



Radon Testing and Mitigation Policy Updated May 13, 2024

This policy outlines Kentucky Housing Corporation's (KHC) procedures to ensure grantees performing environmental reviews comply with the US Dept. of Housing & Urban Development (HUD) [CPD Notice-23-103: Departmental Policy for Addressing Radon in the Environmental Review Process](#). This policy is effective April 11, 2024, and applies to housing developed using HOME Investment Partnerships Program (HOME) and/or National Housing Trust Fund (NHTF) dollars that are subject to Part 58 Environmental Review regulations.

PLEASE NOTE: to ensure the safety of residents of all housing constructed with KHC funds, units developed with Affordable Housing Trust Fund (AHTF) and Rural Housing Trust Fund (RHTF) dollars must comply with the passive radon reduction venting system, radon testing, and radon mitigation requirements established by this policy. Environmental Review requirements do not apply to AHTF and RHTF-funded units. Radon documentation for these projects must be submitted with project set up.

Note: if your local community already has requirement regarding radon, contact KHC's Environmental Review Technical Administrator at environmetalreview@kyhousing.org.

What is Radon?

Radon is a naturally occurring colorless, odorless, and tasteless radioactive gas that comes from the natural radioactive decay of uranium. Radon, itself, decays into radioactive decay products that can be inhaled and cause damage to the lungs and stomach tissue which could cause cancer. Because more people are exposed to moderate levels of radon, most radon-induced lung cancer results from long-term exposure to low or moderate radon levels in the home, as opposed to short term exposure to very high levels of radon. The Environmental Protection Agency recommends homes be fixed if the radon level is 4.0 picocuries per liter (pCi/L) or more. When radon testing determines indoor air radon levels are at or above 4.0 pCi/L or the scientific data review determines the project site is located in an area that has documented radon levels at or above 4.0 pCi/L, HUD [CPD Notice 23-103](#) requires that the Environmental Review Record (ERR) for a housing project include a mitigation plan.

What projects are subject to radon considerations?

KHC developed these strategies to assist grantees with the necessary consideration of radon in the site contamination analysis required under 24 CFR Parts 58.5(i). Not all projects are subject to radon compliance, such as those HUD declares as exempt from Environmental Review per 24 CFR 58.34(a) and those categorically excluded not subject to the Federal laws and authorities per 24 CFR 58.35(b) (CENST activities).

After April 10, 2024, if data (research for new construction) or actual radon testing (in the case of rehabilitation of structures) determines the radon levels are or may be above 4.0 pCi/L, a radon mitigation plan must be documented and implemented. In instances where radon testing will be conducted but cannot be conducted until after the ERR is certified, such as with new construction, the initial mitigation documentation would not include a radon evaluation but must include a condition for post-construction radon testing followed by mitigation, if needed.

Assess projected radon levels at a project site using the University of Kentucky Geologically Based Indoor Radon Potential mapping tool.

KHC requires all developers to explore the [UK College of Nursing's Bridging Research Efforts and Advocacy Toward Healthy Environments \(BREATHE\)](#) radon information and data for preliminary research regarding a project site. Particularly, developers must use the [University of Kentucky Geologically Based Indoor Radon Potential](#) mapping tool¹ to assess the project site's potential indoor radon levels.

- 1) Go to <https://kygs.maps.arcgis.com/apps/View/index.html?appid=eac52b77783d4f2a92403740aaf8de76>
- 2) Enter the geographic coordinates (longitude, latitude) of the center of the project site in the search bar in the upper right corner of the web page.
- 3) Click the layers icon (stacked papers) on the left toolbar, click the down arrow next to "Indoor radon potential..." and change the opacity percentage to 50.
- 4) Click the legend icon (bullet points logo) on the left toolbar and then screen shot a copy of the map with the legend pop up. Using the print function in the mapping tool will remove the legend.
- 5) Upload a copy of the screen shot map in the HEROS Contamination Screen.
- 6) ***If the project site is in the 0.0-2.7 pCi/L (light blue) category, radon testing is not required.***
 - a. In the HEROS Contamination and Toxic Substances section, add "Per the University of Kentucky Geologically Based Indoor Radon Potential map, a science-based data source cited by HUD in the February 27, 2024, 'HUD's Departmentwide Radon Policy Notice' webinar, the project site is in an area where the Indoor radon potential is between 0.0-2.7pCi/L, well below the EPA suggested radon action level of 4.0 pCi/L. Therefore, radon testing is not required for this project site under CPD Notice 23-103 section III(A)(ii)(3)." in both question 1 and the Compliance Determination narratives.
- 7) ***If the project site is in any other category, radon testing is required.***
 - a. **NOTE: If radon testing is required the project cannot convert from CEST to Exempt.** Therefore, Notice of Intent to Request Release of Funds (NOIRROF) must be published in the local paper to initiate the KHC public comment period for the project. After the KHC public comment period, KHC will submit a *Form 7015.15 Request for Release of Funds* to HUD for the project. "Choice limiting activities" cannot be undertaken on the project until HUD issues *Form 7015.16 Authority to Use Grant Funds*. The publication fee for the public notice is a reimbursable pre-development cost.

¹ This is a science-based data source cited by HUD in the February 27, 2024, "HUD's Departmentwide Radon Policy Notice" web that can serve as an alternative for radon testing under HUD CPD Notice 23-103 section III(A)(ii)(3).

Single-Family Homebuyer Development- Acquisition, Rehabilitation, Resale Requirements

PREFERRED RADON TESTING METHOD: The preferred method is testing completed by a professional certified to meet American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) radon testing standards for single-family buildings. The ANSI/AARST standards describe how to perform the following tasks:

- conduct testing;
- interpret test results;
- draft a Radon Test Report to document the process for the building owner; and
- use for the ERR.

The ANSI/AARST standards can be viewed online for free and radon tests must be conducted by certified radon professionals. [Click here](#) to see an interactive map of radon professionals certified for measurement by the National Radon Proficiency Program (NRPP), the credentialing division of AARST.²

If there is a certified radon measurement professional within 50 miles of the project site, a certified professional must be used for radon testing unless the developer can document at least a 15-day wait for testing services. If the project site is more than 50 miles from a certified radon measurement professional or testing cannot be secured within 15 days of request, the alternative do-it-yourself (DIY) radon testing method described below may be used.

ALTERNATIVE RADON TESTING METHOD: If the project site is more than 50 miles from a certified radon measurement professional or testing cannot be secured within 15 days of request, a DIY radon test kit may be used to measure radon levels in single-family dwelling units. You can request free [DIY radon tests kits](#) from your [local health department](#) or from the [Kentucky Radon Program](#). DIY radon kits can also be purchased online or at hardware/home improvement stores. **Test devices must be approved by the National Radon Proficiency Program (NRPP) or the National Radon Safety Board (NRSB), and test results must be analyzed by a certified laboratory.** All test instructions, as specified by the manufacturer, must be followed exactly. **Note:** The ANSI/AARST [Protocol for Conducting Measurement of Radon and Radon Decay Products in Homes](#) provides detailed instructions for conducting radon tests in single-family homes.

RESULTS: If testing demonstrates that radon levels within the building are below 4.0 pCi/L, mitigation is not required. Environmental review preparers can simply upload a PDF of the complete test results in the Environmental Review Record (ERR) and describe the testing methodology in the summary narrative. Currently, HUD requires utilization of the existing fields in the HEROS Contamination and Toxic Substances screen to document radon testing and compliance.

If testing demonstrates that radon levels are at or above 4.0 pCi/L, mitigation measures must be employed to reduce indoor radon levels until levels are below 4.0 pCi/L and successful mitigation activities must be documented in the ERR.

² This map is based on data found at <https://certifiedradonpros.org/ky.html>.

RADON MITIGATION: When radon testing determines indoor radon levels are at or above 4.0 pCi/L, a mitigation plan must be created, which includes the following:

- identifies the radon level at initial testing;
- considers the risk to occupants' health;
- describes the radon reduction system that will be installed;
- establishes an ongoing maintenance plan;
- includes a reasonable timeframe for implementation;
- requires post-installation testing; and
- **mitigation measures must be installed by a professional certified for radon mitigation.** Go to [Click here](#) see an interactive map of radon professionals certified for mitigation by the NRPP.²

CLOSING ON A HOMEBUYER UNIT CANNOT OCCUR UNTIL RADON LEVELS BELOW 4.0 pCi/L ARE DOCUMENTED IN A POST-MITIGATION TEST.

DOCUMENTING THE ERR:

- Pre-Construction:
 - ***If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in the in the 0.0-2.7 pCi/L (light blue) category, radon testing is not required.***
 - In the HEROS Contamination and Toxic Substances section add “Per the University of Kentucky Geologically Based Indoor Radon Potential map, a science-based data source cited by HUD in the February 27, 2024, “HUD’s Departmentwide Radon Policy Notice” webinar, the project site is in an area where the Indoor radon potential is between 0.0-2.7pCi/L, well below the EPA suggested radon action level of 4.0 pCi/L. Therefore, radon testing is not required for this project site under CPD Notice 23-103 section III(A)(ii)(3).” to both in both question 1 and the Compliance Determination narratives.
 - ***If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in any other category, radon testing must be conducted.***
 - Radon testing can only occur once construction is complete, therefore, CEST 58.5 level reviews subject to post-construction testing cannot convert to exempt. In HEROS, within the Contamination and Toxic Substances analysis, include a condition for post-construction radon testing followed by a mitigation plan if adverse levels are reported. Include any applicable compliance documentation as outlined in the documentation as outlined in the *HEROS Environmental Review Completion Guide-HOME Single Family* found on the [HCA Partner Agency Portal](#). *Note: the environmental preparer must update the ERR with the radon evaluation and proof of any required mitigation when complete.*

- Post-Construction: Once testing is complete and documentation that the indoor radon levels are below 4.0 pCi/L, provide the KHC Environmental Review Specialist listed above with the following documentation as applicable.
 - Acceptable method to document testing completed by a certified radon measurement professional:
 - name of professional conducting mitigation, including NRPP Certification Number;
 - PDF of complete test results provided by the certified radon measurement professional; and
 - brief description of test results including date of test and indoor radon level measured in pCi/L.
 - Acceptable method to document DIY testing must include the following:
 - the test device (type, name of certified laboratory analyzing test results);
 - the time period of testing;
 - the test conditions (HVAC system off, outside temperature, etc.);
 - PDF of complete test results provided by the certified laboratory;
 - brief description of test results, particularly indoor radon level measured in pCi/L; and
 - any other conditions relevant to test conditions.
 - Acceptable method to document radon mitigation must include the following:
 - name of professional conducting mitigation, including NRPP Certification Number;
 - proof of completion (invoice documenting scope of work, date of completion, and cost of completion);
 - brief description of mitigation methods employed; and
 - ongoing radon monitoring and mitigation plan.

Single-Family Homebuyer Development- New Construction Requirements

NEW DESIGN STANDARDS: To ensure that all KHC-funded single family new construction units are radon mitigation ready, KHC's Design and Construction Review division has implemented the following updates to the Minimum Design Standards:

Radon Reduction: A passive radon reduction venting system is required for all units.

- a) The radon vent pipe shall pass through a heated portion of the structure and an accessible attic space or chase which will allow adequate working space to possibly install an inline fan.
- b) Electrical provisions shall be roughed in, in an accessible attic or chase, for possible future installation of an inline fan.
- c) If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in the in the 0.0-2.7 pCi/L (light blue) category, radon testing is not required.
- d) If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in any other category, radon testing must be conducted post construction but before occupancy using an acceptable test method as specified in KHC's Radon Policy.
 - a. If testing shows 4 .0pCi/L or more, mitigation measures shall be completed according to the most current version of American National Standards Institute/American Association of Radon Scientists and Technologists CCAH Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses (ANSI/AARST CCAH). Mitigation measures must be installed by a professional certified for radon mitigation. [Click here](#) to see an interactive map of radon professionals certified for mitigation by the NRPP.²

PREFERRED RADON TESTING METHOD: The preferred method is testing completed by a professional certified to meet American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) radon testing standards for single-family buildings. The ANSI/AARST standards describe how to perform the following tasks:

- conduct testing;
- interpret test results;
- draft a Radon Test Report to document the process for the building owner; and
- use for the ERR.

The ANSI/AARST standards can be viewed online for free and radon tests must be conducted by certified radon professionals. [Click here](#) to see an interactive map of radon professionals certified for measurement by the National Radon Proficiency Program (NRPP), the credentialing division of AARST.²

If there is certified radon measurement professional within 50 miles of the project site, a certified professional must be used for radon testing unless the developer can document at least a 15-day wait for testing services. If the project site is more than 50 miles from a certified radon measurement professional or testing cannot be secured within 15 days of request, the alternative do-it-yourself (DIY) radon testing method described below may be used.

ALTERNATIVE RADON TESTING METHOD: If the project site is more than 50 miles from a certified radon measurement professional or testing cannot be secured within 15 days of request, a DIY radon test kit may be used to measure radon levels in single-family dwelling units. You can request free [DIY radon tests kits](#) from your [local health department](#) or from the [Kentucky Radon Program](#). DIY radon kits can

also be purchased online or at hardware/home improvement stores. Test devices must be approved by the National Radon Proficiency Program (NRPP) or the National Radon Safety Board (NRSB), and test results must be analyzed by a certified laboratory. All test instructions, as specified by the manufacturer, must be followed exactly. **Note:** The ANSI/AARST [Protocol for Conducting Measurement of Radon and Radon Decay Products in Homes](#) provides detailed instructions for conducting radon tests in single-family homes.

RESULTS: If testing demonstrates that radon levels within the building are below 4.0 pCi/L, mitigation is not required. Environmental review preparers can simply upload a PDF of the complete test results in the Environmental Review Record (ERR). Currently, HUD requires utilization of the existing fields in the Contamination and Toxic Substances HEROS screen to document radon testing and compliance.

If testing demonstrates that radon levels are at or above 4.0 pCi/L, mitigation measures must be employed to reduce indoor radon levels until levels are below 4.0 pCi/L and successful mitigation activities must be documented in the ERR.

RADON MITIGATION: When radon testing determines indoor radon levels are at or above 4.0 pCi/L, a mitigation plan must be created, which includes the following:

- identifies the radon level at initial testing;
- considers the risk to occupants' health;
- describes the radon reduction system that will be installed;
- establishes an ongoing maintenance plan;
- includes a reasonable timeframe for implementation;
- requires post-installation testing; and
- **mitigation measures must be installed by a professional certified for radon mitigation.** Go to [Click here](#) to see an interactive map of radon professionals certified for mitigation by the NRPP.²

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DOCUMENTING THE ERR:

- Pre-Construction:
 - ***If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in the in the 0.0-2.7 pCi/L (light blue) category, radon testing is not required.***
 - In the HEROS Contamination and Toxic Substances section add "Per the University of Kentucky Geologically Based Indoor Radon Potential map, a science-based data source cited by HUD in the February 27, 2024, "HUD's Departmentwide Radon Policy Notice" webinar, the project site is in an area where the Indoor radon potential is between 0.0-2.7pCi/L, well below the EPA suggested radon action level of 4.0 pCi/L. Therefore, radon testing is not required for this project site under CPD Notice 23-103 section III(A)(ii)(3)." to both in both question 1 and the Compliance Determination narratives.

- ***If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in any other category, radon testing must be conducted.***
 - Radon testing can only occur once construction is complete, therefore, CEST 58.5 level reviews subject to post-construction testing cannot convert to exempt. In HEROS, within the Contamination and Toxic Substances analysis, include a condition for post-construction radon testing followed by a mitigation plan if adverse levels are reported. Include any applicable compliance documentation as outlined in the documentation as outlined in the *HEROS Environmental Review Completion Guide-HOME Single Family* found on the [HCA Partner Agency Portal](#). *Note: the environmental preparer must update the ERR with the radon evaluation and proof of any required mitigation when complete.*
- ***Post-Construction:*** Once testing and mitigation, if applicable, is complete, provide the [KHC Environmental Review Specialist](#) listed above with the following documentation as applicable. Once KHC has approved this documentation and emailed the developer a copy of the completed ERR and closing documents have been approved by HCA, then developers may schedule closing.
 - Acceptable method to document testing completed by a certified radon measurement professional:
 - name of professional conducting mitigation, including NRPP Certification Number;
 - PDF of complete test results provided by the certified radon measurement professional; and
 - brief description of test results including date of test and indoor radon level measured in pCi/L.
 - Acceptable method to document DIY testing must include the following:
 - the test device (type, name of certified laboratory analyzing test results);
 - the time period of testing;
 - the test conditions (HVAC system off, outside temperature, etc.);
 - PDF of complete test results provided by the certified radon measurement professional;
 - brief description of test results, particularly indoor radon level measured in pCi/L; and
 - any other conditions relevant to test conditions.
 - Acceptable method to document radon mitigation must include the following:
 - name of professional conducting mitigation, including NRPP Certification Number;
 - proof of completion (invoice documenting scope of work, date of completion, and cost of completion);
 - brief description of mitigation methods employed; and
 - ongoing radon monitoring and mitigation plan.

Multi-Family Rehabilitation and New Construction Requirements

The American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) MA-MFLB-2023 radon testing standards for multi-family buildings, schools, and large buildings must be utilized. The ANSI/AARST MA-MFLB-2023 standard describes how to conduct testing, interpret test results, and draft a Radon Test Report to document the process for the building owner and to provide documentation for the ERR. The ANSI/AARST MA-MFLB-2023 standards can be viewed online for free and radon tests must be conducted by certified radon professionals. [Click here](#) to see an interactive map of radon professionals certified for measurement by the National Radon Proficiency Program (NRPP), the credentialing division of AARST.²

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- identifies the radon level at initial testing;
- considers the risk to occupants' health;
- describes the radon reduction system that will be installed;
- establishes an ongoing maintenance plan;
- includes a reasonable timeframe for implementation;
- requires post-installation testing; and
- **mitigation measures must be installed by a professional certified for radon mitigation.** Go to [Click here](#) to see an interactive map of radon professionals certified for mitigation by the NRPP.²

DOCUMENTING THE ERR:

- Pre-Construction:
 - ***If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in the in the 0.0-2.7 pCi/L (light blue) category, radon testing is not required.***
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 - ***If the UK Geologically Based Indoor Radon Potential mapping tool shows the project site is in any other category, radon testing must be conducted.***
 - Radon testing can only occur once construction is complete, therefore, CEST 58.5 level reviews subject to post-construction testing cannot convert to exempt. In the HEROS Contamination and Toxic Substances analysis, include a condition for post-construction radon testing followed by a mitigation plan if adverse levels are reported. Include any applicable compliance. *Note: the environmental preparer must update the ERR with the radon evaluation and proof of any required mitigation when complete.*

- Post-Construction: Once testing and mitigation, if applicable, is complete, provide the KHC [Environmental Review Specialist](#) with the following documentation as applicable. Once KHC has approved this documentation and emailed the developer a copy of the completed ERR, then developers may allow residents to occupy units provided all other occupancy requirements have been met.
 - Acceptable method to document testing completed by a certified radon measurement professional:
 - name of professional conducting mitigation, including NRPP Certification Number;
 - PDF of complete test results provided by the certified radon measurement professional; and
 - brief description of test results including date of test and indoor radon level measured in pCi/L
 - Acceptable method to document radon mitigation must include the following:
 - name of professional conducting mitigation, including NRPP Certification Number;
 - proof of completion (invoice documenting scope of work, date of completion, and cost of completion);
 - brief description of mitigation methods employed; and
 - ongoing radon monitoring and mitigation plan