INDOOR ENVIRONMENTS ASSOCIATION

APRIL 2025 revised

THE RADON REPORTER

Practical Information for Your Success

Lung Cancer Screening | IEA Visits Capitol Hill
State Approaches to Vapor Intrusion

TABLE of CONTENTS

AD INDEX

Please submit content, comments, or questions to editor@aarst.org.

Indoor Environments Association™ is a nonprofit, professional organization of members who are dedicated to the highest standard of excellence and ethical performance of hazard identification and abatement of radon, chemical vapor intrusion, and other contaminants of concern in the built environment. The organization primarily strives to advance the interests of its members through developing industry standards, certifying technical proficiency, enabling advancement of public policy, and communicating health risks to the public.

Letter from the Executive Director, Diane Swecker

Saluting Our Public Sector Partners in the Fight Against Radon

For decades, the collaboration between the Indoor Environments Association/AARST and our public sector partners has been instrumental in protecting communities from the dangers of radon and other indoor air quality concerns. This partnership has yielded significant achievements in public health, environmental justice, and policy advancements.

Our shared commitment to reducing radon exposure traces back to 1988 when President Ronald Reagan signed the Indoor Radon Abatement Act. This landmark legislation established the goal of minimizing radon levels in indoor air across the United States, recognizing the serious health risks associated with radon exposure. In response, the U.S. Environmental Protection Agency (EPA) took action, creating the nation's primary defense against radon through its comprehensive radon program.

A cornerstone of this effort has been the EPA's State Indoor Radon Grants (SIRG) Program, which has empowered state health departments, tribal organizations, and local agencies to implement radon education, testing, and mitigation initiatives. SIRG funding has supported vital outreach programs, ensuring that communities, especially those most vulnerable, have access to the resources needed to reduce radon risks in homes, schools, and workplaces.

Progress to reduce radon risk would not be possible without the unwavering dedication of the state radon programs that depend on SIRG assistance, as well as key federal agencies, including:

- **The U.S. Environmental Protection Agency (EPA)** – Leading the nation's radon and indoor air quality efforts through research, guidance, and funding.
- **The Centers for Disease Control and Prevention (CDC)** – Supporting radon-related public health initiatives and integrating radon data into the Environmental Public Health Tracking Program.
- **The Department of Housing and Urban Development (HUD)** – Advancing policies that promote healthier indoor environments in its multifamily lending programs.

Together, these agencies, alongside state and tribal health departments, have built a strong framework for radon risk reduction, one that continues to evolve and expand. Thanks to their leadership and unwavering dedication, radon awareness has increased, mitigation strategies have improved, and more homes and buildings are being tested and made safer every year.

At the Indoor Environments Association, we deeply appreciate and commend the commitment of these partner agencies and public servants. Their expertise and persistence have made a lasting impact, and we celebrate the vital role they play in protecting public health. While significant progress has been made, there is still more work to be done. With continued collaboration, we can ensure that every American has access to indoor air that is safe and free from the dangers of radon.

It is inconceivable and unconscionable that the meager federal financial support for these efforts might be jeopardized by the current political headwinds. IEA stands behind and is standing up for full funding of EPA radon programs and related efforts at CDC and HUD.

A Gentle Nudge That Can Save Your Life

Zan Jones, Vice President Sales & Marketing, Radonova, Inc.

Dr. Chivonne Harrigal is a board-certified radiologist who specializes in cancer imaging. She graduated from the University of Pittsburgh School of Medicine in 2005, followed by a radiology residency and fellowship at Stanford University School of Medicine where she served as a chief resident. However, it wasn't until 4 years ago when she attended a Nevada Cancer Coalition meeting that she learned that radon is a risk factor for lung cancer. This prompted her to test her own home for radon and have it mitigated. Then, when she learned that her state of Nevada had the lowest lung cancer screening rate in the United States, it motivated her to take action beyond her own home.

Approximately 4.5% of eligible high-risk people in the U.S. get screened for lung cancer. Nevada's rate was only 1.4%, one of the lowest in the country. This troubled Dr. Harrigal and caused her to dig deeper as to why. "What we found is that Nevada is very spread-out geographically and all of the lung screening centers in our state were in just two cities, Reno and Las Vegas. Many people who live hours away from these cities weren't able or willing to travel this far to get a 5-minute screening test." In the last three years Nevada has worked to add more lung screening centers, which includes using existing CT machines to perform this exam, especially in rural communities to improve access.

Radonova attended presentations by Dr. Harrigal this year at the EPA Tri-Regional Radon Stakeholders meeting in Reno, Nevada and the Indoor Environments Association International Symposium in Orlando, Florida. Her compelling speeches led us to interview her for this article.

Dr. Harrigal divides saving lives from lung cancer into four categories:

Prevention

Most people know that smoking is the number one cause of lung cancer, but many don't know that radon is the number two cause of lung cancer. Additionally, radon is the number one cause of lung cancer in nonsmokers. Testing your home for radon and having it mitigated if levels are high can prevent radon-induced lung cancer.

According to the Indoor Environments Association Radon Report Card in 2024, 23% of the homes in Nevada have radon levels at or above the actionable limit of 4.0 pCi/L. Long-term exposure to radon is what causes lung cancer. Therefore, testing school buildings, workplaces, and other facilities where people spend many hours per day, every day, will also provide prevention.

Early detection

Lung cancer is the leading cause of cancer death in both men and women in America. Lung cancer is fatal for 4 out of 5 people diagnosed. The reason it causes so many deaths is that lung cancer is frequently diagnosed in later stages where the survival rates are the lowest.

The earlier lung cancer is found, the easier it is to treat, and the chances of cure and survival are much higher. Early detection can be achieved through screening with a low dose CT scan (LDCT). Dr. Harrigal shares that only 16% of lung cancer cases are diagnosed in stage 1 without screening. The cases diagnosed in stage 1 improves to 55-85% with screening.

Currently, lung cancer screening is free and covered by Medicare and other insurance companies for eligible people who are 50-80 years old, with a smoking history of 20 pack years or more, who either currently smoke or have quit smoking within the last 15 years. Dr. Harrigal explains that there currently isn't enough data for the healthcare system/insurance companies to cover lung cancer screening for nonsmokers with other risk factors like radon exposure, secondhand smoke or occupational smoke exposure. Those people wouldn't be eligible for a free screening test, but they could talk to their health care provider to see if they could benefit from the test and pay out of pocket for it, which can cost between $150 and $400.

Treatment

There can be drawbacks of lung cancer screening such as cost, time, false positives, anxiety about results, radiation exposure, etc. However, once an LDCT comes back with an abnormality and lung cancer is diagnosed, further testing can be done to help get a patient get better, personalized treatment. This can include a biomarker that can help a patient receive targeted therapy. Other testing can identify if a patient could benefit from immunotherapy. The good news is that treatments for lung cancer are better than ever, and they will continue to improve.

Health equity

Reducing socioeconomic health disparities "can be the most challenging piece of this puzzle," says Dr. Harrigal.There is a need for affordable and discounted testing. But a significant issue with health equity is having "trusted messengers" of information. Communicating the risk of radon as a silent killer can be better received from neighbors, local community health coaches and navigators versus a medical authority.

"Telling the radon story is no different than other grassroots efforts," says Dr. Harrigal. "People are more open to receiving information from sources they have chosen to trust – such as Facebook groups, neighborhood message boards, schools, and church groups, etc. To save lives from lung cancer, we must be more creative and effective on how we can reach more people to let them know about radon and lung cancer screening tests. If I didn't know about radon, a lot of folks probably don't know about it either. Spreading the word and raising awareness is a big step forward in saving lives from radon and lung cancer."

Gentle nudge

Normalizing lung cancer and removing its stigma can lead to early detection and better outcomes as well.

"Here's one of the biggest challenges we face in healthcare. We have some great screening tests that can catch cancers earlier and save lives, like mammograms for breast cancer, colonoscopy for colon cancer, pap smears for cervical cancer and low dose CT scans for lung cancer. But there are a lot of reasons that people don't get these important life-saving exams. We need to 'gently nudge' and remind people that early detection saves lives and to schedule that cancer screening test that they might have been putting off."

Early detection is critical. Giving people a "gentle nudge" to get screened for lung cancer with a LDCT is the first step, especially if they have lung cancer risk factors. "We need to shift the lung cancer diagnosis timing from stage 4 to stage 1 so we can save more lives."

Notice: 2025 IEA Board Election

The Indoor Environments Association election process begins with the Nominating Committee's call this month for nominations to be submitted no later than June 1. The election will be conducted during September. The results will be announced at the Annual Meeting on Tuesday October 28 in Fort Worth, Texas. Positions open for election are Nationally Elected Directors (five), President-Elect, Vice-President (1), Secretary and Treasurer.

Current IEA Board

Path to be a Nationally Elected Indoor Environments Association Board Member

Those eligible to run for the Nationally Elected Board need to be members in good standing of the Association. Officers and Nationally Elected Directors shall be elected by the membership of the Association by a secure, independent internet balloting service. For the Officers positions, each winner shall be the candidate for that office receiving the largest number of votes. For the positions of Nationally Elected Directors, winners shall be those having the largest number of votes among the candidates, as shall be enough to fill the number of open seats for said Directors. The results of the election shall be tabulated 24 hours prior to the Annual Meeting and announced at the Annual Meeting of the Association. In the event of a tie, the sitting Board will cast a tie breaking vote consisting of a quorum of the Board.

Board Terms

As per the bylaws 5.06 regarding Terms of Officers, Officers serve for a term of two years or until their successors are elected. A President-elect shall be elected every other year for a one-year term and afterward shall serve as President for two years. The outgoing President shall become the Immediate Past President, and shall serve as an Officer, for a term of one year. Except for the President, President-elect and Immediate Past President, an Officer may serve a maximum of three consecutive terms plus the unexpired term of a previous Officer.

How to Apply?

Those interested please contact **nominations@aarst.org** to receive an Indoor Environments Association Board Member Nominating Profile submission form, or access the **form online**. Completed forms must be submitted no later than June 1 for consideration by the Nominating Committee.

UL Fan Safety Standard Update on Unattended Areas

Dave Kapturowski, Vice President & Co-Founder, Spruce Environmental

A new update to "*UL 507 Standard for Safety, Electric Fans*", went into effect on November 27, 2024 and must be implemented on these products as of that date. This update adds requirements for Listed electric fans that are used in "Unattended Areas". Key to the UL507 change is the addition of either a secondary thermal or a current fuse in AC induction motors, along with an extensive suite of testing. The fuse will ensure that motors will not spark if the windings short out.

UL Standards are developed by a committee which includes UL, industry, government, consumer and other groups. The UL standard is used by UL, ETL, CSA and other Nationally Recognized Testing Laboratories to certify products. The UL standard covers all types of fans and many aspects of product safety including mechanical integrity, electric shock and other operational hazards.

On March 3, 2025 the Consumer Product Safety Commission provided a letter to UL in support that an exterior mounted radon fan should be suitable for "Unattended Areas" as the occupant may not detect or be notified of a locked rotor condition.

On April 9, 2025 the UL507 Technical Committee concluded their vote in overwhelming support in their formal standard interpretation that all radon fans must be suitable for use in "Unattended Areas" if they are installed outdoors. This requirement shall be effective immediately. Other areas inside the structure such as: attics, basements or garages are also unattended. In other words, all allowed locations for radon fans in the US are in unattended areas.

Any fan not meeting these new requirements that is installed in these areas could be subject to tear out orders and consumer complaints to the state and certifying bodies affecting your ability to do business.

Safety is a primary concern for the radon industry. Radon systems provide safety to the families that live in the home. This new safety standard revision serves to increase the overall safety and professionalism of the radon mitigation industry and installer.

Editor's Note:

The above material is relevant to radon professionals who are certified by NRPP or NRSB, which require compliance with the ANSI-AARST SGM-SF standard, or credentialed in the 14 states that require compliance with the SGM-SF standard, or otherwise adhere to SGM-SF, since the standard specifies in section 6.5 ASD Fan Installation that ASD fans selected by the user shall meet minimum safety standards including thermal protection:

6.5.1 Fan Design

ASD fans chosen shall be:

a) designed for continuous duty operation;

b) designed or otherwise sealed to reduce the potential for leakage of water and soil gas;

c) designed to allow rainwater or condensation from within ASD piping to pass through or around the fan when operating; and

d) represented by the manufacturer as both appropriate for the class of contaminants being extracted and manufactured with features that meet minimum safety standards, to include:

1. thermal protection integral to the fan that prevents dangerous overheating of the motor;

2. protection against electrical shock for fans mounted both on the interior and exterior of buildings, that may include a fan installed in a weatherproof protective housing that results in a code compliant configuration; and

3. other features that result in a safe fan installation, such as specified by codes where evaluations of chemicals in soil have indicated that gases passing through the fan are corrosive or could result in a fire, explosion, or serious personal injury.

Midwest Chapter

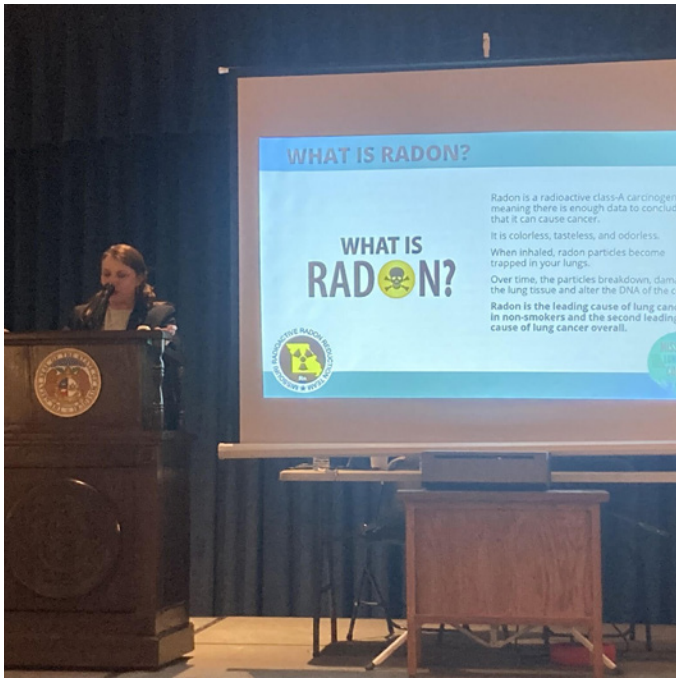
The Annual Stakeholders Meeting was held March 7th in Oak Brook, Il. Chapter leaders reported "Great attendance, solid content, informative industry updates - and those Pinstripes omelettes (for those in-person attendees)!" Additionally, advocacy efforts were a key focus, with between 600 and 800 phone calls made to Illinois legislators in support of the Illinois school radon bill, underscoring the industry's commitment to policy initiatives that enhance public health protections.

Justin Tolentino, Benjamin Portin, Deontae Dodd-Hrobowski, Zan Jones

Peter Ruchti and Vicky Storner-Bhatt

Region 7 Stakeholders Meeting

The EPA Region 7 Stakeholders Meeting took place from March 3rd to 5th, 2025, in Lawrence, Kansas, bringing together industry professionals for in-depth discussions on the future of radon awareness and testing. The event provided a valuable opportunity for collaboration, with attendees engaging in conversations aimed at advancing radon mitigation efforts and promoting safer indoor environments in schools, homes, and communities. As part of the meeting, the Missouri Department of Health and Senior Services delivered a presentation, Vapor Intrusion Basics for the Radon Industry, which explored the similarities and differences between vapor intrusion and radon exposure.



American Lung Association's Laura Turner presenting at the Capitol

Missouri Lung Cancer Coalition Radioactive Radon Reduction Team

Missouri Radon Day at the Capitol

On February 25th, members of the IEA Heartland Chapter—Jim Medley, Wes Hodgden, Cherie Summa, and Ron Rupp—joined representatives from the American Lung Association and the Missouri Lung Cancer Coalition in Jefferson City, MO, to advocate for a radon certification bill for the Missouri Lung Cancer Coalition's Radioactive Radon Reduction Team's Day at the Capitol. The day brought together team members, coalition board members, and Heartland Chapter members to raise awareness about radon and ongoing legislative efforts and circulate educational materials for visitors, while also participating in 17 meetings with legislators to discuss the importance of radon certification requirements. Missouri House Bills 836 and 881 aim to enhance public health protections by establishing certification and licensing requirements for radon measurement and mitigation professionals. These measures are designed to ensure consumer safety and regulatory oversight. Advocates collaborated with bill sponsors Rep. Jeff Farnan and Rep. LaDonna Appelbaum to introduce the legislation this session. As of February 28, both bills had completed their second readings but had not yet been assigned to committees.

Rocky Mountain Chapter

On December 4, 2024, members of the Rocky Mountain IEA gathered for a holiday happy hour at My Neighbor Felix in Centennial, Colorado. The event provided an opportunity for radon professionals to connect in a relaxed setting, fostering conversation, camaraderie, and reflection on the year's efforts in radon awareness and mitigation.

The following day, on December 5, the Rocky Mountain Chapter of IEA convened the Radon Action Coalition, bringing together more than thirty public health officials to coordinate efforts for National Radon Action Month. The meeting served as a platform for officials to exchange information on community-based radon awareness initiatives and explore strategies for collaboration in the coming year.

National Radon Action Month Proclamations

The month of January brought a new year full of opportunities for the radon and vapor intrusion industry, and as IEA celebrated NRAM (National Radon Action Month), so did many state radon programs! Several states joined in declaring January as NRAM by initiating official proclamations. Congratulations to Illinois, Pennsylvania, Texas, Michigan, West Virginia, Maryland, and New Jersey for taking this big step forward in coming together to spread public awareness about the dangers of radon.

AIRTHINGS | FOR PROFESSIONALS

CORENTIUM **PRO**

Continuous radon monitor

Priced at $799

WEEKLY 10x device bundle rental as low as

$399/week

Take advantage of the weekly Rental options. Enjoy the affordable solution for as little as $399 per week of 10 Corentium Pros.*

*Available in the US only.

MONTHLY single device rental for only

$89/month

CONTACT US:

corentiumpro@airthings.com OR **1.833.776.2767**

IEA Leaders Visit Capitol Hill in DC to Support EPA Radon Programs

In 1988, President Ronald Reagan signed the Indoor Radon Abatement Act, which directed EPA to act to reduce radon levels so "that the air within buildings in the United States should be as free of radon as the ambient air outside of buildings." Congress passed that law in recognition of this serious health threat. Ever since, the EPA radon program, which is the nation's primary defense against exposure risk, has received bipartisan support in the Congress. Each year, through the budget appropriations process, the US Congress provides direction to the Executive Branch regarding funding levels and priorities for federal agency programs. EPA's spending is overseen by Subcommittees for Appropriations for Interior, Environment and Related Agencies in both the House of Representatives and the Senate.

On March 13th, IEA leaders participated in a day-long effort on March 13th to educate their own Senators and Representatives and Appropriations Committee leaders on the importance of preserving and fortifying EPA's radon program through the Fiscal Year 26 Appropriations process. The participants were IEA President Dave Hill, Vice Presidents Dave Gillay and George Schambach, Treasurer Dan Potter, National Directors Nate Burden, John Mallon, Dawn Oggier, and Duane West, Indiana IEA Chapter GA committee Chair Bob Coffee, Executive Director Diane Swecker, and National Policy Director Jane Malone. Below is the messaging that IEA presented.

EPA's State Indoor Radon Grants Program (SIRG) is a central element of that line of defense. SIRG enables state health departments, tribes, and others to implement programs to ensure radon exposure risk is visible through outreach, education, and local initiatives. The same state radon programs can protect families from unqualified persons coming into their homes to perform radon work. Twenty states require a license or other credential; the other 30 states don't require any qualification. The absence of proficiency requirements in non-licensing states and limited capacity for enforcement in regulated states allows unqualified personnel and fly-by-night contractors to sell radon-related services without regard to established consensus standards. The proposed funding for SIRG will encourage state action to save lives, leverage private proficiency infrastructure, and optimize state regulatory burden by adopting or strengthening certification requirements.

Requested Congressional Report Language and Fund Increase - SIRG

Categorical Grant: Radon. "The Committee continues to support state radon program efforts that raise awareness about the associated risks of radon exposure. The Committee encourages expanding radon grants to States that are seeking to adopt or strengthen certification requirements for radon measurement and mitigation workers."

Categorical Grant: Radon. "The funding level in the FY 26 Interior-Environments Appropriations Bill for the State Indoor Radon Grant Program (SIRG) shall be increased to $18 million and the increase shall be used for adopting and strengthening credential requirements for radon measurement and mitigation workers."

EPA's Indoor Air and Radon Program supports risk reduction efforts nationwide through partnerships with the radon industry and others in the private sector and by coordinating public outreach activities. Its expertise and coordination are essential to the ongoing development and maintenance of national industry consensus standards for measurement, mitigation and construction, which are essential to the functioning of this entire industry segment. Building on EPA's statutory mandate to deliver proficiency programs, the program's work to update its radon credentialing framework is central to ensuring a quality workforce, public health protection, and consistency.

Requested Congressional Report Language - Indoor Air and Radon Program

Indoor Air: Radon. "The Committee encourages the Agency to continue efforts to update its radon credentialing framework to ensure a quality workforce, public health protection, and consistency, support the ongoing development of the EPA-recommended voluntary industry consensus standards, and provide industry and states with technical support and outreach coordination."

IEA leadership encourages other industry members and radon stakeholders to carry this message to their Congressional delegation.

Please reach out to **nationalpolicy@indoorenvironments.org** for information.

State Approaches to Vapor Intrusion

Bart Eklund, Senior Technical Expert, Haley & Aldrich, Inc.
Catherine E. Regan, Technical Expert, Haley & Aldrich, Inc.
Lila Beckley, Senior Associate Geologist, GSI Environmental Inc.

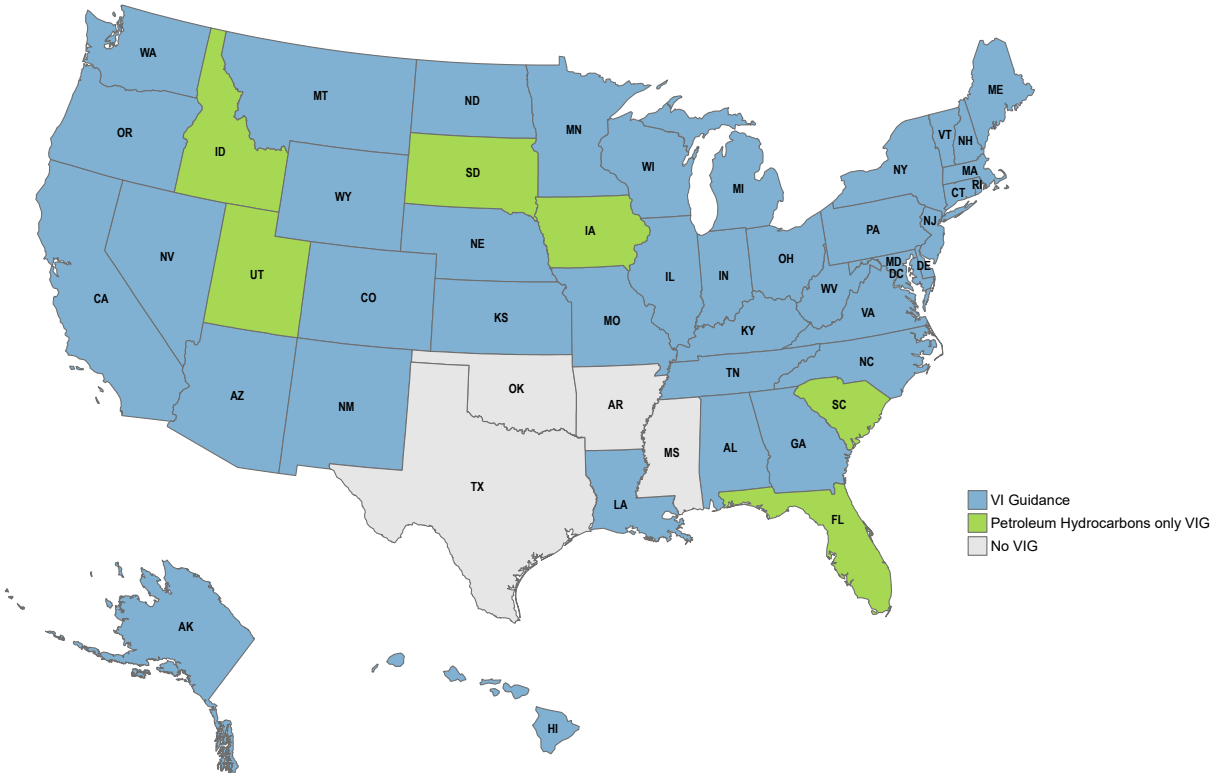
INTRODUCTION

Vapor intrusion (VI) is a potential human exposure pathway where volatile chemicals migrate from soil or groundwater into overlying or nearby buildings. While VI for naturally-occurring radon started being widely addressed relatively quickly after its discovery in the 1980s, VI for volatile organic compounds (VOCs) and other vapor-forming chemicals (e.g., mercury) at contaminated sites has more slowly gotten attention. National guidance has been issued by the USEPA and ITRC, but it has been State agencies that have taken the lead in most jurisdictions. The current state of guidance has been summarized about every five years, including last year (Eklund, et al., 2024).

Guidance can take many forms, from comprehensive guidance manuals specific to VI to guidance spread across multiple documents and web pages. Guidance may be specific to a given program (e.g., underground storage tank sites). Some states (e.g., Oklahoma) may have a robust VI oversight program even though they have not formally issued any guidance and, instead, rely primarily on guidance issued by USEPA and/or ITRC. The variety of formats and levels of detail provided by different states pose additional challenges to responsible parties managing sites in multiple regulatory jurisdictions.

The number of states with VI guidance has increased from 17 states in 2007 to 35 states in 2012 to 42 states in 2018 and now to 46 states (plus DC). The status of each state is depicted in Figure 1. Statuses continue to change; for example North Dakota issued its first VI guidance document in March 2024. Since the first survey was conducted, there has been some movement towards consensus on certain issues. For example, the use of mathematical modeling to address VI has largely been replaced by reliance on real-world measurements. In addition, states have largely settled upon lateral exclusion distances of 100 ft. for chlorinated solvents and 30 ft. for petroleum hydrocarbons. If buildings fall within those lateral distances of subsurface impacts, further investigation generally is triggered. The distance for

FIGURE 1. STATES WITH DRAFT OR FINAL VAPOR INTRUSION GUIDANCE (VIG) OR REGULATION



chlorinated VOCs is unchanged since 2007, but there has been increasing recognition that petroleum hydrocarbons differ from chlorinated VOCs in their potential for VI. There generally were no separate screening distances for petroleum hydrocarbons in 2007, but the typical screening value for petroleum hydrocarbons has largely decreased from 100 ft. in 2012 to 30 ft. in 2018. Since 2018, more states have adopted these values.

For residential, single-family buildings, the states have largely settled upon attenuation factors proposed by the USEPA: i.e., 0.001 for groundwater, 1 for crawl spaces and 0.03 for shallow soil gas. Those attenuation factors can be used to predict indoor air concentrations from a given level of subsurface contamination. The attenuation factors for groundwater and for crawl spaces have largely remained unchanged over the last 15+ years. The default attenuation factors for shallow soil gas were often 0.1 to 0.02 in 2007 and 2012 but largely were changed to 0.03 in the 2018 and current surveys.

States continue to vary as to what types of screening values to use, with little consensus on whether to include bulk soil data and whether to have different values for deep versus shallow soil gas. The number of chemicals included in published screening value tables varies from state to state, from fewer than 10 to more than 300. This variability has remained large from year to year. The screening levels generally are not tied to a conceptual site model and this limitation can make it difficult to define what future sampling may be needed.

The highest and lowest specific screening values used for groundwater, shallow soil gas, and indoor air and the State where each maximum or minimum is published are shown in Table 1 for three compounds of interest. There are significant differences from state to state as to what level of subsurface impacts will trigger further investigations. Over time, however, there has been reduction in the observed ranges for trichloroethene (TCE) and tetrachloroethene (PCE). As states continue to update their screening levels, the size of the range in values should tend to decrease.

A number of states addressed short-term exposures to TCE between 2012 and 2018, but since that time there has been relatively little action on the topic. The underlying science related to developmental health effects continues to be questioned and some organizations have moved away from basing risk management decision making policy on that research.

Mitigation is also an evolving topic with states increasing mitigation content year over year. For example, the number of states referencing differential pressure targets increased from 5 in 2018 to at least 16 today. Mitigation is discussed in more detail below.

VI continues to be an evolving practice and there continues to be relatively little consistency from state to state with regards to exactly what should be considered a significant VI pathway and how the VI pathway is addressed. For interested parties responsible for addressing sites in multiple jurisdictions, these variations in VI guidance and regulation pose challenges in providing a consistent approach.

Mitigation

State VI guidance tends to be detailed and at times prescriptive about how to screen a site, but often has little or no information about VI mitigation. Overall, a little more than half of the jurisdictions mention VI mitigation in their guidance document or as part of their overall site remediation program. If details are provided, common mitigation considerations include targeted differential pressure, vapor membrane thickness, design submission requirements and emission controls. A summary of VI mitigation information provided by states is included in Table 2.

There are now 16 states that recommend a targeted differential pressure for active sub-slab depressurization systems. The target values range widely, from a recommendation to 'demonstrate the presence of a negative pressure field' (Alaska, Indiana, Michigan) to 10 pascals (Pa) (California, DTSC). Varied differential pressure targets may reflect states' objectives to balance between system energy consumption and system effectiveness. At least nine states use or make accommodations for targeting a lower differential pressure of 1 Pa (0.004 inches of water) which would minimize system energy usage while still maintaining a measurable vacuum under the slab.

Details about vapor membranes also vary. Eleven states specify a recommended thickness of a vapor membrane, ranging between 3 and 100 mils, with most states (9 out of 11) having at least part of their accepted range falling between 30 and 60 mils. These recommendations may no longer reflect current vendor recommendations for barriers, as membrane thickness may not equate with effectiveness. Some states, like Georgia, note that membrane thickness may be more important for constructability than for VOC diffusion. At least 15 states record other factors that are important to successful implementation of membranes either instead of or in addition to stating a membrane thickness. These factors include specific VOC resistivity (e.g., documented membrane resistance to TCE), seam and

membrane termination construction (typically per manufacturers recommendations) and/or post-installation quality control testing (i.e., smoke testing) and documentation.

Active VI mitigation systems allow soil gas to be vented to the atmosphere. Mitigation systems installed at a given building are often not considered 'remediation' systems and states take various positions on if these emissions are significant and should be permitted or if they are de-minimis and/or should be exempt. Guidance on VI mitigation air emissions is often difficult to assess as emission regulations may fall under a separate state division or program. Fifteen states include information or references on emission rate thresholds (e.g., pounds VOCs/day, tons VOCs/year, etc.) that may trigger emission controls and/or permitting. Although some states note that most residential and small commercial systems are unlikely to need emission controls, only 3 states (Michigan, New Jersey, and New York) specifically note that either mitigation systems are exempt or specifically that systems at single family homes or other small residential buildings are exempt.

Most states that address mitigation do provide references to documents that can be used to support mitigation design. These documents typically include reference to the 2020 ITRC VI Mitigation Guidance Documents (ITRC, 2020), and several standard guides published and frequently updated by the Indoor Environments Association (formerly American Association of Radon Scientists and Technologists [AARST]) (AARST, 2023a, 2023b, 2023c, 2023d) and/or ASTM (ASTM, 2021a, 2021b). Some states also reference other state's guidance documents as additional resources for mitigation design. Lastly, mitigation guidance often specifies that designs be completed by experienced professionals. Seventeen states either want to approve proposed designs via state review or want responsible parties to work with experienced professional mitigators. Only seven of these states specifically look for designs to be stamped by professional engineers.

REFERENCES

American Association of Radon Scientists and Technologists (AARST). 2023a. *Soil Gas Mitigation Standards for Existing Homes.* SGM-SF-2023.

AARST. 2023b. *Soil Gas Mitigation Standards for Existing Multifamily, School, Commercial and Mixed-Use Buildings.* SGM-MFLB-2023

AARST. 2023c. *Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses - Rev. 5/23.* CCAH-2020-0523

AARST. 2024d. *Soil Gas Control Systems in New Construction of Multifamily, School, Commercial and Mixed-Use Buildings - Rev. 5/23.* CC-1000-2018-0523

ASTM. 2021a. *ASTM E2121-21, Standard Practice for Installing Radon Mitigation Systems in Existing Low-Rise Residential Buildings.*

ASTM. 2021b. *ASTM D8408/D8408M-21 Standard Guide for Development of Long-Term Monitoring Plans for Vapor Mitigation Systems*

Eklund, B., C. Regan, R. Rago, and L. Beckley. 2024. *Overview of State Approaches to Vapor Intrusion: 2023. Groundwater Monitoring & Remediation, 44, no. 3*, pp.76-93. Summer 2024.

ITRC. *Vapor Intrusion Mitigation (VIM).* December 2020. Website accessed on January 6, 2025 at: vim (itrcweb.org)

TABLE 1. RESIDENTIAL SCREENING LEVEL MINIMUMS AND MAXIMUMS FOR SELECTED VOCS

State	BENZENE			TCE			PCE		
	Ground Water	Shallow Soil Gas	Indoor Air	Ground Water	Shallow Soil Gas	Indoor Air	Ground Water	Shallow Soil Gas	Indoor Air
Cal. – DTSC	[0.42]	[3.2]	0.097	[1.2]	[16]	[0.48]	[0.64]	[15]	0.46
Cal. - RWQCB	0.42	3.2	0.097	1.2	16	0.48	0.64	15	0.46
Iowa	1,540	600,000	39.2	--	--	--	--	--	--
Michigan	1.0	110	3.3	0.073	67	2.0	1.5	1,400	41
Missouri	1,000	190,000	4.98	1,600	546,000	12.8	338	200,000	4.27
New Hampshire	2,900	170	3.3	20	20	0.4	240	400	8
New York	--	--	--	--	6	0.2	--	100	3
Oregon	210	72	0.36	200	95	0.47	3,700	2,200	11
Texas	--	--	11	--	--	2.1	--	--	64
Vermont	0.92	4.3	0.13	0.82	6.7	0.2	1.5	21	0.63
Range of Values	6,900x	190,000x	400x	22,000x	91,000x	64x	5,800x	13,000x	140x

Notes: (1) Units are µg/L for groundwater and µg/m3 for soil gas and indoor air. (2) The most conservative (i.e., lowest) screening value is shown for each category. See individual state guidance documents for additional information, including limitations and exceptions. (3) Values in brackets are inferred from the guidance but are not found directly in the published guidance. (4) Highest and lowest values for each chemical are color coded.

TABLE 2. SUMMARY OF MITIGATION GUIDELINES

State	Recommended Differential Pressure Target (range or min) (Pa)	Recommended Vapor Membrane Thickness (range or min) (mil)	Designer Qualification Assumptions	Emission Control Assumptions	Assumed Emission Threshold for Permit and/or Controls** (typically total VOCs)
Alaska	Measurable Vacuum	-	-	-	-
California - DTSC (2011)	4-10	60	PE	Emission based	-
California - RWQCB (2022)	4	30-60	PE	Emission based	Per Air Quality Management District
Colorado	5*	15-30	-	-	-
Delaware	-	-	-	Emission based	> 0.2 lbs/day
Georgia	1	30	QP	-	-
Illinois	0.75	60	-	-	-
Indiana	Measurable Vacuum	-	-	-	-
Maine	-	-	RRM	Emission based	By Compound
Massachusetts	3-5	40-100	QP	Emission based, specific to mitigation systems	> 100 lbs/year
Michigan	Measurable Vacuum	-	PE	Emission Based/ Residential Systems Exempt	By Compound
Minnesota	3 - 5	-	RRM or QP	-	-
Montana	-	3-6	PE	Initial Controls Needed	EPA RSLs
New Hampshire	-	-	RRM or QP	-	-
New Jersey	1	40	RRM or PE	Emission Based/ Residential Systems Exempt	>0.1 lbs/hour
New York	-	3-6	QP or PE	Systems Exempt	-
North Carolina	4*	-	PE	-	-
Ohio	5	10-60	-	Emission based	> 10 lbs/day
Oregon	-	-	PE	Emission based	By Compound
Pennsylvania	2-6	-	RRM	Emission based	> 2.7 tons/year
Tennessee	1	-	-	Emission based	>1,000 lbs/year
Vermont	2	-	-	Emission based	By Compound
Washington	-	-	PE	Emission based	By Compound
West Virginia	-	-	QP	-	-
Wisconsin	1	30	RRM or QP	Emission based	> 5.7 lbs/hr
Wyoming	-	-	QP	-	-
DC	-	30-60	-	-	-

NOTES:

** = Accommodations may be made if values are less than the recommended minimum differential pressure.*

*** = Values provided represent emissions stated in guidance or easily found via reference. Thresholds represent emission limit printed in guidance or regulation and represent values listed for groups of compounds (e.g., total VOCs, total hazardous air pollutants, etc.). Practitioners should verify values for site-specific scenarios.*

- = No significant information provided.

RRM = Registered Radon Mitigator (i.e., nationally and/or state recognized).

PE = Professional Engineer.

QP = Qualified Professional (i.e., holds a relevant degree or license or has applicable experience).

Vapor Intrusion (VI) Mitigation Specialist Credential

NRPP is developing the vapor intrusion (VI) mitigation specialist credential for qualified contractors whose work is compliant with established standards and who have met criteria for certification as defined in the Vapor Intrusion Mitigation Specialist job task analysis. NRPP needs help from those who perform/have performed or oversee/have overseen VI mitigation activities.

Why a VI Mitigation Credential?

Currently, the absence of a uniform approach to VI mitigation systems, as well as the lack of minimum criteria for entry into the profession or an indicator of proficiency in VI mitigation has contributed to several challenges in the VI mitigation industry across the US. The issues include unevenly applied standards, deviations from system design during construction of new structures, inadequate communication between designers, general contractors, and installers, the absence of installation documentation, and insufficient performance monitoring. It's been reported by environmental consultants and state regulators that the lack of fundamental and consistent understanding of system requirements and quality control requirements has resulted in inadequate mitigation systems and an increased potential for sub-standard and deficient system performance, and has created challenges for diagnosing system performance and developing remedies to poor system performance.

Only twenty states require compliance with standards for radon mitigation and most require compliance with the EPA-recommended ANSI-AARST standard. There is no parallel regulatory infrastructure for VI mitigation in any states, in part due to the absence of a system for determining proficiency.

VI mitigation contractors can enter the marketplace and offer mitigation services having no prior training or assessment of proficiency. Environmental firms, responsible parties, and others need to be able to identify VI professionals who are knowledgeable and skilled in the reduction of chemical vapor intrusion and installation of vapor intrusion mitigation systems. NRPP is addressing this need by creating a certification program for VI mitigation specialists.

The Certification Development Process

NRPP's certification development process began with a formal job task analysis (JTA) - a process by which a representative group of subject matter experts identified the essential elements of competent practice as a VI mitigation specialist. The JTA will be used to define the requirements for certification and, as such, it is critical that these elements are validated before being considered part of a certification program. NRPP is requesting feedback from current VI professionals, in the form of a survey, to learn the extent to which the tasks within the job task analysis are relevant to competent practice as a VI mitigation specialist. If you perform, have performed or oversee/have overseen VI mitigation activities, please complete **this JTA survey** and provide your input.

It is anticipated that the VI mitigation specialist certification will be available to personnel who are both qualified to perform mitigation and knowledgeable about Hazardous Waste Operations and Emergency Response but have not necessarily been trained or certified in radon mitigation (or measurement). Pilot testing for the VI Mitigation Specialist is expected to occur by the end of 2025.

PROVIDING SOLUTIONS FOR HEALTHIER INDOOR AIR & WATER

RADON FANS
VAPOR INTRUSION
TESTING PRODUCTS & LAB SERVICES
PROFESSIONAL TRAINING

RADONAWAY MOBILE APP

View prices, place orders, access invoices, manage favorites & more all from the field!

Download on the App Store
GET IT ON Google Play

800-767-3703 | radonaway.com

RadonAway®

Certification: Next Steps

The Job Task Analysis (JTA) surveys for the single-family measurement and single-family and commercial mitigation certification programs closed on January 31. NRPP would like to thank everyone who provided feedback and completed one or more of the surveys.

After NRPP compiles the results, they will be reviewed by each respective JTA committee who will use this feedback to finalize the JTA and discuss and identify requirements for each certification program. NRPP will then use the JTAs to begin developing test questions (items) for each program.

Item developers are responsible for writing, reviewing and approving questions that will be used on the exams. Although no prior experience in item development is required, participants must have knowledge of and experience with the subject (for example, commercial mitigation experience if writing for the commercial mitigation exam). Participation in this activity involves attending a remote item writing training, independently writing questions using an online item authoring tool, and attending an item review meeting during which the newly written items are reviewed, revised, and approved for use on an exam.

The many individuals who indicated an interest in participating in the upcoming exam development activities should receive additional information once the JTAs are completed. If you did not indicate your interest in the JTA survey or did not complete the JTA survey and are interested in participating, please complete this **Certification Volunteer application.**

As a reminder, NRPP's Commercial Measurement JTA and Vapor Intrusion Mitigation Specialist JTA are in progress. JTA validation surveys for these two programs will be available soon.

NRPP Awarded Continued ANAB Accreditation

Radon certification decisions are considered high-stakes, meaning that the outcome of the certification process – whether an individual is awarded or denied the credential – may have serious implications for the individual. Denying certification to someone who deserves to be certified can negatively impact that person's ability to find a job or continue working, and awarding certification to an incompetent individual can place the public's health at risk. For this reason, members of the public, employers, and other radon stakeholders should be able to trust that certification decisions are valid, reliable, legally defensible, that they reflect the requirements of the job and professional, competent practice, and that they are awarded by an organization that adheres to standards and best practices in credentialing.

Accreditation is a means of identifying such organizations. Accreditation involves evaluation of an organization by an independent third-party, in this case ANAB, against recognized standards. NRPP's accreditation to ISO/IEC 17024, Conformity assessment– General requirements for bodies operating certification of persons signifies that NRPP has met all requirements of the international standard for operating a certification program, is deemed competent to carry out its certification activities, and meets the global benchmark for quality certification.

NRPP's goal is to ensure its credentials mean what they are supposed to mean and do what they are supposed to do: identify individuals who possess the knowledge and skills necessary to effectively measure or mitigate radon to keep the public safe and protect their health and wellbeing. There are options for those who are considering a radon credential; certifying bodies who adhere to a set of standards and best practices in certification development provide credentials that are valid and reliable indicators of professional competence. ANAB accreditation to ISO/IEC 17024 is confirmation of NRPP's dedication and attention to quality.

Meet the NRPP Certification Council!

The NRPP Certification Council establishes credentialing criteria and complaint evaluation, decertification, and reciprocity policies. It consists of stakeholders representing a cross-section of industry segments.

ASHLEY FALCO	MARK UNGERER	DAVE KAPTUROWSKI	BRIAN HANSON	CHAD ROBINSON	DAWN GOARD	GREG JOHNS
Certification Council Chair	Council / Committee Member	IEA Technical & Science Committee	Radon Chambers	Radon Mitigation – Residential	Radon Mitigation – Large Buildings	Home Inspectors
Protect Environmental, LLC	Kansas Dept. of Health & Environment	RadonAway	Kansas State University	Building Performance Company	Consultant	TNergy Services, LLC

JOSEPH LYONS	OWEN REESE	DAWN COFFEE	ERIC GABRIELSON	CYNTHIA COSTELLO	TRYGGVE RÖNNQVIST	CHRIS LUTES
Radon Educator	Radon Device Manufacturers	Radon Measurement – Residential	Radon Measurement – Large Buildings	Non-certified States	Radon Laboratories	Chemical Vapor Intrusion
Environmental Consultants & Affiliates Network, LLC	Alpha Energy Laboratories, Inc.	Airthings	Landmark Environmental, LLC	NY State Dept. of Health	Radonova, Inc.	Jacobs

Certification Spotlight: Jorge Gonzalez

Location:
Miami Dade- The Treasure Coast

Title, Company:
Detcom Home Inspections Inc.

WHAT CERTIFICATION DO YOU HAVE?

FL Cert. Measurement & Mitigation Specialists, NRPP Radon Measurement Professional.

HOW LONG HAVE YOU BEEN WORKING IN RADON?

We have been offering radon services since 2016.

DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND HOW YOU GOT INTO RADON MITIGATION/ MEASUREMENT?

I got into the radon trade, just to add an additional service to our company. However, after the first class I fell in love with the topic and decided to gather more information from the Florida Health Department certification program and all the requirements to become certified. After that, my experience has been awesome, and it gets better every day; whether helping another family to determine radon levels at their home or solving radon issues.

DESCRIBE WHAT A TYPICAL WORKDAY LOOKS LIKE.

Besides the building and home inspections services that we offer to our clients, a typical workday for us is going out to visit clients for radon testing events (consulting) or to evaluate potential mitigation approaches at their places.

WHAT DO YOU LIKE ABOUT WORKING IN THE RADON PROFESSION?

What I like most about working in the radon profession is the actual testing process. It's worth the time I spend completing versus the outcome. The satisfaction of helping people is priceless.

ANY CHALLENGES SO FAR? IF SO, EXPLAIN.

Yes, we do have a big challenge while mitigating new constructions. Two common denominators are the soil compaction and air tightness of the structures. Here in Florida, new constructions are designed against major storms such hurricanes, modern homes are built so airtight and full of concrete with not enough air changes per hour which makes the radon stay inside the building and accumulate overtime.

South area (Miami-Broward) is where we most have the challenges; when it comes to active soil depressurization (ASD) systems in (SSD) these modern homes, it can become very challenging since the most recommended approach for radon mitigation nationwide doesn't work because of the poor soil permeability and very limited suction beneath the slab.

WHEN DID YOU FIRST GET CERTIFIED?

My first certification was back in 2016, when I got certified by the state as a radon tester technician.

WHY DID YOU GET CERTIFIED?

I did get certified to offer better services to my clients and keep up with all new technology and latest information of the industry.

WHY NRPP?

Last year I decided to become part of the awarded radon professionals by the NRPP.

The National Radon Proficiency Program is great, where the highest radon practitioners are like a family and where you can find the latest and more accurate information about radon. Not to mention that the NRPP has the highest standards for testing and mitigation protocol. The NRPP requires you to have your CEU credits on point before your renewal, which I think, makes you a better professional.

WHAT BENEFIT(S) DID CERTIFICATION BRING?

The certification puts me in a better position as a professional when it comes to competing with other locals companies which are not certified or do not have

the required certification to perform certain types of jobs.

ANY ADVICE FOR PEOPLE WHO ARE CONSIDERING A CAREER IN RADON?

If you are considering starting a new career in the radon profession, I would highly recommend getting certified and team up with other radon professionals. This is a beautiful journey where there is always something new to learn.

ANY ADVICE FOR PEOPLE WHO ARE CONSIDERING CERTIFICATION?

Do not procrastinate, get certified and do the right thing. You can make a huge impact in hundreds if not thousands of families in your community, city, or state. You can help prevent health issues and save lives.

UPDATE: Radon in Water Standards

Detailed methods to collect a representative water sample for dissolved radon in groundwater were developed into the ANSI-AARST standard (MW-RN 2020). Edits to update and resolve public and committee member comments are underway.

However, no standard exists for the installation, operation, and maintenance of a water mitigation system for radon reduction, and developing one has become the primary goal of the Radon in Water Standards Committee in 2025. Generally, when radon mitigation of a home water supply is desired, use of an activated carbon (AC) filtration system is applicable for lower concentrations, while aeration mitigation systems are applicable for any radon level.

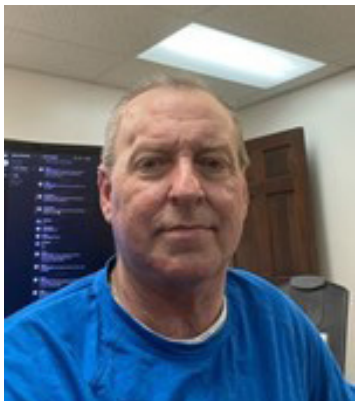
To date, the Committee has worked on drafting text regarding:

- Chemical and other substances in water and how some interact with each other to impact potable water quality, system operation and occupant safety.
- A Health and Safety section, largely similar to that currently in the standard on mitigation of radon in air (SGM-SF-2023), with attention paid to installation of another potentially back-drafting utility.
- Plumbing requirements, such as by-pass valves to isolate individual components for exchange or cleaning, also support Operation, Maintenance and Monitoring (OM&M) goals.
- Aeration system exhaust configurations to include:
    1. Requiring a separate dedicated exhaust.
    2. Methods (parts) to exclude entrance of external contaminants from entering the system through the exhaust port when not operating may have to be developed, and tested again freeze-up.
    3. A timer to complete aeration of reservoir water below 5000 pCi/L
- Activated carbon filtration systems discussion have included:
    1. The suggested maximum radon in water to be treated by AC
    2. Concern related to the practice of leaving "used" activated carbon for the homeowner to discard, since the contained activity can be significant (and detected by landfill monitors).
- Other emerging methods have to be addressed.

We thank the many highly experienced members of this committee in guiding the technical aspects of radon in water mitigation based on what is known and what we mutually learn during the consensus process.

ALA-IEA Partnership FFS Campaign

Mark Stopped Smoking and Improved His Overall Health, You Can Too!



Mark P. had smoked for more than 35 years when he finally decided it was time to quit. But he needed help.

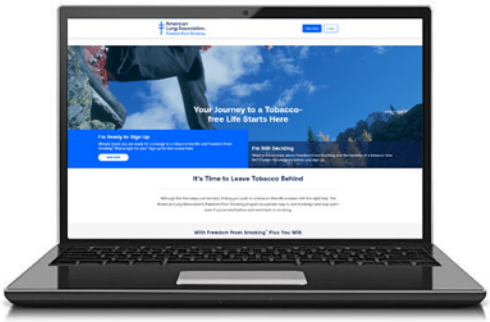
Mark lived with high blood pressure and heart problems for many years, resulting in four heart surgeries. During one procedure, he suffered a ruptured aortic aneurysm causing paralysis in his legs and leaving him unable to walk.

"I still continued to smoke for many years after that," said Mark. "My heart doctors would always talk to me about the effects of smoking on my heart and blood pressure, even giving me brochures on the Freedom From Smoking® Program, but I basically would just toss them aside." In 2002, he suffered a brain aneurysm and "continued to smoke, knowing I was walking a dangerous path because of my health issues."

Then one day he ran into a friend who worked at the local hospital where they offered the American Lung Association's Freedom From Smoking. Mark thought 'what the heck. I'll give it a shot. After all, what's the harm? If I decide I don't like it, I can always stop doing the program.' Understanding he still had control over what he did, rather than feeling forced or pressured to quit, he chose to commit himself to learning all the program had to offer so that even if this wasn't his time to quit, he'd have all of the tools needed to do it when he was finally ready.

"Well thank goodness I did," said Mark, "the program resulted in me smoking my last cigarette October 1, 2019, and I've been smoke-free ever since," said Mark. "I feel so much better. I breathe better and my blood pressure is the best it's been in over 30 years. I'm so glad I made the decision to give the Freedom From Smoking Program a shot."

Mark says he regularly recommends the program to friends and relatives, "and I'll continue to recommend it to anyone who wants to quit smoking. I enjoy telling my story to anyone, anytime. After all, I smoked for 35 years and here I am, five years smoke-free."



Quitting With Support

The Freedom From Smoking Program has helped more than one million individuals, like Mark, quit smoking over the past 40 years. The program, one of the most effective smoking cessation programs in the country, provides personalized, evidence-based and proven-effective cessation techniques to help individuals quit all tobacco products, including e-cigarettes and vaping devices.

It is widely known that smoking is the leading cause of preventable death in the United States. Quitting smoking is the single most important step radon and vapor intrusion professionals and their families can take to protect their health. While 70% of people who smoke want to quit, many face challenges in doing so without proper support. Comprehensive treatment plans, including behavioral counseling and FDA-approved cessation medications, have proven effective in helping people quit for good.

Through a special partnership of the American Lung Association and the Indoor Environments Association (formerly AARST), the Freedom From Smoking Program is available at no charge to radon and vapor intrusion professionals and their families. The program is self-paced and accessible through any digital device including your tablet, laptop or smartphone anytime day or night. Just like Mark, you can quit on your own terms. Learn more about the program and how to enroll at aarst.org/ala-ffs/ or scan the QR code to begin your quit journey today.

Home Inspector Convicted of Violating NJ Radon Certification Law

A home inspector pleaded guilty in January 2025 to performing radon testing services without the NJ-required certification and other violations of the state's radon statute and regulations. The individual was sentenced to 90 days in jail and three years' probation, fined $7500, required to pay $10,385 restitution to defrauded customers, and banned for life from performing radon measurement or mitigation services in NJ.

In the process of testing more than 140 homes across 16 NJ counties over two to three years, after placing a CRM test device, the home inspector would retrieve the device when leaving the home on the same day at the end of the home inspection (the primary reason for the visit).

5.0 TESTING PROCEDURES AND OPTIONS

5.1 Detector Deployment Periods

5.1.1 *Test Phase*

When testing more than one location, all areas and levels of the home being tested shall be tested such that the testing periods overlap by a minimum of 46 hours.

Note—Be it the initial testing phase, follow-up, or post-mitigation testing, comparing test results taken at the same time in different locations can be critical for confidence in reliable testing.

5.1.2 *Short-Term testing*

While deployment periods should optimally collect at least 48 hours of valid sampling time, deployment periods are required to be not less than 46 hours. For test durations of 2 to 90 days, testing is to be conducted under closed-building protocol conditions in accordance with Section 4.

Note—If a short-term test is longer than 2 days, it is best to terminate the test at a 24-hour increment from when the test was started to account for day-to-night fluctuations in radon entry.

This disregard for the ANSI-AARST measurement standard's minimum 46-hour radon measurement device exposure time, and most likely the device manufacturer's instructions, not only violated the state's radon statute and regulations but moreover jeopardized the health of all who have resided and will reside in the 140 homes that were "tested" for radon. The NJ probation agency has offered restitution to the homeowners and referred them to NJ DEP to identify professional radon testing services.

In response to an internet review from a homeowner complaining about this home inspector's two-hour radon test duration, the home inspector wrote:

> *I have the [REDACTED] that provides an accurate testing report. The radon levels came in well below the actionable level, and the dwelling has a radon mitigation system already installed. Despite that, the customer requested an additional radon test days after the inspection as suggested by his realtor and attorney. I said I would do the additional test and was only going to charge the lab fee and my mileage. The customer then threatened to write a poor review of my services unless I provided him with the free additional test. I am a professional and take pride in my work. I gave this customer a lot of my time; my time is valuable, and it is unreasonable to demand an additional superfluous free service.*

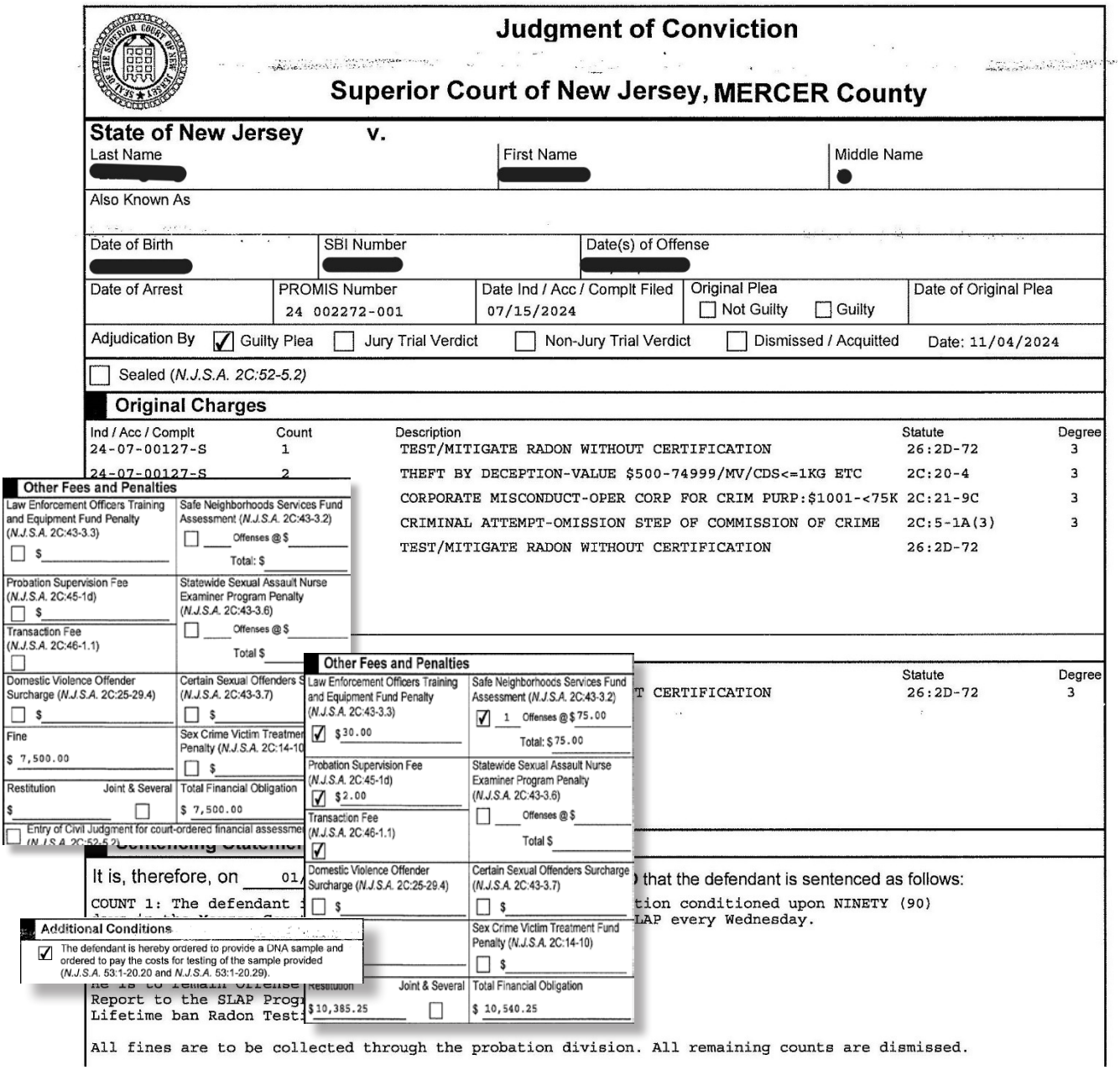
Chuck Renaud, New Jersey Radiation Program Supervisor, said: ""Becoming certified in New Jersey is not a difficult process and it's hard for me to understand jeopardizing human health in order to make a few bucks! We found out about this person purely by accident, but since then we have found some others who are now being investigated. The only way that uncertified individuals or those testing against protocols can be confronted is if someone questioning

the work contacts the Radon Section. Fraudulent activity is not fair to those who are following the rules. Our website, NJradon.org, is the place to go for all certification questions."

Among aggravating factors in sentencing, the Mercer County Superior Court Judge Gibbs noted, "The imposition of a fine, penalty or order of restitution without also imposing a term of imprisonment would be perceived by the defendant or others merely as a cost of doing business, or as an acceptable contingent business or operating expense associated with the initial decision to resort to unlawful practices."

Ashley Falco, President of New Jersey IEA, said: "It's unfortunate when bad actors take advantage of the public. These fraudulent radon services may have led consumers to make misinformed decisions regarding their health. Hopefully, this incident will deter unlicensed/uncertified individuals and/or anyone not following the ANSI-AARST Radon Standards and State regulations from offering radon services to the public. When performed correctly by licensed/certified professionals, radon testing and mitigation saves lives."

This crime underscores the need for full regulation of all third parties who test homes for radon for compensation, whether in the process of selling home inspection services or as a free-standing test, and for proactive compliance and enforcement measures.



Judgment of Conviction

Superior Court of New Jersey, MERCER County

State of New Jersey v.

Last Name	First Name	Middle Name
[redacted]	[redacted]	[redacted]

Also Known As

Date of Birth	SBI Number	Date(s) of Offense
[redacted]	[redacted]	[redacted]

Date of Arrest	PROMIS Number	Date Ind / Acc / Complt Filed	Original Plea	Date of Original Plea
	24 002272-001	07/15/2024	☐ Not Guilty ☐ Guilty	

Adjudication By ☑ Guilty Plea ☐ Jury Trial Verdict ☐ Non-Jury Trial Verdict ☐ Dismissed / Acquitted Date: 11/04/2024

☐ Sealed (*N.J.S.A. 2C:52-5.2*)

Original Charges

Ind / Acc / Complt	Count	Description	Statute	Degree
24-07-00127-S	1	TEST/MITIGATE RADON WITHOUT CERTIFICATION	26:2D-72	3
24-07-00127-S	2	THEFT BY DECEPTION-VALUE $500-74999/MV/CDS<=1KG ETC	2C:20-4	3
		CORPORATE MISCONDUCT-OPER CORP FOR CRIM PURP:$1001-<75K	2C:21-9C	3
		CRIMINAL ATTEMPT-OMISSION STEP OF COMMISSION OF CRIME	2C:5-1A(3)	3
		TEST/MITIGATE RADON WITHOUT CERTIFICATION	26:2D-72	

Other Fees and Penalties

Law Enforcement Officers Training and Equipment Fund Penalty (*N.J.S.A.* 2C:43-3.3) ☐ $	Safe Neighborhoods Services Fund Assessment (*N.J.S.A.* 2C:43-3.2) ☐ ___ Offenses @ $ ___ Total: $
Probation Supervision Fee (*N.J.S.A.* 2C:45-1d) ☐ $	Statewide Sexual Assault Nurse Examiner Program Penalty (*N.J.S.A.* 2C:43-3.6) ☐ ___ Offenses @ $ ___ Total $
Transaction Fee (*N.J.S.A.* 2C:46-1.1) ☐	
Domestic Violence Offender Surcharge (*N.J.S.A.* 2C:25-29.4) ☐ $	Certain Sexual Offenders S (*N.J.S.A.* 2C:43-3.7) ☐ $
Fine $ 7,500.00	Sex Crime Victim Treatmen Penalty (*N.J.S.A.* 2C:14-10 ☐ $
Restitution $ ___ Joint & Several ☐	Total Financial Obligation $ 7,500.00

☐ Entry of Civil Judgment for court-ordered financial assessme (*N.J.S.A.* 2C:52-5.2)

Other Fees and Penalties

Law Enforcement Officers Training and Equipment Fund Penalty (*N.J.S.A.* 2C:43-3.3) ☑ $ 30.00	Safe Neighborhoods Services Fund Assessment (*N.J.S.A.* 2C:43-3.2) ☑ 1 Offenses @ $ 75.00 Total: $ 75.00
Probation Supervision Fee (*N.J.S.A.* 2C:45-1d) ☑ $ 2.00	Statewide Sexual Assault Nurse Examiner Program Penalty (*N.J.S.A.* 2C:43-3.6) ☐ ___ Offenses @ $ ___ Total $
Transaction Fee (*N.J.S.A.* 2C:46-1.1) ☑	
Domestic Violence Offender Surcharge (*N.J.S.A.* 2C:25-29.4) ☐ $	Certain Sexual Offenders Surcharge (*N.J.S.A.* 2C:43-3.7) ☐ $
	Sex Crime Victim Treatment Fund Penalty (*N.J.S.A.* 2C:14-10) ☐ $
Restitution $ 10,385.25 Joint & Several ☐	Total Financial Obligation $ 10,540.25

Additional Conditions

☑ The defendant is hereby ordered to provide a DNA sample and ordered to pay the costs for testing of the sample provided (*N.J.S.A.* 53:1-20.20 and *N.J.S.A.* 53:1-20.29).

Report to the SLAP Progr
Lifetime ban Radon Testi

All fines are to be collected through the probation division. All remaining counts are dismissed.

Evidence-Based Interventions for Preventing Radon-Induced Lung Cancer

Across the US, state and tribal cancer control coalitions identify how to address the burden of cancer in their geographic area and develop multi-year plans to implement effective cancer control strategies. Its Comprehensive Cancer Control Plan (CCCP) serves as each state's blueprint for advancing practices and policies that will reduce cancer risk. Since 1998, CDC's National Comprehensive Cancer Control Program (NCCCP) has provided funding, guidance, and technical assistance to support these impactful, strategic, and sustainable plans to prevent and control cancer.

Although many CCCPs mention radon, few include systematic approaches to population-wide radon risk reduction. A work group of the National Radon Action Plan (NRAP) Leadership Council, which includes leaders from federal and state agencies, ALA, IEA and other nonprofit organizations, developed this list of Evidence-Based Interventions (EBIs) to supply cancer prevention leaders in every state with a checklist of radon risk reduction actions to add to their plans. The list is organized to demonstrate the interventions' alignment with the NRAP's goals.

Goal	Recommended Evidence-Based Interventions
Build in Radon Risk Reduction Maximize risk reduction for all buildings by testing, sharing information about and reducing radon risks through repairs when building transactions occur between homeowners or between landlords and renters, or when repairs and rehabilitations and construction projects are financed.	• Promote laws and policies that require radon notification, warning statements and disclosure during real estate sales and rental transactions. • Educate real estate professionals, home inspectors and builders about notification, disclosure and testing requirements. • Encourage lending entities (e.g., housing, finance, and insurance industries) to require radon testing and mitigation in all residential, educational, and commercial buildings. • Promote legislation requiring that building codes include ANSI-AARST or Appendix F radon standards. • Encourage policies and codes that require all existing buildings to be tested for radon and mitigated as needed. • Promote radon testing requirements for schools and childcare settings.
Support Radon Risk Reduction Focus on the critical need for increasing access to government-backed and other sources of housing financing, identifying new funding sources and help for states and tribes to fund radon controls in all buildings, and directing cancer prevention resources toward radon risk reduction.	• Provide or secure funding to offset the cost of radon mitigation in low wealth communities. • Promote use of Community Development Block Grants to support radon testing and mitigation in low wealth communities. • Educate mortgage lenders and property owners about available funding sources for radon services. Collaborate with cities and housing departments to develop initiatives that provide financial assistance for radon testing and mitigation. • Provide grants or loans to community-based organizations providing low cost/no cost radon mitigation in low wealth communities. • Promote radon training and certification to home rehabilitation and repair service providers.
Build Capacity to Test and Mitigate Using Professional Radon Services Spread recognition of the standards and facilitate identification of a qualified workforce by aligning current credentialing approaches to one quality standard.	• Support policies to require radon testing and mitigation be conducted in accordance with the consensus radon standards. • Promote policies to require radon testing and mitigation be done by professionals certified by an EPA-recognized proficiency program. • Educate mortgage lenders, home inspectors, housing providers and the public about the availability of certified measurement and mitigation professionals.
Increase Awareness of Radon Risk and Control Strategies Address historic inequities in knowledge of radon risk and opportunities for risk reduction through increased engagement of intermediaries with responsibility for protecting constituents' health in homes, workplaces, schools, and childcare.	• Partner with home inspectors and real estate agents to educate clients regarding benefits of radon testing and mitigation. • Educate healthcare providers about radon- induced lung cancer and the importance of testing and mitigation in lung cancer prevention. • Distribute informational radon materials to healthcare providers and lung cancer screening centers to share with lung cancer patients and families. • Develop and disseminate culturally tailored resources on radon risk and control strategies.

Improving the Odds That the IRC Radon Appendix Will Protect Occupants From Radon

The International Code Council (ICC) will consider changes to the International Residential Code (IRC) between April 2025 and April 2026. Numerous state and local jurisdictions have adopted IRC Appendix F, which was renamed Appendix AF in 2021, and renamed Appendix BE in the 2024 code.

Since 2009, advocates for lung health and healthy homes have sought to amend the Radon Appendix.

This year, four proposals to improve the appendix have been submitted. The proposals will be heard by the ICC Residential Code Committee at an ICC conference in Orlando April 27 – May 6. This committee consists of four code officials, four representatives of the National Association of Home Builders, a representative of the International Association of Fire Chiefs, a representative of the American Institute of Architects, and two general interest. If needed, advocates will submit public comments in July to amend/defend the four proposals, and these proposals will be heard by the same committee at an ICC conference in Cleveland in October. Ultimately, ICC members who are code officials will decide if the proposals go into the 2027 IRC through a final hearing in April 2026 and online voting.

FOUR PROPOSED CODE CHANGES AND REASON STATEMENTS

1. Removal of EPA Map of Radon Zones and Zone 1 County List

Revise as follows:

IRC BE101.1 General. This appendix contains requirements for new construction in jurisdictions where radon-resistant construction is required**. ~~Inclusion of this appendix by *jurisdictions* shall be determined through the use of locally available data or determination of Zone 1 designation in Figure AF101.1 and Table AF101.1.~~**

Delete without substitution: FIGURE BE101.1, TABLE BE101.1

~~a. The EPA recommends that this county listing be supplemented with other available state and local data to further understand the radon potential of a Zone 1 area.~~

Reason Statement: The EPA map and Zone 1 county list are based in part on a 1993 survey that measured radon in 5694 homes, less than two per each of the 3141counties in the US. As more recent data have been compiled by states and the US Centers for Disease Control and Prevention, it is evident that more counties have homes that exceed the EPA action level.

Radon Zone 1 counties are defined as having a predicted year-round average indoor radon screening level in the lowest livable area of a structure greater than or equal to four picocuries per liter of air (pCi/L). Relying on an average radon level does not address the full range of risk within a given county. Levels greater than 4 have been found in 85% of US counties tested.

Restricting localities as to when or how they may include the appendix("shall be determined through") can cause this appendix to conflict with local authority. While opponents may suggest otherwise, deleting the county information does not impose a requirement for adoption in Zones 2 and 3.Appendix BE will remain an optional appendix that is only in effect where the jurisdiction has adopted it.

The purpose of the EPA radon zone map, since its inception, has been to show potential of risk not ACTUAL risk. While it is still a useful tool, the map unintentionally creates a false sense of security for those in Zone 2 and Zone 3 that risk in those areas is non- existent. The fact remains that radon is found in all zones and to truly protect against radon you need to test regardless of zone.

Cost Impact: The change proposal is editorial in nature or a clarification and has no cost impact on the cost of construction. Removing a reference will have no impact on cost. Appendix BE is an optional requirement that can be

adopted by a jurisdiction.

2. Vent Pipe - Attach Horizontal Perforated Pipe to Tee Fitting

Revise as follows:

BE103.6.1 Vent pipe. A minimum 3-inch-diameter (76 mm) ABS, PVC or equivalent gastight pipe shall be embedded vertically into the subslab aggregate or other permeable material before the slab is cast. A "T" fitting or equivalent method shall be used to ensure that the pipe opening remains within the subslab permeable material**, and not less than 5 feet (127 cm) of perforated pipe or geotextile matting shall be connected to each of the horizontal openings of the tee fitting. ... Above ground pipe material shall comply with Section P3002.1.**

BE103.5.3 Vent pipe. A plumbing tee or other *approved* connection shall be inserted horizontally beneath the sheeting and connected to a 3- or 4-inch-diameter (76 or 102 mm) fitting with a vertical vent pipe installed through the sheeting**, and not less than 5 feet (127 cm) of perforated pipe or geotextile matting shall be connected to each of the horizontal openings of the tee fitting. ...Above ground pipe material shall comply with Section P3002.1.**

Reason Statement: This proposal provides a soil gas collector and keeps open the horizontal openings in the tee fitting for both sub-slab and sub- membrane (crawl space) installations. The tee fitting is a suction point through which radon gas is pulled from below the building into the vertical vent pipe.

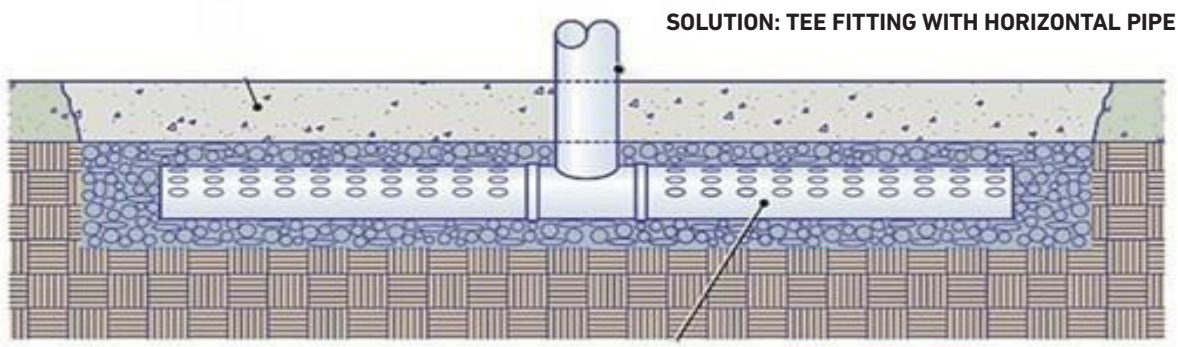
If no pipe is present to protect the side openings in the tee fitting from filling with concrete (when the slab is cast) or aggregate, the above ground pipe cannot vent radon from below the structure to the outside.

This proposal also clarifies that the material requirement shall be consistent with IRC Chapter 30.

Attaching five-foot long perforated piping to tee fittings is required by the USEPA recommended standards for both sub- slab and sub-membrane systems.

PROBLEM:
TEE FITTING OBSTRUCTED BY AGGREGATE

SOLUTION: TEE FITTING WITH HORIZONTAL PIPE



Cost Impact: Increase. The typical cost for a ten-foot long perforated pipe with a four-inch diameter is $16-20. This pipe will be cut in half and each half attached to a horizontal opening in the tee fitting.

3. Vent pipe accessibility for future radon fan

Revise as follows:

BE103.8 Vent pipe accessibility. Radon vent pipes shall be accessible for future fan installation through an *attic* or other area outside the *habitable space*. **The pipe shall be centered in an unobstructed cylindrical space having a height of not less than 36 inches (91 cm) and a diameter of not less than 21 inches (53 cm) in the location where the fan would be installed.**

Exception: The radon vent pipe need not be accessible ~~in~~ **within** an *attic* space where an *approved* ~~roof-top~~ electrical supply is provided for future use **on the roof top or other area outside the habitable space.**

Reason Statement: This change reserves adequate space in the attic for future installation of a radon fan. This language allows for easier system activation as it requires ample working room to install a fan and eliminate the abandonment of existing vent pipes that are inaccessible due to their location in an outside wall or near the gable end of a house. This is a common field failure where the pipe is run too close to the eave or outside walls. If the existing pipe system needs to be abandoned, then an additional roof penetration will be necessary and the old penetration closed and sealed.

Similar language has been part of the Minnesota Building Code (MN Code 1303.2402 subpart 5 (D)) for over a decade and has allowed for many thousands of passive radon control systems to be installed with far fewer complaints from contractors needing to add a fan. The proposed language solved one of the most common complaints our radon program would receive from our radon contractors. Having to spend less time installing the fan because of these new yet simple accessibility requirements ultimately saves fan installation costs. This language also appears in the USEPA Recommended RRNC 2020 Rev 10/22.

Cost Impact: The change proposal is editorial in nature or a clarification and has no cost impact on the cost of construction. This proposal defines a volume of space in an attic location where a radon fan can be installed, if necessary. No new material costs are added, however, the defined volume space requirement assists with proper pipe layout design to facilitate any future fan installation. This can lead to future costs savings for the occupant.

4. Alternative Method: Radon Control

Revise as follows:

BE103.1 General. The following construction techniques are intended to resist radon entry and prepare the building for post-construction radon mitigation, if necessary (see Figure BE103.1). These techniques are required in areas where designated by the jurisdiction. **Radon control systems shall comply with Sections BE103.2 through BE103.12 or ANSI/AARST RRNC.**

Add new text as follows:

TABLE 105.1 REFERENCED STANDARDS ANSI/AARST RRNC 2020 Rev.10/22 Rough-in of Radon Control Components in New Construction of 1 and 2 Family Dwellings and Townhouses

Reason Statement:

Adding the ANSI/AARST RRNC standard as an alternative method allows the builder to fulfill a jurisdictional requirement for radon control by following an EPA-recommended voluntary consensus standard for radon control system components in new dwelling units. Its more detailed guidance can assist builders in the successful installation of radon systems, preventing high radon levels and reducing buyer callbacks.

The standard has been developed and is maintained by a diverse group of stakeholders representing not only radon experts but also home builders, design professionals, state government, federal agencies, and public health leadership. The Commonwealth of Massachusetts allows a similar ANSI/AARST new construction standard as an alternative to its statewide building code's version of IRC Appendix BE.

ANSI/AARST RRNC supports code officials, building inspectors, and other parties who inspect system components installed under the standard with a visual review checklist in the companion guidance.

This standard can be viewed at no cost on the Standards Consortium's website.

Cost Impact: The change proposal is editorial in nature or a clarification and has no cost impact on the cost of construction**.** Since this alternative method would not be required, there is no inherent change in the cost of construction.

PROPONENTS

The co-proponents of the four proposals are Tommy Bowles, Environmental Protection Agency; Kyle Hoylman and Jane Malone, Indoor Environments Association; Josh Kerber, E25 Committee of the Conference of Radiation Control Program Directors and Minnesota Department of Health; Ruth McBurney, Conference of Radiation Control Program Directors; Kevin Stewart, American Lung Association; and Jonathan Wilson, National Center for Healthy Housing.

An Explanation of Radioactive Equilibrium

Michael Kitto

Radioactive secular equilibrium occurs when the half-life of the parent isotope is much longer than the half-life of the progeny. As the decay rate of the parent isotope, and hence the production rate of the progeny, occurs at a constant rate, eventually the progeny decay rate equals the production rate, and the activities reach a constant value. In our case, radium-226 is the long-lived parent (half-life 1600 yr), followed by radon and its radon decay products (RDPs). In solids, when radon is created it is either trapped until it decays, or it may be able to migrate through the particle matrix and escape into the open air before it decays back to a solid atom (e.g., Po-218). The "freed" radon disrupts the equilibrium, resulting in a lower concentration of the RDPs in the matrix. The radon that is created on or near the particle surface is much more likely to escape into the air than the radon trapped inside the matrix. The portion of radon that escapes into the air is termed "emanating fraction" and generally ranges from 0.1-0.3 for soils. Alternatively, 70-90% of the radon decays in the solid matrix.

In indoor-air environments, radon professionals recognize the term "equilibrium ratio" (ER) as the fraction of RDPs relative to the amount of radon gas and generally assign a value of 0.4-0.6 due to removal mechanisms such as plate-out of the RDPs. Occurrence of true radioactive equilibrium of the decay series (from uranium to lead) occurs in undisturbed rock and soil, but seldom elsewhere, as radon escapes when possible. When equilibrium occurs, every isotope in the decay series has the same amount of activity (pCi), thus it is only necessary to measure any radioisotope in the series to arrive at the value for the other decay products. Once radon is allowed to disperse, the equilibrium is broken, and only sealing against radon loss, and time, will permit equilibrium of the RDPs to re-establish. Upon sealing (no radon loss), equilibrium with its parent (radium-226) takes almost a month as the radon production occurs with a 3.82-day half-life reaching 99% equilibrium with the parent radium in that time. As radon production is predictable, by using the date and time that a sample is sealed airtight, the radon equilibrium (ingrowth) factor can be used to estimate the activity at any time without requiring the full (30-day) period.

In contrast, RDP equilibrium with radon is established quickly through a series of short-lived half-lives. The time required to establish equilibrium of the RDPs in a charcoal canister is governed by the Pb-214 and Bi-214 (half-lives of 29 and 20 minutes, respectively) for gamma measurements as well as the alpha-emitting Po-218 and Po-214 isotopes detected by continuous radon monitors. Thus, once the radon is collected as a grab sample or onto charcoal, at least 3 hours (six half-lives) is commonly allowed for RDPs to re-establish equilibrium with the trapped radon so that count rates are maximized and counting error minimized.

The degree of radon equilibrium in effluent is important in regard to exposure and dose. Active subslab depressurization (SSD) systems extract soil gas containing radon, RDPs, and moisture. The ER of the emission is likely low due to air movement, but as several alpha-emitting isotopes exist in the effluent, disposal above the roof line is warranted. As a vast majority of the dose is from the RDPs, and not the radon itself, the ER value is important regarding dose. In contrast, emissions from water aeration systems contain only radon gas, without RDPs, and pose less risk upon exit from the stack than SSD systems – since an absorbed dose received from alpha-particle radiation is 20 times more damaging to living tissue than beta or gamma radiation.)

A state of radioactive equilibrium from the uranium parent through radium occurs in natural materials, such as granite, before the radon is formed and some may escape. However, there are cases where the uranium-to-radium radioactivity is not in equilibrium. Antique items such as orange Fiestaware and green Vaseline glass have a substantial gamma-ray emission from the uranium oxide coloring ingredient, which is initially devoid of decay products. As the uranium has not decayed anywhere near long enough to re-establish equilibrium of the decay series, there is no radon emission from these household products.

IEA Board Retreat

The 2025 Indoor Environments Association (IEA) Board Retreat took place March 20–22 at the Maritime Conference Center in Linthicum, MD, with most board members attending in person and others joining remotely. A significant portion of the retreat was dedicated to a comprehensive SWOT (Strengths Weaknesses Opportunities Threats) analysis, which served as the foundation for shaping updates to the organization's strategic plan amid dynamic industry changes. The analysis provided critical insights into IEA's current position and future trajectory, guiding discussions on certification programs, the Symposium, the AARST Consortium, NRPP, committee updates, and advocacy efforts. Government affairs updates highlighted the impact of state and federal policies on IEA's operations, emphasizing the importance of continued advocacy. Radon remains the primary focus of the association, with a growing emphasis on vapor intrusion, reflected in the continued integration of standards and new proficiency efforts. At the retreat, IEA also recognized the vital role of partner agencies and public servants whose expertise and persistence have made a lasting impact on public health. Continued collaboration and full funding of EPA radon programs, along with related efforts at CDC and HUD, are essential to ensuring safe indoor air for all Americans. The retreat concluded with the approval of the 2025 Strategic Plan, reaffirming the organization's commitment to integrity, member support, and long-term growth.

Call for Nominations: Indoor Environment Association Awards

IEA invites nominations for six Association Awards that recognize Radon and Vapor Intrusion Community Leaders who advance the profession. Please consider supporting your colleagues, employees, and community members by making them candidates for an award. **Submit Nominations Here.** Deadline is June 30, 2025.

2025 Awards

1. **Jack Bartholomew Award (est. 2014) –** for recognized excellence in the field of professional radon education.
2. **Governance Award (est. 2006) –** for significant leadership contributing to the Association's governance.
3. **Elizabeth Hoffman Award (est. 2014) –** for advocacy by a citizen-advocate contributing to risk reduction awareness and/or radon policy.
4. **Radon Community Impact Award –** to recognize an industry partner (e.g., real estate agent/ broker, builder, home inspector, state radon program official, public housing authority, journalist, etc.) who advocated for radon awareness in their community. (Standing Annual Award)
5. **Radon Community Policy Award –** to recognize an individual (e.g., federal, state, or local policymaker) who has an impact on radon policies in our country.
6. **Chapter Leadership Award –** to recognize an individual leader or the entire Chapter. (Standing Annual Award)
7. **IEA Science / Applied Science Award –** to recognize a significant accomplishment in the advancement of indoor environmental health.

Registration Now Open for Indoor Environments 2025 Radon & Vapor Intrusion Symposium!

The Indoor Environments 2025 Radon & Vapor Intrusion Symposium is set to take place in Fort Worth, Texas, at the Omni Hotel from October 26-29, 2025. This premier international event gathers experts, professionals, and stakeholders from around the world to explore the latest advancements in radon measurement, mitigation, and vapor intrusion. With a 38-year legacy of impactful discussions and innovative solutions, the symposium continues to serve as the primary meeting platform driving the industry forward.

A Dynamic and Engaging Experience

Attendees will have the opportunity to participate in insightful presentations, engage with cutting-edge research, and gain hands-on exposure to the latest technologies in the bustling exhibit hall. The symposium fosters a collaborative environment where networking and knowledge-sharing thrive.

It is anticipated that key partners and stakeholders including State Radon Programs, Tribal Organizations, the U.S. Environmental Protection Agency (EPA), and the Conference of Radiation Control Program Directors (CRCPD) will be actively involved, contributing to critical discussions and shaping future policies.

Fort Worth: A Perfect Host City

Beyond the symposium, attendees can enjoy the vibrant downtown Fort Worth, known for its rich history, cultural attractions, and world-class dining and entertainment. Whether exploring the Fort Worth Stockyards, Sundance Square, or local museums, there is something for everyone in this dynamic city.

Four Key Symposium Tracks

To maximize learning and engagement, the symposium is organized into four focused tracks:

Practice and Policy – Addressing regulatory updates, best practices, and policy initiatives.

Vapor Intrusion – Exploring the latest developments and challenges in vapor intrusion assessment and mitigation.

Science and Research – Showcasing cutting-edge studies and technological advancements.

States and Tribes – Highlighting programs, challenges, and success stories from state and tribal organizations.

Call for Presentations

The Symposium Committee has been accepting proposals for 20-minute presentations on topics such as original research, emerging methods, best practices, and policy solutions. This is an excellent opportunity for professionals and researchers to showcase their work to an engaged audience. The deadline for submission: April 1, 2025.

Education

In addition to the quality presentations shared during the symposium sessions, Indoor Environments offers continuing education courses (at extra fee) on Sundays pre-symposium. These courses, hosted by IEA, attract the most in-demand and often unique courses trainers are developing just for the symposium. Trainers run their own courses and distribute all students' course completion certificates for Sunday courses.

Register Today!

Don't miss out on this opportunity to be part of the leading radon and vapor intrusion event of the year! Register now to secure your spot and join industry leaders in shaping the future of indoor environmental health. Register here: https://aarst.org/symposium/tickets/ We look forward to seeing you in Fort Worth in October!

New IEA Members

November
Alexander M St.Clair (CO), Andrew R Budway (MA), Jared Zenger (UT), Michael Wallace (VA), Stephen D Smith (AZ)

December
Alfred Steinki (), Christopher D Rust (IN), CRAIG CUGINI (MI), Ellen Bennett (FL), George Haas (TN), Perrin Hendrick (MA), Travis Thomas (IN)

January
Alexander Hejza (IL), Barry Barnett (OK), Ben Miller (IL), Carmen Mihaileanu (IL), Chris Beatty (OH), Cory Savage (CO), David Moench (OH), Elena Jacques (NH), Eli Barnett (OK), Ian P Dorman (AK), Jesse Cox (CO), Joshua Osborne (CA), Larry Test (IL), Luke Anglea (IL), Mary Butow (NH), Michael J Crandall (MI), Peter Oldmixon (CO), Steven ODonnell (MI), TRAVIS PETERS (IA), Walter Widdis (MT)

New NRPP Certified Professionals

November
Adam Simiele (IA), Allison Burleigh (NH), Ann McDowell (IN), Anthony G Esposito (IN), Benjamin L Mitchell (ID), Benjamin T Schlanger (VA), Brian Johnson (NY), Christian Coleman (CO), Cole M Martin (GA), Cruz Trujillo (AR), David A Fletcher (TN), David Krajicek (CO), David Rhea (CA), Deontae Dodd-Hrobowski (IL), Erik Pile (AR), Falco J. Bruno (VA), Gary L Horwood (MI), Jacob Landfair (MO), Jake Griffith (IN), James Stanton (TN), Jeffrey Burlison (UT), Johann Bates (CO), Jorge L. Gonzalez (FL), Justin D Webster (CO), Kelvin R Franklin (TX), Kerestyn N Hall (IL), Kevin Rex Cayaon Clay (NC), Lanie J Dakin (NV), Lori A Bullock (MO), Lucas Mouttet (CO), Matthew J Koegler (IL), Nicholas G Sapio (VA), Nicholas J Guyett (NY), Nicholas Proia (TN), Owen E Griess (CO), Paul Baumann (MA), Ramon Escamilla (CO), Raul Rodriguez (CO), Ryan Mandel (CA), Rylee G Hiles (IN), Samuel E Surette (IN), Steven Maloney (KS), Thomas S Knouse (CA), Todd Kennedy (TN), William Strasburg (CO)

December
Aaron M Mauck (IN), Abe Mendez (NC), Arthur Hohenberger (NC), Arthur Taufen (CO), Chad Warhold (PA), Christopher D Rust (IN), Christopher Davis (CO), Christopher K Barbeau (NM), Conner Newton (MN), Emmanuel Ortiz-Soto (TX), Garrett A Ward (CO), Garrett S Monty (NJ), Hunter B Coates (FL), James E Maher (IN), Jason Burt (ID), Jay Cudmore (CA), Julia Mercier-Lords (CO), Justin G Davis (VA), Kailee M McCoy (AZ), Katherine Hall-Wurst (NC), Keiani Smith (TX), Logan Loftus (IA), MARTHA CAROLINA CORTES ORTIZ (AZ), Martha H Lahti (CO), Martin M Ivey (NC), Matthew Scheffler (TN), Mouhammad Alharis (MI), Natalie M Pangilinan (CA), Patrick Hayes (VA), Peter Soriano (NJ), Phoenix T Dorr (CA), Robert Pantoja (CO), Robert W Smith (KY), Ryan E Luther (NH), Stephen Villoldo (FL), Trevor Michaelis (UT), Veronica Meij (CO), William C House (NC)

January
Alexander Wozniak (CO), Amy Muller (CT), Andrew Nishio (CA), Andrew R Budway (MA), Andrew Reiblein (IN), Anthony Mileto (NY), Arthur Taufen (CO), Benjamin Engleman (AL), Brandon G Thomson (NC), Brandon L Teets (VA), Brian Walker (MI), Casey S Laudick (CO), Claire W Asmussen (CO), Cristina Q Singleton (TX), Cyndi Meadors (TX), Daniel Frayman (CA), David M Aldridge (KY), Devin E Clary (AZ), Douglas Macdonald (WY), Elijah Bammann (IN), Gared L Edmunds (KY), George Haas (TN), Greg Orr (IN), Hunter Davidson (CO), Hunter R Hendricks (TN), Jack Cutler (NC), James D Sherman (CO), James Thomas (TN), Jeffrey Spivack (FL), Jellay Welder (MN), John Sullivan (MT), Joshua Hilton (MD), Joshua M Kimbrough (IN), Krzysztof Kaczor (IL), Lane Ward (CO), Louis Tiggas (MN), Lucas w Morgan (MI), Mary Goeke (VA), Matthew D Barber (NY), Matthew K Heid (IL), Max Schindler (FL), Michael D Baldwin (CA), Molly M McCorcle (CO), Nathan Higgins (NO), Nathan L Manaugh (TN), Paul M Barry (NM), Peter Grabel (CO), Peter Hill (IN), Randall Hoepker (CO), Robert Annis (FL), Ronald T Stauffer (MI), Ryan B Farley (NH), Scott Hardin (KY), Stephanie Leenstra (NJ), Teodora Momirovska (MI), Trevor Michaelis (UT), Walker Russek (MN), William R Hooper, Jr (TN), Zachary Greenfield (CA), Zachary Pittman (IL), Zhen Chen (MD)

Angi

INDOOR ENVIRONMENTS ASSOCIATION

Great things come in pairs!

Millions of homeowners use Angi to manage their homes. Get your business in front of them today.

Message us at iealeads@angi.com to learn more.