



April 14, 2023

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Department of Housing and Urban Development 451 7th Street SW, Room 7282
Washington, D.C. 20410-8000

RE: Comments on CPD-21-136 “Departmental Policy for Addressing Radon in the Environmental Review Process”

Submitted electronically at www.regulations.gov. Docket No. FR-6358-N-01

The American Association of Radon Scientists and Technologists (AARST) 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.

AARST commends HUD for its decision to formally recognize the need for a department-wide radon policy and acknowledge that properties used in HUD programs must be evaluated for radon to ensure that occupant health and safety are not adversely affected. The decision is consistent with the conclusion of the Inspector General Report of April 8, 2021, OIG 2020-OE-0003, *HUD Program Offices’ Policies and Approaches for Radon* (OIG report) that HUD policy must “ensure that residents in HUD-assisted housing receive consistent and sufficient protection from the hazardous health effects of radon exposure.”

The notice specifically invites responses to two questions:

What specific guidance would a HUD grantee or interested member of the public need to successfully identify and mitigate radon?

- HUD grantees should ensure the use of “current techniques by qualified professionals” as required by [24 CFR 58.5\(i\)\(2\)\(iv\)](#). Contracting with one of the thousands of professionals already credentialed by an EPA-recognized proficiency program such as NRPP or state

agency, all of which require adherence to legitimate consensus standards, is one option. Another option is to build in-house capacity by getting staff properly trained and credentialed by an EPA-recognized proficiency program or state agency. HUD grantees should not take the public health risk and incur the potential legal liability of having unqualified persons using substandard methods to identify or mitigate radon.

- Interested members of the public - everyone who owns or rents their own home – should be encouraged to get that home tested for radon. Testing is the only way to know if the radon level is above or below the EPA action level of four picocuries per liter of air (4 pCi/l). Radon professionals are available to provide measurement and if needed mitigation. A low-cost do-it-yourself test kit can be used to screen a home, but it is important to have a qualified radon professional perform another test to confirm the result.

What concerns do you have about implementation of the proposed radon policy?

AARST’s multiple specific concerns about the proposed policy are described below section-by-section.

I. Notice

The notice should clarify in the opening paragraphs that existing HUD program policies that support testing and mitigations are not pre-empted by the policy.

II. Radon and its health effects

(No comment)

III. Considering radon in the environmental review

Ambiguous language. It is suggested in the draft that “As radon is a radioactive substance, HUD or the responsible entity (RE) must “consider it” as part of the site contamination analysis.” “Consider,” which is used elsewhere in the draft, falls far short of the requirement in the regulation at 24 CFR 58.5(i)(2)(i) and (ii)⁴

[i]t is HUD’s policy that all properties that are being proposed for use in HUD programs **be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances**, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property. The environmental review of multifamily housing . . . , **must include the evaluation of . . . other evidence of contamination on or near the site**, to ensure that occupants of proposed sites are not adversely affected by any of the hazards listed in paragraph (i)(2)(i) of this section.

Similarly, this section states that “HUD encourages” and “recommends” following the most recent EPA recommendations about assessing and reducing radon.

The sentence in the discussion about following EPA guidance, “Indoor air radon levels vary across the U.S. and from parcel to parcel due to differences in geology, climate, seasonal variation, building construction, and other conditions” is misleading by omission. The sentence should be amended to add “and within a building from dwelling unit to dwelling unit” to ensure that the user understands the scientific evidence for testing all ground contact units within a building.¹

Current Methods and Qualified Professionals Are Required. HUD programs are subject to the provisions of 24 CFR 50 or 24 CFR Part 58 regulations which are not ambiguous about requiring action. Indeed, the HUD environmental standards at 24 CFR 58.5(i)(2)(iv) require the use of both current techniques and qualified professionals for testing:

(iv) The responsible entity shall use current techniques by qualified professionals to undertake investigations determined necessary.

a. Best practice for considering radon in the contamination analysis

It is acknowledged that the policy recommends the American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) radon testing standards for single- and multi- family buildings, schools, and large buildings. This section of the policy neglects to make clear that the laws and or regulations in 20 states, covering 48% of the US population, require that radon work be performed in compliance with established standards. In those jurisdictions, what HUD “recommends” could conflict with applicable law. Fortunately, most of the regulated states have adopted some or all of the ANSI/AARST standards consist with the HUD recommendation.

HUD’s department wide policy should be consistent with HUD’s multifamily lending programs and require the ANSI/AARST standards exclusively. They are the only US radon standards that are subject to active continuous maintenance and accountable for compliance with ANSI procedures for openness, lack of dominance, balance, coordination and harmonization, notification of standards development, consideration of views and objections, consensus votes and appeals. Most regulatory states, both EPA-recognized national proficiency programs, the International Code Council’s green building code, and other bodies require adherence to the EPA-recommended voluntary consensus standards.

The National Technology and Transfer of Information Act (NTTIA) at 15 USC 272 requires that federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies. HUD has the capacity and duty comply with this federal policy on consensus standards. HUD has not sought or obtained a waiver from the Office of Management and Budget that would permit HUD to develop or adopt substandard techniques or methods of measuring (or mitigating radon). OMB would be unlikely to grant that waiver given the

¹ The proper citation would be: “Kitto, Michael E. PhD; Murphy, Calvin BSBA; Dixon, Sherry L. PhD; Jacobs, David E. PhD; Wilson, Jonathan MS; Malone, Jane. Evaluating and Assessing Radon Testing in Multifamily Housing. Journal of Public Health Management and Practice 28(2):p E525-E532, March/April 2022. |DOI: 10.1097/PHH.0000000000001392”

existence of standards that meet the NTTIA and are recommended by the leading federal agency tasked with oversight of radon and related technology.

It is completely inconsistent with HUD's environmental-related regulatory authority over buildings supported by HUD programs to allow (or, worse, promulgate) "alternative strategies" for testing.

The final radon policy should unequivocally and consistently refer to the ANSI-AARST standards that are recommended by EPA and recognized in most states. It should be noted that EPA has "recommended" them because, unlike HUD, the Agency does not have regulatory authority over any buildings.

Qualified Professionals

The Indoor Radon Abatement Act (IRAA), which is a significant federal statute relevant to radon, directed EPA at 15 USC 2665(a)(2) to operate a voluntary proficiency program to operate:

A voluntary proficiency program for rating the effectiveness of radon measurement devices and methods, the effectiveness of radon mitigation devices and methods, and the effectiveness of private firms and individuals offering radon-related architecture, design, engineering, measurement, and mitigation services

After implementing the program, EPA ceased operating it, and in 2001 recognized two private radon certification programs, the National Radon Proficiency Program (NRPP) and the National Radon Safety Board (NRSB) to carry out nationwide proficiency functions. EPA also recognizes state credentialing programs. Combined, these programs implement Congressional intent regarding indoor radon and deliver the only nationwide framework for qualifications to perform radon services. EPA has recently issued a notice at 88 FR 17215 to describe its intended criteria to recognize private and state radon proficiency programs in the future.

HUD policy should not sidestep this infrastructure, but instead should unequivocally and consistently require use of "qualified professionals" i.e., persons with state radon licenses or certification and persons certified by the NRPP and/or NRSB. Low-income families should not be subjected to incompetent work, like testing for radon improperly and missing high radon levels or digging around in a basement to release high levels of radon into a home. HUD should insist that programs deploy or use personnel who have the relevant education, training, and experience to conduct radon measurement or mitigation. AARST and others would be pleased to assist HUD in providing housing authorities, local governments, and other responsible parties with technical assistance regarding how to create and maintain in-house capacity for qualified professionals.

Again, the policy neglects to reveal the radon laws and/or regulations in 20 states. These policies require that radon work be performed by persons who possess credentials by private and/or state radon proficiency programs; using others to perform work will violate these radon laws and or regulations.

One of the least productive alternative strategies proposed by the policy is for responsible parties and programs to contact the state radon program for guidance on radon requirements. The capacity of these programs varies considerably: some don't have expertise in advising property owners or program staff, and others don't have time to spare. Another reason to hire

an expert (or get a non-expert qualified) is to avoid the liability and hassle of incorrect interpretations of the requirements.

b. Alternative Testing Strategies

It is unclear what would be the meaning of “Where radon testing is not feasible.” These strategies are not protective of public health and fail to meet the requirement of 24 CFR 58.5(i)(2)(iv) to use current techniques by qualified professionals to undertake investigations. This section of the policy neglects to make clear that the laws and or regulations in 20 states, covering 48% of the US population, require that radon work be performed in compliance with established standards. In those jurisdictions, what HUD allows as alternative strategies will conflict with applicable law.

i. Do-it-yourself Radon Test Kits

This strategy is not protective of public health and fails to meet the requirement of 24 CFR 58.5(i)(2)(iv) to use current techniques by qualified professionals to undertake investigations. A few of the more obvious cautionary notes:

- Subsidizing do-it-yourself testing limited to tenants and owner-occupants is a good first step for their own benefit. It should not be tied to refinancing, real estate transactions, or federal program determination of need for mitigation.
- If allowed in multifamily properties, the use of test kits by owners must test 100% of the ground contact units
- Suggesting that state- and SIRG-funded test kits be used to test residence is not viable: kits are for occupants’ self-protective action.
- An occupant self-test cannot be used to exempt the unit from program action
- Recommending kit purchase sources is inappropriate for a policy
- Citizen’s guide contains insufficient guidance for third party testing – delete
- The ANSI/AARST MAH standard for single family and ANSI/AARST MAMF standard for multifamily are the appropriate references if help/guidance is needed by a third party.
- Legitimate third-party test devices are approved by proficiency program

ii. Remote areas

The need for greater capacity that exists in few areas of the country will be met as demand grows. It is important that HUD support programs and agencies in such areas with relevant, timely, and health-protective guidance consistent with the mandate to use current techniques and qualified professionals.

Most local government staff are not qualified to train anyone else in radon measurement. Local government staff, and others involved in HUD programs, can fulfill capacity gaps in measurement (and mitigation) by getting staff trained and credentialed through a private proficiency program and, as applicable, state credentialing program. They can also use the

state, NRPP and NRSB listings to identify qualified providers. There are radon professionals who will drive more than an hour to meet a need.

For HUD programs testing properties to determine the need for mitigation, consumer monitoring devices are not a substitute for devices that have been approved by the EPA-recognized certification programs.

The applicable regulation at 24 CFR 58.1(d) allows the Assistant Secretary for Community Planning and Development to, for good cause and with appropriate conditions, approve waivers and exceptions. Responsible parties and programs that can document inability to comply should be able to submit a request for a waiver or exception. HUD should establish criteria for granting a variance so that the building does get tested and public health is not compromised. Such exceptions should be rooted in specific types of circumstances proposed by the requestor, such as testing will be done using a specific equipment/person to do the work.

iii. Scientific Data Review

Testing is the only way to determine if a building has a high radon level: scientific data cannot be used to determine “whether the project site is located in an area identified as having a high potential for high radon levels.” This criterion is in itself flawed, since any risk potential is the only legitimate threshold to define whether an area is impacted by high radon levels.

The mischaracterization of radon-induced lung cancer risk is a longstanding health equity problem. The historic EPA radon zone maps classified 3,000 plus counties as having high, medium, or low risk, based on 5,694 radon tests and some geologic and ambient air data. For thirty years, the resultant EPA maps have effectively steered consumer testing decisions and public resources toward the many places labeled high risk and away from Texas, California, and numerous southern states deemed low risk. The EPA Map’s mean radon levels mask measurements above the action level. Millions of additional measurements have occurred since this point-in-time study.

Geological studies should not be used to define whether an area is impacted by high radon levels. While certain geologic formations increase the potential for greater levels of uranium, radon has been found in buildings in many areas that lack these formations.

The most thorough data EPHT test results above the action level and maximum radon level can be useful indicators of an area’s risk potential. Mean and median radon levels should not be used to define whether an area is impacted by high radon levels since they mask measurements above the action level.

c. Mitigating Radon

The mitigation plan must be developed under the supervision of a certified or licensed radon mitigation professional.

The mitigation plan, when implemented, shall be implemented by or under the supervision of a certified or licensed radon mitigation professional in accordance with the applicable ANSI/AARST mitigation standard. Post-mitigation clearance must indicate that the radon level is below 4 picocuries per liter.

HUD must ensure that all HUD programs test for and mitigate radon consistent with industry standards and insist that the disparate treatment of HUD program recipients ends. Radon is a

radioactive substance, the health risk is clear, the standards are in place, one program can be the model for the rest.

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Additional Comments – Frequency of High Radon Levels and Costs

We note that program staff and partners of HUD have expressed concerns about the frequency that radon will have to be mitigated and the incremental cost of testing and mitigation. The members of our association receive these concerns every day from customers in the field, on the phone, and by email. No one wants to have to allocate scarce resources to controlling this Class A carcinogen. We offer the data below to help HUD partners quantify risk and potential costs.

Frequency of High Radon Levels - HUD FHA Multifamily Properties

HUD’s Office of Environment and Energy provided the following results from radon testing reports, which indicate that approximately half of the properties tested July 2017 through April 2022 contained at least one building with radon levels greater than or equal to the EPA 4.0 pCi/L action level.

Time Frame	Ground Contact Testing Required	Properties Tested	Properties with Radon \geq 4.0 pCi/L	% Properties with Radon \geq 4.0 pCi/L
7/7/17-3/17/21 ¹	25%	810	393	48%
3/18/21-4/30/22 ²	25% or 100% ³	204	103	50%

Notes

1 Does not include Zone 3 properties – the 2016 MAP Guide excluded testing of these properties.

2 Includes Zone 3 properties – the 2020 MAP Guide requires testing of these properties.

3 A number of loans included in the 3/18/2021-4/30/2022 time frame were processed under the 2016 MAP Guide due to the queue.

Frequency of High Radon Levels - CDC Environmental Public Health Tracking

Analysis of the pre-mitigation test results available at <https://ephtracking.cdc.gov/DataExplorer/> indicates that more than 1/3 of single-family homes contained radon levels greater than or equal to the EPA 4.0 pCi/L action level.

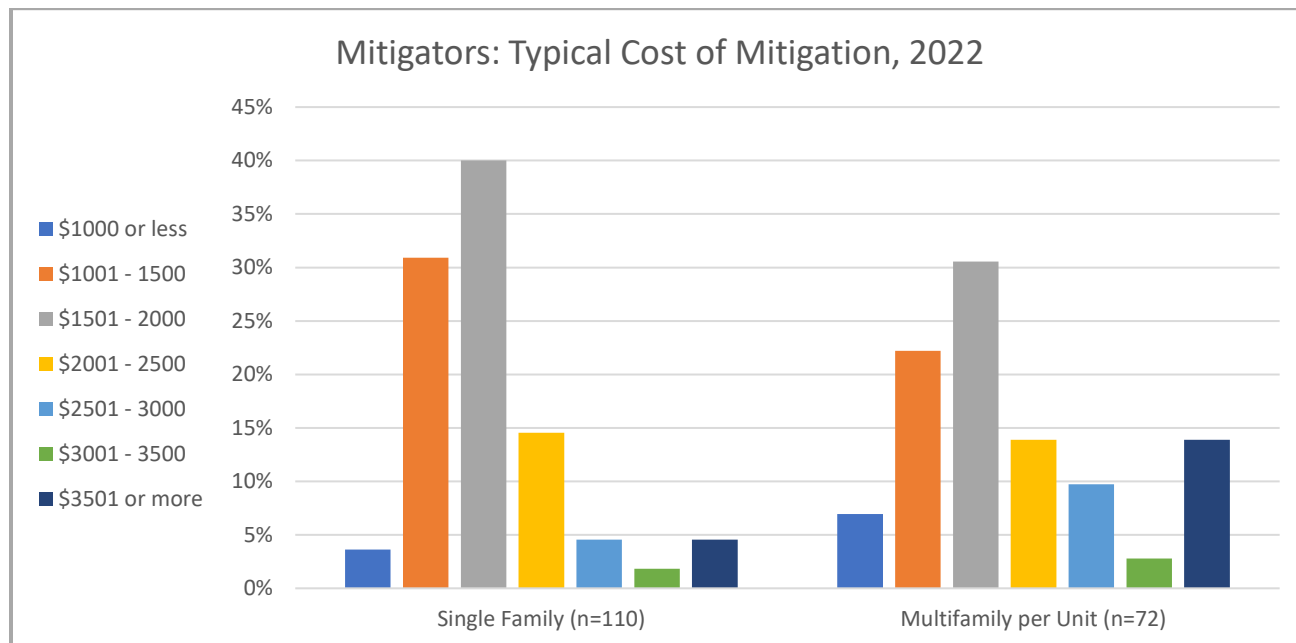
Radon Level	# Test Results	%Test Results
\geq 4.0	718,943	35.7%
$>$ 2.0 and $<$ 4.0	497,754	24.7%
$<$ 2.0	796,847	39.6%
	2,013,544	100.0%

Frequency of High Radon Levels – Other Sources

Analysis of test results collected by one radon measurement firm that has tested hundreds of properties indicate that on average 15% of the ground contact units contain radon levels greater than or equal to the EPA 4.0 pCi/L action level. This result was also obtained through the previously cited EARTH Study.

Mitigation Cost Range - AARST Industry Survey (2022)

AARST asked radon professionals about costs in September 2022. The below table presents mitigators’ response to the question: What is the typical cost of mitigation in 2022?



Conclusion

The proposed department-wide occupant-protective policy falls short of addressing the central finding in the OIG report:

Absent a departmental radon policy, each program office has developed a radon policy or approach with varying degrees of testing and mitigation requirements. This inconsistent approach does not align with statements in HUD’s environmental regulations or support industry standards which recommend that radon testing occur every 2 years after a mitigation system is installed. As a result of this inconsistent approach to testing and mitigation, HUD cannot ensure that residents receive *consistent and sufficient* protection from the hazardous health effects of radon exposure, as testing is the only way to determine indoor radon levels.

The OIG report had recommended that the Office of Environment and Energy develop and issue a departmentwide policy that notes that radon is a radioactive substance and outlines HUD requirements to test for and mitigate excessive radon levels that are consistent and sufficient for all HUD programs. OIG also recommended that the radon policies for PIH, CPD and Multifamily be developed, updated, and implemented to comply with the OEE’s departmental policy. The approach that the draft policy presents mirrors the disparate treatment of HUD customers that prompted the IG report and *is neither consistent nor sufficient*.

All persons affected by HUD programs deserve competent radon services delivered by professionals who have proven specialized knowledge and are complying with established practices. By not requiring that radon-related work be performed by qualified individuals or

comply with widely recognized EPA-recommended voluntary consensus standards for measurement and mitigation, the proposed policy poses significant challenges to health equity. Withholding full use of the proven knowledge and technology will not protect occupants from radon-induced lung cancer.

The decade of experience with multifamily lending program radon policy is a model of productive HUD initiative in addressing the dangers of radon and improving the policy over time. Public housing residents, beneficiaries of block grant programs, and others reached by HUD's programs deserve protection from radon comparable to the multifamily loan programs.

AARST appreciates the longstanding partnership between HUD and the radon industry and looks forward to supporting the implementation of HUD's protective radon policies in the future. Please don't hesitate to call upon AARST for further information and assistance; the point of contact is Jane Malone, National Policy Director, nationalpolicy@aarst.org

Healthy Regards,

A handwritten signature in blue ink that reads "Kyle Hoylman". The signature is fluid and cursive, with the first name "Kyle" being larger and more prominent than the last name "Hoylman".

Kyle Hoylman
President