

Radon Updates within the 2016 MAP Guide

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June 2, 2016

Changes/Clarifications to Radon

- There is an O&M Plan requirement for active mitigation systems (5.9.C.4)
 - Although this is listed in the rehabilitation section (5.9) and not the radon section, the O&M requirement pertains to any instance when an active mitigation system is installed at a property
 - Clarification on the screening process – how to apply data when 100% testing is NOT conducted (9.5.C.2.d.i)
 - If only 25% of the ground floor units are tested and **any** units are elevated, either 100% of the ground floor units throughout development will need to be tested or mitigation will be required in **ALL** buildings (even if screening of 25% of units in a particular building did not indicate elevated levels).
- Clarification on who should be on-site performing the device placements (9.5.C.2.b.i)
 - The previous language noted that the Radon Professional (RP) should supervise the work. However, this was clarified to state that the RP needs to provide **direct** supervision, which means they need to be present during the device placement and retrieval activities.
 - This will also be better clarified in the next version of the AARST Protocol for Conducting Radon and Radon Decay Product Measurements in Multifamily Buildings.

What needs to be in the Radon Report?

- No real changes from the HUD ML to the 2016 MAP guide in regards to the requirements for the content of the Radon Report
- The Radon Report shall be included in the pre-application or application, as applicable.
 - For a New Construction or Gut Rehab project, radon mitigation cannot be listed as a deferred submittal on the plans
- The Radon Report will be different depending on the transaction (new construction, gut rehab, substantial rehab or refinance).
- Radon testing (except in new construction and gut rehab projects) must be performed no earlier than 1 year prior to application submission. For new construction and gut rehab projects, radon testing must be completed after construction is complete but prior to Final Closing.
- The radon report must be signed and certified as to its compliance with the requirements of the HUD guidelines by a Radon Professional (RP).

- An RP is defined as someone possessing an appropriate certification (either tester or mitigator) from NRPP/AARST or NRSB **in addition to** a state license, if required by the state.

New Construction Projects

- How can you have a Radon Report when you cannot test?
 - The Radon Report does not include testing (but must include a post-construction sampling plan)
- The Radon Report includes a review of the mitigation design. The review must be completed by a properly credentialed mitigator and state that the proposed design meets the specific radon resistant construction criteria (as defined in the MAP Guide based on the EPA Radon Zone).
- A Radon Professional may conclude that mitigation is not necessary based on the proposed design of the building(s). An example of a valid justification is having only a garage on the surface level that is open to the air and is fully ventilated. However, this will still need to be documented by an RP in a Radon Report and post-construction testing is still required.
- During construction, the system must be installed by (or at least directly supervised and signed off by) a properly certified (through NRPP/AARST or NRSB) mitigator. Need state license if applicable.

New Construction Projects (continued)

- A post construction radon sampling plan must be included (includes how many units need to be tested, etc.) per HUD protocols.
- A cost estimate for the mitigation system as designed needs to be included. In addition, a plan for what would be required if the post construction sampling indicates elevated radon levels – levels at or above 4.0 pCi/L – (i.e. conversion from a passive to an active system or if no passive system installed would have to be retrofitted with a mitigation system). Additional testing would be required to ensure that radon levels are acceptable.
- Once construction is complete, the following is required:
 - Radon testing must be performed after construction is complete but prior to Final Closing.
 - An amended Radon Report will be required. This should include the previously submitted information as well as the following:
 - Include notice to notify occupants of what was done (if mitigation system was installed and/or results of post-construction testing)
 - Include a summary of sampling results as well as the protocols followed during sampling

- A certificate of completion needs to be issued and signed by the RP. This should include at least the specifics of the mitigation system(s) installed, confirmation that post-mitigation sampling was performed and acceptable, and discuss any ongoing maintenance requirements.

Substantial Rehab Projects

- Testing is required for **all** EPA Radon Zones
- If elevated radon levels (at or above 4 pCi/L) are confirmed, a pilot test would need to be performed prior to submittal. This will allow the mitigation plan to be developed. The radon report shall include the results of any testing performed and the details of any mitigation. Also, the appropriate certifications of the inspector must be included as well as a copy of the EPA Radon Zone map for the state.
- The mitigation design must conform to the ASTM standards as identified in the MAP Guide.
- All mitigation, including follow-up testing, must be completed prior to Final Closing.
- An amended radon report must be issued if the testing and/or mitigation must occur after application submittal. The radon report must be signed and certified as to its compliance with the requirements of the HUD guidelines by a Radon Professional.

Section 223(f) Refinance Projects

- The only exceptions to testing are projects that are categorically excluded under 24 CFR 50.19(b)(21) and Section 223(f) project applications that are located in EPA Radon Zone 3 **AND** where the search of readily available local radon data confirms the potential for radon gas is low. However, testing is still recommended in all zones.
- If elevated radon levels (at or above 4.0 pCi/L) are confirmed, mitigation is required. The mitigation design must conform to the ASTM standards.
- Radon mitigation included as part of a Section 223(f) project's repairs must be completed as quickly as practicable, and in any event, no later than 12 months after Closing.
- The radon report shall include the results of any testing performed and the details of any mitigation. Also, the appropriate certifications of the inspector must be included as well as a copy of the EPA Radon Zone map for the state. An amended radon report must be issued if the testing and/or mitigation must occur after application submittal. The radon report must be signed and certified as to

its compliance with the requirements of the HUD guidelines by a Radon Professional.

Deficiencies in Radon Reports or Provided Information

- For Sub Rehabs and 223(f) Refinance Projects, common deficiencies in the Radon Reports have included:
 - Missing state EPA Radon Zone map
 - Missing inspector credentials
 - Missing discussions of closed building conditions and notification of sampling requirements to the residents
 - Not testing at least 25% (or 100% if the state requires it) of the ground floor units or 10% of the upper floor units (per floor or per building)
- For New Construction and Gut Rehab Projects, common deficiencies in the information provided have included:
 - No Radon Report whatsoever
 - Plans do not include any radon mitigation designs (will often say that radon mitigation plans will be a deferred submittal)
 - The mitigation designs do not conform to the applicable standards
 - Improper connection of the radon system piping to the sub-slab soil gas collection system
 - Piping does not extend (or no plans to allow extension) to an appropriate ambient discharge point for any risers
 - Insufficient design allowances if conversion of passive to active system required (i.e. where fan will go)
 - Insufficient diameter PVC piping under slab
 - Insufficient permeable base for foundation
 - Missing language in the specifications outlining HUD's requirements in regards to the standard and the qualifications of the contractor supervising the project

Why Involve a Mitigation Professional in the Project Design?

- There are often more efficient ways of achieving compliance with the standard (which would be beneficial for the developer from a cost perspective).
- Utilizing the most up to date industry standards and materials is the best way to achieve that and you are better off to have a certified professional design the system from the beginning (rather than having to modify an existing design).
- The RP needs to perform (or at least supervise) the installation of the mitigation system as they have to sign off on it at the conclusion of the construction project. This is a requirement of the radon standard.

