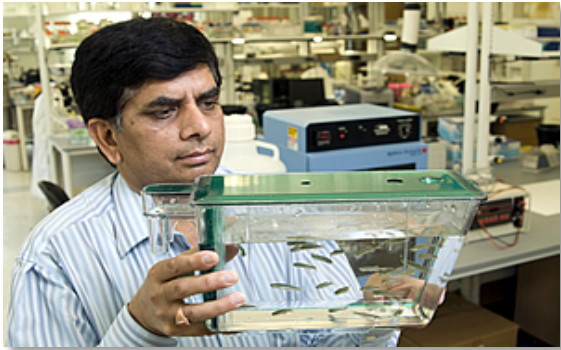


UNIVERSITY OF NORTH TEXAS LIFE SCIENCES COMPLEX DENTON, TEXAS

KEY PARAMETERS

- Type of Installation - Existing Building (EB)
- Function - Higher Education
- Area - 5-stories, 176,000 sq. ft.
- Project Completion – 2014

The Life Sciences Complex is a world-class research and teaching facility for biochemistry and molecular biology, developmental physiology and genetics, and plant science. It features state-of-the-art labs, classrooms, offices, meeting rooms, and communal spaces.



Challenges: Filter maintenance at the facility had become an ongoing process and problematic, particularly for 100% dedicated outside air units. When the O.A. units filters loaded up, the building would lose pressurization because there was insufficient ‘motor/fan’ to overcome the high pressure drop across the filter banks. The custom central station air handlers each had two stages of filtration with MERV 8 pre-filters and MERV 14 final filters.



Additionally, the institution is very focused on sustainable practices and infrastructure improvement. Curriculums and leadership programs on sustainability are offered at the school and green design is very important.

Solution: Retrofit the existing air handler’s multiple stages of filtration with Dynamic V8 Air Cleaning Systems. The Dynamic V8 provides MERV 15 filtration which exceeded the original design. In addition to fine dust particle removal, the Dynamic V8 also removes VOC and gas phase contaminants which standard passive filtration systems do not. The Dynamic V8 Air Cleaning System has a very high dust holding capacity; holding up to ten times more dust than standard cartridge and bag filters and up to 100 times more dust than shallow-bed passive filters.

Results: The Dynamic V8 system proved to be an effective and sustainable solution to reduce maintenance intervals, saving time and money for the UNT facilities department. The new system has addressed building pressurization issues, and will save air handler fan energy consumption. Variable frequency drives are able to effectively slow down the fan RPM while maintaining critical outside air CFM quantities.



TEAM

- Owner – University of North Texas

MECHANICAL SYSTEMS

- Life Cycle Analysis – HTS Texas, Ft. Worth
- Installation – HTS Texas, Ft. Worth

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