LB schools/large buildings

## Mitigation in Large Buildings

Primary differences between single-family and large building mitigation activities

- Building investigation
  - Collect ALL known radon measurement reports
    - ID any measurement data insufficiencies
  - Identification of **ALL** HVAC zones
  - Identification of **ALL** foundational zones

## Mitigation in Large Buildings

Primary differences between single-family and large building mitigation activities

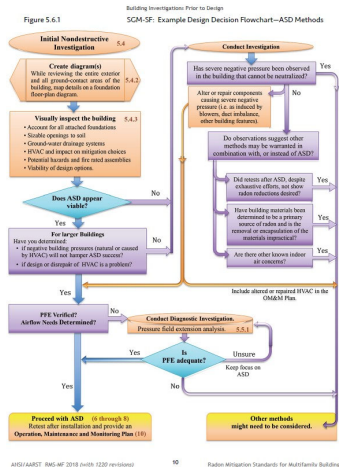
- Proposal/bid issues
  - Provide the client a statement regarding extent of **ALL** building investigations needed to design an appropriate mitigation strategy/system
- Client communication

*"Occupant Advisory: Common construction sealants used to prevent radon entry at foundations and other locations will normally emit vapors that contain modest amounts of certain chemicals generally referred to as volatile organic compounds. The emissions occur mostly during application, but also to a lesser extent as they dry to form an airtight bond. While these chemicals are commonly used, some sensitive individuals may experience discomfort or other health effects when exposed to such chemicals. Symptoms that may indicate sensitivity to these vapors may include: nausea, headaches, dizziness, drowsiness and/or an allergic reaction. Special consideration should be made for the very young or elderly who cannot communicate symptoms experienced. Safety Data Sheets (SDS) are available upon request. If symptoms are observed: Leave the area immediately to breathe fresh air. Avoid further exposure. If symptoms persist, get medical attention."*

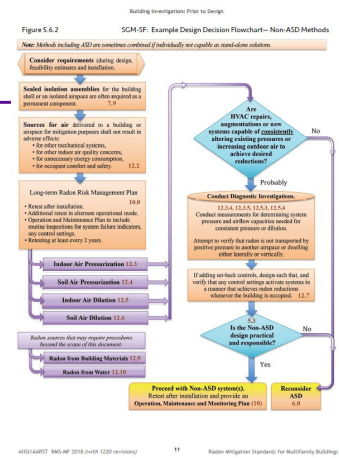
(See notice examples in Exhibits A-1 and A-3.)

The notification to clients regarding hazardous materials shall include a general description of the hazardous materials; symptoms that might indicate sensitivity to the materials; and actions to take if symptoms are observed.

## System Design



## System Design



## Documentation

Table 10.5 Part 1

Table 10.5 Operation, Maintenance and Monitoring (OM&M) Plan Requirements		
Documentation	Maintenance Inspections of Controls and Monitors	Frequency of Inspection
<p><b>Document Startup Details</b> A description shall be provided for the fan monitors, control settings and other operating parameters that existed at the time successful mitigation was initially achieved.</p> <p>Note—The description should include explicit detail for comparison during inspections and repair, including:</p> <ul style="list-style-type: none"> <li>a) descriptions of equipment labeling and annotations for fan monitors, control settings and other operating parameters;</li> <li>b) exact locations of fan monitors, electronic telemetry/monitoring equipment, electrical disconnects and other components;</li> <li>c) instructions for equipment sufficient to interpret labels, annotations and the designed operating parameters for the equipment. When applicable, include manufacturer instructions;</li> <li>d) a list of appropriate actions for the client(s) to take if fan monitor devices or inspections indicate a system is not operating as designed; and</li> <li>e) documented measurements for balance of airflow in and airflow out of HVAC system(s) when a component of a mitigation system.</li> </ul>	<p>The following inspections shall be written into the OM&amp;M plan as required actions:</p> <ul style="list-style-type: none"> <li>a) inspection of fan monitors, control settings and other operating parameters to ensure systems are operating as designed;</li> <li>b) investigation and correction of any conditions that are found to indicate component failure or inconsistencies with designed operating parameters;</li> <li>c) recording and maintenance of records that are to be assimilated into the overall building OM&amp;M documentation; and</li> <li>d) the plan shall stipulate that a qualified professional should perform these inspections and if performed by in-house maintenance staff, such staff shall be trained in system operations.</li> </ul>	<p>The plan shall stipulate recommendations and any requirements for the frequency of inspections, as deemed by the contractor as appropriate to the situation.</p> <p>Note 1—It is recommended that the plan stipulate inspections be conducted at least quarterly of all fan monitors, controls, and as applicable, filters and vent openings.</p> <p>Note 2—The plan should recommend inspections subsequent to:</p> <ul style="list-style-type: none"> <li>a) system shutdown due to building power failure or emergency; and</li> <li>b) any catastrophic event that could damage system components.</li> </ul>

## Documentation

Table 10.5 Part 2

Documentation Mechanical Equipment	Mechanical Equipment Inspections	Frequency of Inspection
<p><b>Equipment Details and Instructions</b></p> <ul style="list-style-type: none"> <li>a) Include manufacturer instructions and instructions specific to design configurations, as appropriate;</li> <li>b) Include exact locations of fans, electrical disconnects and other components; and</li> <li>c) Include a list of appropriate actions for the client(s) to take if the fan monitor warning device indicates system degradation or failure.</li> <li>d) Include a list of potential repair items for ASD systems that should include:                             <ul style="list-style-type: none"> <li>i. fan monitor repair or replacement (e.g., reconnect or replace oil in U tube);</li> <li>ii. electrical repair;</li> <li>iii. fan or boot replacement; and</li> <li>iv. sealing openings to soil or piping connections.</li> </ul> </li> </ul>	<p>The OM&amp;M plan shall observe that mechanical equipment inspections should include all seats, straps, fasteners, electrical system (including switch operation), boots, performance indicators, labels, pipe condition, filters, inlet grills and fan operation.</p> <p>When HVAC is a component of the mitigation system(s), provide a list of inspection items that include:</p> <ul style="list-style-type: none"> <li>i. HVAC airflow in and airflow out of the air handler;</li> <li>ii. functionality of HVAC filters;</li> <li>iii. room differential pressure test;</li> <li>iv. fresh-air damper settings; and</li> <li>v. verification for supply air into rooms of interest.</li> </ul>	<p>The plan shall stipulate that a detailed inspection of all components is to be conducted at least every 2 years by a qualified professional.</p>
<p><b>Monitoring Continued Effectiveness</b> The plan shall include notice of applicable retesting guidance found in ANSI/AARST publication MAMF: Protocol for Conducting Measurements of Radon and Radon Decay Products In Multifamily Buildings.</p>		

## Business Considerations

A non-comprehensive list of things to think about

- Project bid development
  - 'Ask me anything BUT for time!'
  - Costs of bid production
  - Cost projections
    - Staffing, devices, report development
- Business practice changes
  - Insurance levels
  - Permanent/temporary staffing concerns

## Questions?

Cause, boy do I have answers...



## We're From the Government, We're Here to Help

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Kansas Radon Chamber

[www.ksuradonchamber.org](http://www.ksuradonchamber.org)

National Radon Program Services

[www.sosradon.org](http://www.sosradon.org)

Kansas Radon Program

[www.kansasradonprogram.org](http://www.kansasradonprogram.org)

KSU Radon Training

<https://radoncourses.com/>

## Resources for You

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- Call National Radon Program Services
  - 800.SOSRADON (800.767.7236)
  - <https://sosradon.org>
- Brian Hanson
  - 785.532.4996
  - [bhanson@ksu.edu](mailto:bhanson@ksu.edu)