

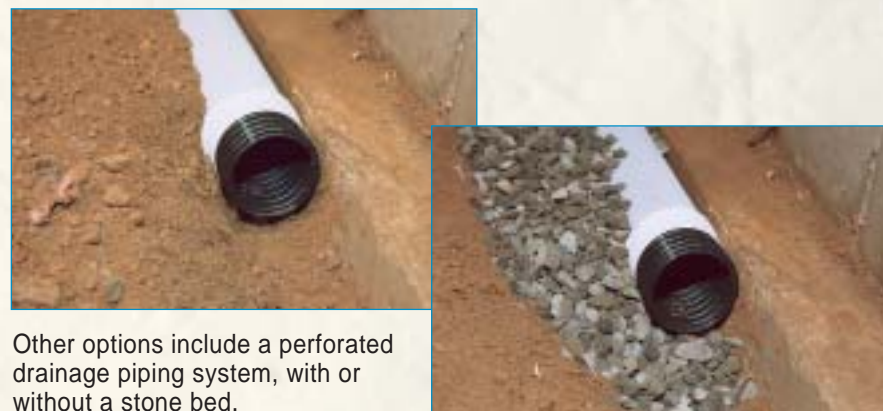
Drainage Options

Some crawl spaces are wet and require a drainage system underneath the CleanSpace™ liner. Your local CleanSpace™ dealer will recommend a drainage system that is best for your crawl space conditions.

A Basement Systems SuperSump™ will be necessary in wet crawl spaces to drain the water and pump it out. The SuperSump™ has a reliable 1/3 hp cast iron pump in a strong durable sump liner with holes in it to accept water from the ground. It features an airtight lid to keep the moisture and bugs out, and a WaterWatch™ alarm system to let you know if there is ever a pump or power problem before the crawl space floods.



The SuperSump™ will be installed in a low spot in your crawl space. As an option, a drainage swale or trench system can be developed around the perimeter to drain water to the SuperSump™. An UltraSump™ battery back-up pumping system is an option.



Other options include a perforated drainage piping system, with or without a stone bed.

Once the drainage is installed, the CleanSpace™ liner will be installed over it, and sealed tight around the SuperSump™.



CRAWL SPACES WITH CONCRETE FLOORS
Crawl spaces with concrete floors that are wet or damp can be very difficult to install a drainage system in because they are so low, and removing concrete is difficult or impossible. Further, a concrete floor is porous and lets water vapor pass through it. The CleanSpace™ system is a perfect solution for these problems!



What lurks under your home?



Before

"I had no idea how bad the crawl space was, because I hardly ever go down there. When I inspected it, I was really surprised and disgusted at what was right under our feet. My wife has allergies that act up all the time, and it's no wonder why. After the guys were done installing the CleanSpace™ System, I was amazed by the difference. It's really clean and bright. It seems like the whole house dried out. It's really awesome!"

- David Bell, CleanSpace™ System owner



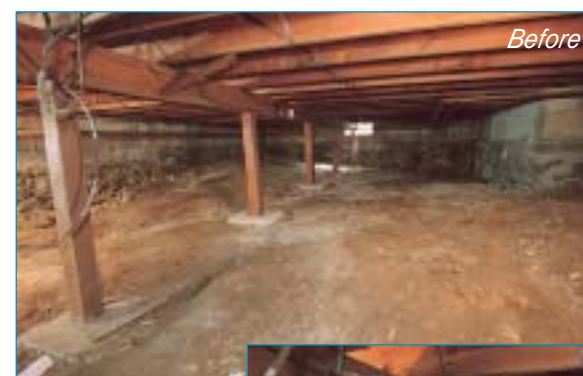
After

"I love what you have done for my home. It's the best home repair project I have ever had done. I am now actually storing stuff in a space that I wouldn't even go into before. The floors are not nearly as cold since you blocked up the vents, which I'm sure will save me money too. I really love your CleanSpace™ System and would encourage everyone with a dirt crawl space to go for it without hesitation!"

- Kathy Reilly, CleanSpace™ System owner



The humidity levels in many crawl spaces go from over 80% to under 35% after the CleanSpace™ System is installed. Some homeowners say that the windows and doors upstairs are operating better because the swollen wood dried out. Even buckling hardwood floors and carpets dry out.



Before



After

CleanSpace™

Crawl Space Encapsulation System™



There are three things that destroy materials in general, and wood in particular: water, heat and ultra-violet radiation. Of these, water is by far the most important.

A dirt crawl space under a home is a very bad idea. The earth has very high humidity in the soil. This water vapor moves easily into the crawl space and upwards into the house environment.



Before

A damp environment is very unhealthy and destructive. Mold thrives and reproduces by producing airborne spores by the millions, and some molds are toxic.

Insects and critters of all kinds love damp environments and wet materials. Rot and decay occur in damp environments causing structural damage.

The natural airflow in a house is from bottom to top. This sucks the moist air and everything in it up into the living areas of the home.

Mold spores, odors, humidity and critters create a very unhealthy environment for people. Many people are allergic to these things, and experience a host of symptoms and don't realize that their dirt crawl space is affecting their health.

Dirt crawl spaces do not have to be wet or flooded to be extremely unhealthy.

Heating and cooling costs are higher in a home with a vented dirt crawl space.



During

Now there is a real solution to dirt crawl spaces - The CleanSpace™ System - developed by Basement Systems, the world leader in dry basement technology.



After

The Problem and The Damage

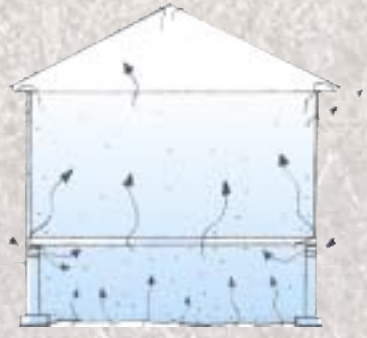
Critters - Bugs, Rodents and MORE Bugs.

Dirt Crawl Spaces are great places to live, thrive and reproduce if you're a bug. There is an even temperature, moisture, damp wood and shelter. Spiders, beetles, centipedes, termites, and all kinds of other insects are found in dirt crawl spaces. Animals such as mice (dead and alive) are commonly found in dirt crawl spaces. In some cases, even rats, snakes and small animals have been found.



CONDENSATION

Because of the high humidity level in a dirt crawl space, cool surfaces such as the earth at 55 degrees, concrete and metal surfaces will sweat with water vapor condensing out of the air. This causes rot, smells, and is a water source for critters.



As heat rises, the natural air movement in a home is upward. Air escapes out of the upper levels, and is drawn upward from the lower levels.

MOLD

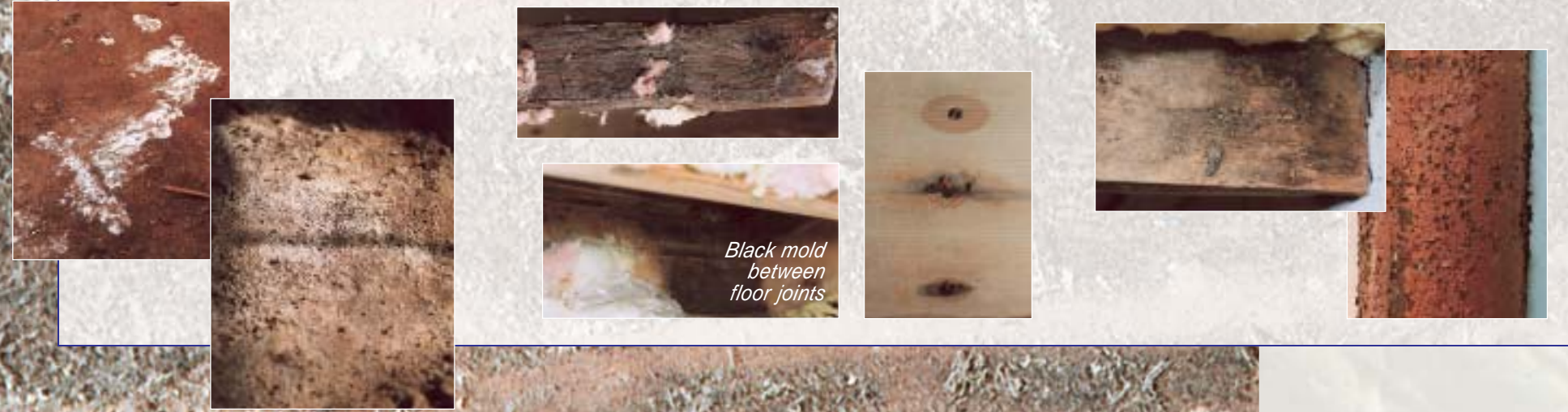
Mold spores, the seeds of mold, are in the air everywhere. All they need to grow is organic material such as wood, the right temperature range, and moisture. Of these, the only one that can be controlled is moisture.

Dirt crawl spaces have the high humidity levels necessary for mold growth. Humidity levels from 50% to 90% are easily found in dirt crawl spaces that have never flooded.

Mold can grow on dirt, insulation, framing and even under your carpet on the first floor. Mold destroys organic materials as it feeds on them. Mold reproduces by producing millions of floating airborne spores, which some people are very sensitive to. Spores can be dormant for many years, waiting for the right conditions to grow. Some molds produce mycotoxins, such as the black mold Stachybotrys. Many articles can be found on the effects of mold, and toxic mold.

Dr. Harriet Burge, an expert in airborne diseases at the Harvard School of Public Health says, "Mold in houses is not a good thing. It could lead to asthma. Houses with mold are damp, and have dust mites and other things in them that can cause illness, especially in children."

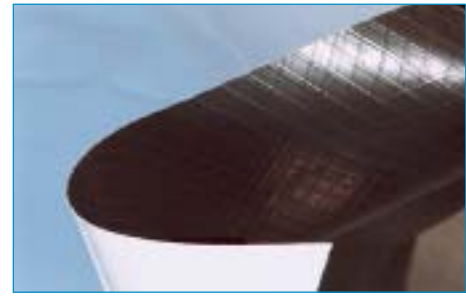
Don't panic; there is a solution that will stop your crawl space from being a hospitable environment for mold. Mold will not grow when the humidity levels are reduced below 40%.



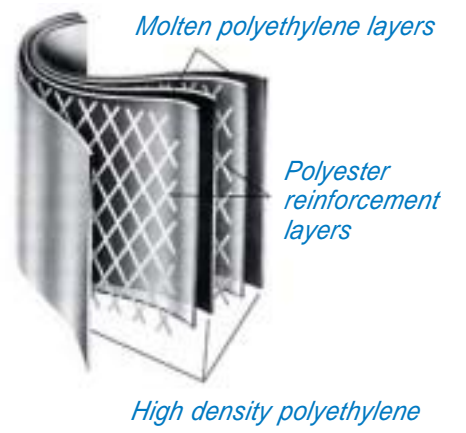
Black mold between floor joints

The CleanSpace™ Liner

The CleanSpace™ liner is used to isolate the home from the earth completely and permanently. The liner is a heavy 20 mil thick material similar to a pool liner. It is manufactured in 7 layers - a blend of high density polyethylene, low density polyethylene, and two layers of polyester cord reinforcement. It is black on one side and white on the other. The bright white finished side really brightens a crawl space with the available lighting and allows you to easily see that your crawl space is free of mold, insects and dirt.



The CleanSpace™ liner is tough enough for you to crawl on it and use your crawl space for storage. Servicemen can crawl on it without worry of putting holes or tears in the liner. The liner completely stops moisture penetration.



RADON GAS

Radon gas is a naturally occurring radioactive gas that comes from the ground in most areas of North America. The EPA has identified radon gas exposure with increased risk of lung cancer. Dirt crawl spaces allow radon gas to enter the home easily. The CleanSpace™ Encapsulation System™ is the ideal solution to reduce radon entry from a dirt crawl space. The System can be combined with a fan and exhaust pipe to actively draw radon laden air from beneath the CleanSpace™ Liner and exhaust it outdoors.

STRUCTURAL DAMAGE

Moisture is the prime factor that causes structural damage. Over time, rot and decay from a moist environment damage wood framing and steel structural members.

Walls made of block or stone often let moisture into a crawl space. That's why it's important for a solution to include the walls as well as the floor.



The Solution

The CleanSpace™ Crawl Space Encapsulation System completely isolates your home from the earth. This dramatically reduces the humidity level in the air, which will reduce or in most cases eliminate mold growth, rot and critters from your crawl space and make the whole house healthier.

Trained installers will remove wood and organic materials from your crawl space floor. Rocks and uneven surfaces are leveled, depending on the crawl space conditions.

The CleanSpace™ liner is carefully cut and installed. The workers will usually be working in their socks, once the floor piece is laid out to keep the liner clean. That's how clean your crawl space will be!

Small holes are drilled into the top of your crawl space walls, and nylon fasteners are installed to permanently secure the CleanSpace™ liner to the walls.

The top edge of the CleanSpace™ liner is sealed to the walls with polyurethane sealant. All seams are sealed with special 4" wide sealing tape and/or sealant made for the CleanSpace™ liner. The CleanSpace™ liner is also sealed around other objects such as pipes, columns, and piers with any combination of sealants or concrete.



The CleanSpace™ liner is COMPLETELY SEALED over the floor and walls to fully isolate your home environment from the earth. The result is an attractive, bright, tough, impervious liner - and a healthy home above it!



CleanSpace™ liner—impressive strength, thickness and durability.

CleanSpace™ Warranty

The installing dealer warrants the CleanSpace™ liner to be free from holes and tears, and be free from groundwater on top of the Liner for 25 years, or repair at no charge. The CleanSpace™ system is warranted to reduce humidity in a dirt crawl space.

Warranty does not include damage from abuse or moisture from condensation. There are no other warranties expressed or implied.

Eliminating ≈ Ventilation

Most dirt crawl spaces are vented to get the moisture out. The problem is that the vents let warm humid air in during the summer. This adds moisture to the crawl space, and makes the house harder to air condition as all this moisture needs to be wrung out of the air. In the winter, the vents let in cold air, which causes very cold, uncomfortable floors upstairs and higher heating costs. Building Scientists, and the U.S. Dept. of Energy agree that vented crawl spaces in warm and cold climates are a bad idea. With the CleanSpace™ Encapsulation System™, your vents will be closed up! This will save you energy costs, and make a more comfortable and healthy home.