

ISSUE PAPER: ESTABLISHMENT OF A MITIGATION CONTRACTOR CERTIFICATION PROGRAM

Vapor Intrusion EAG Subgroup

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Type of Recommendation

This issue paper was prepared to capture discussions to date by the ad hoc committee evaluating the need for mitigation contractor certification. A certification program is being considered to address issues with contractor qualifications and accountability identified in Wisconsin with both radon and vapor intrusion mitigation systems. Indoor Environments Association (IEA) is working to develop and finalize credentials for vapor intrusion mitigation on a national level. Recommendations will not be developed until the IEA vapor intrusion mitigation credential program has been finalized and subsequently reviewed by Wisconsin stakeholders.

Background

Need for a VI Mitigation Credentialing in Wisconsin Program

There is a growing body of evidence that VI mitigation needs to be performed by qualified personnel whose work will be compliant with established standards and who will be held accountable for compliance. The same is true of radon measurement and radon mitigation. Since WI is primarily surrounded by states (MN, IA, IL & IN) that license mitigators, it is important both within WI and regionally to close this gap in oversight.

Regulation through Certification The simplest way to move forward is to leverage the regulation through certification (RtC) approach to mitigation of radon that has been established as a result of various efforts by the US Environmental Protection Agency (EPA), other states, and national industry-led non-profit organizations. Radon policies in ten of the 20 states that presently regulate radon services use the RtC model. This approach relies on certification by existing EPA-recognized national proficiency programs to qualify personnel for eligibility to have a state license. Licensing supplements the proficiency qualification process to enable in-state compliance and enforcement activities, and support any customization needed to match local conditions. States that enact new regulatory policies can leverage established proficiency systems rather than create new mechanisms for job definitions and task analyses, qualifications, examination item development, exam delivery and proctoring, training approvals, renewal eligibility requirements, and other components of credentialing.

Commented [JB1]: Certification or Credentialing - discuss appropriate wording with committee

Commented [EB2]: Mention focus on VI

Capture umbrella legislation later

Don't lose sight of overall goal

Commented [EB3]: Credit NRPP not IEA where needed

Commented [EB4]: From Chris V: I don't know if it matters, but I think we should, early in the document, when we refer to the Indoor Environments Association (IEA), we should say something like (formerly known as AARST)... might give a little more "instant recognition" for those reading this paper.

From Jane: I will clarify the IEA-AARST connection in the section I am drafting, thanks for the reminder

Commented [EB5]: Jane

Commented [JB6R5]: Jane's 2/6/25 text merged into doc by Borski

Current Standards. The ten RTC states and four other regulated states require compliance with EPA-recommended ANSI-AARST standards for radon measurement and soil gas mitigation, while the other six regulated states continue to use legacy standards that were created by the state or EPA or a combination of ANSI-AARST and legacy standards. The ANSI-AARST soil gas mitigation standards (SGM-SF and SGM-MFLB) and the ANSI-AARST operation monitoring and maintenance (SG-OMM) standard under development are the only relevant consensus standards that cover both radon and vapor mitigation. The Consortium on National Standards is an ANSI-accredited standards development organization.

Current Proficiency Programs. The proficiency programs currently recognized by EPA are the National Radon Proficiency Program (NRPP), which is administered by the Indoor Environments Association (IEA, formerly the American Association of Radon Scientists and Technologists or AARST) and the National Radon Safety Board (NRSB). In March 2023, the EPA released Proposed Radon Credentialing Criteria which will help align and encourage consistency across radon credentialing programs operated by certification bodies and states. The criteria are designed to support establishment and maintenance of a base level of organizational and program-specific competencies, grounded in third-party accreditation to ISO/IEC 17024:2012. The imminent finalization of EPA's approval criteria may change the future array of recognized credentialing programs, since only one (NRPP) of the currently recognized ones is accredited to ISO/IEC 17024:2012, and there may be programs newly applying for EPA recognition.

Oversight Board. The IEA (AARST) model RtC legislation relies on an oversight board, like a plumbing board, medical examining board, or geologist board that involves volunteer industry members and empowers them to insist on oversight and impose penalties for non-performance. Kentucky enacted this approach in its radon law. Advocates in Maryland, Missouri and North Carolina are including a board in their proposed radon laws. IEA's Virginia Chapter is seeking to move regulatory oversight from the health department to the Asbestos and Lead Board in the state's Department of Professional and Occupational Regulation. One approach in Wisconsin would be placing a board in DSPS to enable a collaborative board to oversee all mitigation services, considering that there will be some individuals performing both radon and VI according to the same standards. In this scenario there could be designated representatives of the two agencies responsible – DHS and DNR – to ensure a high degree of communication and consistency where appropriate.

Consider existing certifications such as for asbestos abatement.

Need for Certification Program

—suggest regulation through certification (RtC) utilizing national programs: National Radon Proficiency Program (NRPP) or Nation Radon Safety Board (NRSB). Recognize WI is primarily surrounded by certified mitigator states (MN, IA, IL & IN). MI is pursuing certification.

Commented [EB7]: May not create certification

Commented [EB8]: Add to need for certification section. Ed

Commented [EB9R8]: Not yet including VI/Radon in DSPS; start with NRPP and end wild west

Commented [EB10]: Jane

Commented [EB11]: May not create certification

State Agency Roles and Interrelationships~~Partnership between DHS and DNR (including DCF & potential for DSPS)~~ –

~~The DHS, DNR, and DCF are overseen by separate committees in the Wisconsin Legislature but overlap extensively in their respective duties to ensure public protection from harmful soil gas exposures. The DHS has long-standing federally funded programs that support radon and vapor intrusion exposure prevention through human health risk assessment, expert consultation, and statewide public health education and outreach efforts. The DNR... Together, the DHS and DNR work together routinely to ensure Wisconsin citizens are sufficiently protected from chemical vapors resulting from hazardous spills. In 2023, the DCF enacted new rules to protect children enrolled in licensed childcare from exposure to high levels of radon gas. The DCF largely relies on the DHS's radon expertise to provide ongoing radon-related education to childcare providers and childcare licensing staff. Together, the DHS, DNR, and DCF work to promote the safety of children enrolled in licensed childcare and their caretakers and prevent harmful soil gas exposures.~~

~~Because all state agencies with roles and responsibilities related to radon and vapor intrusion routinely interact with each other on these issues, an umbrella law requiring oversight and credentialing of radon and vapor intrusion mitigation contractors would integrate well among the agencies' independent and shared responsibilities and interests. Additionally, Chapter 15 of the Wisconsin Statute, Structure of the Executive Branch, grants the creation of the Department of Safety and Professional Services (DSPS) and its authority to host examining boards and councils for various professional services. DSPS leads administrative activities that help each board and council achieve its goals, including managing the issuance and denial of licenses and license applications. While DSPS does not currently have a soil gas-related board, current infrastructure exists that could support development of such a board at DSPS.~~

~~DHS and DNR covered by separate committees in legislature but about 85% overlap in radon and vapor intrusion mitigation systems. Consider an umbrella law. Both systems address public health issues. Suggest oversight of certification (& associated state licensure?) fall to DSPS with emphasis on teachable moments vs. enforcement/penalties. DCF rules require radon measurement and mitigation at day cares with no protection of consumers from inadequate mitigators.~~

Current State of Mitigation –

~~The design and installation of VI mitigation systems is administered through NR 700. Wis. Admin. Code. The WDNR guidance document "Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin" (RR-800) also provides information on VI mitigation systems. However, there is not a uniform standard for design and installation of VI mitigation systems. Regulation of radon in Wisconsin is currently limited to testing and mitigation associated with licensed family and group child care providers, as established by the Wisconsin Department of Children and Families. The Wisconsin Department of Health Services provides information with respect to radon but does not regulate radon~~

Commented [AK12]: Jennifer et al., please complete!

Commented [AK13]: We can go further into depth here if needed - would ask Nathan to contribute from his Site Evaluation Program's perspective.

Commented [EB14]: From Chris V: As stated in our last meeting, I think that it might be "easier" to get the "credential" vs. "license" through a DHS oversight vs. the DSPS oversight. I don't think, I don't know for sure, but it seems like trying to establish a "board" to oversee the "licensing" process (e.g., like the PE and PG boards) would be onerous vs. having DHS take lead and creating (or accepting a nationally created credential) would be simpler. Again, if we are doing this we should flush out the difference between the DSPS "license" vs. the DHS "credential". My first gut reaction to this is that you'd likely get more people to comply and participate in the credential process if it were relatively "easy" to obtain and participate. The DSPS process is brutal whereas the asbestos credentialing process is much more simplistic – and I'm not sure that what we are talking about really should rise to the level of being complicated and burdensome – I think our goal with this is to get more people who are going to do this work educated continuously and credentialed to show that they are being educated and understand what is happening. Otherwise, there will be less people doing the work and the market will soon adopt an increased cost which will then have ramifications for the environmental justice portion of this (fewer people will be able to afford to have the work done, etc.).

From Amanda: I have reached out to my colleagues in the DHS Lead and Asbestos Section to see whether they could have one or two of their staff potentially attend one of our future meetings to shed some light on this. My hope is that they could discuss how the certification programs work, why they fall under DHS instead of DSPS, what the staffing and duties look like, benefits and challenges/limitations, etc.

From Jane: The idea behind using DSPS was to enable one oversight board for all mitigation services (considering that there will be some individuals performing both radon and VI ...)

Commented [EB15]: Comment from Amanda: This is a good point but perhaps this section isn't the best place for it. Thinking this should go under another section that describes issues observed in the field.

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measurement or mitigation. The State of Wisconsin does not require contractors performing radon mitigation work to be state-licensed or nationally certified.

The absence of a uniform standard with respect to VI mitigation systems or radon mitigation systems has contributed to several challenges:

Inadequate Design: While several standards for VI and radon mitigation systems have been developed by ANSI/AARST, the standards are applied unevenly by designers. With respect to VI mitigation, this has led to project delays when WDNR provides comments requesting revisions to designs. Cases have also occurred where inadequate mitigation systems have been installed, resulting in vapor intrusion exposures.

Untrained Installers: In the absence of a certification process unqualified contractors can enter the marketplace and offer mitigation services. This has led to installation of deficient mitigation systems.

Deviations from Design to Installation: VI mitigation systems are often installed during new construction of structures. VI mitigation system designs are often handed off from the designer to a general contractor, who is tasked with developing construction specifications for the overall construction project and retaining subcontractors. Inadequate communication between designers, general contractors, and installers has resulted in deviations from the design for a variety of reasons, including cost savings (e.g., installing a vapor barrier that is inconsistent with the design), lack of understanding of system requirements (e.g. system fans installed at improper locations or orientations, failure to slope system piping to allow drainage or condensate, etc.), lack of understanding of quality control requirements (e.g., failure to conduct coupon or smoke tests), and lack of details in the design leading to misinterpretation. These deviations have the potential for sub-standard and deficient system performance.

Lack of Installation Documentation: In the absence of oversight during the installation phase for a VI mitigation system, deviations from a design are likely to go undocumented. In the event of issues with system performance, the absence of installation documentation has made diagnosing system performance issues a challenge and developing remedies to poor system performance difficult.

Insufficient Performance Monitoring: Collection of post-installation commissioning data is important in verifying a mitigation system is operating properly and managing risk. While WDNR guidance outlines general requirements for commissioning a VI mitigation system, the schedule for implementation/system verification is left to responsible parties and consultants. This has led to delays in sample collection and associated notifications to building occupants when exposures occur.

The net result of the not infrequently encountered issues listed above is the potential for vapor intrusion exposure to building occupants and additional costs associated with diagnosing/repairing sub-standard mitigation systems.

~~Similar issues identified with radon mitigation systems as with VI mitigation systems including unqualified contractors, inadequate installations, no or insufficient performance monitoring, ineffective mitigation systems, etc. resulting in additional costs and unnecessary exposures. ANSI/AARST Standards transitioning from exclusively radon to soil gas that includes both radon and VI.~~

IEA/NRPP Certification Development –

The National Radon Proficiency Program (NRPP), which is administered by the Indoor Environments Association (IEA, formerly the American Association of Radon Scientists and Technologists or AARST) is developing a vapor intrusion mitigation credential. This credential would add to the current array of NRPP certifications: Radon Measurement Professional, Radon Mitigation Specialist, Radon Measurement Field Technician, Radon Mitigation Installer, Soil Gas Mitigation Compliance Inspector. Also under development are certifications for the Commercial Radon Measurement Professional and the Commercial Radon Mitigation Specialist.

It is anticipated that VI mitigator 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).

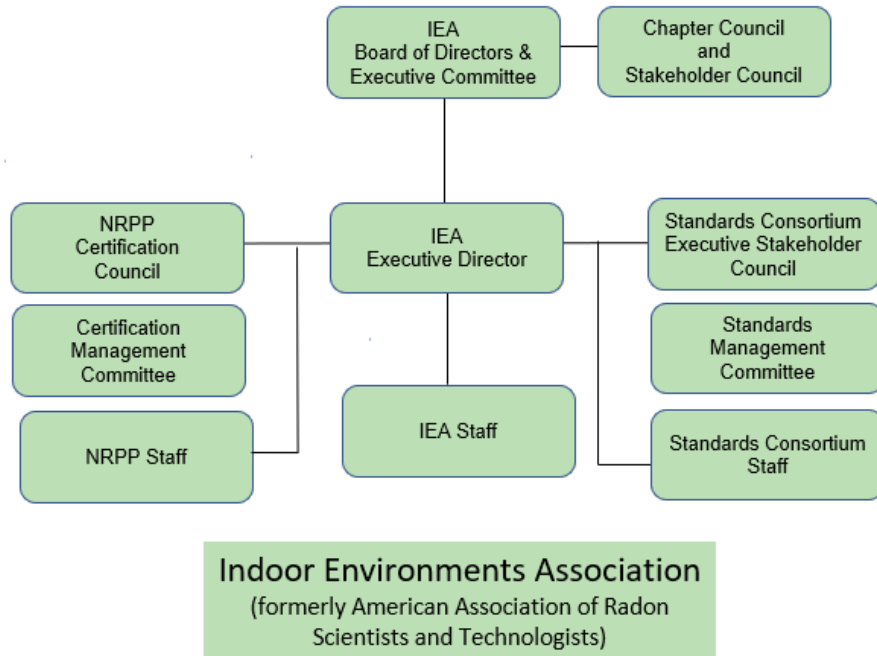
NRPP follows a rigorous process to develop a certification to fully fulfill its accreditation by the ANSI National Accreditation Board under ISO/IEC 17024:2012. The definition of the role and related job tasks, eligibility pathways, assessment/certification process, and exam format recertification interval and requirement are among the steps in certification creation. Current practitioners are surveyed to learn the extent to which tasks within the Job Task Analysis are necessary and important. Exam content is developed through volunteer committees of exam item writers and item reviewers. Once the exam is delivered in pilot format, the effectiveness of the items is evaluated to ensure that the items are technically correct and assess knowledge important to the job, and the passing score is established. It is anticipated that pilot testing will occur by the end of 2025.

Commented [EB16]: Jane

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Commented [EB18]: From Chris V: Should we be approaching the certification credential to be multi-staged like the asbestos credentials? There are different needs for individuals who design the system vs. individuals who install the system vs. individuals who perform the "assessment" for need of a system. Asbestos program has many differing levels of certification for different tasks. Seems like this should follow the same potential route – at least for the Designer and Installer credentials, since the assessment work is probably covered under the NR 700 code by the need to define the extents of contamination of all media (soil, groundwater, vapor) in NR716, right?

From Jane: I hope (but can't confirm) that NRPP's current radon mitigation installer certification will be broadened to all soil gas hands on workers



~~developing a vapor intrusion mitigation credential to establish a vapor intrusion mitigator certification. VI mitigator certification excludes need for contractor to pursue/obtain radon measurement certification and radon mitigation certification if only pursuing vapor intrusion mitigation certification. VI mitigation credential acknowledges potential need for Hazardous Waste Operations and Emergency Response (HAZWOPER) training, asbestos certifications, etc.~~

Prerequisites?

Other Topics? –

Potential Conflicts with Existing Regulations

Initial discussions with IEA included certification provisions that may be applicable to mitigation system designers and performance verification. While limited regulations exist in Wisconsin with respect to radon, the NR 700 rule series include several areas that are associated with site investigation, interim/immediate action, and regulator closure. For example, NR 712, Wis. Admin. Code establishes personnel qualifications for conducting environmental response actions. Adoption of certification programs must not conflict with these and other existing regulations.

[NRPP certifications may also include provisions for system commissioning, which would likely include air monitoring. Laboratory accreditation is regulated by the WDNR under NR 149, Wis. Admin. Code. The WDNR does not currently regulate the analysis of air samples in Wisconsin by laboratories. Adoption of certification programs must recognize the absence of such accreditation.](#)

[Applicability of Certifications to Subcontractors](#)

[It is common to engage various trades, such as plumbers and electricians, during the installation of mitigation systems. If the adoption of certifications programs is pursued in Wisconsin, these subcontractors should be supervised by certified installers but should not be required to be certified installers themselves. Construction managers \(e.g., general contractors, owners representatives\) should also not be required to be certified installers, but should engage certified installers to verify installation of mitigation systems are in accordance with the design specifications.](#)

VI mitigation certification must not conflict with NR 700 rules for investigation, air sampling during commissioning, documentation requirements and consulting requirements, including NR 712. DNR does not regulate air labs in [WI](#). Consider how to clarify how mitigation certification relates to environmental consulting (esp. when environmental consultant is seeking certification to also be the VI mitigation installer). Clarify that subs (e.g., plumbers, electricians) must be supervised by certified mitigators, not certified mitigators themselves.

HUD requires mitigation certification for multi-family structures (for radon) & eager to [include](#) soil gas standards. HUD Environmental Review Program includes radon & VI.

[Suggest engaging Realtors, Home Inspectors, Home Builders, installers, for support.](#)

[Consider existing certifications such as for asbestos abatement.](#)

Consider including language currently used to try and skirt regulations such as "radon resistant", "moisture reduction" and "off-gas" systems, and any future creative language – perhaps focus on the performance including any protection from or reduction of soil gas (includes both radon and VI) or any form of depressurization for protection from soil [gas](#).

Proposal

This issue paper recommends continued evaluation of a certification program for mitigation in Wisconsin. Discussions will continue following completion of credentials for vapor intrusion mitigation on a national level by [NRPP/EA](#).

Resources Needed

Commented [EB19]: Think about weaving in radon measurement

Commented [EB20]: Jennifer to try and find HUD volunteer. Sarah Jenson? Glen Schroeder?

Commented [EB21]: Include a section on stakeholder outreach for buy-in

Commented [EB22]: Add to need for certification section. Ed

Commented [EB23R22]: Not yet including VI/Radon in DSPS; start with NRPP and end wild west. ACM certification through DHS

Commented [EB24R22]: Process: 1) rely on national standard initially, 2) license through DSPS board with members from DHS (radon) and WDNR (VI)

Commented [EB25]: Comment from mitigation contractors - contracts may market other things as radon/vi use - e.g., moisture barrier used for vapor but called moisture barrier to avoid certification.

Add to current state of mitigation section?

Ed

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To be determined

Environmental Justice

To be determined

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