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## INTERPRETING RADON IN AIR TEST RESULTS

### GENERAL

The EPA has developed screening tests for air-borne radon to get an idea of whether follow-up testing is necessary. The test we performed, like all short duration tests of various approved technologies, should be considered a screening test. A single screening test is incapable of determining how radon levels in a house average over months and years. Radon levels do change dramatically from day to day, depending on weather conditions. Long-term tests once favored by the EPA have proven to have certain implementation problems, particularly under the time constraints of a real estate transaction. The EPA has therefore offered guidelines for multiple screening tests in borderline cases.

### READINGS UNDER 4.0

In my experience, usually if a radon screening test comes out below the EPA designated 4.0 picocuries per liter cut-off, the buyer will accept the house as is. Even though a 3.6 reading could have just as easily been a 4.4 under different weather conditions, buyers usually do not make an issue out of readings under 4.0 since it is difficult or impossible to negotiate and one can be pretty confident that the average long-term reading is not going to be extremely high.

### READINGS FROM 4.0 TO 10.0

Readings in this range are very common. About one out of five houses locally tests above 4.0 and very few test above 10.0. The EPA suggests a long term test be performed for readings that fall between 4.0 and 200. This way, one can determine if a radon reduction system is appropriate or not. There is a reasonable chance that the short-term screening test was taken during a high spike and that the average long-term reading will be less. Nevertheless, a three-month test or a year-long test may be impractical in a real estate transaction.

Having performed somewhere around 3500 radon screening tests by now, with around 20% coming out above 4.0, I have observed the following five scenarios fairly regularly:

- 1) The buyer takes the house as is because the reading is not far above 4.0.
- 2) The seller compensates the buyer for a radon reduction system or in fact installs it to keep the deal together.
- 3) The buyer and seller split the cost of a radon mitigation system.
- 4) The buyer and the seller agree to do a second screening test and average the results (consistent with EPA guidelines for real estate transactions). Before the second test, they decide on how they will act once the test results are in.
- 5) The buyer and seller cannot agree on a course of action.

Scenarios 1 through 4 seem appropriate, depending on the circumstances. Scenario five is a shame.

### READINGS ABOVE 10.0

Even though the EPA suggests additional testing for houses with a screening test reading of between 4.0 and 200, I have observed that usually some arrangement for radon reduction is agreed on for houses which test above 10.0 initially.

### REDUCTION SYSTEMS

The most common radon reduction system is a sub-slab suction system. This system works with a pipe cemented into the basement concrete floor slab and a fan that sucks air out of this pipe. This way the bulk of the radon is discharged outside before it has a chance to dissipate into the house. The average cost of this system seems to be running around \$1,000