

ADVANCED REACTOR SUPPORT

KEY CAPABILITIES AND EXPERIENCE

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Seismic Methodology

- Seismic Performance Criteria
- Seismic Risk Assessment/PRA
 - Soil/Structure/Fluid Interaction
 - Structure & Component Fragility
 - Geotechnical Fragility



Design Optimization

- Buildings and Support Structures
- Material Selection & Processing
- Design for Analysis (Optimize Transients, Reduce Conservatism)
- Digital Twin Development



Seismic/Structural Evaluation

- FEA Modeling, Dynamic Analysis
 - Modal, Response Spectrum, & Time History Analysis
 - SASSI and LS-DYNA
- Equipment Qualification
 - By Testing and/or Analysis
- Building Structure Code Evaluations
- Aircraft Impact & Tornado Missile Evals
- Large Component Drop Evaluations



Licensing Support

- Analytical & Inspection Program Development
- Advisement for PSAR/FSAR
- Regulatory Interactions (RAIs)



Risk Assessment

- Probabilistic Risk Assessment
- Probabilistic Fracture Mechanics (including leak-before-break)
- Constructability Reviews



Quality Assurance

- Program & Procedure Development
- Commercial Grade Dedication
- Personnel Testing

DESIGN

ANALYSIS

LICENSING

CONSTRUCTION

OPERATION



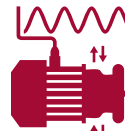
Fuel Design & Analysis

- Fuel Performance Codes/Methods
- Accident/Transient Analyses
- Neutronics & Thermal Hydraulics
- Source Term & Consequence Analysis
- Spent Fuel Storage (Design/Analysis)



Design Analyses

- System & Component Evaluations
 - ASME Section III, including Div-5
 - Piping Analysis (Sec-III or B31)
- Embrittlement & Aging Effects



Vibration Analysis

- CVAP for RPV Internals (R.G. 1.20)
 - Mechanism Screening
 - Forcing Functions & Stresses/Wear
 - Develop/Implement Test Programs
 - Regulatory Support
- ASME OM-3 for Piping Programs



Engineering Programs

- ASME Sec-III Fatigue Management
- ASME Sec-XI, Div-2 (RIM Programs)
 - Expert Panel Support
 - Degradation Assessments
 - Strategy Development
 - MANDE Technology Maturation
 - Uncertainty Evaluations



Conventional Island Systems

- Turbine & Generator Performance
- Process/Chemistry Control Equipment
- Pre-Operational Risk Assessments



Operational Support Services

- Process Temperature Control
 - Modeling & Implementation
- Radioactive Waste Treatment
- Effluent Control, Occupational Dose
- Emergency Planning/Procedures

SI ASSET PERFORMANCE MANAGEMENT — SOFTWARE AND SOLUTIONS

Our integrated digital platform serves as a single source of truth that captures, analyses, and displays data and actionable recommendations.