

Enclosure 5
Turkey Point Nuclear Station Presentation
Meeting Summary of the 6/8/2010 Meeting with
NRC/SNC/FPL/SCE&G
Dated June 17, 2010

Fire Protection OMA Screening Criteria

June 8, 2010

Turkey Point Nuclear Station



FPL

Overview

- Purpose and Attendees
- Background
- Specific Applicability of Screening Criteria
- NFPA 805 Project Status
- Closing Remarks

Purpose and Attendees

The purpose is to address NRC Staff's observations regarding applicability of the eight screening criteria for Operator Manual Actions (OMAs) to Turkey Point (PTN) based on FPL's current understanding of the Staff's process

FPL Attendees:

Rich Wright – PTN Operations Manager

Larry Nicholson – Corporate Licensing Director

Vinny Rubano – Corporate Project Engineering Manager

Virginia Barry – PTN Senior Reactor Operator

Glen Blinde – Corporate PRA Engineer

Al Dunstan – PTN Fire Protection Engineer



Background

- Submitted Letter of Intent November 15, 2005 for transitioning to NFPA 805
- Completed Safe Shutdown Analysis upgrade:
 - Corrective actions in place
 - Appropriate compensatory measures implemented
 - Procedure upgrade in-progress
- OMAs are:
 - Compensatory measures for degraded fire barriers
 - Based on RIS 2006-10 guidance

Criterion 1 - Number of OMAs

The number of OMAs is considered low based on the following:

- **146 fire zones associated with the nuclear power block**
- **~34% of these fire zones have no OMAs**
- **Seven fire zones have >20 OMAs**

The number of OMAs is low

- **Fire PRA being developed for the NFPA 805 project will reduce OMAs**
- **Modifications are proposed and being implemented to reduce OMAs (not waiting for NFPA 805 license amendment)**

Criterion 2 - Single Fire Effect on Both Units

- **Fire in >95% of fire zones would not require shutdown of both units**
- **Power generation circuits and components are functionally and spatially separated between units**
- **Fire in shared systems does not cause unit trip or shutdown**
- **Credible fire scenarios are well below Appendix R-scale fires**
 - **Open turbine building and outside areas promote dispersion of smoke and hot gases**
 - **Minimal intervening combustible loading**

Most fires would not require both units to shutdown

Criterion 3 - Thermoplastic Cable Insulation

- **Most original cable has thermoplastic insulation with flame retardant overspray**
 - **Flammastic 71A or 77**
 - **Reduces flame spread and radiant energy exposure effects**
 - **Credited coating is maintained**

- **Instituted requirements to install qualified cables (early 1980s)**
 - **New non-safety bus (C-Bus)**
 - **Emergency power upgrade**

- **Deterministic nature of Appendix R fire scenarios diminishes the significance of differences between thermoplastic and thermoset insulation combustion characteristics**

There is no safety issue with thermoplastic cable insulation

The NFPA 805 Project is conservatively addressing the issue by fire PRA assuming all unprotected cable is thermoplastic

Criterion 6 - Use of Complex OMAs

OMAs are not considered complex at PTN based on the following:

- **Actions consist of one or two steps**
- **Manipulations are used in normal operation and for routine maintenance clearances**
- **Actions have been validated by walkdowns and/or analysis to have time margin**
- **Operator training actions are similar to actions required for Appendix R safe shutdown**
- **No special tools required for access or to perform manipulations**
- **No repairs required**

OMAs are simple and consistent with routine operations

Criterion 7 - Cross-Tying Systems

- **No cross-ties are created to achieve safe shutdown**
 - **Shared systems are designed as such**
 - **Shared systems are normally aligned and operated to support either or both units**
 - **The current Internal Events PRA shows significant risk benefits for the ability to use shared systems**

- **Systems and components are operated in a manner typical for normal or emergency use and are not required to operate outside reference bounds of component design to support safe shutdown**

No cross-ties created to achieve safe shutdown

Criterion 8 - Symptom-Based and Complex OMAs

- **Off-normal procedures are event-based**
- **OMAs are prescriptive and proactive**
- **None of the actions are considered complex**

***Response procedures are event-based
OMAs are prescriptive and not complex***

NFPA 805 SSA initiatives are reducing diagnostic and decision points and increasing prescriptive actions

Summary of Applicability

#	Screening Criterion	Summary Application to PTN	FPL Position
1	A relatively large number of Operator Manual Actions (OMAs) used to mitigate cable separation issues	<ul style="list-style-type: none"> ➤ Total of 146 fire zones ➤ Approximately 34% of fire zones have no OMAs ➤ Only seven fire zones have >20 OMAs 	Not Applicable
2	A single fire that could affect more than one unit	<ul style="list-style-type: none"> ➤ In >95% of fire zones, dual-unit shutdown not required ➤ Fire in shared systems are not shutdown initiators ➤ Open areas substantially limit common exposure 	Not Applicable
3	The use of thermoplastic cable insulation	<ul style="list-style-type: none"> ➤ Original plant cable has thermoplastic insulation ➤ Flammastic overspray reduces flame spread ➤ Used only qualified cables since early 1980s 	Applicable
4	Limited documentation of cable routing within the plant	Not Applicable	--
5	Self-Induced Station Black-Out strategy	Not Applicable	--
6	Use of complex OMAs	<ul style="list-style-type: none"> ➤ OMAs are simple ➤ Operator training actions similar to OMAs ➤ No special tools or repairs required 	Not Applicable
7	Mitigation of a fire requires cross-tying electrical or mechanical systems from multiple units in order to achieve safe shutdown for a fire in a single area	No cross-ties are created to achieve safe shutdown	Not Applicable
8	Symptom-based fire response procedures with complex OMAs	<ul style="list-style-type: none"> ➤ Response procedures are event-based ➤ OMAs are prescriptive and not complex 	Not Applicable

NFPA 805 Project Status

- The first pass review has been completed for:
 - fundamental fire protection program and design elements,
 - nuclear safety performance criteria
 - radioactive release
 - non-power operations
- Fire PRA draft model is developed and undergoing validation
- Risk evaluations have started
- License Amendment Request submittal is planned for the first quarter of 2011
- The first modifications are scheduled for fall of 2010

Closing Remarks

- Seven of eight screening criteria do not apply to Turkey Point.
- There is no safety issue with thermoplastic cable insulation
- FPL is pursuing the implementation of NFPA 805:
 - OMAs are being reviewed by the NFPA 805 Project to determine the need for such actions and to quantify the risk associated with any OMAs that remain
 - Modifications are in progress to reduce reliance on OMAs

