



# Radon Mitigation System Checklist

Client Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**This home appears to have an active radon mitigation system.\***

- 1) Test the home's radon concentration to verify that the mitigation system is operating as designed and maintaining the radon concentration < 4.0 pCi/L.
- 2) If all review elements are checked "yes" (or n/a), the system likely conforms with 32 Ill. Adm. Code 422.150 Mitigation Standard.
- 3) If any of the review elements are checked "no" the system may not conform with required design and installation standards. If so, consider having a licensed radon mitigation professional repair or upgrade the system.

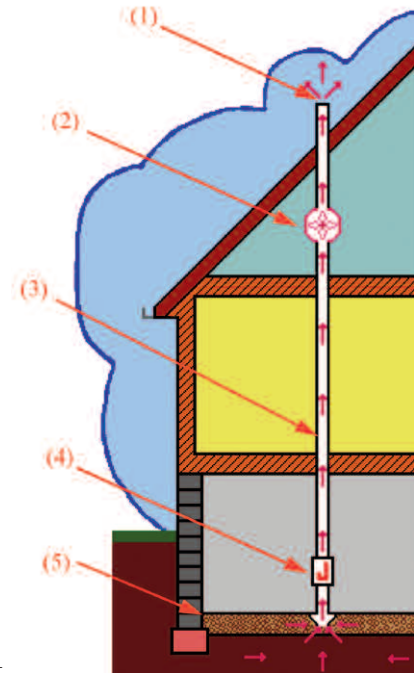
**This home appears to have been built using radon resistant new construction techniques.**

- 1) Test the home's indoor air to verify that the radon concentration is < 4.0 pCi/L.
- 2) If all review elements are checked "yes" (or n/a), the system likely conforms with 32 Ill. Adm. Code 422.150 Mitigation Standard.
- 3) If any of the review elements are checked "no" the system may not conform with recommended design and installation standards. If so, consider having a licensed radon mitigation professional repair or upgrade the system.

**This home appears not to have a radon mitigation system of any kind.**

- 1) Test the home's indoor air for radon. If the result is 4.0 pCi/L or more have a Mitigation Professional licensed with the IEMA install a mitigation system. Retest after the system is installed.

\* An active radon mitigation system has five basic elements: (1) a vent stack discharge point above the highest eave of the roof and as close to the roof ridge line as possible to prevent re-entrainment of radon or direct exposure of individuals outside the building to high levels of radon; (2) an electric vent fan located outside the conditioned space of the home (i.e., in an attic, garage or outside the living envelope); (3) a radon vent pipe, consisting of a minimum 3" Schedule 40 PVC pipe, running between the sub-slab gravel up to and above the highest eave of roof; (4) a manometer to indicate system failure with a label that includes the installer's name and phone number; (5) sealed and caulked all cracks and joints in the slab and walls.



## Consumer Information

Exposure to radon is the second leading cause of lung cancer after smoking. The Illinois Emergency Management Agency (IEMA) and the United States Environmental Protection Agency (USEPA) recommend that home owners and home buyers test their current or prospective home for the presence of radon gas in the indoor air. IEMA and USEPA recommend that steps be taken to reduce indoor radon levels when test results are 4 picocuries per liter (pCi/L) of radon in air or more. The USEPA estimates there are about 21,000 deaths annually due to radon related lung cancers with an uncertainty range of 8,000 to 45,000.

Since January of 1998, individuals measuring radon levels and installing radon mitigations have been required to be licensed with the IEMA in accordance with the Radon Industry Licensing Act. In June of 1998, the State of Illinois established specific regulations (32 Ill. Adm. Code 422) governing the performance of radon measurements and how a radon mitigation system should be installed. Prior to June 1998, USEPA had recommendations on the design and installation of mitigation systems, however there were no mandatory requirements.

## Have a Question About Your Inspection Results?

Contact the IEMA Radon Program Hotline at (800) 325-1245 or visit our website at [www.radon.illinois.gov](http://www.radon.illinois.gov).

### (1) Radon Vent Pipe Installation

- A) The main run of vent pipe, from primary suction point to exhaust is a minimum 3-inch in diameter (exteriorly 3-inch by 4-inch metal downspout may be used)  Yes  No  N/A
- B) Vent pipe and fittings are Schedule 40 PVC, appear to be air tight and properly joined / sealed.  Yes  No  N/A
- C) Vent pipes are supported every 6 feet on horizontal runs, every eight feet on vertical runs that do not penetrate floors, ceilings or roofs and supported at the floor.  Yes  No  N/A
- D) Vent pipes are installed in a configuration that ensures that any rain water or condensation drains downward into the ground beneath the slab or soil gas retarder membrane.  Yes  No  N/A

### (2) Vent Stack Discharge Point

- A) The vent stack discharge point is above the highest eave of the roof and as close to the roof ridge line as possible to prevent re-entrainment of radon or direct exposure of individuals outside the building to high levels of radon.  Yes  No  N/A
- B) The vent stack discharge point is 10 feet or more above the ground level.  Yes  No  N/A
- C) The vent stack discharge point is 10 feet or more from any window, door or other opening into conditioned spaces of the structure that is less than 2 feet below the exhaust point.  Yes  No  N/A
- D) The vent stack discharge point is 10 feet or more from any opening into an adjacent building  Yes  No  N/A
- E) For vent stacks that penetrate the roof, the vent stack discharge point is at least 12 inches above the surface of the roof.  Yes  No  N/A
- F) For vent stack pipes attached to the sides of buildings, the vent stack discharge point is at least 12 inches above the edge of the roof.  Yes  No  N/A

### (3) Radon Vent Fan Installation (for active systems only)

- A) The radon vent fan is installed in the attic, in garages that are not beneath conditioned spaces or on the exterior of the building.  Yes  No  N/A
- B) The radon vent fan is installed in a vertical run of the vent pipe.  Yes  No  N/A
- C) The radon vent fan is mounted to the vent pipe with removable or flexible connections.  Yes  No  N/A

### (4) Sump Pit Requirements

- A) The sump pit is not used as the primary suction point and includes rubber couplings if used as a secondary suction point.  Yes  No  N/A
- B) The sump pit is covered, sealed and incorporates a clear view-port to permit observations of conditions in the sump pit.  Yes  No  N/A
- C) The sump pit cover is made of durable plastic or clear polycarbonate.  Yes  No  N/A

### (5) Soil Gas Retarder Requirements

- A) A soil gas retarder membrane is installed in crawlspace areas without a concrete floor.  Yes  No  N/A
- B) The soil gas retarder membrane is a minimum of 6 mil (3 mil cross-laminated) polyethylene.  Yes  No  N/A
- C) Seams are overlapped at least 12 inches and sealed using compatible glues.  Yes  No  N/A
- D) The soil gas retarder is secured to the wall using furring strips or appropriate caulks.  Yes  No  N/A

### (6) Electrical Requirements

- A) For vent fans installed using a plugged cord, the cord is no longer than 6 feet.  Yes  No  N/A
- B) The plugged cord does not penetrate a wall and is not concealed within a wall.  Yes  No  N/A
- C) An exteriorly, plugged vent fan is used only inside a weatherproof housing or chase.  Yes  No  N/A
- D) An exteriorly installed vent fan (not in a weatherproof housing) is hard-wired into an electrical circuit with an electrical disconnect installed within line of sight and 4 feet of the fan.  Yes  No  N/A

### (7) Monitors and Labeling

- A) Vent pipes are labeled "Radon Reduction System" on each level where pipe is visible.  Yes  No  N/A
- B) An exteriorly installed vent fan and vent pipe are labeled "Radon Reduction System" in a weatherproof manner.  Yes  No  N/A
- C) The circuit breaker controlling the circuit on which the radon vent fan operates is labeled "Radon Reduction System."  Yes  No  N/A
- D) A manometer is installed and clearly marked indicating the initial system differential pressure readings.  Yes  No  N/A
- E) A system description label is installed next to the manometer that includes the following:  Yes  No  N/A
- 1) Installers Name \_\_\_\_\_
  - 2) Installers Phone Number \_\_\_\_\_
  - 3) Installers License Number \_\_\_\_\_
  - 4) Date of Installation \_\_\_\_\_

**ABOUT THIS CHECKLIST** - The main purpose of this Radon Mitigation System Checklist is to educate home inspection clients about radon and to encourage radon testing and mitigation when elevated levels (4.0 pCi/L or more) are found. The checklist also helps to determine whether an existing system may need to be repaired or upgraded. The checklist is not a comprehensive inspection tool. It does not replace, nor is it a substitute for, mitigation system inspections conducted by the Illinois Emergency Management Agency for compliance with the requirements of 32 Ill. Adm. Code 422.150 Mitigation Standard.