Government of Alberta ■
Infrastructure

TECHNICAL BULLETIN

TECHNICAL SERVICES BRANCH

ISSUE NO. _42_ JUNE 2026

MOULD MANAGEMENT IN OWNED AND SUPPORTED INFRASTRUCTURE

INTRODUCTION

Moulds are naturally occurring fungi that are ubiquitous in the environment and can be found in soil, vegetation, and decaying organic matter. Airborne mould spores are routinely present in both outdoor and indoor environments and are considered a normal component of background bioaerosols.

Buildings often contain a variety of organic materials that can serve as nutrient sources for mould growth. When mould spores encounter favourable conditions, particularly elevated moisture levels resulting from water intrusion, condensation, high relative humidity, or prolonged dampness, they can germinate and colonize building materials. As mould growth progresses, fungal colonies may degrade affected materials through enzymatic activity, potentially resulting in material deterioration and damage.

While the presence of low levels of airborne mould spores is normal, the amplification of mould growth within a building and the subsequent release of elevated concentrations of spores, fungal fragments, and other microbial by-products may adversely affect indoor environmental quality and become a concern for building occupants. Effective moisture control and timely remediation of water-related issues are therefore critical components of mould prevention and management.

HEALTH EFFECTS OF MOULD EXPOSURE

In most buildings where mould growth is not present or is effectively controlled, exposure to background levels of airborne mould spores is not generally expected to pose a significant health risk to the majority of occupants.

However, where mould amplification has occurred due to moisture intrusion or prolonged dampness, the potential for adverse health effects may increase.

The health impacts associated with mould exposure are complex and influenced by a variety of factors. Individual susceptibility varies based on age, overall health status, pre-existing respiratory conditions, immune function, and the route and duration of exposure.

Mould related factors that may influence health outcomes include the extent of contamination, concentration of airborne spores and fragments, duration of exposure, and the biological characteristics of the mould species present. Health effects may result from allergic, irritant, infectious, or toxigenic mechanisms, either individually or in combination.

Current evidence indicates that individuals with heightened sensitivities including children, older adults, those with asthma or allergies, and immunocompromised individuals may be more susceptible to mould-related symptoms and adverse health effects. Although exposure can occur through skin contact or ingestion, inhalation of airborne mould spores, fragments, and associated microbial by-products is generally considered the primary exposure pathway of concern in indoor environments.

MOULD ASSESSMENTS

A mould assessment is conducted to identify the cause, nature, and extent of potential mould contamination and to evaluate its potential impact on the health, safety, and comfort of building occupants. Assessments are typically initiated in response to indoor air quality (IAQ) complaints, uncontrolled water intrusion events, visible evidence of mould growth, or conditions that suggest hidden microbial contamination may be present.

The objectives of a mould assessment may include:

1. Determining whether occupant health complaints may be associated with mould growth or moisture-related conditions;
2. Identifying and documenting visible mould growth or evidence of microbial contamination;
3. Evaluating indoor airborne fungal concentrations and comparing them to outdoor background levels;
4. Identifying environmental conditions that may promote mould growth, such as elevated humidity, condensation, or inadequate ventilation;

5. Assessing the extent and severity of contamination, including the affected area, quantity of impacted materials, and nature of the microbial growth;
6. Identifying active or historical sources of water intrusion or moisture accumulation; and
7. Determining the building system deficiencies, operational issues, or structural failures that have contributed to moisture ingress and mould amplification.

The findings of the assessment provide the basis for developing appropriate corrective actions, remediation strategies and long-term moisture management measures to prevent recurrence.

WHO SHOULD INVESTIGATE

Multiple stakeholders may be involved in the identification, assessment, and resolution of mould-related concerns, including building owners, property managers, maintenance personnel, and building occupants.

Individuals responsible for measurements, analytical interpretation, and evaluation of findings shall possess a thorough understanding of applicable methodologies, sampling protocols, and building science principles relevant to mould assessments.

Occupational hygiene professionals engaged in mould assessments shall possess the appropriate education, training, experience, and competencies required to perform their duties.

At a minimum, personnel shall meet the competency requirements outlined in the following Alberta Occupational Health and Safety publications:

- Occupational Hygiene Reports: Requirements and Tips (GS019); and
- Occupational Hygiene Competency: Frequently Asked Questions (GS020).

All instrumentation and monitoring equipment used in mould assessments shall be maintained, calibrated, and operated in accordance with the manufacturer's specifications to ensure accuracy and reliability of collected data.

Personnel operating air monitoring and sampling equipment shall have appropriate training and demonstrated competency in the use of the specified instruments and associated field procedures.

For Alberta Infrastructure Owned and Supported facilities, additional project-specific requirements related to sample collection, interpretation of analytical results, evaluation of findings and technical report sign-off may be required to ensure the quality and completeness of assessment deliverables and support Alberta Infrastructure compliance with applicable Occupational Health and Safety legislation.

COMMUNICATION

Throughout the investigation and response process, timely, transparent, and consistent communication is essential to maintaining stakeholder confidence and fostering trust. Information regarding the concern, investigation activities, findings, and any corrective actions should be communicated to the individual who reported the issue and other affected stakeholders, as appropriate.

It is important to acknowledge that concerns have been received, are being taken seriously, and are being addressed through an appropriate assessment and response process. Regular updates should be provided to communicate progress, findings, and the status of any actions being undertaken to resolve the issue.

Where concerns persist despite the completion of investigative activities, individuals should be encouraged to consult a qualified healthcare professional to ensure that all potential factors contributing to their symptoms or discomfort are appropriately evaluated.

Effective resolution of mould concerns relies on open communication, timely information sharing, and collaboration among all parties involved throughout the assessment, investigation, and corrective action process.

APPLIED ECOSCIENCES UNIT

Typical Support Services

The Applied Ecosciences Unit provides technical expertise, advisory services and program support related to mould management and indoor environmental investigations within built facilities.

Services are intended to support the identification, assessment and control of moisture-related conditions and mould growth, as well as the implementation of appropriate corrective and preventive measures. Services include, but are not limited to:

- Conducting mould investigations and indoor environmental assessments, including field inspections, sampling (where applicable), data analysis, and interpretation of findings;
- Preparation of scopes of work, technical specifications, and supporting documentation for mould assessment, remediation, and related construction activities;
- Development and delivery of mould management workshops and technical training sessions for facility staff, contractors, and project stakeholders;
- Provision of mould awareness and educational presentations to support understanding of moisture-related risks, building performance issues, and mould prevention strategies; and
- Design and delivery of structured mould management training programs to support organizational capacity in assessment, response, and long-term prevention practices.

These services support the proactive management of mould and helps maintain a safe and healthy environment as well as support building operations and integrity of Government facilities while maintaining compliance with applicable regulatory requirements and industry best practices.

CONTACT INFORMATION

Technical Services Branch

The above services may be provided by Alberta Infrastructure and/or a private occupational hygiene consultant.

Where the engagement of an external consultant is identified as the preferred delivery model, the Applied Ecosciences Unit can provide technical support in the development of the project scope, preparation of detailed terms of reference, and oversight support throughout project implementation and construction activities.

Additionally, our Unit offers a comprehensive range of applied indoor air quality and occupational hygiene advisory services to support project planning, regulatory compliance, assessment, and operational execution.

For information or assistance, contact the Manager of Applied Ecosciences Unit at 780-422-7472.