



PROJECT PROFILE: Kenwood Middle School, Clarksville-Montgomery County

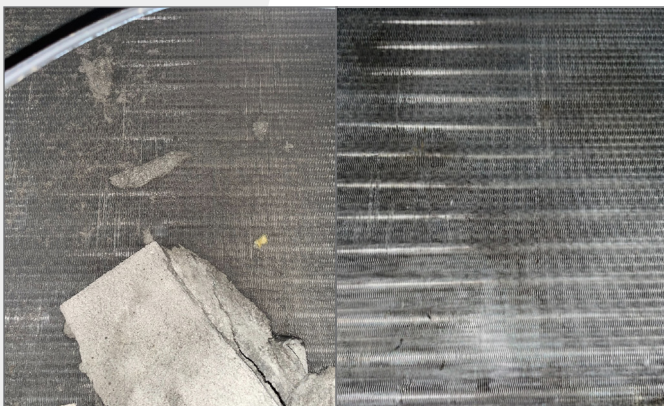
Challenge:

Kenwood Middle School had a water intrusion event within the band/theater area. The Clarksville-Montgomery County School System detected and remediated mold in that occupiable space. However, the air handler unit servicing that zone was in operation during the process and left unaddressed. This compromise of the HVAC system posed a risk to student and staff safety. It was strongly recommended that mold spores, particulate matter, and other possible contaminants of concern be environmentally remediated from AHU 5 and the corresponding ductwork by WTI/Pure Air Control Services.

Project Completion Date	May 29, 2023
Project Type	Building Remediation Sciences
Project Size	Air Handler Unit (AHU) 5, 945 liner feet of ductwork, and five variable air volume (VAV) devices
Services Used	HVAC Steam Cleaning, Duct Cleaning, and HVAC Restoration

Solution:

The first step in the process was PURE-Steam AHU and coil cleaning.



Coils before PURE-Steam

Coils after PURE-Steam





Before New Life Restoration

After New Life Restoration



Ducts before PURE-Duct

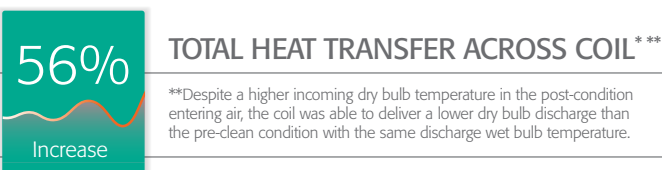
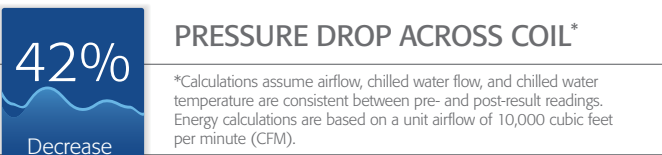
Ducts after PURE-Duct

PURE-Steam AHU and Coil Cleaning

This proprietary method utilizes high temperature and low-pressure steam to effectively remove airflow obstructions and sanitize the equipment. The steam cleaning of AHU 5 optimized its performance, measurable in static pressure and thermal transfer improvements, as well as better indoor air quality downstream. Typically, engineering improvements such as these lead to energy savings since the AHU takes less time to achieve its cooling set point.

PURE-Duct Cleaning

Next, PURE-Duct cleaning was performed on 945 linear feet ductwork, including five VAV devices, attached to AHU 5. This environmental duct cleaning process was self-performed by WTI/Pure Air service techs following the strictest guidelines and safety protocol from the National Air Duct Cleaning Association (NADCA). Environmental samples were collected both pre- and post-duct cleaning.



The project's success demonstrated the effectiveness of our comprehensive approach to HVAC cleaning and restoration, benefiting Kenwood Middle School and its occupants for years to come.

The samples were analyzed and compared by WTI laboratory services. The lab analysis found a microbial count of 40,000 colony forming units (CFU) in the pre-cleaning samples and a count determined "below detectable levels" or BDL in the post cleaning!

HVAC New Life Restoration

In the last phase of work, HVAC New Life restoration services were performed on AHU 5 to improve safety and increase its useful lifecycle. First, old fiberglass insulation was environmentally removed. Next, high-performance coatings were applied to the interior of the unit and drain pan. PURE-Coat and PURE-Liner 2.0 coatings provide exceptional anti-microbial, corrosion resistant protection. Then new, fiberglass free, water-resistant insulation was installed. Finally, the inspection and fine-tuning of various components, such as the coils, fans, and filters, was conducted to ensure optimal performance.

 **100% ENVIRONMENTAL IMPROVEMENT**



Drain pan before New Life

Drain pan after New Life

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