

HOMEOWNER CONSENT – RRNC HOME

Research Project Title: *Radon Evaluations in New Construction Homes*

Principal Investigator:

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Key Information: The following is a short summary of this study to help you decide whether or not to be a part of this study. More detailed information is included later on in this form.

The focus of this project is to determine the impact of radon-resistant new construction (RRNC) features on indoor radon levels. This will be done by alternatingly closing and opening the passive radon pipe that goes through the floor of the foundation, in one week intervals, and comparing indoor radon levels in the weeks with the pipe closed and the weeks with the pipe open. Another set of homes without RRNC features will also be tested to compare the overall effect of all RRNC features relative to homes that do not have such features. Testing will take six weeks. Passive radon and temperature/humidity loggers will be placed in participating homes throughout the measurement period. These monitors do not make any noise.

Project Overview

The University of Illinois at Urbana-Champaign's (UIUC) Indoor Climate Research & Training group (ICRT), a part of UIUC's Applied Research Institute (ARI) is studying radon in homes. Lawrence Berkeley National Laboratory (LBNL) is a partner in the study. This study is funded by the United States Department of Energy Building America Program (www.BuildingAmerica.gov).

ICRT invites you to participate in the study.

If you participate, ICRT will:

- Visit your home to deploy equipment, and then return once a week for six weeks. The first visit will take 1-2 hours. The last visit will take 30 minutes to one hour. All other visits will take less than 15 minutes. Intermediate visits will not require access to the interior of the home and may, with your permission, be conducted without someone present.
- Inspect and record information about your home and equipment in your home that may affect radon.
- Take photos of features of your home that may impact radon.
- Install monitors to measure radon in your home. The monitors will require up to 2 indoor electrical outlets.
- Install instruments to measure indoor and outdoor relative humidity.
- Measure the airflow of your ventilation system and other building components.

Also, during the study period, we request that you keep your windows closed.

The results of this field study will be combined with results from other homes and published in

an anonymous fashion. More information is provided in Section 4 of this consent form.

The requirements to participate are:

- You must be at least 18 years old.
- You must speak and read English well enough to understand this document.
- Your home must be located in Illinois or Colorado.
- Your home must not have highly unusual filtration or ventilation systems.
- Your home must be owner occupied.
- At least one adult must be present for the in-home visits.
- There must be suitable locations and electrical outlets for monitors.
- If you decide to stop participating before the measurements are complete, you must allow the study team to collect all monitors.

1. PROCEDURES

If you agree to be in this study, the following will happen:

Visit to Collect Basic Information about Your Home and Place Monitors to Measure Air Quality, Ventilation and Appliance Usage

Up to 3 researchers (the study team) will visit your home for 1 to 2 hours. The team will:

- Walk through to identify and collect information about appliances and ventilation equipment. Photos will be taken. A sketch of your home's floor plan will be made.
- Work with you to select suitable locations for setting up monitors inside and outside of the house.
- Install monitors to measure radon at one central location on the first floor and at one central location in the basement (if present). In some cases we may request to install a monitor in a crawl space.
- Install monitors to measure temperature and humidity at one location inside and one location outside of your home.

Radon monitors will need to be plugged into electrical outlets. It is important that you not unplug or otherwise disturb these items except in an emergency. Contact information is provided at the end of this document in the event you have any questions about the equipment.

Also, the study team may conduct the following tasks:

- Measure air leakage of the home.
- Measure airflow of continuous ventilation systems.

Depending on the workflow of the study team, the above tasks may occur when they return to your home at the end of the study period.

Six-week study period

Over the six-week study period, our monitors will measure radon, temperature, and humidity inside of your home and temperature and humidity outside of your home.

During the study period, it is important that all windows in your home stay closed and that exterior doors, including patio and garage doors, are open as little as possible. You may open windows as normal to manage the air quality in your home, such as to address odors or when doing a major cleaning.

Each week, 1-2 member(s) of the research team will come to your home to alternate capping or uncapping the radon vent pipe.

Gathering of Monitors and Complete Data Collection

At the end of the study period, the study team will return to your home for 30 minutes to 1 hour to:

- Complete gathering of home data (e.g. photos, floor plan).
- Complete testing of home.
- Confirm with you that all devices and monitors have been removed, and make sure that the study team is leaving your home in good condition.

Report With Results for Your Home

You will receive a report from the study team with most test results within 6 months.

2. RISKS/DISCOMFORTS

Keeping your windows closed may change the air quality in your home. Indoor pollutants may reach higher levels compared to when windows are open. Many pollutants from outdoors will typically be at lower levels.

If you sometimes use windows for comfort or for any other reason, please consider whether keeping them closed for the study period is acceptable to you.

We will use devices to measure the air leakage of your home. These make noise and create drafts during use. The tests are expected to take 30-60 minutes. Appliances, heating and cooling equipment, and exhaust fans will be temporarily off while we complete our activities. If this is bothersome, you may leave the area or go outdoors while the tests are being done. Please consider whether this will be acceptable to you.

Radon monitors will be placed in locations that are acceptable to you.

The study requires at least one adult to be present to meet the study team. The activities of the study team during visits may be temporarily disruptive or create limited access to equipment or locations in the home.

The study team will work with caution, but there is the risk of minor damage, such as paint chips or scratches. Please contact ICRT if something is damaged from the visits, even if you don't find the problem until after the work in your home has ended.

We will collect your name, address, phone number, and email address, and information from your home. It is possible that this information, along with health and demographic data collected as part of the survey, could accidentally become public. We will use password-protected and encrypted files. We will use code numbers in place of names to reduce the chance of accidental releases of information.

Illinois and Colorado have laws that require you to inform potential homebuyers of known radon levels in your home. These laws may change in the future.

3. BENEFITS

By reading the participant report, you will learn about the radon levels in your home.

The study aims to benefit Americans by studying how radon resistant features impact indoor radon levels.

4. STORAGE OF SAMPLES/DATA

The data from the survey and your home will be stored in password-protected computers, computer files, and a computer database. To keep the study anonymous, all of the information collected about you and your home will be identified by a home identification code. The electronic file that links this code to your contact information will be password-protected and not shared outside of the research team.

Coded data that does not include your name, address, or contact information may be shared with other researchers who are doing related studies. This includes health and demographic data collected as part of the survey.

Summary information and results from each home in the study will be put into a database that will be made available to other researchers. This database will not have information that identifies individual homes or participants. The raw data will be stored indefinitely and may be shared with other researchers. Shared data also will not include names, addresses, or contact information. A file linking the house address to the identification code will be kept indefinitely in order to be able to respond to any potential future requests you may have about your home but this file will not have your name and contact information.

Any papers that have your personal contact information will be stored in a locked filing cabinet at ICRT. Papers and files that have personal contact information will be destroyed at the end of the study. A password-protected electronic file that links your contact information to the home identification code will be kept for 3 years after the study is completed. This will enable the study team to contact you for potential follow-up studies. If you do not want to be contacted about future studies please indicate that on the signature page.

5. FINANCIAL CONSIDERATIONS

Study participants who complete the monitoring will receive \$100 in home improvement store gift cards.

Gift cards will be given to you at the end of the last visit. You will be asked to sign a form to show that you received the gift card.

The radon monitors will be plugged in and consume energy. It is expected that this energy use will be less than \$0.50 per week.

6. QUESTIONS AND CONTACT NUMBERS

If you have questions, concerns, or complaints, or think the research has hurt you, talk to research team lead Paul Francisco, 217-244-0667, pwf@illinois.edu.

This research has been reviewed and approved by an Institutional Review Board (the Central Department of Energy Institutional Review Board or “CDOEIRB”). The CDOEIRB is a diverse group of people who review research to make sure it is in line with the rules for human research studies. You may talk to them at (865) 574-4359 or CDOEIRB@orau.org if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.
- For any other reason you wish to talk to the CDOEIRB.

If you want to know more about the program, visit the DOE HSRP:
<http://science.energy.gov/ber/human-subjects/>

7. PARTICIPATION IN RESEARCH IS VOLUNTARY.

You have the right to not take part in this study or to stop taking part at any time. If you stop participation, it may take a few days before we can remove monitors and equipment.

The research team has the right to withdraw you from the study if you or your home does not meet the eligibility criteria on pages 1-2 of this document, or the research team determines that your home is an unsafe place to work.

If you wish to participate, please sign below. You will be given a copy of this consent form to keep.

Participants should know:

- Someone will explain this research study to you.
- Whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide.

AUTHORIZATION

I have read this consent form. My questions about the study have been answered.

I volunteer to participate in this research. I also give consent for my children who live in this home and are less than 18 years old.

I live at this address: _____

I will give the study team access to my home to study the home and equipment, conduct tests and install and remove monitors recording air quality and equipment operation. I agree to not unplug the monitors except in an emergency.

I agree to allow the study team to monitor over one week and access the home on two days.

I **request / decline** to receive a report summarizing short term test results.

I **agree / do not agree** to allow the study team to contact me about follow-up studies.

Date

Subject's Signature

Subject's Name (print legibly)

Date

Person Obtaining Consent (Signature)

Name (print legibly)