UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 6, 2011

LICENSEE: Licensees Planning to Transition to NFPA 805

FACILITY: Facilities Planning to Transition to NFPA 805

SUBJECT: SUMMARY OF APRIL 14, 2011, MEETING WITH THE NUCLEAR ENERGY INSTITUTE, THE ELECTRIC POWER RESEARCH INSTITUTE, AND LICENSEES ON TRANSITIONING TO NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805

On April 14, 2011, a Category 2 public meeting was held between the Nuclear Regulatory Commission (NRC), the Nuclear Energy Institute (NEI), the Electric Power Research Institute (EPRI), and representatives of licensees planning to transition to National Fire Protection Association (NFPA) Standard 805 at NRC Headquarters, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland. A list of attendees is provided as Enclosure 1.

The meeting focused on the February 17, 2011, Advisory Committee on Reactor Safeguards (ACRS) recommendations concerning the transition. The participants discussed sequencing the NFPA 805 license amendment submittals as described in NEI's letter dated November 15, 2010. SECY-11-0033, "NRC Staff Approach to Address Resource Challenges Associated with Concurrent Review of a Large Number of NFPA 805 License Amendment Requests," which is currently under Commission consideration, was also discussed. Industry expressed the importance of extending enforcement discretion should the Commission decide to approve a sequencing approach. Discussions also focused on recent accomplishments and ongoing work associated with the Memorandum of Understanding between EPRI and the NRC Office of Research (RES) on fire protection research.

The NRC staff's presentation is included as Enclosure 2, "Discussions on the Recommendations from the ACRS Concerning the Transition to NFPA 805." The eight ACRS recommendations were addressed by both NEI and EPRI over the course of the meeting. NEI's presentation is included as Enclosure 3, "Transition of Non-Pilot Licensees to NFPA 805," whereas EPRI's presentation is included as Enclosure 4, "Fire PRA Methods Expert Review Panel."

NEI's stated purpose for their presentation included the following:

- Discuss sequenced approach to license amendment request (LAR) submittals.
- Provide industry considerations that factored into sequencing.
- Provide projected results and need for implementing sequenced approach.
- Provide suggestions on LAR review approach and adjustment to monthly status meetings to support reviews.

Highlights of this presentation included the following:

- The NRC staff and industry underestimated the complexity and resources necessary to review and approve the LARs that transition to NFPA 805.

- The two pilot plant reviews (Shearon Harris and Oconee) were both very resource intensive and took approximately 2 years to review and approve.

- Current enforcement discretion for most plants expires on June 29, 2011, and approximately 23 LARs are currently scheduled to be submitted on that date.

- The NRC lacks the resources to perform 23 concurrent LAR reviews within the 2-year metric. Following the acceptance reviews, the staff would, by necessity, be forced to shelve the majority of the LARs. This would result in an undue burden on licensees due to the need to maintain in-house and contract support.

- Shelving LARs would not be beneficial. It would prevent licensees from applying lessons learned from previous NRC reviews and it would require licensees to update their LAR.

- NEI has previously recommended a sequencing approach with its most recent letter dated November 15, 2010. Sequencing was also recommended by the ACRS.

- Industry foresees a number of benefits associated with sequencing. Benefits would allow more timely NRC review, application of improvements in methodologies, and a more predictable and stable transition.

- NEI proposed 7 to 9 LAR submittals in fiscal year (FY) 2011, 10 to 12 LARs in FY 2012, and 9 to 11 LARs in FY 2013.

- SECY-11-0033 and its proposal for sequencing were discussed, but it was noted, that the Commission had not completed their evaluation. An extension of enforcement discretion would be needed if the Commission approved sequencing.

- Industry representatives cited the need for extending enforcement discretion as soon as possible.

Representatives of EPRI and RES discussed a number of their ongoing efforts that are being pursued collaboratively under the NRC-RES/EPRI Memorandum of Understanding (MOU). These discussions addressed a number of the ACRS recommendations and the following highlights:

- Collecting recent fire event data to update the fire PRA event frequencies.

- EPRI's expert review panel process provides a consistent and through technical review of Fire PRA methods that may differ from the alternative methods outlined in NUREG/CR-6850.

- The expert review panels are made up of NRC and industry members and deliberate on the accuracy, usability, interface, limitations, and capability category of the fire PRA method being reviewed.

- RES and EPRI will continue to work under the MOU to advance the state of the art fire PRA methods and data.

Members of the public were in attendance but no Public Meeting Feedback forms were received.

Please direct any inquiries to me at 301-415-1364 or Douglas.Pickett@nrc.gov.

Douglas V. Pickett

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Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Enclosures:
As stated

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

MEETING ATTENDANCE FORM

Subject: Transitioning of Non-Pilot Licensees to NFPA 805

Date: April 14, 2011 Location: Rockville, MD

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NAME	ORGANIZATION
Bill Victor	NPPD
Bob Natuch	First Energy
Vincent Rubano	NextEra Energy
Randy Bunt	SNC
Peter Mazzaferro	Constellation Energy
Mike Lilley	Constellation Energy
TODD STEVENS	NEI
FRED EMERSON	GEH / BWROG
Jessica Walker	Entergy / ANO
Elizabeth Kleinsorg	KGRS
AMIR AFZALI	SOUTHERN NUCLEAR COMPANY
Michelle Kelly	Xcel Energy
Craig Sly	Dominion
PAUL LAIN	NRC / NRR / DRA / AFPB
Pat Baranowsky	ERIN
DAVID MANNAI	ENTERGY CORPORATE
Lynnea Wilkins	NRC / NRR / ADRO / DORL
RON OATES	ARS
Stephen Dinsmore	NRC / NRR / DRA / APLA
DAN MacDOUGALL	AMERICAN ELECTRIC POWER
Robert Lee Gladney	Southern Nuclear (SNC)

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Subject: Transitioning of Non-Pilot Licensees to NFPA 805

Date: April 14, 2011 Location: Rockville, MD

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NAME	ORGANIZATION
Paul Beeris	PGE
Larry Parker	STARS
Deepak Rao	Entergy
Frankey Manning	First Energy
Henry Hegrat	FirstEnergy
David Miskiewicz	Progress Energy
David Goforth	Duke Energy
JEFF ERTMAN	PROGRESS ENERGY
Andy Ratchford	KGRS
Tom Basco	NEI
Michael Tonnacliff	Winston Kenyon
Jim Chapman	Scientech
Gerry Gulla	NRC
SAMSON LEE	NRC/DRA
Alex Klein	NRC/DRA/APLB
Mark Henry Salley	NRC/RES/DRA/FRB
Ray " Balkcom	NRC/NRR/DRA/APLA
Mike Cheok	NRC/NRR/DRA
Steven A Laur	NRC/NRR/DRA
Larry Todd Stafford	TVA-BFN
Chris Gratton	NRR/DORL/LPL2-2

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MEETING ATTENDANCE FORM

Subject: Transitioning of Non-Pilot Licensees to NFPA 805

Date: April 14, 2011 Location: Rockville, MD

PLEASE PRINT LEGIBLY

NAME	ORGANIZATION
Tom Juhras	EPM, Inc.
Biff Bradley	NEI
Ken Hoffer	Progress
Amy Hazelhoff	Exelon (Xcel Energy-PINGP)
Larry Maron	Constellation
Donnie Harrison	NRC/NRR/DRA
Daniel Frumkin	NRC/NRR/DRA
Doug Pickett	NRC/NRR/DORL

U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

Discussions on the Recommendations from the ACRS Concerning the Transition to NFPA 805

Industry, NEI, NRR\DRA,
NRR\DORL, RES\DRA, &
Concerned Stakeholders
April 14, 2011

U.S.NRC
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Protecting People and the Environment

ACRS Recommendation # 1

- The staff should consider establishment of a mutually-agreed-upon firm schedule for sequential submittals of license amendment requests for transition to the risk-informed licensing framework under 10 CFR 50.48(c).

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ACRS Recommendation # 2

- Uncertainties should be quantified and propagated through the fire PRA models according to current state-of-the-practice methods and guidance.

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ACRS Recommendation # 3

- The quantified risks from fires and internal events should be combined to develop an overall plant risk profile. Post-transition analyses of the changes to the risk from fires, the risk from internal initiating events, and the overall plant risk should be made to provide a balanced assessment of these contributions.

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ACRS Recommendation # 4

- The updated fire events database should consistently account for plant-to-plant variability in the available operating experience as a distinct contribution to uncertainties in the fire ignition frequencies. Efforts should be expedited to develop data for "component-level" fire ignition frequencies, rather than the currently applied "plant-level" frequencies.

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Protecting People and the Environment

ACRS Recommendation # 5

- Caution is warranted regarding expectations that in-progress efforts to enhance the industry fire events database will result in significant reductions in the quantified risk from electrical cabinet fires. Those efforts will improve the overall experience base and understanding of these fires, and they should continue to completion. However, other initiatives and research are needed to address this technical issue in a more integrated manner.

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ACRS Recommendation # 6

- The general category of "electrical cabinets" in NUREG/CR-6850 should be subdivided into functional subgroups that can consistently account for fire ignition frequencies, potential fire severities, typical characteristics of plant locations, and potential risk consequences. Results and engineering insights from the completed pilot plant studies and in-progress PRAs should be used to guide the definitions of these groups.

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ACRS Recommendation # 7

- The NRC should encourage industry to expedite active engagement of the senior technical review and oversight group to facilitate consistent interpretation and application of focused modeling techniques or methods that have generic applicability to multiple plants. The staff should facilitate efficient reviews of departures from the guidance in NUREG/CR-6850 and communicate interim technical positions on issues that may have generic applicability.

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ACRS Recommendation # 8

- The staff should continue current initiatives for collaboration and coordination of research. Research priorities should be established by demonstrated needs to support specific refinements to PRA methods, models, and data that have the most potential benefit for the largest number of stakeholders.

Transition of Non-Pilot Licensees to NFPA 805

NRC Public Meeting
April 14, 2011

NEI
NUCLEAR ENERGY INSTITUTE

Purpose

- Discuss sequenced approach to LAR submittals
- Provide industry considerations that factored into sequencing
- Provide projected results and need for implementing sequenced approach
- Provide suggestions on LAR review approach and adjustment to monthly status meetings to support reviews

NEI

Sequenced NFPA 805 Application

- Current non-pilot plant submittals
  - 23 LARs (33 units) by June 29, 2011
  - LIC 109 reviews extended to 60 days
  - Pilot reviews took over 2 years when originally estimated for only 6 months
  - Review and SE issuance for 23 submittals will require multiple review teams to support a 2 year review timeframe
  - "...the staff and the industry have underestimated the complexity and resources necessary to address the technical issues associated with review and approval of LARs for use of NFPA 805."

NEI

Sequenced NFPA 805 Application

- Impact of current submittal approach
  - Opportunity lost to apply lessons learned or improvements in FPRA methodology
  - Multiple review teams will result in inconsistent reviews
  - Review period beyond 2 years places undue burden on licensees
    - Risk of losing knowledgeable support
    - Additional significant financial cost

NEI

Sequenced NFPA 805 Application

- Introduction of staggered approach
  - NEI letters to NRC recommending staggered approach to LAR submittals
    - February 2, 2007
    - March 7, 2008
    - November 15, 2010
  - ACRS Letter issued February 17, 2011
  - SECY 11-0033 issued March 4, 2011

NEI

Sequenced NFPA 805 Application

- Benefits of sequenced submittals
  - Allow application of any improvements developed in the FPRA methodology
  - Incorporate lessons learned
    - Pilot information
    - Fleet information
    - RAIs from early submittals
  - More consistent reviews by limiting the number of required review teams
  - Stable, predictable and efficient transition

NEI

Industry Considerations for Sequencing

- Management of fleet stations
  - Internal resource utilization
  - Incorporation of lessons learned
  - Program consistency
- Station designs
- Fire PRA
  - Status
  - Approach
  - Peer Review

NEI

Industry Considerations for Sequencing

- Fire PRA methodology improvements
- Other significant licensee applications
  - License Renewal
  - Risk informed applications
  - EPU
- Outage and modification schedules
- Industry and vendor resources
- License Commitments
- FAQ closure

NEI

Projected Industry Submittals under Sequenced Approach

- Fiscal Year 2011 – 7 to 9
- Fiscal Year 2012 – 10 to 12
- Fiscal Year 2013 – 9 to 11

NEI

Enforcement Policy Revision

- SECY-11-0033 recommends staggered submittals and reviews of LARs
- Staff to submit policy paper recommending changes to Enforcement Policy
- Enforcement policy revision required now to preclude expending industry and staff resources on applications

NEI

LAR Review Approach

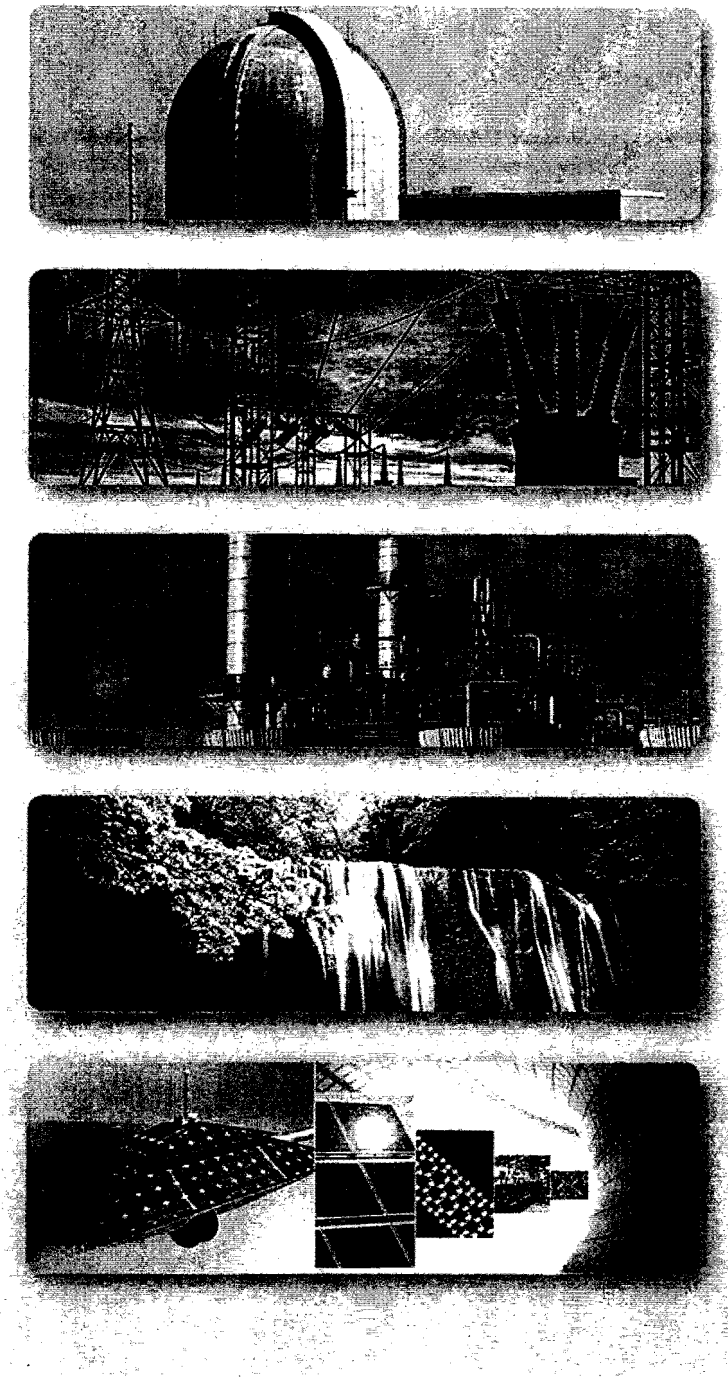
- Process reviewed and approved (NEI 04-02, FAQs, SE and LAR templates)
- Suggest NRC review teams organized by subject matter experts/LAR sections
- Maximize use of electronic audit site
- Sample review of items where licensee state compliance with NFPA 805 without conditions
- Industry will provide a matrix of sections requesting specific approval

NEI

Monthly Status Meetings

- Adjust monthly FAQ public meeting
  - High level status of LAR reviews
  - RAIs with generic applications
  - Need for new FAQs
- Benefits
  - Timely recognition and response to generic issues
  - Maintain consistency in reviews and responses

NEI



EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Fire PRA Methods Expert Review Panel

April 14, 2011

Rick Wachowiak

Sr Project Manager,

Risk and Safety Management

Purpose

- Extension of peer review process
- Provide consistent and thorough technical review
- Identify limits of application
  - Including discrimination of capability category
- Help the utility to justify deviations from 6850

More options for scenario specific issues

Makeup of Panels

- Owner's Groups
- Utilities
- NRC
- Consultants

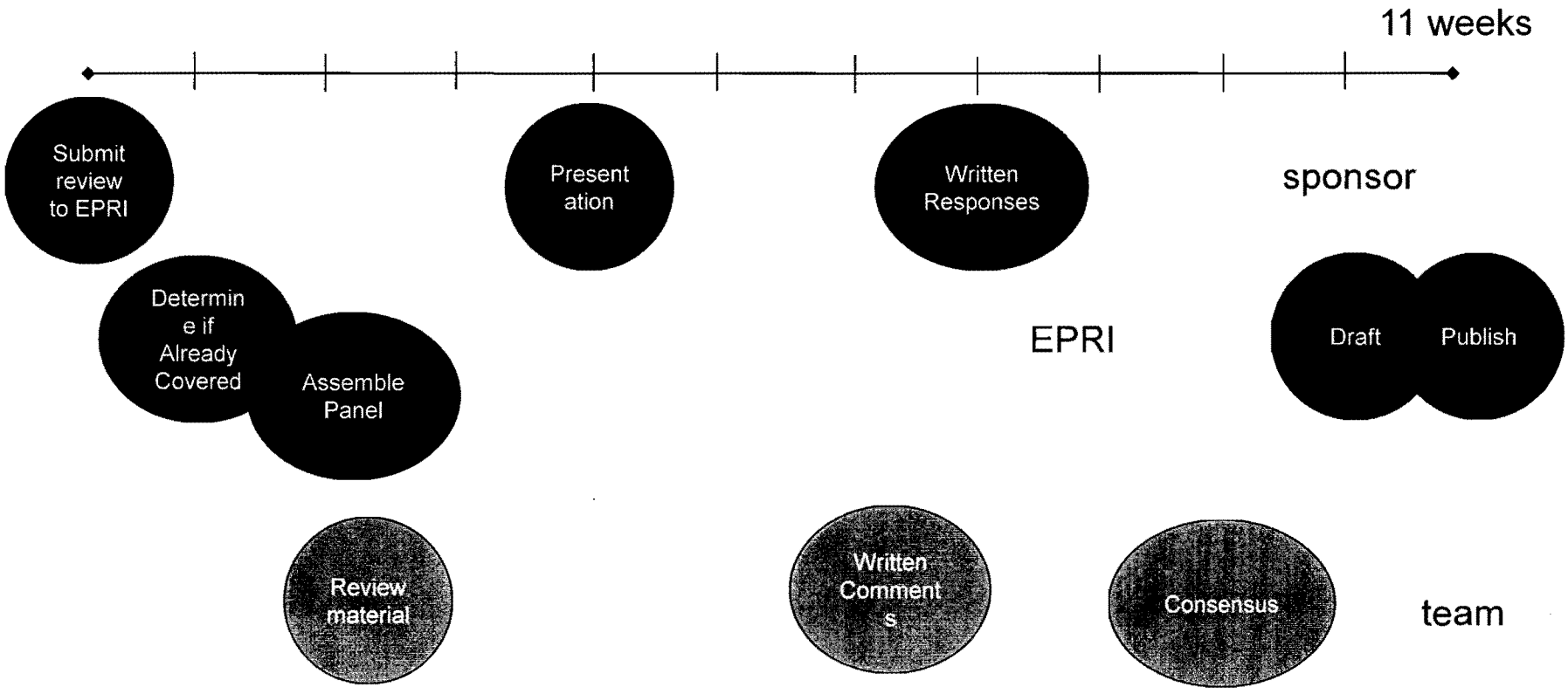
- Mix of expertise
- 6 – 10 members

Expertise Matches the Subject of Review

Review Scope

- Accuracy – gives reasonable results
- Usability – can be implemented
- Interface – how to interface with other tasks
- Limitations – when you can and can't use
- Capability Category – are there different levels

New Methods Schedule



Ideal schedule

Submittal Content

- Title of Method
- Sponsor Information
- Methodology has been implemented in varying degrees at:
- Use of method
- Necessity
- Description
- Limitations of Applicability
- Need Date
- Peer Review Comments
- Suggested Expertise of Reviewers
- Example
- References
- Attachments

Ground Rules

- Nothing proprietary
  - Information is confidential during the reviews
- Written comments
  - Expectation that comments and responses will be public
- Keep up with the schedule
- Final product will be an EPRI public document

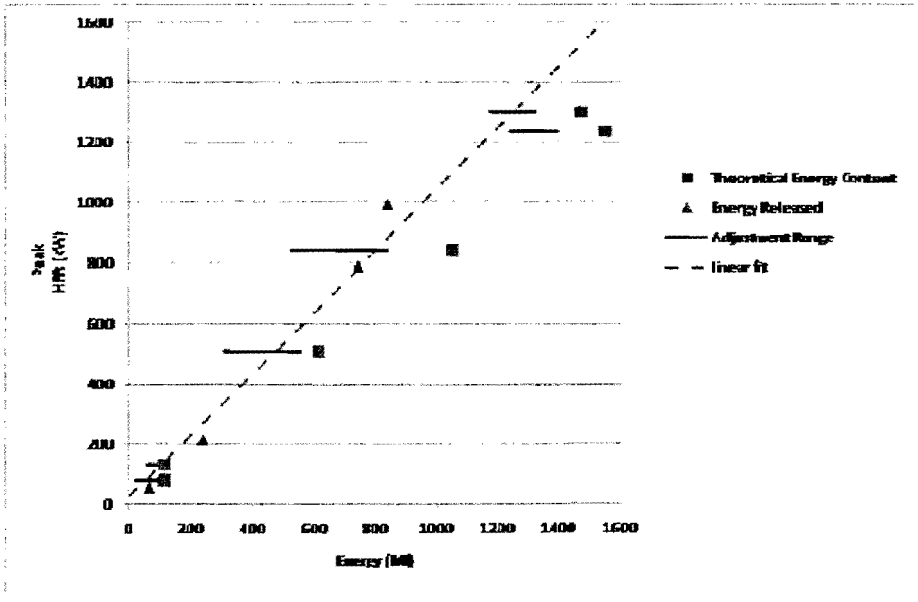
Vertical Electrical Cabinet Heat Release Rate

- Purpose of study: Re-evaluate the heat release rates (HRRs) of cabinet fires recommended for use in NUREG/CR-6850 (Table G-1)

- Scope limited to:
  - Vertical cabinets
  - No consideration of external influences, or of fire propagation to other cabinets
  - No consideration of fire duration

- Model developed to characterize potential HRR for cabinet fires

Next Draft – End of April 2011



EPRI ELECTRIC POWER RESEARCH INSTITUTE

Electrical Cabinet HRR Panel Makeup

- PWROG – Clarence Worrell
- BWROG – Dennis Henneke
- EPRI – Sean Hunt
  - Bob Bertucio
  - Kiang Zee
- Utilities – Dave Miskiewicz
- NRC – Ray Gallucci

ERIN Alignment Factors

- Hot Work Fire Frequency Alignment Factor
- Pump Oil Fire Frequency Alignment Factor
- Transient Fire Frequency Alignment Factor
- Electrical Cabinet Fire Frequency Alignment Factor

- Many in use at utilities

- F&O from peer reviews on some

Kickoff Meeting 4/11/2011

Electrical Cabinet HRR Panel Makeup

- PWROG – Clarence Worrell
- BWROG – Dennis Henneke
- EPRI – Sean Hunt
  - Bob Bertucio
  - Paul Amico
- Utilities – Rob Cavedo
- NRC – Ray Gallucci

Summary

- Process in its shakedown run
- Will be adjusted as we get through it
- More methods expected
- MOU reports would not go through process
- Reviewer support is key to the process

Together...Shaping the Future of Electricity

- The expert review panels are made up of NRC and industry members and deliberate on the accuracy, usability, interface, limitations, and capability category of the fire PRA method being reviewed.

- RES and EPRI will continue to work under the MOU to advance the state of the art fire PRA methods and data.

Members of the public were in attendance but no Public Meeting Feedback forms were received.

Please direct any inquiries to me at 301-415-1364 or Douglas.Pickett@nrc.gov.

/ra/

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