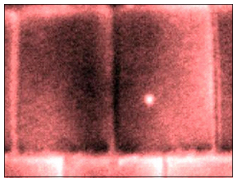
Pinnacle Engineering

MEDICAL DEVICE MANUFACTURER—MINNEAPOLIS, MINNESOTA

MOLD/WATER INTRUSION INVESTIGATION
REMEDIATION/BIOREMEDIATION

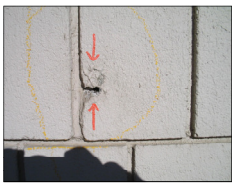
Our long term client has been plagued by mold problems in a number of its buildings at various sites throughout the Metro area. The initial investigation began with a suspected indoor air quality problem in one of their work areas. Because mold growth was the main cause of poor air quality in this particular work area, a plan was implemented to investigate other buildings that the client occupied as well. The following summary outlines the investigation and remediation of one of these buildings.

Project Highlights



The Challenge: The client's building has had several instances of water intrusion and water damage. This water damage has been from interior and exterior leaks. Pinnacle was contracted to determine the severity of the leaks, recommend remedial actions, if necessary, and identify possible sources of these leaks. The main areas of concern were the QA/QC lab and a south facing exterior wall of their production area.

Work Scope: The work scope consisted of identifying potential causes of the water intrusion, recommending solutions, and managing the contract work for the implementation of those solutions.



Equipment & Procedures Used in the Investigation: An ***infrared scanner*** was used to measure interior and exterior wall temperatures. Temperature variation within a wall surface can often be an indicator of moisture intrusion. The infrared scanner has the ability to save still shots. These still shots were used to document potential leaks. A ***moisture meter*** was used to determine the moisture content of building materials within affected areas. ***Air samples*** were taken of various areas suspected of moisture intrusion and analyzed. ***Tape lift/bulk samples*** of the suspect fungal growth were taken to confirm the need for remediation.

Specific Findings—problem sources identified:

- Settling of a concrete floor created cracking along the foundation.
- A coating used to seal the exterior walls was not applied properly to be an effective moisture barrier.
- Unsealed concrete walls beneath the soil level in the decorative landscaping planters allowed moisture seepage.
- No vapor barrier was installed between two wall sections, the exterior concrete block and the decorative block. Since the base of the wall had been only partially sealed, water was allowed to move further into the interior of the wall, resulting in the water intrusion and damage.

Site Remediation: The work scope consisted of the removal of the suspect fungal growth on the drywall including debris removal, isolation of the work area, ventilation and air filtration, and clearance sampling. The bioremediation involved the removal and disposal of contaminated building materials, disinfection of building structures and decontamination. All work was conducted in a manner to minimize construction dust and potential release of bioaerolos and mold structures to the containment area. Follow up sampling of the affected areas and a control area was conducted to demonstrate the effectiveness of the treatments.

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