

NRCREP Resource

From: Henneke, Dennis (GE Infra, Energy) [dennis.henneke@ge.com]
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To: NRCREP Resource
Subject: D. Henneke Comments on DG-1218
Attachments: DWH Comments DG-1218.doc

See the attached comments on DG-1218, dated March 2009.

Thanks

Dennis Henneke
GE Hitachi

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<<DWH Comments DG-1218.doc>>

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SUNSI Review Complete
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Adm = R. Jervey (RAS)
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Dennis Henneke, GE Hitachi

Comments on DG-1218

- 1) Regulatory Position 2.4: This position does not meet the intent of NFPA 805, or the intent of the transition process as defined in the original rulemaking. As one of the original contributors/authors of NFPA 805, we had two basic philosophies that we developed the guideline; a) A Full Fire PRA is not required for transition, and b) Safe-today, Safe tomorrow. In the later case, if an action was already approved, then this was safe today and did not require a change evaluation per NFPA 805. In NFPA 805, in fact, there was the provision to use existing licensing documents and approvals, and to assume those approvals are treated as deterministically. In the definition of Plant Change Evaluation, for example, the change analysis is required for any change to a previously approved fire protection program element. Also, under the fundamental fire protection program, NFPA 805 states that previously approved alternatives take precedence over the requirements in 805.

The problem with the regulatory position is that it increases the overall burden to develop and maintain the license basis, with no apparent improvement to the plant. As originally envisioned, the NFPA 805 process would take around \$1M to transition and around ½ person to maintain. Due to the continued ratcheting of the NRC on issues like this, the overall cost of transition has increased around 10 fold, and the cost of maintaining the program has increase to around 2 persons.

- 2) Section 4.3, Paragraph 5: The interpretation of the NRC to this requirement in 805 appears to over-extend the intent of what is written in 805. When originally written, the Fire PRA standard was not yet complete. Additionally NUREG/CR-6850 was not yet complete. It was the intent that if Fire PRA were performed using NUREG/CR-6850, this would be the level of requirement for approval by the AHJ. Additionally, if a full fire PRA was performed (remember again, not a requirement of 805), that the Fire PRA would be reviewed against the standard. However, NUREG/CR-6850 (and the standard) do not include a lot of details in some areas. The plant should not be required to submit any interpretation or extension of the NUREG/CR-6850 method to the NRC. If required, the regulatory interpretation of the requirement might be extended to anything not specifically covered in 6850. This requirement is not in the best interest of the public, the plant or the NRC. Here are a few examples of technical areas not addressed in NUREG/CR-6850, just to give an idea of the possible scope of the extension of the Section 4.3 requirements:

- a) A PWR without MG sets, but has a series of electrical cabinets (in its place), assumes the MG set fire frequency as a subsection of the electrical cabinet fire frequency calculation.
- b) NUREG/CR-6850 has guidance on fire spread through overhead cable trays, and delayed fire damage due to cable coatings. However, there is no model for fire spread through overhead cable trays with cable coatings.
- c) NUREG/CR-6850 provides no guidance on how to apply factors for hot short duration. Methods for determining the factors is in FAQ 050, but the methods for applying the factors are not yet documented.
- d) Methods for quantifying risk, such as the use of the FRANC code, are explicitly not included in NUREG/CR-6850.

The interpretation of the guidance is that the Fire PRA should be performed against the ASME Standard, as verified through peer review or review by the NRC (for the pilot plants).

- 3) Regulatory Position 4.2: NFPA 805 allows for the use of Fire Modeling as an option, but this is specifically not allowed under the NRC guidance unless a change evaluation is performed (under the performance based approach). It was the intent to include this as an option by the NFPA 805 authors, as agreed upon during consensus of the standard, without a change evaluation. Removal of this option is another example of ratcheting of the amount and scope of work required by the NRC to transition to NFPA 805.
- 4) 3.3.2: the discussion in NFPA 805 for High/low pressure interfaces is only in the definition sections, and the circuit analysis for these (what circuits are required, etc.) is included in NEI 00-01, chapter 3. As such, the analysis of High/low pressure interface flow paths should be no different inside and outside of NFPA 805, and the screening of certain flow paths due to pressure of the piping being adequate, small flow not affecting safe shutdown, etc., should not be considered performance based per the NFPA 805 definition. As stated above, the change evaluations are limited by definition to those changes to the existing fire protection program. Since the high/low pressure interface analysis exists in the previous program, the evaluation should not require a change evaluation.
- 5) Section 4.3: note that RG 1.200, revision 2 has been issued and should be referenced.
- 6) Section 4.3: the use of the term "potentially risk significant findings" is inappropriate. Per NEI 07-12 and NEI 05-04, the peer review will provide findings and observations. Findings are those issues considered systematic, or potentially affect the PRA results. However, these are more than just risk significant findings, since risk significant under RG 1.200 and 1.174 has a different meaning. Recommend changing the wording to just "peer review findings."

- 7) Section 4.3: Since the change evaluations are not specifically approved by the NRC and can be performed after the license application for NFPA 805, the reference to Capability Category III appears in appropriate.