

Merrick & Company was contracted by Giant Refining to refurbish the existing 200,000 lb/hr, 225 psig, 400°F main steam distribution system in its Gallup, New Mexico facility. The task scope addressed solving steam consumption in the event of a power failure or the loss of steam generators. Merrick performed a study which provided recommendations and cost estimates to the client for improvements to the entire steam distribution system.

Based on these recommendations, Merrick performed detailed engineering for improvements to the steam distribution systems which included control enhancements, valve additions, bootleg/trap station additions, control valve additions, and piping modifications. Piping modifications included sections up to 12 inches in diameter. Design analyses included piping stress analysis and water hammer prevention analysis.

Additionally, Merrick refurbished one of the three existing boilers as part of the client's turnaround maintenance. In order to minimize disruption to the facility, Merrick installed a temporary packaged boiler during refurbishment, which was tied into main steam distribution.

All work was performed in accordance with ASME Boiler and Pressure Vessel Code, Sections I and VIII, and ANSI/ASME B31.1, Power Plant Piping.