



Babcock Power
ENVIRONMENTAL

SUCCESS STORIES

MID WESTERN COOPERATIVE

SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM UPGRADE

LOCATION MEROM, IN, U.S.A.
CAPACITY 525 MWS

PROJECT OVERVIEW

Babcock Power Environmental was contracted to provide SCR system upgrade of units 1 and 2 at Mid-Western Cooperative, Merom Generating Station in Merom, Indiana.

The system upgrade included 3-D modeling of the existing Selective Catalytic Reduction (SCR) system arrangement, furnished and installed by others, and the design and supply of Babcock Power Environmental (BPE) Delta Wing® mixing technology and a dilution air system, including fans and steam coil air heaters for the direct injection of ammonia to control NO_x emissions from the steam generating units.

PERFORMANCE MEASUREMENTS

NH_3 to NO_x Distribution	$\leq 4\%$ std. dev.
SCR Inlet Temperature	$+28/-8^\circ\text{F}$
Pressure Drop Increase	≤ 2 iwc
Min. Reagent Vaporization Rate	Met Gua (by cal)
Max. Power Consumption	38 KW (by cal)
Max. Steam Consumption	Met Gua (by cal)
Max. Noise Level (3' H/5' H)	Not Measured

DESIGN PERFORMANCE MEASUREMENTS

NH_3 to NO_x Distribution	$\leq 6\%$ std. dev.
SCR Inlet Temperature	$\pm 30^\circ\text{F}$
Pressure Drop Increase	≤ 2 iwc
Min. Reagent Vaporization Rate	≤ 933 lb/hr
Max. Power Consumption	≤ 42 KW
Max. Steam Consumption	$\leq 3,960$ lb/hr
Max. Noise Level (3' H/5' H)	85 dbA



BABCOCK POWER ENVIRONMENTAL SOLUTION

Babcock Power provided a Delta Wing Static Gas Mixing System, an Ammonia Flow Control Skid, Dilution Air fans, 2 x 100%, Steam Coil Dilution Air Heaters, 2 x 100%, Dilution Air Flow Transmitter, and eight Ammonia Injection Lances (down from 40), each Lance 8 inch diameter has local flow meter and balancing and isolation valves.



^ Ammonia Skids



^ Dilution Air Fans

