

Summary of Mold Assessment performed 9/23/2020
Cornelius Elementary School
Rooms 7, 301, 229

Room 7:

Corner room, two exterior walls. Moisture content in flooring higher along exterior walls than interior portions may indicate migration of exterior moisture through slab foundation. 64% moisture meter reading.

No visible signs of actual mold growth.

A ceiling tile has water stain and should be replaced.

Air Sample very high Aspergillus/Penicillium molds at 21,700/m³ (spores per cubic meter of air). Normal for conditioned indoor air is 200-700/m³. Also elevated Cladosporium mold at 2400/m³, normal 200-700/m³.

Most likely cause of elevated air mold counts is exposure to elevated indoor humidity prior to placement of dehumidification equipment.

Room 301:

Corner room, two exterior walls. Moisture content in flooring higher along exterior walls than interior portions may indicate migration of exterior moisture through slab foundation. 62-89% moisture meter readings.

No active leaks observed

Mold growth of Cladosporium found in HVAC system interior fiberglass linings

Air sample high counts of Cladosporium mold at 10,900/m³ and elevated Aspergillus/Penicillium at 3000/m³.

Most likely cause of elevated air mold counts is exposure to elevated indoor humidity prior to placement of dehumidification equipment and contamination from HVAC system.

Room 229:

One exterior wall. Moisture content in flooring higher along exterior wall than interior portions may indicate migration of exterior moisture through slab foundation. 96-98% moisture meter readings.

No active leaks observed.

Water stain on ceiling tile sampled for mold. Stachybotrys (toxic black mold) present. This is a water damage mold that only grows when water saturation occurs.

Air sample very high in Cladosporium mold at 12,700/m³ and Aspergillus/Penicillium elevated at 1900/m³.

Mold growth observed on HVAC interior fiberglass linings.

Most likely cause of elevated air mold counts is exposure to elevated indoor humidity prior to placement of dehumidification equipment and contamination from HVAC system.

Recommendations:

Sources of moisture and indoor humidity are priorities to control prior to control of mold growth. Without moisture sources mold can't grow.

Exterior sources of water that is able to flow to foundation areas or settle in these areas should be re-directed to flow away at least six feet from slab. Grading a slope of 5% or 6" per 10 feet is recommended. Keep mulch low around slab and do not direct irrigation water toward foundation.

Secondly, sources of actual mold growth need to be removed. The actual growth was found in at least one, and suspected in both of the HVAC unit linings of Rooms 229 and 301. The fiberglass linings can't be effectively cleaned once they have actual mold growth and should be replaced. Consult with HVAC pro to determine best methods to do this, ie replace sections or pull lining. It is preferable to have NO lining in the air stream sections of the HVAC systems but this may not be an applicable consideration in this type of unit. In a case where it cannot be removed, replaced it has to be coated with a sealant to 'lock in' the mold spores and fragments.

After Moisture/Mold Sources are Controlled:

Since mold spores and fragments can linger in the environment at levels that can trigger symptoms in some occupants it is important to clean the rooms aggressively with the following methods:

Air-washing with blowers (electrical leaf type blowers) or air compressors to stir up settled mold spores and fragments to better capture them in commercial HEPA filtered 'air scrubbers'. Blowing, then allowing scrubbers to run for two hours then repeating twice more is most effective for removing these excessive spores and fragments. Wipe downs with dampened microfiber cloth of surfaces is advised in addition to the air scrubbing.

Some remediation contractors also utilize a fogging process that helps push tiny airborne particles out of the air and onto surfaces which is then followed by the wipe down process. Only a solution of fogging that is non-toxic should be used, such as Enviroguard Knockdown, if choosing this method.

Any ceiling tiles with water staining should be replaced. Keep extras on hand so this can always be done promptly when leaks are discovered and after the leak has been stopped.

Various options for effective active air purification are available to help maintain indoor air quality and reduce air and surface contaminants. We can discuss these if desired.

Post Remediation/Cleaning:

Post inspection should be done to check moisture, visual signs of mold growth, humidity along with air sampling to meet criteria for passing and return to normal expected fungal counts.