Approach for the Risk Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors (10 CFR 50.69)

10 CFR 50.69, Risk Informed Categorization and Treatment of SSCs, provides the ability to focus resources on critical components thereby reducing operational and regulatory burdens making plants more cost-effective while providing a direct path towards the goals of the nuclear promise.

Engineering Planning and Management (EPM) has the experience in risk-informed and deterministic analyses necessary to achieve the most cost effective implementation of 10 CFR 50.69 in the operating environment. EPM's highly experienced PRA group has direct plant experience and is a leader in the application of risk-informed solutions. EPM engineers have extensive experience in plant design analysis, operations, maintenance, component Q-list reclassification, procurement, licensing, etc., all areas necessary to see the greatest benefit from the application of 10 CFR 50.69.

Approach

EPM engineers will use its proven experience in the following areas:

1. EPM will assist in the development of the Licensing Amendment Request required to implement the 10 CFR 50.69 approach.
2. EPM will evaluate and enhance if necessary the existing plant PRA to ensure it supports a 10 CFR 50.69 approach.
3. EPM will perform the analysis necessary to determine the systems or components that will provide the maximum economic benefit under the 10 CFR 50.69 process.
4. EPM will perform the PRA analysis and provide the risk insights supporting the system and component selection process.
5. EPM will manage or assist in the implementation of a 10 CFR 50.69 program in the areas of maintenance, procurement, warehousing, etc. as well as 10 CFR 50.69 program maintenance.

Experience

EPM's experience in the application of risk-informed solutions and deterministic analyses will provide the utility with the most cost effective application of 10 CFR 50.69.

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EPM is an industry leader in NFPA 805 risk-informed Fire Protection programs. Risk-informed fire protection solutions have been provided for the following plants:

Beaver Valley Nuclear Generating Station 1 & 2	Davis-Besse Nuclear Power Station
Browns Ferry Nuclear Plant 1, 2, & 3	Diablo Canyon Power Plant 1 & 2
Brunswick Steam Electric Plant	Fort Calhoun Nuclear Generating Station
Callaway Nuclear Generating Station	Shearon Harris Nuclear Power Plant 1
Calvert Cliffs Nuclear Power Plant 1 & 2	Point Beach Nuclear Plant 1 & 2
Comanche Peak Nuclear Power Plant	H.B. Robinson Nuclear Generating Station
DC Cook Nuclear Generating Station 1 & 2	Westinghouse AP1000
Cooper Nuclear Station	Wolf Creek Generating Station

EPM's experience in deterministic component safety classification (a.k.a. Q-list) is second to none. EPM has performed Q-list services for the following plants:

Connecticut Yankee Nuclear Power Plant	Kewaunee Nuclear Plant
Cooper Nuclear Station	Millstone Nuclear Power Plant 1, 2 & 3
James A. Fitzpatrick Nuclear Power Plant	Turkey Point Nuclear Generating Station
Fort Calhoun Station	Vermont Yankee
Indian Point Energy Center	

In addition to component safety classification, the following is a brief list of engineering services provided by EPM.

- Engineering Program Support
  - *Environmental Qualification (EQ)*
  - *Fire Protection*
- Engineering Support
  - *Instrumentation Accuracy and Setpoint Analysis*
  - *Design*
  - *Supply Chain Management*
- Regulatory and Licensing Compliance
- Audits, Assessments, and Inspections
- Training
- On-Site Staffing Support

EPM and EPM's engineers have provided services, such as those listed above, to more than 80% of the nuclear power plants in the United States, 100% of the nuclear power plants in Canada, as well as nuclear power plants in the England, Ukraine, Russia, and South Korea.

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