Power Generation

Case Study

American Electric Power Generates Results with Pall

D.C. Cook Plant Deploys Pall Ultipor® Media for Reliable Fuel Pool Filtration

Overview

American Electric Power (AEP) owns and operates more than 60 generating stations in the United States, with a capacity of more than 35,000 megawatts. While the size of the operation is significant, it's the efficiency -- and the resulting reliability and operational economies -- that has earned AEP its reputation as a pioneering, innovative, and dependable power producer.

AEP's D.C. Cook Nuclear Plant is located in Bridgman, MI -- 650 acres on the shoreline of Lake Michigan that reflect AEP's philosophy of safety and performance. Cook Unit 1 is one of the leading nuclear power generators in the United States.

The Challenge: Cleaning the Fuel Pool

For fuel pool filtration, the D.C. Cook plant had been relying on a competitor's 5-micron nominal cartridges but found them to be the cause of rising dose rates on the refueling floor. To combat this hazardous situation, the nuclear plant decided to modernize its filtration capabilities.

The Solution: Pall Ultipor® GF Plus

After evaluating several options, the company chose Pall's Ultipor® GF Plus media in a direct retrofit cartridge to filter D.C. Cook's fuel pool. Pall Ultipor GF Plus media has been specifically designed for use in the nuclear industry. It's manufactured in removal ratings ranging from 40µ down to 0.1µ.

Because of its unique, positively charged media, the Pall cartridge delivers a higher dirt-holding capacity and lower clean differential pressure than competitors' cartridges.

Additionally, the Ultipor GF Plus element allows for easier and quicker changeouts, further reducing exposure for plant personnel. As plants use finer and finer filtration, they actually capture more radioactive particulate. Adhering to Pall's recommended graduated filter replacement program, D.C. Cook initiated the project with 6µ filters and is now down to 1µ.

Pall has retrofitted numerous fuel pools, including Utilities Service Alliance plants representing more than 13,000MW of power generation. Exelon, Entergy and Duke, the nations three largest nuclear generators, also use Pall products in their fuel pool. Offering several direct replacements for fuel pool retrofits, Pall has the products to help your plant run safely and efficiently.

About Pall Ultipor® GF Plus

Pall Ultipor® GF Plus filter cartridges are made with highly efficient glass fiber filter media pleated into low pressure drop modular filter elements, and feature:

- High-area pleated medium
- Low differential pressures
- Absolute particle rated in liquids
- High-capacity for long life
- Fixed pores to prevent unloading

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