

## WHAT'S YOUR ROLE AS A SOUTH AFRICAN?



### Please support government efforts

to measure radon indoors by availing your house or building for radon measurements.

Please seek more information and **share with others.**



## WHAT'S GOVERNMENT ROLE ON INDOOR RADON?

- 1 Conduct radon measurements inside homes, public buildings, crèches, schools, etc.
- 2 Build mechanisms to protect the public from indoor radon exposure.
- 3 Develop mechanisms for control of radon exposures indoors.

Radionuclides of natural origin contained in or released from process materials may pose a risk to workers, public or the environment. These radioactive elements in minerals and ores originally found in the environment are commonly known as NORM – (Naturally Occurring Radioactive Material). Long-lived radioactive elements such as uranium, thorium and potassium and any of their decay products, such as radium and radon are examples of NORM.

The National Nuclear Regulator (NNR) is a public entity established and governed in terms of the National Nuclear Regulator Act (Act No 47 of 1999). The fundamental objective of the NNR is to provide for the protection of persons (workers and members of public), property and the environment from the harmful effects of ionising radiation associated with radioactive material through the establishment of safety standards and regulatory practices suited for the South African context. The NNR exercises regulatory control over the safety of nuclear installations, certain types of radioactive waste and naturally occurring radioactive materials.

The NNR is currently investigating the radon levels indoors (homes and buildings), to inform the establishment of an indoor radon regulatory framework for South Africa aimed at ensuring the effective management of the risk of indoor radon exposure to protect members of the public.

For more information please contact:  
National Nuclear Regulator: 012 674 7100  
enquiry@nnr.co.za



National  
Nuclear  
Regulator

## WHAT IS RADON?

- Is a radioactive gas that occurs naturally on earth.
- Is found everywhere on earth.
- It is tasteless, odorless and invisible to the naked eye.
- It is a significant contributor to natural radiation exposure.
- Radon can enter your home.



## PROPERTIES

86 (222)

Rn

Radon

## RADON AND YOUR HEALTH

Second leading cause of lung cancer, after smoking.

Prolonged radon exposure **increases the risk of lung cancer** in the general population.



The risk for lung cancer **higher for smokers** and reduced for non-smokers although significant.

**14%** of all lung cancer cases in some countries are radon-induced.

## HOW RADON ENTERS BUILDINGS?

- 1 Enters from the ground through cracks, water pipes and any spaces between walls and floor concrete.
- 2 Radon can build up due to poor ventilation.



## COULD RADON CAUSE OTHER ILLNESSES APART FROM LUNG CANCER?

No, according to current scientific knowledge, there is no other proven health effect associated with radon exposure apart from lung cancer.

## HOW DO I KNOW IF THERE IS RADON IN MY BUILDING?

The only way to know the radon level in any home / building is by conducting a radon measurement.



## HOW IS RADON MEASURED?

- 1 Radon is measured using a detector.
- 2 This detector is placed in the building for a determined period.
- 3 Detector is later removed for analysis at a laboratory.
- 4 Results of radon are later communicated.



## PREVENTION/MITIGATION

- 1 Improving ventilation of the building.
- 2 Sealing all possible entry routes.
- 3 Installing soil gas retardant plastic membrane on foundations and below floor slabs during construction.
- 4 Installation of devices to reduce build up indoors.