

ASHRAE 188 Legionella compliance guidance



Reduce risks associated with Legionella

Legionnaires' disease, a type of pneumonia caused by Legionella bacteria, is a major concern for commercial building owners. Each year, thousands of cases can be traced to commercial building water systems, most often in cooling towers. With UL Solutions, customers can help decrease the risks to building inhabitants through our control services.

ASHRAE Standard 188 specifically covers risk management for building water systems as it relates to Legionnaires' disease and those who document compliance with this standard will significantly reduce their liability.

UL Solutions helps customers demonstrate compliance through the development of proactive control measures. We assist owners and operators in developing Legionella risk and water management plans to obtain compliance with ASHRAE Standard 188, and the Centers for Medicare and Medicaid Services (CMS) accreditation. Our comprehensive and professional services are for hospital facilities, commercial buildings and multifamily buildings.

Risk assessments and management plans include:

- Identifying building and program team
- Developing water process flow diagrams
- Creating water assets inventory
- Identifying control locations
- Writing a management plan
- Documenting and verifying processes
- Validating procedures and Legionella testing

For more information, call 800.352.6102 or visit www.UL.com/healthybuildings





Energy and water benchmarking

















Providing benchmarking support to more than 600 buildings annually

Building owners and managers need to understand the benefits of ongoing energy monitoring, as well as the ever-increasing regulatory requirements for public energy benchmarking disclosure. UL Solutions helps customers throughout the energy and water benchmarking process, including tracking a building's consumption, comparing the data to similar buildings to understand relative performance and submitting the data in compliance with state and local regulations.

Statewide ordinances

Building owners across the United States have seen an increase in mandatory building benchmarking, as cities and states are pursuing long term carbon and energy reduction goals. One of the largest statewide ordinances is California's Energy Benchmarking Ordinance Assembly Bill 802 (AB 802). UL Solutions helps building owners and managers annually disclose their energy consumption data so that it is delivered on time and in compliance with changing requirements.

Local ordinances

We have worked in jurisdictions across the country from Los Angeles' Existing Buildings Energy & Water Efficiency (EBEWE) to New York's Local Law 84 (LL84) and in more than 12 U.S. cities with varying requirements for covered buildings and submittal processes. Our analysis includes an action plan for prescriptive requirements where applicable as well, such as recurring energy audit requirements in Los Angeles, San Francisco, Washington, D.C., or New York.

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Proactive indoor air quality monitoring











Helping property owners improve the bottom line

Forward-thinking real estate building owners and property managers employ a proactive indoor air quality (IAQ) program to realize the benefits of limiting liability and risk, improve tenant retention and make their buildings more valuable. The cost of the IAQ program is recovered with return on investment (ROI) at sale time when owners can demonstrate a high and improving standard of IAQ over the seller's hold time.

Help limit liability and risk

UL IAQ program functions as an ongoing due diligence program intended to provide evidence of our customers' committment to a safe and healthy workplace. The program is a part of a building's preventative management practice and includes physical inspections that can identify system issues before they become a serious problem.

Tenant retention

Set your building apart from competitors by demonstrating proactive indoor air quality, building tenant retention rates.

Making buildings more valuable

UL IAQ programs give building buyers confidence in the health of your building, which can result in a smooth due diligence process at sale. Find out how our IAQ programs satisfy LEED® requirements for those pursuing certifications.

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Architect services











Comprehensive support for architects

UL Solutions provides comprehensive support to architects, general contractors and developers that need assistance in making their designs and buildings healthier, more sustainable and energy efficient. Beginning in the design phase, UL Solutions is the perfect choice to help identify efficiency measures that will lower a building's energy expenses and support the pursuit of sustainability certifications and programs. We provide architects with support for LEED® certification, commissioning, energy audits and energy modeling.

New construction and commercial interiors services

- Construction monitoring
- Mold and moisture assessment/testing
- Preoccupancy and LEED indoor environmental quality (IEQ) testing
- Energy modeling
- Commissioning

Sustainable building advisory services

- LEED project management
- WELL project management
- WELL feasibility analysis
- WELL gap analysis and water quality
- Fitwel
- BREEAM

UL SPOT® Product Database

UL SPOT is an online product database that contains more than 130,000 products searchable by MasterFormat number, manufacturer, certification programs such as UL GREENGUARD and ECOLOGO® Certification, or sustainable building credits in green rating systems such as the U.S. Green Building Council's LEED program, Green Globes, WELL Building Standard™ and others. UL SPOT can help design professionals identify sustainable products for green buildings during the design.

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WELL building certification



Integrating health and wellness in buildings

Many building owners see the value in developing buildings that are not only energy efficient but also improve the health, well-being, productivity and happiness of their tenants. The WELL Building Standard™ was created with the belief that people's health and wellness should be at the center of design. UL Solutions' services help building owners comply with WELL standards and drive comfort and health for their tenants.

The WELL Building Standard

The WELL Building Standard, developed by the International WELL Building Institute, is the first performance-based health and wellness rating system for buildings, interior spaces, and core and shell space types. UL Solutions helps building owners manage the WELL certification process. Our highly trained, WELL-accredited professionals provide a full suite of WELL advisory, feasibility and gap analysis testing, and WELL performance testing to help clients prepare for certification.

WELL services

When you partner with UL Solutions throughout the WELL Certification process, you draw on our years of experience in indoor air quality testing and indoor environmental quality assurance. We understand the impact that buildings have on the health and wellness of inhabitants.

Our WELL services include:

- WELL feasibility assessments
- WELL project management
- WELL performance testing

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Asbestos oversight for California











Helping lower risks for building owners and operators

There is no safe level of asbestos exposure, and products containing asbestos have not been completely banned from import or installation into current buildings. That is why the state of California is requiring owners and operators to conduct surveys for asbestos-containing materials prior to building renovation. We are finding that agencies are enforcing asbestos related regulations now more than ever and failure to meet these requirements often results in fines and other penalties.

Facility surveys

Our asbestos bulk surveys include a site visit to inspect building materials likely to be disturbed during renovation or demolition. Suspect materials are sampled and sent to a local laboratory for analysis. A report is generated listing areas inspected and when asbestos-containing materials are found, the report is used as a road map by remediation contractors to help ensure the renovation or demolition may be safely completed.

Asbestos abatement oversight

UL Solutions acts as the owner's representative by providing project oversight and quality control throughout the abatement process. A technician monitors activities to help ensure that all work is performed in accordance with project specifications and applicable guidelines and regulations. When asbestos abatement has been completed, testing is performed and a final closeout report is issued.

Independent third party

UL Solutions is an independent third party that does not provide any abatement services. Our customers can be confident that our role is in direct service to building ownership and management.

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Asbestos testing











Helping lower risks for building owners and operators

There is no safe level of asbestos exposure, and products containing asbestos have not been completely banned from import or installation into current buildings. That is why many federal, state and local regulatory agencies throughout the nation are requiring owners and operators to conduct surveys for asbestoscontaining materials prior to major retrofits or demolition. We are finding that agencies are enforcing this rule now more than ever and failure to meet these requirements often results in fines and other penalties.

Facility surveys

Our asbestos bulk surveys include a site visit to inspect building materials likely to be disturbed during renovation or demolition. Suspect materials are sampled and sent to a local laboratory for analysis. A report is generated listing areas inspected and when asbestos-containing materials are found, the report is used as a road map by remediation contractors to help ensure the renovation or demolition may be safely completed.

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UL Solutions helps customers demonstrate value in their buildings. For more than 20 years, our services for healthy buildings offer our customers the tools they need to help lower operating costs and increase net operating. Find out how UL Solutions helps make our customers' buildings more valuable.

Indoor environmental quality

- Proactive and reactive inspections
- Construction monitoring
- Recommendations for flood management (clean, gray and black water)
- Asbestos and lead surveying
- WELLv2™ performance testing

Sustainability

- LEED v4 project management
- WELL v1 and v2 project management
- GRESB project management
- BREEAM in-use project management and assessor
- · Corporate sustainability project management and planning
- Waste audits

Energy

- ENERGY STAR® benchmarking and certification
- Benchmarking ordinance compliance
- Energy audits
- Retro-commissioning (RCx)
- Commissioning (Cx)
- Energy modeling

Water

- Water quality surveys
- ASHRAE 188
 Legionella compliance
- Water use audits

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