GNF2: High Performance Fuel Assembly

Superior Fuel Reliability through Best-in-Class Filtering Technology

Optimized Design and Performance
The enhanced design of the GNF2 fuel assembly — based on pioneering technologies developed by GNF — provides customers with improved fuel utilization and increased performance and reliability.

In addition to increased output and reduced fuel costs, the GNF2 advanced design offers the latest technology in corrosion and debris resistance. The advanced debris filter, the Defender™, is now standard on the GNF2 fuel assembly — increasing reliability and filtration to the best available in today’s market.

The GNF2 fuel assembly has undergone rigorous testing and is expected to be even more reliable than other fuel designs — preventing more fuel failures than any other design due to the standard Defender™ filter.

Increased Output, Reduced Fuel Costs
To meet customers’ needs in a demanding market, we designed GNF2 to deliver increased energy output — while reducing overall fuel cycle costs. This enhanced design will save money by reducing the total amount of uranium and the average enrichment in fuel reloads.
Features
High Energy Fuel Rod Design
• Increased Plenum Volume
• High Mass Pellet
Reactivity – Enhancing Part Length Rods
• Optimized Two-Phase Pressure Drop
• Multiple Lengths
• Positioned for Improved Reactivity
Advanced Spacer Design
• Reduced Thickness Inconel Grid
• Flow Wings
Advanced Debris Filter – The Defender™
• Equivalent Pressure Drop
• Debris Shield also Available
Simplified Channel
• Thick Ends and Corners
• Fewer Welds
• Formed Features

Benefits
Reduced Fuel Cycle Costs
• Reduced Batch Size at Constant EUP
• Improved Nuclear Efficiency
• Bundle U Mass
• Improved Axial H/U ratio
• Optimized Cold Shutdown Margin
Increased Energy
• Increased Exposure Capability
• Supports 24-Month Cycles @ 120% Power
Operating Flexibility
• Accommodates High Assembly Power
• Increased Critical Power Margin
• Increased Loading Pattern Flexibility
• Low Pressure Drop
Reliability and Quality Enhancements
• Enhanced Debris Mitigation (Defender™ Debris Filter Lower Tie Plate (DFLTP))
• Enhanced Corrosion-Resistant Cladding
• Improved Manufacturing Process