

ENGINEERING & TECHNICAL SERVICES

EXCEL is dedicated to the highest levels of engineering excellence and integrity. Our personnel deliver quality technical solutions as well as provide strategic support to help our clients achieve their business goals. EXCEL is technology neutral and can therefore provide objective guidance to aid our clients in technology selection.

EXCEL has extensive experience assisting customers with Power Upgrades, 24-Month Fuel Cycles, License Renewals, Probabilistic Risk Assessment, Decommissioning, and Safety Setpoint Programs and Calculations. EXCEL has been on the ground floor with most NRC initiatives, including 10CFR50.69 and Risk-Informed Licensing. EXCEL has also developed a methodology for performing Design Basis Retrievability (a process which verifies the Design and Licensing Basis and makes the Design and Licensing Basis information easily retrievable).

EXCEL personnel have extensive experience in Maintenance Rule and general system, maintenance and plant engineering. EXCEL personnel have the experience to assist in day to day Engineering issues that may arise. EXCEL takes pride in assisting customers with a wide range of Engineering services.

50.69 AND RISK-INFORMED LICENSING

EXCEL is committed to supporting Risk Informed initiatives throughout the industry through participation in Technical Specification Task Force (TSTF) activities and various other industry groups. EXCEL's professionals actively participated in NEI for the development of a template for use as a License Amendment Request (LAR) for 10CFR50.69 and in IEEE for the development of IEEE Std 1819-2016, "Standard for Risk-Informed Categorization and Treatment of Electrical and Electronic Equipment at Nuclear Power Generating Stations and Other Nuclear Facilities." EXCEL's professionals continue to participate in the NEI Risk Informed Engineering Programs 10CFR50.69 Implementation Guidance task force. EXCEL's unique background in design and licensing basis, along with extensive electrical and I&C design and Probabilistic Risk Assessment experience, provides the necessary skills to prepare the LAR and to perform the requisite component categorizations and treatment changes to make 10CFR50.69 a profitable venture for NPPs.



DECOMMISSIONING

EXCEL is a trusted resource for those plants that are undergoing the difficult process of decommissioning. Our exemplary vision of the decommissioning process provides the basis for our experienced personnel to plan and execute the necessary decommissioning tasks to alleviate any uncertainty or concerns. EXCEL's reputation as a leader in the nuclear industry and long-standing, excellent relationship with the Nuclear Regulatory Commission (NRC) has contributed to being recognized as the premier supplier of licensing and regulatory compliance.

EXCEL's experience in decommissioning includes assisting licensees with the following:

- Drafting of the Cessation of Power Letters;
- Drafting of the Permanently Defueled Letters;
- Development of the Post Shutdown Decommissioning Activities Report;
- Development of the Decommissioning Cost Estimate;
- Conversion of the Emergency Plan to the Permanently Defueled Technical Specifications including answering NRC Requests for Additional Information (RAIs);
- Conversion of the Updated Final Safety Analysis Report (UFSAR) to a Defueled Safety Analysis Report (DSAR)
- Revision of the Licensee Controlled Specifications (LCS) to reflect the Permanently Defueled condition of the plant;
- Providing Independent Review of the 10 CFR 50.59 Screens and Evaluations performed for retirement of plant systems from service as part of the decommissioning process;

EXCEL's past and present decommissioning clients includes Dominion Energy, Duke Energy Florida, Inc., and Southern California Edison. EXCEL's teams of professionals are known for delivering projects on schedule, within budget and in full compliance with regulatory requirements. If your organization needs experienced top notch professionals to make your decommissioning experience successful, then EXCEL is not only the clear choice but the only choice.



24 MONTH FUEL CYCLE EXTENSIONS

EXCEL's professionals have extensive involvement with nuclear utilities performing all aspects of the evaluations necessary for transition to a 24-month operating cycle (except for the fuels and vessel analysis). EXCEL has and continues to work with Nuclear Energy Institute (NEI), the Owners Groups and the NRC in the development and licensing of the 24-month operating cycle extension projects, as well as the relevant industry guidance documents. EXCEL is the premier consulting firm for the development of surveillance failure analyses, instrument drift analyses, instrument uncertainty/setpoint calculations, and Probabilistic Risk Assessment (PRA) revisions to support the surveillance interval extensions. EXCEL has significant experience in all phases of 24 Month Fuel Cycle Extension projects, from the scoping study phase, through design and licensing, to project implementation and trending.

DESIGN BASIS RETRIEVABILITY

Design Basis Retrievability requires confirming or verifying all Statements of Fact (SOF) and providing a summary of the references (e.g., FSAR, Calculations, DBD, Design Specifications) for selected Systems' design basis information in the Technical Specifications (TS), TS Bases, and Technical Requirements Manual (TRM). This initiative provides review, correction, and documentation of verification, and the production of the Reference Summary for the design basis information verified.

Design Basis Retrievability assists nuclear plant operators in consolidating the Design Basis information, calculations, and references for the SOFs in the TS Bases in a readily understandable and retrievable document. This facilitates knowledge transfer and integration. DBR increases the efficiency of performing Design changes, TS and other regulatory changes, and operability determinations. It also facilitates the Reactor Oversight Performance process by providing the ability to expediently retrieve information to respond more readily to inspection challenges by reducing the time to gather the reference material. This translates into saving many man-hours involved in researching and retrieving Design Basis Information.

POWER UPRATE

EXCEL has significant experience and expertise in the analysis and licensing for Measurement Uncertainty Recapture (MUR) power uprates, which utilize a reduction in feedwater measurement uncertainty through the use of ultrasonic flowmeters. EXCEL has provided the calculation and licensing support for various plants, supporting power uprate projects for PWRs and BWRs. EXCEL also has significant experience in strategic licensing for Extended Power Uprate (EPU) projects. EXCEL has supported the technical and licensing of over 20 MUR power uprates and EPUs.

SAFETY SETPOINT PROGRAMS AND CALCULATIONS

EXCEL has the industry's most experienced instrument uncertainty and setpoint calculation personnel. EXCEL has supported the development of Setpoint Methodologies, Setpoint Calculations and Setpoint Control programs. EXCEL was a key participant in program development for implementation of TSTF-493 Rev 4 Option A and Option B. EXCEL also actively participates in the continuing support and revision of ISA 67 series standards and recommended practices, regarding instrument uncertainty and setpoint analysis methodologies. EXCEL is also one of the most experienced companies in instrumentation drift analysis, as-found/ as-left analysis of instrument performance to validate setpoint calculation assumptions, providing trending information and providing input to surveillance extension activities. EXCEL continues to provide instrument uncertainty and setpoint calculation production and revision for BWRs and PWRs, supporting small and large scale equipment replacements and programmatic changes.

LICENSE RENEWAL

EXCEL has significant experience supporting License Renewal projects in the areas of project management, engineering and licensing. EXCEL has provided licensing leadership and strategy for several projects.

EXCEL's experience in license renewal includes assisting licensees with the following:

- Mechanical scoping and screening
- Aging Management Report (AMR) production
- Aging Management Program (AMP)
- Time-Limited Aging Analysis (TLAA) development
- License amendment request submittal development and defense including audit and RAI support.