

NRR-PMDAPem Resource

From: Feintuch, Karl
Sent: Friday, April 26, 2013 3:36 PM
To: Feintuch, Karl
Subject: FW: ME6818-DAEC-Adoption of NFPA-805- RAI dated 4/7/2013 - Record of Clarification Call of April 11, 2013

Record of April 11, 2013 Conference Call

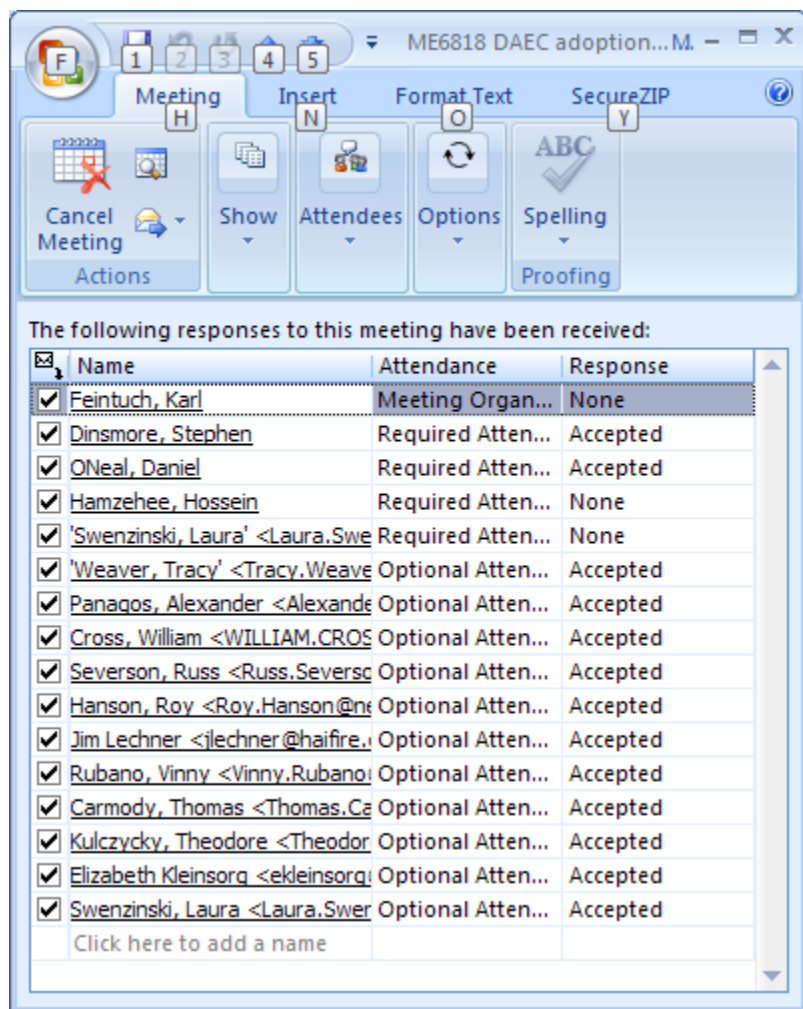
===== update 2013-04-26-1310 ET =====

Meeting was held as scheduled. April 11, 2013, 0900-1000 ET.

NRC Attendees were Feintuch, O'Neal and Dinsmore, as listed in the image below. Hamzehee was not present, as shown.

Licensee and Licensee support staffs attending are listed in the image below. In addition, Laura Swenzinski, DAEC Licensing attended.

The items of issue were clarified. DAEC (Swenzinski) confirmed that the expected response date was 5/1/2013 for the requested items.



===== update 2013-04-10-1108 ET =====

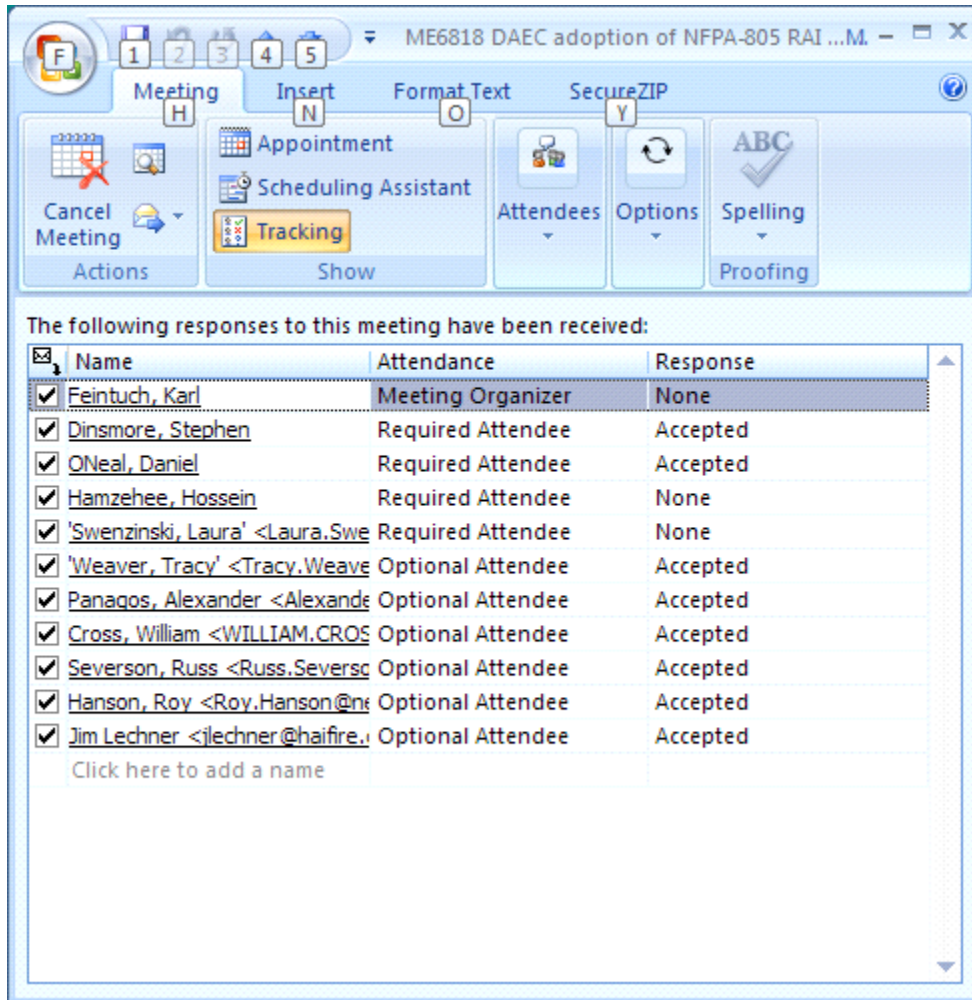
NRC participants will assemble in O-10D20. Additional people have accepted this meeting

===== update 2013-04-10-1035 ET =====

ML13098B072 = ADAMS Accession No. for RAI copied below. Meeting is 9-10 AM CT (8-9AM CT)
NRC participants will assemble in O-10H5 (Hamzehee office)

Bridge line information: **800-857-5346** ; Pass code **33026 #** ; Capacity = 6 lines

Attendee status at this time:



The following responses to this meeting have been received:

Name	Attendance	Response
<input checked="" type="checkbox"/> Feintuch, Karl	Meeting Organizer	None
<input checked="" type="checkbox"/> Dinsmore, Stephen	Required Attendee	Accepted
<input checked="" type="checkbox"/> O'Neal, Daniel	Required Attendee	Accepted
<input checked="" type="checkbox"/> Hamzehee, Hossein	Required Attendee	None
<input checked="" type="checkbox"/> 'Swenzinski, Laura' <Laura.Swe	Required Attendee	None
<input checked="" type="checkbox"/> 'Weaver, Tracy' <Tracy.Weave	Optional Attendee	Accepted
<input checked="" type="checkbox"/> Panagos, Alexander <Alexande	Optional Attendee	Accepted
<input checked="" type="checkbox"/> Cross, William <WILLIAM.CROS	Optional Attendee	Accepted
<input checked="" type="checkbox"/> Severson, Russ <Russ.Seversc	Optional Attendee	Accepted
<input checked="" type="checkbox"/> Hanson, Roy <Roy.Hanson@ne	Optional Attendee	Accepted
<input checked="" type="checkbox"/> Jim Lechner <jlechner@haifire.i	Optional Attendee	Accepted

[Click here to add a name](#)

===== original message =====

Duane Arnold (Laura Swenzinski) requested an clarification call for the Items requested in a RAI message dated April 7, 2013. A copy to facilitate the discussion follows.

The topics of discussion will include but not be limited to:

- PRA 70 (11th bullet in PRA 82 below)
- PRA 69 (use of terminology “electronics” vs. “sensitive electronics”)
- Confirm a complete response by May 1, 2013.

As before I propose conducting the call from Hossein’s office.

===== Subject RAI =====

Transmittal Message

By letter dated August 5, 2011, NextEra Energy Duane Arnold, LLC, (the Licensee), submitted a license amendment request (LAR) to transition their fire protection licensing basis at the Duane Arnold Energy Center (DAEC), from Title 10

of the Code of Federal Regulations (10CFR), Section 50.48(b), to 10CFR50.48(c), National Fire Protection Association Standard NFPA 805 (NFPA 805).

A review team, consisting of U.S. Nuclear Regulatory Commission (NRC) staff and contractors from Pacific Northwest National Laboratory (PNNL) and the Center for Nuclear Waste Regulatory Analyses (CNWRA) participated in a regulatory audit of the DAEC in Palo, Iowa during the period December 12-16, 2011. In a message dated January 31, 2012, (ADAMS Accession No. ML12031A112) the NRC issued requests for additional information (RAIs). In letters dated April 23, 2012 (ADAMS Accession No. ML12117A052) and May 23, 2012 (ADAMS Accession No. ML12146A094) the licensee provided responses to those RAIs. In messages dated November 8, 2012 (ADAMS Accession No. ML12318A394) and December 5, 2012, (ADAMS Accession No. ML12340A450) the NRC issued additional requests for additional information. In letters dated January 11, 2013 (ADAMS Accession No. ML13015A350), February 12, 2013 (ADAMS Accession No. ML13046A031), and March 6, 2013 (ADAMS Accession No. ML13070A065), the licensee provided additional responses.

In a message dated March 22, 2013 (ADAMS Accession No. ME13084A004), the NRC issued additional requests for additional information. The licensee requested clarification of the items in a conference call dated 4/3/2013. Conference call attendees included or the NRC: Karl Feintuch, Hossein Hamzehee, Dan O'Neal, and Stephen Dinsmore; and included for Duane Arnold: Laura Swenzinski; William Cross, Roy Hanson, Elizabeth Kleinsorg, Russ Severson, Brad Hopkins, Robert Egan, et al.

As a consequence of the conference call discussion, NRC staff revised its request. The revised RAI items are attached.

Please review the attached revised items for clarification and request a conference call if needed as soon as possible. Though the items in the attached file are identified as draft in the heading (subject to the need for clarification), they are firm relative to the information being requested. If no further clarification is needed, please respond with a schedule by which you plan to respond. The NRC seeks a response by May 1, 2013, or as soon as practical. If you have any questions or need any additional information concerning these RAIs, please contact me at 301-415-3079.

Docket No: 50-331

DRAFT RAI

DRAFT REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO ADOPT
NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805
PERFORMANCE-BASED STANDARD FOR FIRE PROTECTION FOR LIGHT WATER REACTOR GENERATING PLANTS
DUANE ARNOLD ENERGY CENTER
(TAC NO. ME6818)

Probabilistic Risk Assessment RAI 82 (Revised)

The NRC staff identified numerous methods that were used in the fire probabilistic risk assessment (FPRA) that have not yet been accepted by the staff. Requests for Additional Information (RAIs) were provided (January 31, 2012 Agencywide Document Access and Management System (ADAMS) Accession No. ML12031A112, October 26, 2012 ADAMS Accession No. ML12304A069, and December 5, 2012, ADAMS Accession No. ML12340A450) about these methods and the responses (April 23, 2012, ADAMS Accession No. ML12117A052, May 23, 2012, ADAMS Accession No. ML12146A094, February 12, 2013, ADAMS Accession No. ML13046A031, and March 6, 2013 (ADAMS Accession No. ML13070A065) have been reviewed.

RAIs have identified the method differences from NUREG/CR 6850 or FAQs. Some RAI responses describe that the method differences have been addressed to be consistent with acceptable methods. For other RAIs, the staff has determined that additional information is needed. An integrated analysis is being requested for all of these methods, as discussed below:

- Regarding determining the HRR of transient fires that differ from those endorsed by the NRC in its letter to NEI dated June 21, 2012 on “Recent Fire PRA Methods Review Panel Decisions and EPRI 1022993, ‘Evaluation of Peak Heat Release Rates in Electrical Cabinet Fires’ (ADAMS Accession No. ML12171A583). (PRA RAI 01.01c)
- Regarding the need to sum all barrier elements in the multi-compartment analysis. (PRA RAI 05)
- Regarding the use of an emergency diesel generator aggressive fire factor. (PRA RAI 07)
- Regarding turbine generator ignition frequency and credit for manual suppression. (PRA RAI 11.01)
- Regarding the use of excessive Control Power Transformer (CPT) credit. (PRA RAI 12)
- Regarding removal of the hot-work pre-initiator factor of 0.01 for hot work administrative controls. (PRA RAI 14a)
- Regarding the use of a “Very Low” transient influence factor in the frequency factors for distributing transient frequency. (PRA RAI 14b)
- Regarding the use of a minimum non-suppression probability of less than 0.001. (PRA RAI 72)
- Regarding not following NUREG/6850 Step 5.c (Section 11.5.4.5) while determining the extent of fire damage during MCA. (PRA RAI 08.01)
- Regarding crediting prompt (i.e., hot work type) suppression for transient fires. (PRA RAI 14.01d)
- Regarding credit given to sealed electrical cabinets to prevent fire spread. (PRA RAI 70)
- Regarding the credit for incipient detection in the main control room. The staff and industry have not completed the FAQ on incipient detection in the main control room. A sensitivity study is requested for the integrated analysis with no credit for incipient detection in the main control room until an acceptable method is completed. In addition, you may provide and evaluate a proposed method. (PRA RAI 35.01)
- Regarding modeling of sensitive electronics in cabinet using cable damage criteria instead of sensitive electronics criteria. The response discussed the main control room only; however, any application of this method for sensitive electronics outside the main control room should also be considered in the integrated analysis. In addition, please discuss the assumptions, approach, and analyses applied to the Fire PRA for sensitive electronics outside the main control room. (PRA RAI 69)
- Regarding the use a conditional probability of 0.1. The response does not provide adequate justification for the use of the conditional probability of 0.1. Either provide additional justification or remove the 0.1 credit in the integrated analysis. (PRA RAI 71)
- Regarding a sensitivity study for the transient HRR if it differs from NUREG/CR-6850 guidance. If it is determined to differ, include it in the integrated analysis. (PRA RAI 83 part b)
- In addition, the data collection effort on identification of which cables are thermoplastic and which are unqualified should be incorporated into the Fire PRA as appropriate for this integrated analysis. (FM RAI 02 response)

The following information is requested for the methods discussed above:

- a. Results of a composite analysis that shows the integrated impact on the fire risk (Core Damage Frequency (CDF), Large Early Release Frequency (LERF), delta (Δ)CDF, and Δ LERF) of all of the above method changes analyses. In this composite analysis, for those cases where the individual issues have a synergistic impact on the results, perform a simultaneous analysis. For those cases where no synergy exists, perform a one-at-a-time analysis. In the response, provide justification of how the Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," risk acceptance guidelines are satisfied for the composite analysis of all the issues identified and, if applicable, a description of any new modifications or operator actions being credited to reduce delta risk and the associated impacts of the fire protection program.
- b. An additional composite analysis that includes only the analyses believed to be appropriate and justification for not using selected methods. Include justification of how the RG 1.174 risk acceptance guidelines are satisfied.

Probabilistic Risk Assessment RAI 83 (Revised)

In a letter dated May 23, 2012, (ADAMS Accession No. ML12146A094) you responded to Probabilistic Risk Assessment RAI 20 and provided the conditional core damage probabilities (CCDP) and the conditional large early release probabilities (CLERP) but did not provide a discussion of the analysis, assumptions, and ignition frequency as requested. The staff is requesting additional information as summarized below:

- a. Discussion of the analysis, assumptions, and ignition frequency, using the clarification guidance criteria discussed in NEI's letter to NRC dated September 27, 2011 on "Recent Fire PRA Methods Review Panel Decision: Clarification for Transient Fires and Alignment Factor for Pump Oil Fires" (ADAMS Accession Nos. ML113130448, ML113130451, ML113130453, ML113130454) and as endorsed by the NRC in its letter to NEI dated June 21, 2012 on "Recent Fire PRA Methods Review Panel Decisions and EPRI 1022993, 'Evaluation of Peak Heat Release Rates in Electrical Cabinet Fires' " (ADAMS Accession No. ML12171A583). Include the basis for the ignition frequency. Also include justification for the transient heat release rate used.
- b. If the transient heat release rate differs from NUREG/CR-6850, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities," provide a sensitivity study containing the risk and change in risk, using the values in NUREG/CR-6850.

===== end message =====

Hearing Identifier: NRR_PMDA
Email Number: 677

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Subject: FW: ME6818-DAEC-Adoption of NFPA-805- RAI dated 4/7/2013 - Record of Clarification Call of April 11, 2013
Sent Date: 4/26/2013 3:35:50 PM
Received Date: 4/26/2013 3:35:52 PM
From: Feintuch, Karl

Created By: Karl.Feintuch@nrc.gov

Recipients:
"Feintuch, Karl" <Karl.Feintuch@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
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image002.png	74913	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received: