Minot Air Force Base

Retro-Commissioning Services

About the Facility:

Minot Air Force Base is a U.S. Air Force Installation in Ward County, North Dakota. As part of a collaborative effort with Johnson Controls Federal systems, Sain Engineering Associates, Inc. (SEA) was selected to provide Retro-Commissioning (RCx) to several facilities managed by the 5th Civil Engineer Squadron. The focus of the RCx services included Utility Monitoring and Control Systems (UMCS), Heating, Ventilation and Air Conditioning (HVAC) systems including chiller/boiler systems instalaltion and integration, as well as Supervisor Control and Data Acquisition (SCADA) systems.

Scope of Work

SEA served as the Commissioning Authority for this effort and was responsible for leading, planning, scheduling and coordinating the Retro-Commissioning process. SEA coordinated all on-site activities with the Base Energy Manager and the HVAC Superintendent. The team also directed the activities of the field technicians as information was gathered and evaluated, and systems were tested for functionality. SEA also made recommendations to the owner regarding Facility Improvement Measures (FIM).

Johnson Controls Federal System served as Project Manager and provided on-site coordination regarding execution of the Performance Work Statement (PWS) ensuring compliance with Minot AFB procedures. The primary goal of the RCx at the specified buildings was to identify operational and maintenance enhancements that resulted in:

- Ensuring systems worked efficiently as designed
- Improving energy efficiency
- Improving occupant comfort
- Improving indoor air quality

The two squadrons that SEA focused RCx work on included the 91st Missel Wing and the 5th Bomber Wing.

SEA
SAIN ENGINEERING ASSOCIATES, INC

91st Missile Wing

SEA was responsible for providing RCx on existing equipment including the DDC and HVAC systems, as well as the building envelope for fifteen MAF sites totaling 130,000 square feet. This included the development and execution of functional test procedures and TAB. Final deliverables included a report detailing the results of all testing and noted issues with the site, identifying and recommending priorities for repairs of non-functioning equipment.

130k
Square Feet

15
Facilities Assessed

5th Bomber Wing

SEA was responsible for the RCx plan focusing on the operation of current DDC and HVAC systems at 9 buildings totaling 630,000 square feet. The buildings also included air and hydronic TAB. Final deliverables included a report with Draft Contractor Field Test and Performance Verification Test procedures for government approval. The plan established the framework for testing HVAC equipment after completion of the initial site survey.

630k
Square Feet

9
Facilities Assessed