

Chemistry Building Maintenance Analysis

Chemistry Building Ventilation System Maintenance Cost by Category

Fiscal Year	Category	Total Labor Hours	Total Labor Cost	Total WO Costs
17	PREVENTIVE	108.00	\$ 4,849	\$ 31,043
18	PREVENTIVE	75.00	\$ 3,527	\$ 27,002
19	PREVENTIVE	97.25	\$ 4,536	\$ 27,936
20	PREVENTIVE	123.00	\$ 4,889	\$ 28,289
21	PREVENTIVE	63.75	\$ 2,767	\$ 26,167
Grand Total		467.00	\$ 20,567	\$ 140,437

Fiscal Year	Category	Total Labor Hours	Total Labor Cost	Total WO Cost
17	CORRECTIVE	446.75	\$ 17,994	\$ 23,438
18	CORRECTIVE	408	\$ 19,115	\$ 36,556
19	CORRECTIVE	340	\$ 15,623	\$ 23,245
20	CORRECTIVE	335.25	\$ 12,819	\$ 31,447
21	CORRECTIVE	160.75	\$ 6,992	\$ 14,921
Grand Total		1690.75	\$ 72,543	\$ 129,606

Maintenance Analysis:

NMSU performs regularly scheduled preventive maintenance on the building and fume hood ventilation system for the Chemistry Buildings. A cost analysis was generated for the period of Fiscal Year 17 through May 10, 2021. During this time frame NMSU spent \$270,043.00 to perform maintenance and repairs on the systems. Preventive maintenance expenditures account for 52% of the total expense with the remaining 48% on Corrective maintenance. NMSU projects to achieve up to a 75% reduction in annual corrective maintenance labor hours and total work order costs. This equates to an annual maximum reduction of 317 labor hours and \$24,301.00 total work order costs. The savings will be reinvested in scheduled maintenance for Mechanical systems in other academic buildings on campus.

Project Development:

Facilities Operations needs to be an active participant in the project design. The Maintenance Analysis is based upon a detailed work order review from AiM. The Mechanical shop are the subject matter experts in regards to system flaws and challenges. At a minimum we recommend the following items be addressed as part of the project:

1. Create a dedicated ventilation system for all fume hoods in the 3 buildings.
2. Create a dedicated comfort ventilation system for the 3 buildings
3. Commission both systems and upload copies of the commissioning report in AiM
4. Address root causes of Too Hot/Too Cold trouble calls that remain after commissioning