

Steam System Infrastructure Maintenance Analysis

Steam Infrastructure Repair Costs						
Row Labels	Total Hours	Labor Cost	Material Cost	Contract Cost	Total Cost	
18	825	\$ 38,935	\$ 8,998	\$ 211,330	\$	259,263
19	981	\$ 44,415	\$ 5,435	\$ 241,272	\$	291,122
20	1563	\$ 59,966	\$ 42,305	\$ 208,006	\$	310,277
21	3968	\$ 150,273	\$ 76,989	\$ 247,976	\$	475,238
22	1262	\$ 59,966	\$ 35,688	\$ 389,165	\$	484,820
Grand Total	8598	\$ 353,555	\$ 169,416	\$ 1,297,749	\$	1,820,721

Maintenance Analysis:

NMSU maintains a steam system infrastructure which includes the steam distribution system, building components, and condensate return to the Central Utility Plant. This infrastructure receives routine visual inspections by Plant Operations and Utility technicians as well as Mechanical shop personnel. The inspections are critical to identifying potential leak areas, catastrophic system failures and other adjustments to improve operational efficiencies. Steam leaks in the tunnel system increase our chemical costs, make up water requirements, overall production costs and may result in property damage that is repaired via insurance claims. Plant Operations and Utilities technicians perform the tunnel inspections while the Mechanical shop is responsible for funding all distribution and building system repairs. Repair costs have increased by 87% from FY 18 through June 30, 2022. A linear projection for FY22 costs results in an estimated cost of \$484,820 for steam infrastructure and tunnel repairs. NMSU anticipates a potential reduction of 25% in corrective maintenance costs which will be reinvested into preventive maintenance programs.

Project Benefits:

Performing the project will replace obsolete and/or failing components which will extend the useful life of the steam system. Extending the useful life of the system allows NMSU time to plan and revitalize the steam system thereby reducing the deferred maintenance backlog for the steam system. Additionally, performing the project will improve the operating efficiency of the system and reduce utility production costs.

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. Plant Operations and Utilities as well as the Mechanical shop are the subject matter experts regarding system flaws and challenges. Additionally, NMSU has updated our Utility Master Plan which would be used to develop the project scope.