



NASA Goddard Wallops Flight Facility
Wallops Island, VA
Base-Wide Boiler Decentralization & Geothermal Engineering

ABOUT THE CLIENT

NASA Goddard Space Flight Center's Wallops Flight Facility was established in 1945 by the National Advisory Committee for Aeronautics as a center for aeronautic research. The research and responsibilities of Wallops Flight Facility include providing a fast, low cost, highly flexible and safe response to meet the needs of the United States' aerospace technology interests and science research.

REFERENCE

Jason Vass, PE, CEM
 Project Manager
 Ameresco Federal Solutions
 (865) 330-7162
 jvass@ameresco.com

(856) 427-0200
 CONCORD-ENGINEERING.COM



CONSTRUCTION COST:

\$19 Million

YEAR COMPLETED:

2013

750,000 SQ. FT.

ENERGY SAVINGS PERFORMANCE CONTRACT

Concord Engineering performed the development engineering for several Energy Conservation Measures (ECMs) as part of an Energy Savings Performance Contract (ESPC) with a federal ESCO. Concord provided energy savings analysis, generated engineering design documents, provided bid & award support and is providing construction administration/engineering support during construction. Concord was first involved in the decentralization of the existing central steam plant on the Main Base in December 2008. Construction was complete by Fall 2011.

Modular, propane fired condensing boilers were added to 41 buildings (~750,000 SF); 27 of which were on the steam plant. The remaining 14 buildings were converted from fuel oil to propane. A new underground propane vapor distribution system was added with a centralized storage facility and water-bath vaporizers for conversion of liquefied propane to propane vapor. Energy savings resulting from this project was approximately \$1 million.

Additionally, Concord provided the engineering design for a Geothermal Heat Pump retrofit at 20 buildings on Wallops Island in August 2010. Construction began in Fall 2011, with completion in Winter 2013. High-efficiency Geothermal Heat Pumps and Vertical Closed Loop Geothermal heat exchangers were added to 20 buildings (~150,000 SF). As part of this project, a high-efficiency 250 Ton air-cooled chiller with variable speed drive screw compressor was added to serve 4 buildings on the Main Base.

