

# DESCALING IN NUCLEAR PLANT GREATLY REDUCES ENERGY CONSUMPTION

## Case Study

**The Challenge:** A nuclear plant in the Midwest was experiencing high head pressure in their unit 2 containment chillers. Unit 2 has two A & B 550-ton chillers that produce chilled water, which supplies the air handlers for the primary containment area.

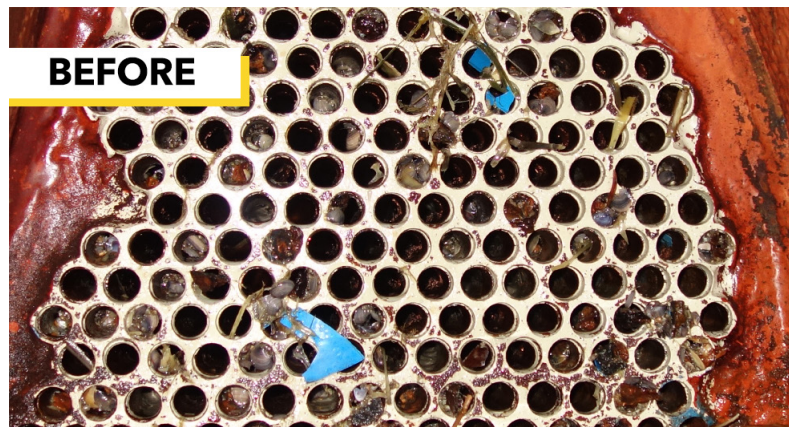
When water formed deposits accumulate on tube surfaces, it creates an insulating barrier, this accumulation minimizes efficient heat transfer and increases head pressure of the condenser. The condenser barrel has a total of 531 ¾" tubes, 12' long, including water boxes, the volume was about 200 gallons. The scale thickness averaged 1/16" of scale throughout the tube sheet. 85 gallons of ScaleBreak-MP was circulated for 4 hours and the results were excellent.

*"This chiller is running and performing more efficiently than any chiller we have."*

**The Solution:** The solution used was Goodway Technologies ScaleBreak-MP (Multi-Purpose), a citric based biodegradable descaling solution which dissolves 2.5 pounds of scale per gallon. Since the condenser tubes were stainless steel, the cleaning required a compatible descaling solution to ensure the stainless would not be damaged.

**The Results:** The pressure drop across the condenser has improved from 25 psi to 14 psi. The head pressure is now operating at 140 Psi with lake temperature around 96 degrees F! By comparison, the second chiller, which is still fouled is running at 165 Psi. - a significant difference.

Contact Goodway Technologies to ask how we can help your facility restore efficient equipment operation and reduce energy consumption.



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