# RADON ANALYSIS

This test was conducted with a *femto* -TECH CRM-510LPT, an EPA and Industry approved radon testing device. This test was performed in accordance with the current Standards and Guidelines accepted for radon testing.

Radon is below the EPA action level. No mitigation is required.

Weather Stations (3): MIDDLETOWN HOOK FIELD MUNICIPAL AIRPORT, DAYTON WRIGHT BROTHERS AIRPORT, HAMILTON BUTLER CO REGIONA...

Weather Conditions (in order of observation): Clear, Partially cloudy, Rain & Overcast, Rain & Partially cloudy, Overcast.

Mitigation/Ventilation Present: No active mitigation or ventilation system observed.

#### **Radon Risk**



Radon is the second leading cause of lung cancer, after smoking. The U.S. Environmental Protection Agency (EPA) and the Surgeon General strongly recommend taking further action when the home's radon test results are 4.0 pCi/l (picocuries per liter of air) or greater. Radon levels less than 4.0 pCi/l still pose some risk and in many cases may be reduced. The national average indoor radon level is about 1.3 pCi/l while outdoor radon levels average 0.4 pCi/l. The higher a home's radon level, the greater the health risk to you and your family. Smokers and former smokers are at especially high risk. You can call your state radon office to obtain information, including a list of EPA or State approved radon contractors who can correct or help you develop a plan for correcting the radon problem. Many questions you may have can be found in the EPA's publication "Home Buyer's and Seller's Guide to Radon".

Average: 1.2 pCi/l



## AIR QUALITY ANALYSIS



VOC Avg: 1/3

## **VOC Risk**

Volatile organic compounds, or VOCs, are gases that are emitted into the air from man-made products or natural processes. Some can be very harmful to our health and in some cases they can cause cancer. Certain VOC's can react with other gases in the air and form other air pollutants.

Breathing in VOCs can irritate your eyes, nose and throat, cause difficulty breathing, nausea, and damage your central nervous system as well as other organs. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors.

Paints, varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products, even fuel. All of these products can release organic compounds while you are using them and to some degree when they are stored.

VOC Rating: (Good) No action necessary.

# CO Risk

Carbon monoxide is an odorless, colorless and toxic gas. Because it is impossible to see, taste or smell, CO can kill you before you are aware it is in your home. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.

Average levels in homes without gas stoves vary from 0.5 to 5 parts per million (ppm). Levels near properly adjusted gas stoves are often 5 to 15 ppm and those near poorly adjusted stoves may be 30 ppm or higher. The U.S. Environmental Protection Agency (EPA) strongly recommends taking further action when the average carbon monoxide level exceeds 9 ppm. <u>Many questions you may have can be found in the EPA's publication</u> <u>"Carbon Monoxide's Impact on Indoor Air Quality"</u>.

Carbon monoxide is below the EPA action level.

# CO2 Risk

Carbon dioxide is a odorless, colorless gas. It is more dense than air and at high concentrations it can persist in open pits and other areas below grade. The current OSHA standard is 5000 ppm as an 8-hour time-weighted average (TWA) concentration.

Gaseous carbon dioxide is an asphyxiant. Concentrations of 10% (100,000 ppm) or more can produce unconsciousness or death. Lower concentrations may cause headache, sweating, rapid breathing, increased heartbeat, shortness of breath, dizziness, mental depression, visual disturbances or shaking. CO2 levels can serve as an indication of poor ventilation for the amount of occupants in the building.

Carbon dioxide is below the EPA action level.

#### Mold Risk

Molds are part of the natural environment. Outdoors, molds play a part in nature by breaking down dead organic matter such as fallen leaves and dead trees, but indoors, mold growth should be avoided. Molds reproduce by means of tiny spores; the spores are invisible to the naked eye and float through outdoor and indoor air. Inhaling or touching mold or mold spores may cause allergic reactions in sensitive individuals.

Allergic responses include hay fever-type symptoms, such as sneezing, runny nose, red eyes, and skin rash (dermatitis). Nominal relative humidity (%) for airborne mold protection is 50% and less. <u>Many questions you may have can be found in the EPA's publication "A Brief Guide to Mold, Moisture and Your Home".</u>

Mold risk is low due to average relative humidity being below 50%.

\*VOC risk is calculated using publicized research by the following: <u>American Lung Associaton</u> <u>Agency for Toxic Substances and Disease</u> <u>United States Environmental Protection Agency</u>



CO Avg: 0 ppm

CO2 Avg: 601 ppm



RH Avg: 42.8%

