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Risk-Informing Special Treatment Requirements 10 CFR 50.69

Insights from the 50.69 Proto-type Pilot Plant

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Background of STP's Status

- STP pursued and received an Exemption from certain Special Treatment Requirements in August 2001 - viewed as proto-type pilot for 10 CFR 50.69

- STP categorization process and implementation allowances closely align with the processes approved in 10 CFR 50.69

- As of 12/31/04, STP completed categorization of 85 different system designators (about 80,000 components)

Categorization Lessons Learned

Positives noted:

- Consensus decision-making process has been effective in promoting critical discussion and consensus resolutions

- Excellent categorization stability has been noted throughout process

- Good consistency noted between probabilistic and deterministic results

- Dissenting Opinion process has worked well - differences of technical opinions effectively addressed

- Management involvement adds value to the process

Categorization Lessons Learned

Challenges seen:

- Proper identification of all system functions is necessary for effective categorization results

- Electrical components (breakers, MCCs, etc) pose unique categorization challenges when determining importance

- If a certain number of components are not specifically tagged, need to develop methodology on how to address these in both categorization and implementation

Categorization Lessons Learned

Hazards to be Avoided:

- Begin with a well-reviewed, well-supported PRA Model
- Recognize that some SSCs will periodically change categorization - prepare a methodology to restore full regulatory controls to SSCs that were previously RISC-3
- Documentation of categorization basis must be detailed, clear, and retrievable
- Categorization and treatment must be addressed separately
- Must prepare the organizational culture to understand and use the categorization results

Implementation Lessons Learned

- Communicate, communicate, communicate
- Focus on a few programmatic areas of implementation initially - when these areas show positive feedback with controlled results, move on to other areas
- Focus on programmatic areas that have a willing owner
- Determine how to define implementation success - could be defined through reduced burden, parts savings, better focus on safety significant activities, etc.

Implementation Lessons Learned

- STP is expending considerable effort to document a basis of reasonable confidence when reducing treatment for RISC-3 SSCs - question as to whether 50.69 requires this same degree of effort

- There remains uncertainty about NRC expectations for industry RISC-3 treatments - when will the industry feel comfortable with what constitutes 'reasonable confidence', and who will define it?

Going Forward

- STP efforts to date have demonstrated the value of a sound categorization approach

- Implementation results in both nuclear safety and economic benefits - not all can be measured via bottom-line, hard-dollar savings

- Categorization and treatment are different aspects and must be kept separate

- Industry is poised to move forward, but uncertainties still exist that could keep many industry players on the sidelines