

Healthier Home Healthier You

What Lies With-in
and
Why

by
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Long term exposure to low levels of pollutants and contaminants can lead to chronic health issues and in some cases acute health effects.

We come in contact with these pollutants and contaminants in our outdoor environments as well as the condition of the air inside our homes.

Air pollution, according to the World Health Organization (WHO) in September of 2016, is top killer globally and major cause of climate change.

Pima County Community Health Needs Assessment 2015 indicated that **Chronic Lower Respiratory Diseases** are the Third leading cause of death in Pima County.

It's with this in mind that Russett Southwest Corporation developed a comprehensive process to test, assess, inform and resolve **indoor air quality** issues in your home. This process is part of our **Healthier Home, Healthier You, What Lies With-in and Why** program.

It is important to understand that the reported outdoor conditions are not necessarily the outdoor conditions at your home. Every home is in its own micro environment created by the winds, height of the home and the surroundings. This is why all testing conducted by Russett Southwest Corporation begins with measuring the outdoor conditions at the home being tested.

Environmental Protection Agency (EPA) has National Ambient Air Quality Standards (NAAQS) which lists six (6) Criteria Pollutants, as follows:

Carbon Monoxide (CO)

Ozone (O3)

Particulate Matter (PM10)
(PM2.5)

Nitrogen Dioxide (NO2)

Sulfur Dioxide (SO2)

Lead (Pb)

All of the Criteria Pollutant's listed above contribute to the cause of serious Health problems.

Pima County Department of Environmental Quality (PDEQ) monitors and reports ambient air quality data. **For current conditions see:**

[Air Monitoring - Pima County](#)

On Pima County's Web Site

For detailed explanation of the **Criteria Pollutants**, go to Air Quality Index on the above referenced Web Site and open **Air Quality Index**.

There are additional issues to consider beyond the National Criteria Pollutants, such as:

1. Carbon Dioxide (CO₂) which has increased significantly since it was recognized as a natural tracer gas.
2. Hydrogen Sulfide (H₂S) gas from sewers that can cause serious health issues.
3. Nitric Oxide (NO) one of the gases that make up bad Ozone (O₃).
4. Volatile Organic Compounds (VOC's) inclusive of Formaldehyde, also contributing to adverse health effects and bad Ozone (O₃).
5. Biological Contamination, such as molds, viruses and bacteria's.

The elevated levels of pollutants can also reduce the percentage of oxygen in the air which may increase the rate of breathing required to supply adequate oxygen to the blood stream.

The build-up of pollutants and contaminants in your home, assuming adequate house-keeping measures are practiced, can usually be attributed to inadequate ventilation, filtration and pressure management.

Russett Southwest Corporation, an industry leader in **indoor air quality** has developed a revolutionary Indoor Air Quality (IAQ) test, assess and inform (TAI) program to evaluate the environmental conditions with-in your home and provide solutions for adverse conditions.

Initial Test & Assessment

Initial test & assessment address, but not limited to:

- Ventilation Effectiveness
- Filtration Efficiency
- Pressure Management
- Pollutants:
 - Carbon Monoxide (CO)
 - Particulates - PM.3
 - Particulates - PM2.5
 - Particulates - PM10
 - Carbon Dioxide (CO2)
 - Settled Lead (Pb)
 - Bio-Contamination (RLU)
- Duct Leakage, Total (Measured)
 - Leakage to Outdoors (Effects Energy Cost)
 - Leakage to Indoors (Effects Indoor Air Quality)
- Envelope Infiltration Rate (Measured)

Post Repair Performance Test

Post repair performance test measures and confirms the results of the repairs inclusive of, but not limited to:

- Ventilation Effectiveness
- Filtration Efficiency
- Pressure Management
- Pollutants
 - Carbon Monoxide (CO)
 - Carbon Dioxide (CO₂)
 - Particulates - PM₃
 - Particulates - PM_{2.5}
 - Particulates - PM₁₀
- Oxygen (O₂)
 - Volatile Organic Compounds (VOC)
 - Formaldehyde (CH₂O)
 - Nitric Oxide (NO)
 - Nitrogen Dioxide (NO₂)

- Ozone (O₃)
- Hydrogen Sulfide (H₂S)
- Sulfur Dioxide (SO₂)
- Pressure Management

All testing is performed by qualified personnel utilizing the latest technology and applied sciences to the standards, guidelines and acceptable industry practices by recognized organizations. The recognized organizations include but not necessarily limited to, International Residential Code (IRC) as adopted locally, Air Conditioning Contractors of America (ACCA), Building Performance Institute (BPI), American Council of Accredited Certifications (ACAC), American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE), Environmental Protection Agency (EPA) and the Indoor Air Quality Association, Inc. (IAQA).

Russett Southwest Corporation Assessment Report will include, but not limited to, our Findings, Comments and Recommended Improvements that can be made to your home to improve your Indoor Air.

Glossary of Selected Contaminants

Glossary of Selected Contaminants and Health Effects

<u>Contaminant</u>	<u>Health Effect</u>
Carbon Monoxide (CO)	<p>Enters the blood stream and reduces the delivery of oxygen to the bodies organs and tissues.</p> <p>Causes fatigue in healthy people</p> <p>Causes chest pains at low concentrations</p> <p>Hazardous to people with heart or cirulatory problems and people who have damaged lungs or breathing passages.</p> <p>Can be fatal</p>
Carbon Dioxide (CO2) (Significant indicator of indoor air quality)	<p>Causes stuffiness and amplifies odors.</p> <p>Causes drowsiness and fatigue.</p> <p>Depletes oxygen.</p>
<p>Particulates</p> <p>(Identified as the most significant indoor contaminant in terms of chronic health impact in residences. The smaller the particulate the greater the health risk)</p>	<p>(PM10) Causes coughing, wheezing and shortness of breath.</p> <p>(PM2.5) Aggravates Asthma, deceases lung function.</p> <p>Can be toxic heavy metals and cancer causing organic compounds.</p> <p>(PM.3) Increases mortality from cardiovascular and respiratory diseases.</p> <p>Ultrafine (UFP)</p>

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Contaminant

Health Effect

Lead(Pb)

Can cause damage to the nervous system, resulting in IQ loss and negative impact on childrens learning, memory and behavior. Can cause cardiovascular, renal and early anemia effects in adults.

Bio-contamination(RLU)

Can cause coughing, wheezing, respiratory illness leading to asthma development. Can cause headaches, fatigue and skin rashes. Can cause neuropsychiatric symptoms and cancer.