



NFPA 805 Program Implementation Plan

The requirements and approach for NFPA 805 program implementation includes NRC RAI support, monitoring program implementation, documentation and model updates, new program implementation training and additional Fire PRA analysis to increase the regulatory margin.

Post NFPA 805 LAR Submittal Readiness Assessment Support

As part of implementation process, Licensees are encouraged to perform Implementation Readiness Self Assessments. The performance of this type of assessment prior to going “Live” with the new NFPA 805 Fire Protection Program has been viewed favorably by the regulator. EPM has well qualified personnel and staff to lead and/or provide support for such an assessment for Licensees prior to or following receipt of the new programs’ safety evaluation.

NFPA 805 Monitoring Program

Under the new licensing basis, a monitoring program required by NFPA 805 Section 2.6 will be developed, consistent with the guidance of approved NFPA 805 FAQ 10-0059. The four major phases of the development of the monitoring program include Scoping, Screening Using Risk Criteria, Risk Target Value Determination and Monitoring Implementation. EPM personnel provide the expertise needed to develop all facets of the program from the determination of the scope of fire protection, radioactive release, nuclear safety capability SSCs and programmatic elements to monitor to the point of establishing initial levels of availability and reliability. Other specific aspects of this topic that we offer expertise include:

- *Scoping Calculation Development*
- *NSCA vs Maintenance Rule Function Reviews*
- *Maintenance Rule a(4) Support*
- *Expert Panel Support*
- *EPRI Fire Protection Equipment Surveillance Optimization Support*

Non-Power Operations/Outage Risk Management Support

Under the new licensing basis, requirements associated with control of fire risk during non-power modes of operation, come into effect. The result of the NPO Pinch Point Analysis, as documented in the NFPA 805 LAR, must be integrated into existing Shutdown Risk Management Procedures. EPM expertise in this area includes:

- *Pinch Point Analysis Refinements*
- *Shutdown/Outage Risk Management Procedure Updates*
- *Fire Risk Management Actions/Compensatory Measures*

Fire Protection Documentation & Model Updates

As part of the transition to NFPA 805, the fire protection program must be adequately documented to support the transition to a new licensing basis. Following the transition, a risk-informed, performance based fire protection

program must be supported by appropriate models and documentation, and maintained under configuration control and quality assurance processes. EPM has the personnel and tools to develop and maintain the basic documentation, configuration control, quality requirements and practices that are part of a nuclear power plant fire protection program, such as the control of ignition sources and transient combustibles. EPM personnel have the skill set to efficiently assist in procedure changes, process updates, surveillance optimization, and training to affected plant personnel that can be completed prior to implementation of the new NFPA 805 FP program.

- ***FP Program Document*** – include updates to existing configuration control procedures and the creation of a new procedure to implement the post transition change evaluation process currently being vetted through the NFPA 805 FAQ process (FAQ 12-0061). In addition, EPM staff offers qualified assistance to client operations staff with revisions to fire response procedures based on the NSCA output generated under pre-LAR tasks related to recovery action transition. This includes providing risk insights to more effectively implement these changes into plant operation documents.
- ***FPRA/FHRA Updates and Model Synchronization*** – Since the Fire PRA was developed from the internal events PRA, then it must be updated following internal events PRA changes. EPM personnel interface with client PRA staff in order to define the level of effort and schedule so the Fire PRA is updated and maintained in an efficient, coordinated manner.
- ***FPRA Document Update Support*** – updates to each of the associated Fire PRA reports, Fire Risk Evaluations and Fire Safety Analyses. Documentation updates can be deferred until closer to the time that the SER will be received. Additionally, a review of various design basis documents such as Plant Technical Specifications, Maintenance Rule, Emergency Planning, Severe Accident Management Procedures, B5B and/or other risk-informed license amendment requests will be performed to ensure the risk insights from the Fire PRA are reflected appropriately.

Modification and Design Change Reviews

Implementation of plant modifications committed to within the NFPA 805 LAR, as well as on-going plant design change projects, will require cable selection, cable routing, analysis updates, and various Fire Protection Program impact evaluations to ensure all aspects of plant changes are properly reflected in the new fire protection program. EPM has assisted utilities with long-term regulatory compliance reviews of this nature, for over 30 years.

Training to Support New Program Implementation

EPM has developed a wide variety of NFPA 805 training materials that can easily be tailored toward a client's specific need. EPM staff works closely with utility personnel in coordinating with the Nuclear Training Department, as applicable, in order to meet individual plant needs. Lesson plans are prepared that contain the necessary information to ensure adequate coverage of each of the relevant topics associated with long term program compliance. A copy of the lesson plans are provided to the client for concurrence prior to training, upon request. Student handouts and/or user manuals are available, as applicable. Training sessions are available in the areas of Fire Modeling, NSCA software & transition tools, Fire PRA and FP Monitoring and Configuration Control. Training session approach and recommendations for combining related topics can be revised and formalized to meet a specific agenda.

Increase Regulatory Margin

The industry has significant activity in progress to improve Fire PRA results by reducing conservatism. EPRI has formed an expert panel consisting of NRC and industry leaders in order to review new methods to the guidance provided in NUREG/CR-6850. EPM staff is well equipped to assist utility personnel with improving the Fire PRA and FRE results by providing additional margin to regulatory limits and the ability of the Fire PRA to support future risk-informed applications, by incorporating improved methods and/or data that become available. Additionally, EPM staff can assist utilities with an assessment of any new initiatives before implementation, as some initiatives may not be cost-beneficial to implement.



Engineering Planning and Management, Inc.

ONET GROUP