

Redfield Site

Information About Ventilation Systems

February 2001

Are these systems similar to those used to eliminate naturally occurring radon? What, if any, is the difference?

These are standard radon systems that are installed to mitigate radon present in homes. There are no differences. The systems and the system installers meet the same guidelines developed for mitigation of radon.

What do ventilation systems look like? Can you see them easily inside the house? Can you install the ventilation system in the basement or crawl space where people can't see it?

In homes without a crawl space, a hole approximately 4 inches in diameter is cut into the concrete slab in the lowest floor (i.e., basement or bi-level), and several buckets of soil are removed to create a void in the soil below the concrete. PVC pipe is placed into the hole to pull vapors from below the slab. The hole is sealed around the pipe.

In homes with a large crawl space, a plastic liner is placed across the surface of the soil and sealed to the foundation around the perimeter of the crawl space. PVC pipe is placed through a hole in the liner to pull vapors from below the liner. The liner is sealed around the pipe. The pipe from below the slab or from the crawl space is then routed up to the ceiling, and out of that area to the outside of the house—through an outside wall, the garage, or the attic, depending on the individual house. The pipe is visible in the areas where it is located. Pipe often can be located in closets or unfinished areas of the house.

The fan is approximately the size of a basketball and is mounted in the pipe. The fan can be mounted outside, in a garage, or in an attic, depending on the individual house. The outlet pipe from the fan is then extended above the roof. Fans cannot be inside of or underneath a living space (i.e., cannot be in basements or crawl spaces) in accordance with EPA guidelines.

Are ventilation systems noisy?

The small fans operate continuously, and can be heard when standing next to them. Some people have compared the fan sound to that of a fan on a refrigerator.

For More Information:

We will continue to update our neighbors as new information about the site becomes available. We welcome your questions or comments. Please feel free to contact the following representatives for more information or call the Redfield information line at (303) 637-2503.

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How long does the ventilation system need to operate? Can it be turned off once the initial levels have dropped and turned back on only if they increase again?

Vapors that build up in the soil beneath a house can migrate into the house. The mitigation system works by creating a small, continuous flow of air from beneath the house that removes vapors that might otherwise collect below the house. The fan needs to operate continuously to be effective. Mitigation system fans should not be turned off until the groundwater is cleaned up, which will take a number of years.

How will you know if the ventilation system is working effectively?

Installers include a small tube called a manometer on the piping, which provides a visual indication that the system is working. If homeowners notice a problem with the manometer, they can contact EnviroGroup, which will contact the appropriate installer to come back and examine the system.

In addition, after the system has been operating for two to three weeks, an EnviroGroup representative contacts the homeowner to schedule a confirmation test. Again, a canister is placed in the lowest living area of the home and retrieved 24 hours later. The sample is sent to a CDPHE-approved laboratory for analysis. Homeowners will receive results of the confirmation testing about four to six weeks later. If the 1,1-DCE concentration is not below the CDPHE action level of 0.49 micrograms per cubic meter of air, the contractor will inspect and modify the system. Periodic testing will continue for all homes with ventilation systems.

Who will pay for the electrical expense for operating the system?

Brown Retail will mail a reimbursement check to the homeowner approximately two months following installation. This will cover electrical expenses for 5 years of use. If the mitigation system was still necessary after that time, additional expenses would be covered.