JULY 2022

THE RADON REPORTER™

Practical Information for Your Success

TEST OUR SCHOOLS FOR RADON!

plus

NRPP AWARDED ISO/IEC 17024 ACCREDITATION!

AARST STAFF LEADERSHIP TRANSITION

AARST's Executive Director (ED) Dallas Jones resigned in April; he continued to serve as Associate Director through July 1. Dallas' accomplishments and contributions were many; he will be missed. The AARST Board appointed National Policy Director Jane Malone to serve as Interim ED until it hires a new permanent ED by the end of 2022, and has appointed a Search Committee consisting of David Gillay, Peter Hendrick (Chair), David Kapturowski, Tony McDonald, and Kim Steves.

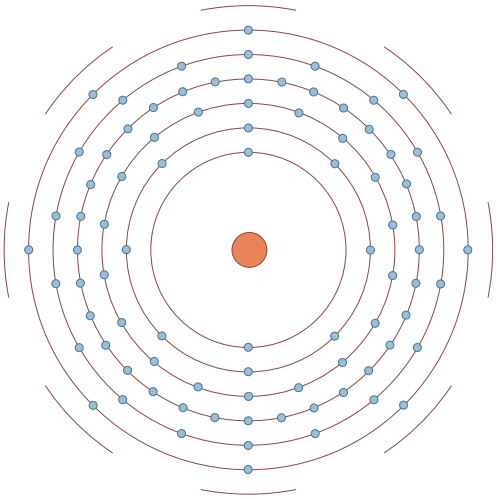


TABLE of CONTENTS

AD INDEX

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

AARST™, the American Association of Radon Scientists and Technologists, is a nonprofit, professional organization dedicated to the highest standard of excellence and ethical performance of radon measurement, mitigation, and transfer of information for the benefit of members, consumers, and the public at large. AARST's leadership is democratically elected by the members.

AARST represents your voice as we meet the wide range of challenges facing radon professionals and the community. Your membership and participation provide you a voice in the changes to come, and allow you to gain updated information, discover new techniques, learn about new problems before they occur, and hone your professional skills.

Kyle Hoylman, AARST President

Testing for Radon in Schools and Childcare Facilities

Summer is a good time to improve the indoor environments in all school buildings and childcare facilities. Testing to measure radon levels requires planning. Schools are often more crowded than other indoor spaces – four times the population density of a typical office (which means less fresh air available). School staff and child care facility staff could have long-term exposure. The toolkits in this issue of the Radon Reporter provide helpful information to get you started.

All states require licensing of childcare facilities. Most childcare licensing rules include environmental health/safety; several specify radon requirements. Licensed childcare may be center-based (typically located in a non-residential building) or home-based (located in a residential building and often referred to as family child care).

Nearly 30 years ago, EPA conducted a nationwide survey of radon levels in schools and estimated that nearly one in five U.S. schools have at least one ground contact room with short-term radon levels above 4 pCi/L. It's been estimated that 20% of the schools nationwide have done some testing.

The only way to know whether an elevated level of radon is present in any room in a school or facility is to test. It is recommended that all schools and childcare facilities nationwide be tested for radon.

Progress in the States: Standards Adoption

New Jersey has become the 11th regulated state to adopt all the ANSI-AARST standards – effective December 6, 2022. Currently certified persons and businesses must complete renewal applications by October 3, 2022.

The Department established five categories of certification and an affiliate program that allows individuals to associate with one or more certified businesses to conduct radon testing or mitigation. The certifications are radon measurement specialist, radon measurement technician, radon mitigation specialist, radon measurement business, and radon mitigation business. Details provided at **www.njradon.org**.

Three other states are considering adopting all, and three other states have already adopted one or more. As an ANSI-Accredited Standard Developer, the AARST Consortium continues to provide unparalleled leadership in convening stakeholders to produce and perfect consensus standards.

NRPP's Certification Program Earns ANSI Accreditation

I commend the National Radon Proficiency Program (NRPP) for becoming accredited under the International Organization for Standardization (ISO) 17024 standard for certification bodies in June. Meeting ANSI's rigorous requirements for ISO/IEC 17024 standard to join the elite group of organizations that have achieved this distinction highlights AARST's commitment to offering a high-quality certification program.

Symposium – October 24-26 – Bellevue, Washington

Please join us at the International Radon and Vapor Intrusion Symposium. An excellent program is under development. We look forward to seeing you in October.

NRPP Awarded ISO/IEC 17024 Accreditation!

AARST is pleased to announce that the National Radon Proficiency Program has been awarded ISO/IEC 17024 from ANAB (ANSI National Accreditation Board). This is a significant accomplishment for the organization and is the result of several years of hard work by the NRPP staff and Certification Council. This achievement provides confirmation of the competence and quality of the certification program by an independent, unbiased accreditation body.

The National Radon Proficiency Program (NRPP) was accredited by the American National Standards Institute (ANSI) National Accreditation Board for fulfilling the International Organization for Standardization (ISO) 17024 standard for certification bodies in June. NRPP's radon measurement and mitigation certifications are the only radon industry certifications to earn ANSI recognition, which separates NRPP from the competition and distinguishes top-quality radon professionals.

"I commend the NRPP staff for meeting the rigorous requirements of the ISO/IEC 17024 standard and joining the elite group of organizations that have achieved this distinction," said AARST President Kyle Hoylman. *"This achievement highlights AARST's commitment to offering a high-quality certification program."*

Accreditation indicates that NRPP's certifications have met the most respected and internationally accepted standards for personnel certification bodies. The ISO/IEC 17024 accreditation applies to the certifications for Radon Measurement Professional, Radon Mitigation Specialist, Radon Measurement Field Technician, and Radon Mitigation Installer. As NRPP adds new certifications in the future, the program will apply for a scope extension to add them to the accreditation.

The ANSI accreditation process is designed to increase the integrity, confidence, and mobility of certified professionals. It creates value for all the stakeholders including certification holders, employers, the public, and regulatory authorities. Accreditation is a formal, independent verification that a program meets established quality standards and is competent to conduct the conformity assessment tasks necessary for certification. ISO/IEC 17024 sets the requirements and the framework, at a global level, for the operation of personnel certification bodies.

"Consumers seeking radon services, who are often unaware of the distinction between a 'certification' and a 'certificate,' may be vulnerable to misleading advertising. NRPP's achievement of reputable third-party accreditation under ISO/IEC 17024 expands the program's credibility and offers reassurance that it has the independent oversight necessary for consumer protection," said Marilyn Patrick, NRPP Operations and Exams Manager. *"The ISO designation signals that credential holders have undergone a valid, fair, and reliable assessment to verify they have the necessary competencies to do the job."*

This significant accomplishment is the result of several years of hard work by the NRPP staff and Certification Council.

The NRPP took its first steps toward ANSI-ISO 17024 accreditation in 2018. With the assistance of consultants and volunteers, a new certification scheme, job task analysis, exam content development (aligned with the relevant ANSI-AARST consensus standards), and standards-setting for exams were completed. The ISO 17024 application was submitted to the ANSI National Accreditation Board (ANAB) in November 2021. The NRPP staff participated in an intensive two-day virtual site visit with ANAB assessors and received feedback on a handful of nonconformities in April 2022. While ANAB allows certification bodies up to six months to implement corrective actions, NRPP conducted corrective actions to successfully close all citations in just five weeks.

The ISO/IEC 17024 standard specifies requirements that ensure organizations operating certification programs for professionals operate in a fair, impartial, consistent, and reliable manner. This accreditation contains rigorous requirements for examination development, maintenance, and quality management systems.

The International Standard ISO/IEC 17024 was developed to fill the need for public protection by establishing how individuals have the required competencies to perform their work. ANAB accreditation is recognized worldwide as a critical requirement for personnel certification bodies that offer certification in many industries, including public health, environment, and national security services.

NRPP is a program of the American Association of Radon Scientists and Technologists, Inc. (AARST). Recognized and demanded by federal agencies and state radon regulations, NRPP credentials indicate to building owners and service providers the mastery of the specific skills required to successfully complete radon testing and mitigation projects. The program's credentialing policies and procedures are governed by the NRPP Certification Council, which consists of industry stakeholders such as analytic laboratories, device manufacturers, state radon programs, training providers, and radon professionals.

In 2019, NRPP began developing new schemes for radon certifications. Initially this involved convening stakeholders to determine the need for multiple certifications and completing job task analyses, including domains, subdomains, and knowledge, skills, and abilities statements, for each certification scheme. A determination was made that NRPP should expand from one measurement credential and one mitigation credential to a two-tiered approach for each field.

Surveys of professionals regarding the relative importance of domains and subdomains informed the development of new exam blueprints and exam questions. Psychometrician consultants facilitated the process of converting these important concepts into properly developed, fair and impartial exams, which were beta-tested and analyzed. The NRPP certifications accredited by the ANSI National Accreditation Board (ANAB) include:

Current NRPP Certifications

Measurement Certifications

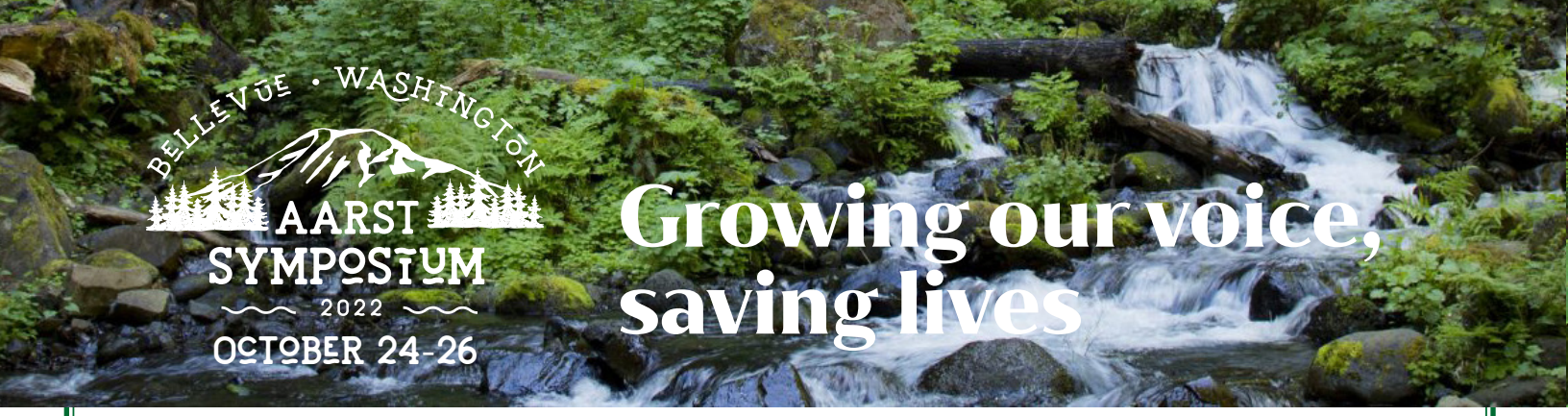
Radon Measurement Field Technician
The NRPP Radon Measurement Field Technician (RMFT) certification is geared toward a measurement technician who deploys and retrieves approved measurement devices, implements device placement, and insures building conditions for residential testing and assessment. A Certified RMFT must work under the direction and QA/QC oversight of a Certified Measurement Professional.

Radon Measurement Professional
The NRPP Radon Measurement Professional (RMP) certification is designed to assess the knowledge and skills necessary for the evaluation of residential radon measurement results, including but not limited to client report generation, development and execution of QA/QC plans and worker exposure surveillance. A Certified RMP may function as the key person for analytical labs and oversight of work conducted by Radon Measurement Field Technicians.

Mitigation Certifications

Radon Mitigation Installer
The NRPP Radon Mitigation Installer (RMI) certification is geared toward individuals who install soil depressurization systems in residences and implement measures to protect themselves, co-workers, and occupants from hazards related to the mitigation process. A Certified RMI must work under supervision provided by a Certified Radon Mitigation Specialist.

Radon Mitigation Specialist
The NRPP Radon Mitigation Specialist (RMS) certification is designed to assess the knowledge and skills necessary for the design and ultimate compliance of residential radon reduction systems, and for the implementation of worker safety/ surveillance programs. A Certified RMS may provide supervision and oversight of work conducted by Radon Mitigation Installers.



Symposium Overview

Nicole Chazaud, Symposium Manager

The 2022 International Radon and Vapor Intrusion Symposium agenda is filling up! The peer-reviewed abstract selections represent global industry leaders who discuss and share their knowledge from such countries as Sweden, Ghana, Israel, Qatar, Canada, and of course, the United States. Conveyed in all submissions is the knowledge of process and discovery, method examples, and practical applications aimed at risk reduction, public knowledge, and government applications to save lives.

The Call for Presentation Abstracts concluded in May. AARST has received thirty formal abstracts- a "first" in the recent history of symposium planning. Direct outreach by Symposium Planning Committee members will bring even more presenters to the forefront. A full agenda typically offers more than fifty sessions across the stages and in poster sessions, allowing attendees to earn new and different C.E. experiences for their certifications and licenses.

The symposium theme **Growing our voice, saving lives** celebrates and underscores the efforts by AARST's members, chapters, and partners to conduct insightful public policy, advocacy, and strategic public awareness messaging to accomplish real change in the prevention of radon-induced lung cancer. So many in this extended family work tirelessly to give voice to radon risk. By absorbing various activities and presentations, attendees will return home with a clearer understanding of how that voice can define the means to accomplish changes in how buildings are built, tested, mitigated, and maintained to ultimately save lives.

The Symposium, now 36 years old, hosts not only the longest-running radon trade show but also the only combined radon - vapor intrusion trade show in the country. The variety and subject matter of presentation submissions exemplify the interest in and growth of these industries. For attendees, it is hands-down the best opportunity to learn a massive amount of information, network with industry leaders and other professionals, and glean new perspectives - in formal classroom-style settings and in the hallways, over refreshments, or sharing a meal. Past attendees are the first to say the connections made at a symposium are the relationships they most value.

Taking place in beautiful downtown Bellevue, Washington, just across the glacier-excavated Lake Washington from Seattle, the name Bellevue comes from the area's French settlers for "beautiful view." The surrounding area is lush and green, with multiple bodies of water, islands, and mountains ready to explore. The Hyatt Regency Bellevue is in the center of shopping and restaurants and is just a short walk from the renowned Bellevue Arts Museum.

Registration opens July 15th. The hotel is presently accepting bookings at a group discounted rate. The draft agenda is constantly updated to reflect the addition of speakers, C.E. courses, or schedule changes. Symposium features can be found on the symposium website: Agenda, Speakers, Exhibitors, Hotel and Event Spaces, Registration and Tickets, and a section about Bellevue and Seattle area for planning your trip. https://aarst.org/symposium/event-details/.

Schedule

The annual Friends and Family Outing, "Treat Yourself to Seattle," offered Tuesday, October 25th, will take visitors round-trip from the hotel for a fun day out visiting iconic locations in downtown Seattle including the Museum of Pop Culture, Space Needle, and Pike Place Market.

October 23
Activities, exhibits, and C.E. opportunities will begin at 8:00 a.m. with the exhibits opening at 2 p.m. The Sunday C.E. courses are run by private trainers and require a separate registration from the Symposium registration. The Exhibit Hall will host the Opening Reception from 6:00 – 8:00 p.m.

October 24-25
The core sessions and exhibits are planned for Monday and Tuesday. All attendees are eligible to earn up to 12 Category-I C.E. credits by taking daily quizzes and up to 8 Category-II C.E. credits for attending the two days of the Symposium. Social activities are essential to making connections, and this year is no exception. Breaks, lunches, and a Monday evening happy hour are included in the registration price.

Abstracts cover four tracks of information planned for the full agenda. Additionally, mitigation tips, stories, and experiences will be presented throughout the sessions. Monday features a shared agenda developed by AARST and the E25 Radon Committee of the Conference of Radiation Control Program Directors, which will include the latest announcements on radon and vapor intrusion (VI) policy achievements and updates, and presentations on the ANSI-AARST Standards, as well as NRPP Certifications. Tuesday's agenda will feature concurrent sessions in (1) Science and Research and (2) Practice and Policy. The exhibit hall will close Tuesday at 5 p.m.

October 26
Wednesday morning will bring additional learning and networking opportunities for attendees. Wednesday features six concurrent unique workshops. From 9:00-11:00 a.m., these are free and included in the full registration ticket. Attendees planning to stay through Wednesday must pre-register for the workshop of their choice to participate.

Note: The CRCPD (Conference of Radiation Control Program Directors, Inc.) National Radon Training Event runs independently and concurrently with the AARST program, (Monday AARST and CRCPD share a combined agenda) AARST attendees are invited to attend any of these sessions.

Vapor Intrusion

The vapor intrusion track presentations continue to grow into their second year. Indicators of this growth include the fact that several presentations offered in the VI Track were submitted during the Call for Abstracts process from the VI community and the exhibit hall continues to attract VI companies. The VI subcommittee of the planning committee also identified invited sessions, which will be offered during the separate VI track that begins after the morning break on Monday.

Pacific Northwest Partners

The Planning Committee has been thrilled to include the Northwest Radon Coalition in the planning and agenda. The Northwest Coalition began in 2005 as a predominantly Oregon-based group of organizations. Its early work focused on passing Oregon Senate Bill 1025, the Northwest Radon Forum hosted by Cascade Radon, continuing to promote radon awareness, and adding members and outreach efforts. Today the Northwest Radon Coalition consists of thirty-two members representing EPA Region 10, mitigation and testing companies, state health and housing agencies, real estate professionals, home inspectors, weatherization companies, manufacturers, Tribal Air Quality Programs, American Lung Association, Portland State University, and AARST.

The Coalition generally meets in September to discuss collaboration opportunities and again in April to share experiences, successes, challenges, and continued opportunities to focus on for the rest of the year. Its main project is conducting a Radon Forum each January. Throughout the year, the Coalition is a resource for staffing local health fairs, co-presenting at health conferences or neighborhood association meetings, and conducting interviews for podcasts or other opportunities. Most recently, the Coalition collaborated with the Oregon State University Public Health Department on a student learning project to mentor undergraduate students who learned about radon and created awareness toolkits for diverse communities. The Coalition supports an advocacy subcommittee currently working on an Oregon bill to help protect homebuyers and their families, school children, tenants, and occupants of new homes through mandatory radon testing.

Continued on page 9

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The Symposium Planning Team

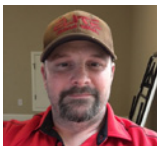
It takes a year to plan the annual symposium with dozens of volunteers donating their time and expertise to produce an exciting program. The Planning Committee changes from year to year; the Association President appoints the Chair who then seats their committee, supported by AARST staff. The goal of the planning committee is to create an educational and social event by professionals for professionals whilst supporting the Association with their leadership.

This year's committee members are:

(Chair) Dawn Oggier, Manager of Market Dev. with RadonAway and an AARST BOD, owned a geology firm for 12 yrs and installed 100s of radon mitigation systems. Enjoys teaching others how to measure, mitigate, and troubleshoot radon mitigation systems across the country.

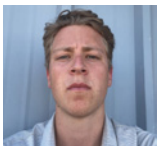
Shannon Cory, ACI is CEO of 5 Star Environmental Services, Inc. and holds numerous certificates in building codes and environmental testing and analysis. Cory presently conducts trainings as well as running his business.

Felicia Flanders presently manages the testing division for Cascade Radon in Portland, Oregon. With a background in Project Management, Flanders is new to the radon industry.



James Fraley, owner of Elite Radon Team and an AARST member as are his entire team, has been certified since 2016 and owns a test/mitigation business in Georgia that serves the Southeast for commercial projects.

David Gillay Partner in Barnes & Thornburg LLP's Indianapolis Office, heads up the Remediation, Redevelopment, & Environ. Transactions practices. Prior to joining Barnes & Thornburg LLP over 20 years, worked as an environ. consultant on remediation and redevelopment projects throughout the US.

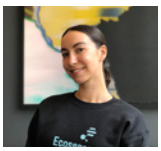


Clark Hines currently works for Tennessee Radon Services and is working on his certification.

Phil Jenkins, PhD holds the position as Sr. Health Physicist at Bowser-Morner, Inc. With a background in engineering and health physics, Jenkins has been involved with the radon industry for over 30 years.

Jessica Karns works presently as the National Sales Director at A-Z Solutions, Inc. Karns has over a decade of experience in Vapor Intrusion Mitigation and has been involved in the radon (VI) industry for 12 years.

Michael Kitto, PhD, holds the role of the AARST Symposium editor. With a background in nuclear chemistry, Kitto has been involved in the radon industry for 32 years.



Ksenia Kolyeva works for Ecosense as their marketing manager. With a background in oil & gas engineering, Kolyeva has been involved in the radon industry for over a year.

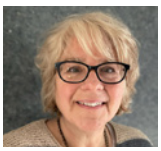
Paul Melilo, CHMM currently works at Protect Environmental as the Dir, National account. In his 20+ year career as an environmental professional, Melilo found that inhalation is the dominant human health pathway in the vast majority of site conceptual site models.

Jill Newton presently works as a Radiological Engineer at Spruce. With a background in Nuclear Engineering, she has been involved in the radon industry for over 10 years.

Uttam Saha is the Senior Public Service Associate at University of Georgia Extension. With a background in Environmental Sciences, Saha has been involved in the radon industry for 12 years.

Amber Vaughn DrPH, MPH, presently works as a Senior Professional Research Assistant at the Colorado School of Public Health. With a background in public health, Vaughn has been involved in the radon industry for three years.

Duane West, Owner of 3Rs Construction and Healthy Home Club of America has a background in remediation of mold, radon, mycotoxins and remodeling and has been involved in the radon industry for 27 years.



Nicole Chazaud, AARST Symposium Manager, has facilitated the past 6 symposiums. Working in membership and communication roles for 13 years with AARST, she has attended 10 symposiums.

ARPC, Keeping Radon in the Forefront

What is the ARPC? The **American Radon Policy Campaign** is **AARST's** program to raise funds to support federal and state policy that advances radon risk reduction.

Why does AARST need to raise ARPC funds every year? So many reasons:

- Efforts have been made to eliminate federal funding for the EPA radon program.
- Efforts have been made to eliminate federal funding for state radon programs – State Indoor Radon Grant (SIRG).
- 30 states do not regulate radon work.
- 41 states do not require warning buyers about radon.
- 39 states do not require radon systems in new homes.
- Most states have no radon testing requirements for schools, childcare, or workplaces.

Ensuring continuity of federal funding and enacting protective state policy requires that someone lobby legislators to introduce and pass legislation. Often, this requires the services of a professional lobbyist who represents the radon industry.

Is ARPC new? No. ARPC Advertisers have supported lobbying work on Capitol Hill in Washington DC for almost a decade. These efforts helped open doors to new federal policy while delivering $70 million for SIRG. Now and in the future, ARPC funds will also support AARST Chapter lobbying work at the state level after the chapter's strategy, lobbyist, and request for support have been vetted by AARST.

How does ARPC work? Companies and individuals pay an annual advertiser fee or a monthly sustaining advertiser fee to support lobbyists working for AARST and chapters. Payment can be made by credit card or check. Each year, ARPC Advertisers are recognized for their support through advertisements in the Symposium Program, The Radon Reporter, and Rn Biz.

How can you become an ARPC Advertiser in 2022? Help us achieve our fundraising goal of $45,000 in 2022. Visit the ARPC page for more information and to become a 2022 Advertiser. With your help, this good work will continue. **https://aarst.org/arpc/**

Wallace L. Akerley, M.D.
Symposium Keynote Speaker

Professor of Medicine
Division of Oncology

Dr. Wallace Akerley was born in Rhode Island and received his MD degree from Brown University, Providence, Rhode Island. Upon completion of his residency in Internal Medicine at the University of Southern California (USC) in Los Angeles, California, Dr. Akerley received oncology fellowship training at the University of Southern California (USC) in Los Angeles, California. He pursued an additional fellowship in Hematology/Oncology at Dartmouth Hitchcock Medical Center in Lebanon, New Hampshire.

Dr. Akerley served on the faculty at Brown University from 1989 to 1999 as an Assistant Professor of Medicine and later, Interim Chief of Medical Oncology. He then went to Boston University to be the Chief of Medical Oncology, Associate Director, and Professor of Medicine.

Since 2002, Dr. Akerley has served as Director of Thoracic Oncology, Huntsman Cancer Institute, at the University of Utah in Salt Lake City. He has also held the positions of Director of Clinical Trials and Outcome Studies for HCCP (Huntsman Cancer Care Program), Senior Director of Clinical Research, Director Utah Cancer Registry, and Senior Director of Community Oncology Research. Presently he is Chair of the PRMC (Protocol Review & Monitoring Committee), Director of the Lung Cancer Disease Center of Excellence, and member of the NCCN's Steering committee and Non-Small Cell Lung Cancer Panel.

Dr. Akerley exclusively specializes in the treatment of lung cancer patients. Given that radon is the second leading cause of lung cancer, he is a strong proponent of radon testing and has pursued radon legislation in the State of Utah. He is active in radon research, radon surveys, and publications in the area of radon.

SYMPOSIUM TICKETS GO ON SALE JULY 15TH

Save $100 with Early Bird pricing!

FULL REGISTRATION ($659.99) INCLUDES:

Early Bird price of $559 available until September 1
Access to the exhibit hall
Opening Reception
All Monday- Wednesday sessions
Monday and Tuesday breaks & lunch
Monday Happy hour
Opportunity to earn up to 12 Category-I CE credits
Wednesday workshop sessions (must be reserved at no extra cost)

SINGLE DAY REGISTRATION ($350.00) INCLUDES:

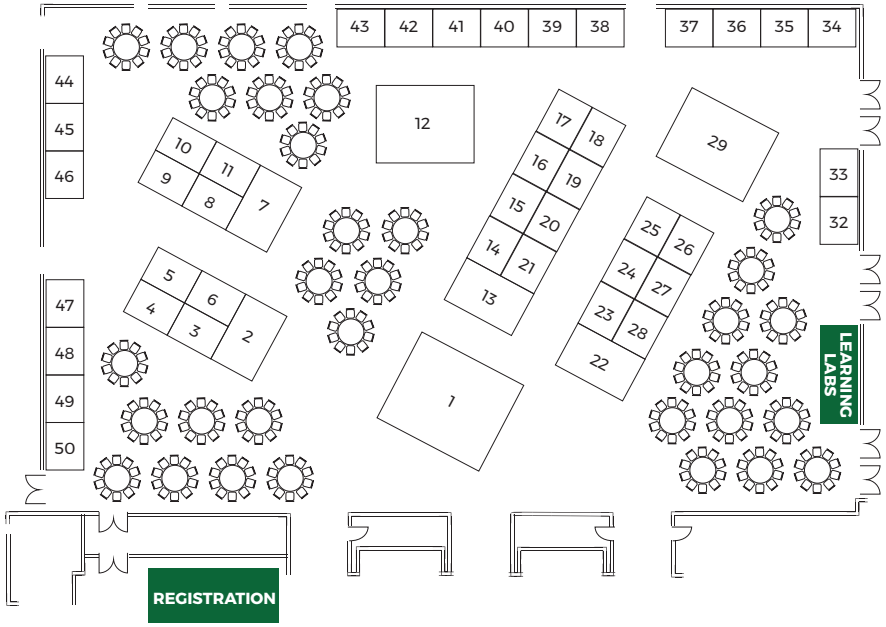
Monday: access to the exhibits, breaks, lunch, and happy hour.
Tuesday: access to the exhibits, breaks, lunch, and meet-ups.

Additional tickets are available for Sunday CE courses

Guest tickets are available for friends and family to join social activities such as the Opening Reception and Monday evening's Happy Hour. The Friends and Family outing "Treat Yourself to Seattle," sponsored in part by Professional Discount Supply, is available for $75.00.

https://aarst.org/symposium/tickets/

Exhibitors



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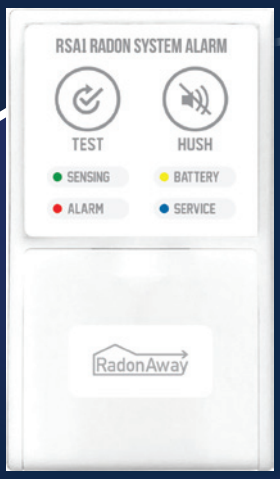

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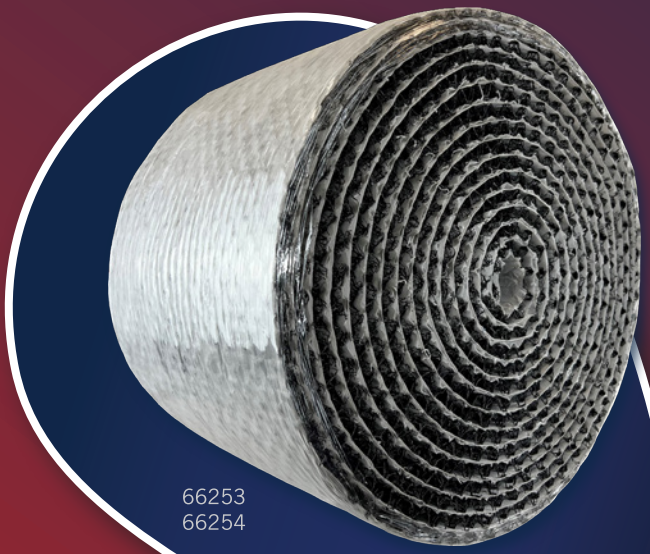

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https://aarst.org/member-benefits-2/

Welcome New Members to AARST!

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Brande Doll (NE)
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Elizabeth Teague (MA)
Jason Bates (OH)
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Lance Rule (WI)
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Radon Testing and Policy: Schools and Childcare Facilities

AARST Government Affairs

Children breathe deeper, faster, and proportionately more air than adults. A case study by the Agency for Toxic Substances and Disease Registry concluded that due to lung shape and size differences, children have higher estimated radiation doses than adults. Their lungs are developing faster, making them more sensitive to indoor air quality. Children are among the most sensitive to radon gas. Children and adolescents grow quickly, and their cells are more sensitive to radiation. Individuals exposed to elevated levels of radon in their youth are more likely to develop radon-related illnesses later in life.

Across the US, legislators and regulators are increasingly recognizing the imperative to test the buildings where young people learn and grow, mitigate high radon levels in them, and refrain from building new ones without radon-reducing systems. These basic measures will help to prevent lung cancer and represent a wise investment in buildings that serve generations of children.

The AARST Government Affairs Committee, which leads AARST efforts to support effective public policy, has created toolkits for key public policies. On the next two pages are background material and the model legislation from the toolkits for radon policy in schools and childcare facilities. A key component of both model laws is a requirement to report results to parents, staff, and others.

The Environmental Law Institute has developed detailed reports on schools and childcare policies:
Radon in Schools: Overview of State Laws
Radon in Child Care: Review of State Policies

Unfortunately, not all of the policies enacted - across 22 states - require the use of certified personnel, and not all require adherence to the applicable current measurement, mitigation, or new construction consensus standards. Radon professionals and other stakeholders need to be involved in the advocacy process - to support radon policies for schools and childcare facilities, and to ensure that all new and existing policies are fully protective of children, teachers, and staff through requirements for qualified personnel and proven methods as provided in the model laws.

School Radon Testing Policy

SEVENTEEN STATES HAVE RADON-RELATED POLICIES FOR SCHOOLS

Requirement	CO	CT	DC	FL	IL	IN	IA	ME	MN	NE	NJ	NY	OR	RI	VT	VA	WV
Test for Radon	X	X*	X	X	~	~	X	~				~	X	X	X	X	#
Funding if Available								X	X								
Per a Standard	X							X						X	X		
Results Are Public	X	X	X		~		X	X					X	X		X	X
Report to State				X	X		X	X	X				X			X	X
Mitigate → 4 pCi/L			X		~		X							X			X
Funding if Available							X		X								
RRNC - New School	X	1,2			~		X	X		X	1	~	1	1,2			

X required ***** post-2003 only **~** recommended **1 or 1,2** radon zone(s) **#** state performs test

Model Legislation: Radon Testing in School Buildings

(1) **Testing for Radon**. Every school building shall be tested in accordance with this section.

(2) **Frequency of Testing.**
   a. The initial measurement of a building's radon levels shall occur within one year of enactment.
   b. Follow-up testing of a building with all radon levels below 4 pCi/L shall occur every five years.
   c. Follow-up testing of a building with a radon level equal to or exceeding 4 pCi/L shall occur every two years.

(3) **Standard for Testing**. Measurement shall be performed in accordance with ANSI-AARST MALB: Protocol for Conducting Measurement of Radon and Radon Decay Products in Schools and Large Buildings.[1]

(4) **Testing Device**. Measurement shall be performed using a device that has been approved by an EPA-recognized certification program, such as a continuous radon monitor that has been calibrated and passed a device performance test, or a test kit that will be submitted for analysis to a laboratory approved by an EPA-recognized certification program.

(5) **Qualified Personnel**. Measurement shall be performed by an individual who is currently licensed under the state radon licensing program and/or currently certified by the National Radon Proficiency Program.[2]
Mitigation Requirement. If radon measurement results for any room or area indicate that the radon level equals or exceeds 4.0 picocuries per liter of air (pCi/L), the building shall be mitigated in accordance with ANSI-AARST RMS-LB: Radon Mitigation Standards for Schools and Large Buildings, and retested in accordance with ANSI-AARST MALB: Protocol for Conducting Measurement of Radon and Radon Decay Products in Schools and Large Buildings until the radon levels are less than 4.0 pCi/L.[3] Mitigation shall be performed by an individual who is currently licensed under the state radon licensing program and/or currently certified by the National Radon Proficiency Program.[4] Operation, maintenance, and monitoring shall comply with Section 10.1.1 of ANSI-AARST RMS-LB: Radon Mitigation Standards for Schools and Large Buildings.

(6) **Reporting**. Results of radon testing, mitigation plans, and mitigation results shall be reported within 30 days after they have been received as follows:
   a. presentation at a public meeting of the school board;
   b. communication to the parents' organization;
   c. communication to the teachers' union or other staff organizations;
   d. website and other social media posting by both the school board and individual school, and report submitted to the state radon program and state board of education.

[1] or in accordance with a "national consensus standard recommended by the US Environmental Protection Agency"
[2] or currently certified by "an EPA-recognized certification program."
[3] or in accordance with a "national consensus standard recommended by the US Environmental Protection Agency"
[4] or currently certified by "an EPA-recognized certification program."

Childcare Facility Testing Policy

ELEVEN STATES REQUIRE TESTING CHILDCARE FACILITIES FOR RADON

Requirement	CO	CT	DE	FL	IL	IA	MI	NH	NJ	NY	RI
Test for Radon											
Center-Based	X	X	X	Z	X	X		Z	X	Z	X
Home-Based			X	Z	X		X	Z		Z	X
Per a Standard	X	X		X	X	X			X		X
By a Radon Professional	X			X	X	X		Z	X		X
Report to Families		X			X		X		X		X
Mitigate → 4 pCi/L	G	X	X	G/Z	G	X	X	Z	X	Z	X

X Required **Z** Required in high-risk zones only
G Mitigation required per a general health/safety rule

Model Legislation: Childcare Facilities

(1) **Testing for Radon**. Every childcare facility shall be tested in accordance with this section.
(2) **Frequency of Testing.**
  a. The initial measurement of a building's radon levels shall occur within one year of enactment.
  b. Follow-up testing of a building with all radon levels below 4 pCi/L shall occur every five years or sixty days after the HVAC system has been altered or structural changes have occurred. This shall not supersede another state policy that is more protective.
  c. Follow-up testing of a building with a radon level equal to or exceeding 4 pCi/L shall occur every two years.
(3) **Standard for Testing**. Measurement shall be performed in accordance with
  a. In a center-based childcare facility, *ANSI-AARST MALB: Protocol for Conducting Measurement of Radon and Radon Decay Products in Schools and Large Buildings*.[1]
  b. In a home-based childcare facility, *ANSI-AARST MAH: Protocol for Conducting Measurement of Radon and Radon Decay Products in Homes.*
(4) **Testing Device**. Measurement shall be performed using a device that has been approved by an EPA-recognized certification program, such as a continuous radon monitor that has been calibrated and passed a device performance test, or a test kit that will be submitted for analysis to a laboratory approved by an EPA-recognized certification program.
(5) **Qualified Personnel**. Measurement shall be performed by an individual who is currently licensed under the state radon licensing program or certified by an EPA-approved proficiency program.[1]
(6) **Mitigation Requirement**. If radon measurement results for any room or area indicate that the radon level equals or exceeds 4.0 picocuries per liter of air (pCi/L), the building shall be mitigated:
  a. If a center-based childcare facility, in accordance with *ANSI-AARST RMS-LB: Radon Mitigation Standards for Schools and Large Buildings,* and then retested in accordance with *ANSI-AARST MALB: Protocol for Conducting Measurement of Radon and Radon Decay Products in Schools and Large Buildings* until the radon levels are less than 4.0 pCi/L. Operation, maintenance and monitoring shall comply with Section 10.1.1 of *ANSI-AARST RMS-LB: Radon Mitigation Standards for Schools and Large Buildings*.
  b. If a home-based childcare facility, in accordance with *ANSI-AARST SGM-SF Soil Gas Mitigation Standards for Existing Homes,* and then retested in accordance with *ANSI-AARST MAH: Protocol for Conducting Measurement of Radon and Radon Decay Products* until the radon levels are less than 4.0 pCi/L. Operation, maintenance and monitoring shall comply with Section 10 of *ANSI-AARST SGM-SF Soil Gas Mitigation Standards for Existing Homes*.
(7) **Qualified Personnel**. Mitigation shall be performed by an individual who is currently licensed under the state radon licensing program or certified by an EPA-approved proficiency program.
(8) **Reporting**. Results of radon testing, mitigation plans, and mitigation results shall be reported within 30 days after they have been received through:
  individual written notification to parents; individual written notification to staff; posting in a prominent physical accessible location within the facility; website and/or social media posting (post-mitigation test results only); and report submitted to the state radon program and state childcare licensing agency.

[1] Alternative reference to the "ANSI AARST" standard: "a national consensus standard recommended by the US Environmental Protection Agency."
[2] Alternative reference to the "National Radon Proficiency Program:" "an EPA-recognized certification program."

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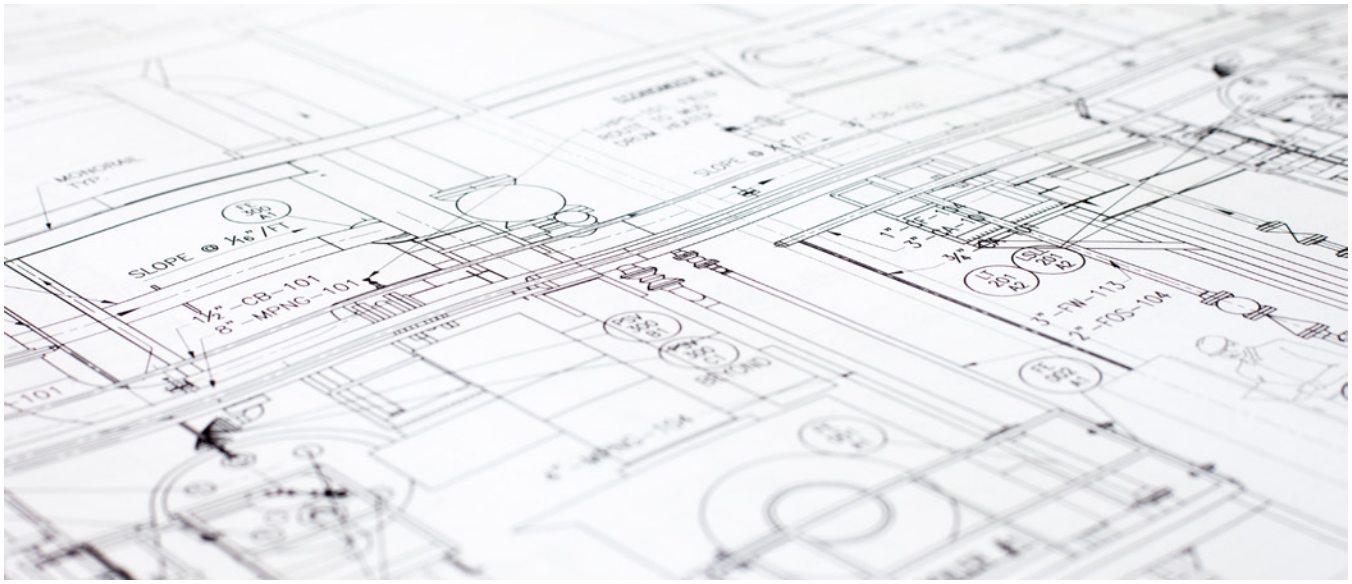
https://aarst.org/memberships/



The Vapor Intrusion Pathway Mini-Series: Regulatory Closure Challenges

David R. Gillay, Barnes & Thornburg LLP[1]

This is the second in a series of articles focusing on an unseen villain known as vapor intrusion. This article discusses some of the challenges and new tools to secure and maintain regulatory closure of contaminated sites where this pathway is potentially present.

Vapor intrusion (VI) is the migration of volatile chemicals from subsurface soil and groundwater into buildings. It shares many common characteristics with the intrusion of naturally occurring radon gas into buildings. This emerging contamination "pathway" has affected thousands of closed and contaminated sites across the country.

The VI pathway reveals some of the potential future risks flowing from risk-based closure of contaminated sites. A risk-based approach generally allows the responsible party to tailor the remedy to the real-world exposures at each site, instead of simply removing all of the contaminant or achieving a numerical closure level for unrestricted use in certain environmental media. Risk-based decision-making is a mechanism to integrate source reduction and risk management of a cleanup to ensure it protects human health, applies sound science and common sense, and is flexible and cost-effective. Depending on known or anticipated risks to human health and the environment, an integrated risk-based approach may include monitoring and data collection, active or passive remediation, containment, institutional controls, or a combination of these actions.

To effectively manage liability, a responsible party must find the balance between source reduction and risk management for residual contamination. Evolving VI pathway guidance and dramatic changes to a contaminant's toxicity can disrupt this delicate balance.

In late 2002, the United States Environmental Protection Agency (EPA) first released draft guidance on the VI pathway. The EPA finalized its VI pathway guidance well over a decade later, in the summer of 2015. During the EPA's careful deliberation and release of its VI guidance, the vast majority of state environmental agencies published their own VI guidance. The VI guidance landscape remains in flux and continues to evolve, with more emphasis on the movement of soil gas in the subsurface.

As the regulatory scrutiny intensified on the VI pathway, the EPA updated its toxicological review for one of the most ubiquitous chlorinated solvents, Trichloroethylene or TCE, in our nation's groundwater. Published in 2011, this review suggested that a low level of TCE may pose an immediate potential hazard and adverse developmental outcomes could potentially result from short-term TCE inhalation exposures during pregnancy. One of the more controversial studies that the EPA used identified that even a woman's single exposure to TCE during fetal development may be sufficient to produce an adverse developmental effect. The VI pathway was quickly designated a primary conduit for TCE vapors to enter a structure and amplified this potential risk.

As a consequence of evolving VI guidance and developmental toxicity concerns with TCE exposure, many states, including New York, Michigan, Minnesota, and Massachusetts, systemically started to reevaluate and, where appropriate, reopen closed sites with TCE contamination.

Maintaining regulatory closure

So, given the rapidly changing regulatory climate, how can a responsible party secure and, perhaps more importantly, maintain regulatory closure for a contaminated site? A phase-based approach may be the best choice, coupled with some new tools.

Phase 1. The first phase should focus on an internal audit of your portfolio of active and/or closed sites. There are ways to help ensure that the audit is privileged and confidential. This audit should be conducted through legal counsel and include an experienced consulting expert to help evaluate the risk-based assumptions and evaluate any new pathways (like VI). This expert should consider, among other criteria, the applicable screening levels for the VI pathway and conduct an updated receptor survey for both on and off-site land uses.

Phase 2. The second phase could involve collecting additional samples. If it is determined that the VI pathway was not adequately assessed or evaluated, then you should consider developing a VI Decision Matrix, VI Sampling and Analysis Plan, and updating the VI Conceptual Model.

Phase 3. The third phase is site-specific and data-driven. Developing a so-called Long Term Stewardship (LTS) Plan that embraces and effectively uses new regulatory, legal, and technical tools to manage the VI pathway is considered a best practice. There is state and federal guidance available to draft a successful LTS Plan or equivalent approach. There are important legal mechanisms, including environmental restrictive covenants or ordinances, which when properly drafted can be very effective to manage potential future VI pathway liability. An LTS Plan can include new technology and tools, like the newly patented remote monitoring device known as the Vapor Sentinel. This new device provides remote telemetric monitoring technology to provide around-the-clock data collection and reporting.

The VI pathway can be complex and the science continues to evolve at a rapid pace, but with counsel from legal and environmental professionals and a phase-based plan tailored to your site, you can successfully secure and maintain closure. The last article in this series will cover various landowner liability protections and some recent toxic tort litigation centered on the VI pathway and alleged TCE exposure.

This publication should not be construed as legal advice or legal opinion on any specific facts or circumstances. The contents are intended for general informational purposes only, and you are urged to consult your lawyer on any specific legal questions you may have concerning your situation. David R. Gillay, Esq., is a Partner in the Environmental Department of Barnes & Thornburg LLP's Indianapolis Office and may be reached at 317.946.9267 or david.gillay@btlaw.com.

1 David leads Barnes & Thornburg LLP's Environmental department's remediation, redevelopment, and environmental transactions practices. He has focused on the legal, regulatory, and technical impact and implications related to the vapor intrusion pathway, chlorinated VOCs (with an emphasis on TCE), and potential long-term stewardship obligations related to environmentally challenged properties for nearly two decades. David is a frequent writer and speaker, having participated in a variety of private association, client, and continuing legal and business education seminars with a special focus on vapor intrusion, TCE, and developing cost-effective solutions to manage residual contamination as part of redevelopment projects and the sale of contaminated property. David was recently elected to join the American Association of Radon Scientists and Technologists (AARST) Board of Directors and continues to serve as counsel of record for the Midwestern States Environmental Consultants Association (MSECA). Prior to joining Barnes & Thornburg, he obtained an advanced environmental engineering degree and practiced as an environmental consultant on various projects across the country.

Device-Specific Training

Christina Johnson, NRPP Credentialing Coordinator

Are you an NRPP measurement certified professional using analytical testing devices? Depending on the type of device you are operating, you may be able to skip the device performance test for your certification renewal!

If your device manufacturer has created an NRPP-approved device-specific training course geared toward your analytical testing device, then you are eligible to take this course in lieu of sending your device to a test chamber for a device performance test. The current 2-hour courses are available in an online web-based format; the two hours can be used toward your renewal C.E.s as well.

PLEASE NOTE: This option is ONLY for those renewing their NRPP measurement certification with the same device registered in their NRPP certification portal. If you are applying for new certification or renewing and adding a new type of analytical device to your list, then you are still required to complete an initial device performance test for each device model.

NRPP is working with the remaining device manufacturers to add more training courses to the list. To learn more about device-specific training or device performance testing, please visit the NRPP website here: https://nrpp.info/devices/performance-testing-calibrations/.

Please see the current list of NRPP-approved device-specific training courses below to see if your device is listed. To enroll, please contact the device manufacturer.

Continued on next page.

NRPP-Approved Device Courses

AIRTHINGS CORENTIUM PRO DEVICE-SPECIFIC TRAINING COURSE

Course ID#: CORPRO-800

Applicable to: Measurement; 2 C.E. Credits

This online course offers sufficient information on how to operate Corentium Pro for radon measurements. It includes info on how to use the software, as well as a walkthrough of the QA Plan specific to Corentium Pro.

https://www.corentiumpro.com/course/.

Provided by Airthings, Geneva, IL
Phone: (855) 561-4483, Email: procertif@airthings.com

FEMTO-TECH DEVICE-SPECIFIC TRAINING COURSE: CRM-510LP

Course ID#: FEMTO-800

Applicable to: Measurement

Course Type: Online

C.E. Credits: 2

This online 2-hour comprehensive course is designed to expose the user to enough information to allow them to be proficient in the usage of the femto-TECH CRM-510LP, LPB, and LP/CO devices. Those who complete this training and quiz following the course, are eligible for 2 continuing education (CE) credits and will receive a Certificate of Completion.

www.femto-tech.com/training.html

Provided by femto-TECH, Inc., Carlisle, OH
Phone: (937) 746-4427, Email: joe@femto-tech.com

RAD ELEC RECON Recon DEVICE-SPECIFIC TRAINING COURSE

Course ID#: RECON-800

Applicable to: Measurement

Course Type: Online

C.E. Credits: 4

This course is the device training program for the Rad Elec Recon continuous radon monitor; designed to instruct users on the proper usage, including how to accurately deploy, retrieve, and interpret radon measurement utilizing the Rad Elec Recon CRM.

https://www.radelec.com

Provided by Rad Elec Inc., Frederick, MD
Phone: (800) 526-5482, Email: info@radelec.com

RADSTAR 300: RADONAWAY DEVICE-SPECIFIC TRAINING

Course ID#: RS300-800

Applicable to: Measurement; 2 C.E.

Show your proficiency in operating the RadStar 300. This free online course guides the user/owner through operations, procedures, and troubleshooting of the RadStar 300 when performing Radon Measurements. Includes downloading, generating, and analyzing reports for your clients. It also includes requirements to generate and upload a genuine 48-hour test with quiz questions and pass an additional unique quiz for DPT. Call Spruce at 800-355-0901 to register for this course.

https://sprucetraining.talentlms.com.

Provided by RadonAway, Ward Hill, MA
Phone: (800) 355-0901, Email: training@spruce.com

RADSTAR 800: RADONAWAY DEVICE-SPECIFIC TRAINING

Course ID#: RS800-801

Applicable to: Measurement; 2 C.E.

Show your proficiency in operating the RadStar 800. This free online course guides the user/owner through operations, procedures, and troubleshooting of the RadStar 800 when performing Radon Measurement. Includes downloading, generating, and analyzing reports for your client. It also includes requirements to generate and upload a genuine 48-hour test with quiz questions and pass an additional unique quiz for DPT. Call Spruce at 800-355-0901 to register for this course.

https://sprucetraining.talentlms.com.

Provided by RadonAway, Ward Hill, MA
Phone: (978) 521-0901, Email: training@spruce.com

SUNRADON DEVICE SPECIFIC TRAINING COURSE: CRM:1027, 1028, 1028-XP, 1030

Course ID#: SUNNUC-800

Applicable to: Measurement; 2 C.E. Credits

This online 2-hour comprehensive course includes training on SunRADON Continuous Radon Monitors (1027, 1028, 1028-XP, 1030) and Radon Detection Software. Those who complete this training and quiz following the course, are eligible for 2 continuing education (CE) credits and will receive a Certificate of Completion.

https://sunradon.com/pages/continuingeducation-certification-training-schedule.

Provided by SunRADON, Melbourne
Phone: (321) 255-7011, Email: support@sunradon.com

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