

Establishing a Condition-Based Maintenance Program for Buildings and Facilities

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Summary

The facility of interest in this report is a focal point for medical research in the United States. On the main campus, thousands of doctors, researchers, and scientists work in over 60 buildings to advance the state of medical knowledge and research.

The maintenance program at the facility includes comprehensive operation and maintenance support for the care of all campus buildings. This includes routine and emergency maintenance on electrical, mechanical, structural including utilities and a vast distribution system for steam, chilled water and compressed air from a main plant on campus. Critical environments include Bio-hazard Level 3 and 4 facilities, animal facilities, and patient care units. Over the last 6 years, maintenance strategies have been updated to include diagnostic technologies and expertise to transition from a reactive maintenance environment to a strategic Condition-Based Maintenance (CBM) program.

Efforts to date include vibration analysis, infrared thermography, lubricant analysis, motor circuit analysis, ultrasonic leak detection, and electrical testing. Training has also been a significant aspect of the program, providing level-of-awareness classes for the diagnostic technologies and maintenance strategies, and targeted pro-active maintenance workshops in the use of maintenance tools such as laser alignment and steam trap leak detection.