Lessons Learned from the Regulatory Issue Resolution Protocol (RIRP) Pilots

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Overview

- RIRP Background
- RIRP Process
- Pilot 1: Top Nozzle SCC
- Pilot 2: Marine Atmosphere SCC
- Path Forward

RIRP Background

- Regulatory Issue Resolution Protocol (RIRP)
- 11/09 and 02/10, NRC Public Meetings - NEI's Dry Storage Task Force (DSTF)
  - Identify and facilitate resolution of generic issues pertaining to dry used fuel storage and transportation
- 04/10, NEI's "Used Fuel Storage and Transportation Issue Resolution Protocol"

RIRP Process

- Identification Phase
  - Issue Screening Form
- Screening Phase
- Planning Phase
  - Issue Resolution Plan Form
- Implementation Phase
- Closure Phase
  - Issue Closure Form

Top Nozzle

- Identified by Industry
  - Certain Westinghouse PWR fuel assemblies susceptible to SCC of the top nozzle guide tube sleeves
  - Clarify whether license/CoC amendments are required
  - Identify specific technical aspects and form of supporting analysis and evaluations.

Top Nozzle

- Screening and Planning Phases
  - Public Meetings in February, August, September 2010
- Implementation Phase
  - NEI White Paper, November 2010
  - NRC Response, September 2011
  - Additional public meeting recommended
- Closure Phase (Pending)

Top Nozzle

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- Successes
  - NRC and Industry dedicated appropriate time and resource to resolution effort
  - Early NRC-Industry interaction helpful
- Challenges
  - Excessive debating of regulatory basis delays progress and issue closure
  - Internal NRC concurrence timeliness
  - Closure path unclear

Marine Atmosphere

- Identified by the NRC
  - Stainless steels are susceptible to SCC in chloride environments, near salt water bodies
  - Insufficient data available to determine extent of SCC susceptibility of spent fuel storage canisters
    - Specific environmental conditions
    - Associated time scales
  - NUREG-7030 demonstrated SCC for bounding environments

Marine Atmosphere

- Screening and Planning Phases
  - Public Meetings in February 2010 and March 2011
- Implementation Phase (Ongoing)
  - Research existing data (complete)
  - Field Testing
  - Develop Screening Criteria
- Closure Phase (Pending)

Marine Environment

- Successes
  - NRC and Industry dedicated appropriate time and resource to resolution effort
  - Early NRC-Industry interaction helpful
  - Documented endorsement of issue forms
- Challenges
  - RIRP issue interface with related efforts

RIRP Conclusions

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- RIRP may be beneficial in addressing issues with generic implications
  - Will be demonstrated upon closure of pilots
  - Closure may require redefining
- Clear communication among all involved parties is essential, similar to NEI drop-ins
- Documented endorsement of screening, planning, and closure forms beneficial