



THE AIR COMPLIANCE GROUP, LLC

Philadelphia, PA (215) 364-8940 • Roanoke, VA (540) 265-1987

acinfo@aircompgroup.com • www.aircompgroup.com

Indoor Environmental Quality Services

On average, over 90% of a building's 30-year costs are spent on the people who occupy the building. Unacceptable indoor air quality affects businesses through reduced worker productivity, increased employee absenteeism, increased insurance costs, increased operational costs, and increased exposure to liability and litigation.

Indoor air quality concerns, often associated with a building's heating, ventilating, and air-conditioning (HVAC) system, include occupant complaints of "stuffy" rooms, "stale" air or "air that makes them sick". When handled properly, including proper maintenance and operation of the HVAC system, these issues can be abated and comfortable conditions provided to the occupants, whereby decreasing absenteeism and increasing productivity.

This issue has been raised to a new level since the attack on the World Trade Center in 2001, as new concerns have developed about potential chemical and biological contamination. **The Air Compliance Group (ACG)** is dedicated to working with building owners and managers to insure that all occupants are safe from undue exposure to harmful substances while inside their buildings. With over 30-years in the air quality business, **ACG** is your source for reliable expert services to provide you with the security that you need, and your occupants with piece of mind that they deserve.

In addition to general indoor environmental quality issues, **ACG** has recognized that mold has become the legal keyword for building managers and owners today. Mold contamination is a continuing concern for virtually all real estate markets. Undetected – or worse, undisclosed – mold growth can result in litigation, large insurance claims, and lost real estate deals.

Mold remediation has also become a recurring problem for building owners and managers, as well as homeowners and insurance companies. **ACG** acknowledges that mold remediation projects are unique and require careful and competent planning and execution.

ACG will provides its clients with the following indoor environmental quality services:

- Indoor Air Quality Services
- HVAC System Assessments
- Microbial Assessments & Remediation Design
- Post-Remediation Verification Sampling
- Chemical Air Samples
- Particulate (Dust) Sampling
- Water Testing – Legionella and Potable Systems

The Air Compliance Group operates all services out of two facilities in the eastern United States. The addresses, phone numbers, and fax numbers of these two full-service facilities are as follows:

Virginia Office:
5075 Hollins Road
Roanoke, VA 24019
(540) 265-1987 (phone)
(540) 265-0082 (fax)

Philadelphia Office:
449 Veit Road
Huntingdon Valley, PA 19006
(215) 364-8940 (phone)
(215) 364-4596 (fax)



THE AIR COMPLIANCE GROUP, LLC

Philadelphia, PA (215) 364-8940 • Roanoke, VA (540) 265-1987

acginfo@aircompgroup.com • www.aircompgroup.com

INDOOR AIR QUALITY

IAQ investigations are usually performed in response to occupant complaints of poor air quality or increased illnesses such as colds, flu, asthma, weakness, burning eyes, rashes, sore throats, allergies, lethargy, or headaches related to the building.

Assessment of these conditions usually requires the evaluation of:

- History of the symptoms and complaints
- Building history
- Possible sources of pollutants (indoors and outdoors)
- HVAC systems
- Building design and maintenance procedures
- Occupant activities and functions
- Effect of the immediate outdoor environment



ACG will work with building managers to quickly learn how their building operates, diagnose the conditions, complete inspections of the building's systems, and advise on the best course of action. **ACG** will also work with the client to ensure the outcome of the survey is properly implemented to provide the occupants with comfortable working conditions.

ACG will utilize state-of-the-art equipment to measure:

- Air Flow from HVAC Systems – improper supply, return, and exhaust air can create uncomfortable conditions. Additionally, inadequate air quantities and/or distribution can create a build-up of internally generated pollutants and stagnant air conditions.
- Temperature and Relative Humidity – these are essential indices of comfort in workplace environments.
- Carbon Dioxide – this by-product of human metabolism serves as a useful indicator of the effectiveness of the HVAC systems in providing ventilated air.
- Carbon Monoxide – low levels of this by-product of combustion (auto exhaust, heating equipment, etc.) can cause adverse health effects.

Indoor air quality services may also include air sampling for various potential indoor pollutants or contaminants, such as:

- Microbial Sampling – using accepted protocols, samples may be collected to test for mold and/or bacteria.
- Volatile Organic Compounds (VOCs) and/or other chemical agents identified during the preliminary information gathering will be sampled.
- Indoor Allergens – dust mites, cockroach allergens, cat and dog dander, etc.
- Dust Characterization Sampling – identification of the components of dust within the space.

ACG will only utilize nationally accredited laboratories for sample analysis, including the American Industrial Hygiene Association (AIHA) Environmental Microbiology Proficiency Analytical Testing (EMPAT) program.



THE AIR COMPLIANCE GROUP, LLC

Philadelphia, PA (215) 364-8940 • Roanoke, VA (540) 265-1987

acginfo@aircompgroup.com • www.aircompgroup.com

MICROBIAL ASSESSMENTS & REMEDIATION DESIGN

Over the past decade, mold has become recognizable as one of the greatest indoor environmental quality complaints. Water intrusion, coupled with an elevated temperature and a food source, create the ideal environment for molds to grow quickly. Floods, sewer back-ups, or the presence of bird droppings increase the likelihood that bacteria are involved.

ACG utilizes protocols established by the ACGIH *Bioaerosols: Assessment and Control* (1999) and AIHA *Field Guide for the Determination of Biological Contaminants in Environmental Samples* (1996).

ACG's services will include:

- Site inspection, including a thorough visual inspection of building components and HVAC system(s)
- Moisture measurements of affected building materials
- Temperature and relative humidity measurements indoors
- Microbial sampling for mold and/or bacteria
 - Air Samples – cultured and/or spore traps for total fungal structures
 - Surface Samples – swabs/wipes and/or tape-lifts
 - Bulk Samples – affected materials and/or dusts
 - Samples will provide information on site conditions



ACG will only utilize nationally accredited laboratories for sample analysis, including the American Industrial Hygiene Association (AIHA) Environmental Microbiology Proficiency Analytical Testing (EMPAT) program.

If building contamination is determined to exist, **ACG** can develop site-specific microbial remediation specifications to return the building to clean conditions. Whether the problem is mold infestation, or removal of biological agents, remediation plans are developed, qualified contractors are selected, and the clean-up process is monitored and documented until full and successful completion, based on post remediation verification inspection(s) and samples.

Environmental monitoring should be part of any microbial remediation project to ensure that the remediation work is performed correctly. At the completion of the remediation work, post remediation verification inspections, including final clearance air samples, to certify that the building area(s) will be safe for re-occupancy.

Microbial remediation project specifics are developed based on the USEPA *Mold Remediation in Schools and Commercial Buildings* (2001) and the IICRC *S520 Standard and Reference Guide for Professional Mold Remediation* (2003)



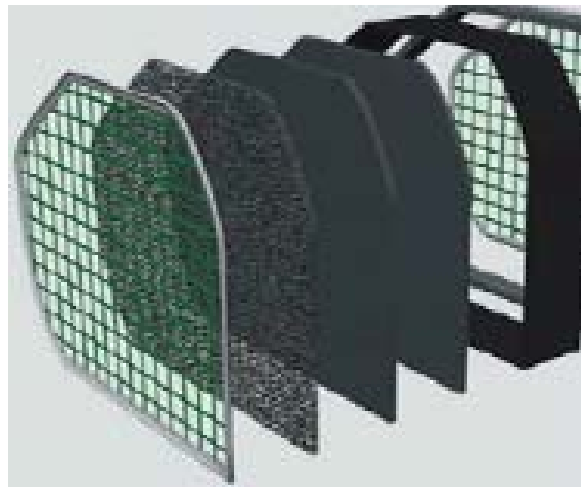
THE AIR COMPLIANCE GROUP, LLC

Philadelphia, PA (215) 364-8940 • Roanoke, VA (540) 265-1987

acginfo@aircompgroup.com • www.aircompgroup.com

BUILDING AIR QUALITY PROTECTION SERVICES

In light of current threats worldwide, building owners and managers must be prepared to address potential threats of chemical or biological attacks against individual buildings or groups of buildings. Such contamination can be introduced to the building environment from outside or inside the building. **ACG** can evaluate building designs and operations to identify the potential sources of entry of such agents, and the methods by which they might spread throughout the building. If modifications or upgrades are advisable, **ACG** can design and supervise any changes that may be necessary. This can include the installation of air filtration systems that can effectively remove most known chemical and biological agents, relocation of fresh makeup air ducts, modification of relative building pressures in different zones or areas, or isolation of high risk areas such as mail rooms and entrance lobbies.



AIR CONTAMINANT RE-ENTRAINMENT EVALUATIONS

Building air quality issues are often generated by air pollutant emissions from affected buildings themselves, or from nearby structures. The emissions from laboratory hood vents, or boilers or generators associated with large complexes can be inadvertently directed, by wind conditions, back into the building, through fresh air intake ports. **The Air Compliance Group** can provide computer modeling services, or field measurements services to ascertain the level of this threat. If a concern is identified, **The Air Compliance Group** can recommend, design and supervise activities to alleviate the problem.

