

Engineering Capabilities

Structural and Engineering Mechanics

- ASME Equipment and Component Qualification
- Attachment Point Response Spectra
- AUX Equipment Qualification
- Cavity Pressurization
- Crane Assessments
- Drop/Impact Analyses
- Environmentally-Assisted Fatigue (for all class 1 component)
- FIV Analysis
- Flaw Handbooks for RCS Components
- Fluid Transient Load Evaluations
- Fracture Mechanics, Elastic and Inelastic
- High Energy Line Break (HELB) Loading Reduction
- Justifications for Continuing Operation of Equipment
- Leak Before Break
- Materials, Environmental Degradation, RV Integrity, Specification Development, Material Selection, Failure Analysis
- MRP-227 Implementation, Inspection Planning, and Engineering Evaluation
- Piping Stress Analyses
- RCS and NSSS Structural Analysis and Design
- Seismic/Dynamic Loading Development and Analysis
- Seismic Qualification of Equipment
- Snubber Reduction
- Stress Analysis/Finite Element Analysis
- Support Analyses (ASME NF)
- Suspended Systems
- Vibration Analysis

Thermal Hydraulics/Performance

- Flow Modeling and Hydraulic Analysis
- Fluid Transient – Hydrodynamic Pipe Loads
- System Water Hammer Evaluation
- Thermal-Hydraulic Analysis including CFD Modeling

Component and Services Engineering

- 3D Modeling and Design Services
- 180-Day and Fast Track Reports
- ASME III and XI Expertise and Consultation
- Code Reconciliations
- Condition Monitoring and Operational Assessments
- Degradation Assessments
- Design and Equipment Specifications
- Heavy Rigging Independent Review and Consultation
- Loose Part Analysis
- Manway/Closure Analysis
- NSSS Equipment Repair and Replacement Planning
- Skip Inspection Determinations
- Stabilization Criteria Documents
- Steam Generator Consultation
- Steam Generator Hardware Qualification (Plugs/Stabilizers)
- Tube Integrity Engineering

Safety Analysis

- Accident Analysis
- Containment Analysis
- Equipment Out of Service (EOOS) Evaluations
- Justification for Continued Operation (JCOs)
- Licensing Support
- Probabilistic Risk Analysis (PRA)
- Radiation Shielding
- Radiological and Environmental Analysis
- Security Modifications
- Site Dose Models
- Transient Analysis

Nuclear Analysis

- Alternative Source Term
- Containment and High Energy Line Break Analysis
- Control Room Habitability
- Criticality Analysis
- Dose Assessment
- Fluid Transient – Hydrodynamic Pipe Loads
- GOTHIC Analysis (Containment Analysis)
- MCNP, DORT, SCALE, Heating Analysis
- Meteorological and Atmospheric Dispersion Analysis
- PSA Support Services
- Radiation Accident and Safety Analysis
- Radiation Effluents and Waste Management
- Radiation Environmental Monitoring Program Support
- Radiation Shielding and Equipment Qualification
- Risk-Based Technical Specification Optimization
- Risk-Informed In-Service Inspection
- Risk-Informed Procurement
- Spent Fuel Characterization
- Spent Fuel Pool Thermal-Hydraulic Analysis
- Transient/LOCA Safety Analysis

Mechanical Engineering

- 10CFR50.71(e) Updating USAR Program
- ALWR Design
- ASME and B31.1 Piping/Support Design and Analysis
- Design Basis Upgrades
- Development/Evaluation/Enhancement
- Engineering Studies/Cost-Benefit Analysis
- Insulation Replacement and Modification
- Mechanical Component Engineering
- Mechanical Systems Engineering
- Plant Modifications and Plant Design Modification Packages
- Safety Related Room Coolers
- Suction Strainer/Containment
- Sump Hydraulic Analysis
- System Assessments – SSFIs, SSEIs
- System Monitoring/EPRI

License Renewal and Regulatory Projects

- Assessment of Plant CLB, DB, Programs and Technical Support Doc. SSC Scoping, Screens, Aging Management
- Design Basis Documentation (DBD)
- Initial Plant Life Extension Analyses
- LR Site Implementation Plan Improved Tech Spec (ITS)
- NRC Inspection Review Support
- Plant Condition Assessments
- Risk Informed Engineering Programs (10 CFR 50.69)
- Time-Limited License Aging Analysis and License
- Renewal Application Support
- Reliability Improvement
- Corrective Action Program
- Equipment Reliability Studies
- ISI/IST
- Human Performance Trending
- Life Cycle Management
- MOV/AOV Programs
- MOV/Equipment Testing
- Operating Experience Program
- Plant Maintenance Living Program (PMLP)
- Plant Maintenance Optimization (PMO)
- Plant Restart Support
- Predictive and Preventative Program Assessments
- Reliability Engineering
- Root Cause Analysis/Support
- Single-Point Vulnerability Evaluations

Contingency Planning Services

- Contingency Plan Drill and Exercises
- Emergency Preparedness Planning
- Radiology Drill and Exercise Planning

Civil/Structural

- Concrete and Steel Design
- Containment Analysis and Design
- Dynamic Loading
- Load Path and Haul Route Evaluations
- Rigging Evaluations
- Seismic Analysis
- Seismic PRA – HCLPF Analyses
- Soil Mechanics and Foundations
- Soil-Structure Interaction Analysis
- SQUG Qualifications

Electrical/I&C Engineering

- AC/DC System Design and Analysis
- Calculation Conversions
- Control Room Design
- Cybersecurity and Security Safeguards
- Design Studies
- Diesel Generator Engineering
- Digital I&C System Analyses: Setpoint, FMEA, Reliability, Response Time Uncertainty
- Digital Upgrades
- Electrical Calculations and System Analysis (ETAP)
- Evaluation of Changes to Plant Operations
- Electrical Load Management
- Environmental Qualification
- Human Factors Engineering
- I&C Calculations
- I&C System Design
- Interface Management
- Licensing Support
- Modification Package Development
- Plant Process Computer Replacements
- Power Systems Modeling (ETAP, etc.)
- Qualification of Replacement Parts
- Repairs to Existing Hardware
- Requirements Specification Development
- Security Replacements and Upgrades
- Single Point Vulnerability
- Software Quality Assurance (SQA) Plans and Procedures
- Software Verification and Validation (V&V)
- Temporary Power Design and Evaluation
- Voltage Regulation

Fire Protection Engineering

- Detection/Suppression/Water Supply System Design
- Fire Barrier Testing and Qualification
- Fire Safe Shutdown Analysis
- NFPA 805 Post Transition Support
- Plant Fire Protection Program Support

Balance of Plant Services

- Balance of Plant (BOP) Projects
- BOP Engineering, Design, Analysis, Procurement, and Construction
- Complete Procurement Services
- Decommissioning
- Design Change Packages
- Electrical and I&C Services and Products
 - Digital Upgrades
- Engineering Field Support
- Field Engineering
- General Construction Management Projects
- Major Plant Component Replacements
- Plant Upgrades
- Power Upgrades
- Radiological, Valve and Condenser Services
- Specialized Machining, Welding and Precision Measurements
- Task Management and Craft Labor
- Testing and Turnover
- Work Planning and Packages

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