

## Value Delivered

- ✓ Key insights & programmatic recommendations for steam generator chemistry success
- ✓ Plant-specific results reviewed against expansive industry database
- ✓ Samples' integrity secured by prompt analysis
- ✓ Advanced modeling techniques to predict crevice chemistry conditions for HOR data
- ✓ Reduced burden on plant laboratory
- ✓ As-needed expert on-site support to assist plant personnel

## Industry Challenge

During operation, contaminants accumulate (hideout) in flow-restricted and steam-blanketed locations within PWR steam generators. Chemistry in these regions can become aggressive to the generator's tubing materials, leading to stress corrosion cracking and premature tube failure. Conversely, during shutdown and cooldown, steam voids collapse, areas are rewetted, and impurities are released back (return) into the bulk steam generator water. Analyzing hideout return data provides key insights into chemistry conditions in these flow-compromised regions, enabling plant personnel to better manage local chemistry conditions and take actions to lessen corrosion and premature failure. Further, EPRI Guidelines require that hideout return evaluations be performed after each planned outage to predict crevice chemistry conditions in the steam generators.

## ChemStaff Solution

Meeting this challenge, ChemStaff maintains an extensive database of hideout return (HOR) results from across the industry. Our experienced technical experts meticulously evaluate plant data and compare it to our industry experience database, offering detailed benchmarks to achieve best practices. At ChemStaff, we can even eliminate large analysis backlogs in plant laboratories by providing functional analytical services for HOR samples. We deliver:

- ✓ Predictive tools – HOR data processed using advanced modeling techniques to predict crevice chemistry conditions
- ✓ Benchmarking – HOR results compared to ChemStaff's extensive industry experience database
- ✓ Sample analysis – HOR sample analysis and elimination of laboratory backlogs along with reduced overtime and minimized analysis cycle-time
- ✓ Detailed report – Comprehensive report with thorough plant-specific results, comparison to industry benchmarks, and programmatic recommendations
- ✓ Execution – On-site support to assist plant personnel as needed

