

Value Delivered

- ✓ Significant cost savings through inspection relief
- ✓ Optimized hydrogen injection rates to ensure ECP reduction
- ✓ Identify opportunity for inspection relief
- ✓ Provide test plans for successful ramp testing
- ✓ On-site support with post-activity report
 - ✓ Report to provide detailed synopsis of approach and results
 - ✓ Provide mitigation recommendations consistent with industry-best practices

Industry Challenge

BWRVIP-62 provides justification for inspection relief for plants that have implemented Moderate Hydrogen Water Chemistry and NMCA, OLNC in a manner that effectively mitigates intergranular stress corrosion cracking (IGSCC). In most cases, justification for inspection relief depends on evaluating local electrochemical potential in areas of interest to verify local ECP is less than -230 mV(SHE). At this ECP value, IGSCC is considered mitigated. Inspections included in BWRVIP-62 guidance pertain to reactor internals. Obtaining relief for inspections in the reactor internals save outage time and collective radiation exposure and reduce cost.

ChemStaff Solution

ChemStaff provides support for BWRVIP-62 ramp tests, performed to correlate hydrogen injection rates to ECP measurements in the reactor internals. ChemStaff support for ramp tests will also include evaluation of main steam radiation levels under varying hydrogen and oxygen concentrations.

ChemStaff's team of experienced experts provide on-site support to ensure that ramp testing is performed per BWRVIP-62 guidance and that necessary next steps to obtain inspection relief are identified. By determining feedwater hydrogen concentration required to reduce ECP less than -230 mV(SHE) in lower vessel head, as well as correlating ECP to H₂ injection rate, feedwater and reactor water H₂ concentration, reactor water O₂ concentration, and main steam rad levels, the plant will benefit from significant cost savings. Benchmarking with BWRVIA model and on-site support with experienced personnel will provide support and save on outage time.