What is Radon?

- **Radon** is a colorless, odorless, tasteless gas which is produced naturally in the soil. It is usually found in basements, with older buildings at higher risk than new.\(^1\)
- While radon itself is not reactive, it produces radioactive particles which can be harmful. Exposure to elevated levels over long periods of time increases cancer risk.\(^1\)
- **Passive testing** uses a canister with a negatively-charged surface to “catch” positively-charged ions emitted over a given period of time. The amount found, measured in pCi/L (picoCuries per liter) tells how radioactive the air is.\(^3\)
- 32.7 pCi/L is the suggested maximum safe concentration of charged particles present for 40 hour/week exposure.\(^3\)

Testing at Beloit

- Preliminary tests were conducted in the southern (academic) half of campus in March 2014 by Environmental Initiatives testing service.
- Elevated levels (25 and 19 pCi/L, respectively) found in Middle College & Campbell Hall; occupants of Middle were relocated.
- Repairs in July lowered radiation to a safe level.
- Testing will continue on the academic side of campus and begin on the residential side in fall 2014.
- Testing is scheduled by occupancy and risk level; dorms will be tested beginning August 2014.

Future Plans

The full Beloit College Radon Management plan can be found at our website, https://www.beloit.edu/physicalplant/radon/. It includes:
- All prior testing dates, locations, and results
- Educational material
- Contact information for trained Beloit College staff
- Projected testing schedule

Scientific Background

Chemistry

Radon-222 is a product of radioactive decay of uranium 238. It forms free radical radioisotopes of heavy metals (polonium, lead) which react with airborne particles. If these particles are inhaled, radiation results in cell damage and increased cancer risk. Because radon is a heavy gas with a large nucleus, it remains in the air for long periods of time.\(^1\)

Geology

Rock County is located in a red zone, indicating that the average indoor level is at or above the EPA recommended level for homes.\(^3\)

References: