

Course Description

This course focuses on the essentials of BWR operational chemistry. Designed by industry experts for chemistry personnel who have a basic understanding of plant operation and plant systems, the course provides practical, accessible information and proven techniques for personnel responsible for operational chemistry analysis, corrosion prevention, and system diagnostics. Common topics will be covered as well as reactor water and reactor water clean-up chemistry and radiochemistry, feedwater chemistry, demineralizer and filtration performance, startup and shutdown chemistry, fuel integrity, corrosion concerns, and data evaluation techniques.

Course Information

- Course duration is five days.
- Detailed course handbooks will be provided upon arrival.
- Attendees are encouraged to bring plant data for group discussion and analysis.

Course Topics

- ✓ History of BWRs
- ✓ Chemistry control
- ✓ Startup & shutdown chemistry
- ✓ Reactor water corrosion control – startup, shutdown, & normal operation
- ✓ Feedwater corrosion control
- ✓ Monitoring parameters
- ✓ Data interpretation – radiochemistry, chemical injections, & transient calculations
- ✓ Intergranular stress corrosion cracking within BWRs
- ✓ Normal operation & shutdown dose rate control – zinc injection & cobalt
- ✓ Contaminants
- ✓ RWCU demineralizer operation – monitoring & RWCU outage calculations
- ✓ Condensate demineralizer operation – filter demineralizers, deep bed demineralizers, & dual systems
- ✓ Condenser leaks, leak detection, & on-line leak detection
- ✓ Cleanup calculations
- ✓ Closed cooled water systems
- ✓ Closed loop corrosion control
- ✓ Effluents
- ✓ Primary coolant samples
- ✓ Fuel monitoring
- ✓ Tritium plant related issues
- ✓ Regulatory requirements – technical specifications, EPRI water chemistry guidelines, & regulatory guides

