RulemakingComments Resource

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Sent: Friday, March 04, 2016 9:44 AM
To: RulemakingComments Resource
Cc: DeJesus, Anthony
Subject: [External_Sender] Docket No. PRM-50-112, NRC-2015-0213, request for comments published in Fed.Reg. / Vol.81, No.3 Jan.6, 2016

Dear Mrs. Vietti-Cook,

The NRC is seeking advice and recommendations from the public on the above-referenced PRM for the use of the terms “Important to Safety” and “Safety Related”. As detailed in Paragraph V. of its document the NRC describes a cause dating back to the mid of the eighties which has raised (or prompted) ambiguities and tedious discussions since then.

NPEC established a task force in 2014 to evaluate and determine proper sources and usage of key terms in the IEEE standards most relevant for nuclear power applications. 7 out of 38 investigated standards were identified with terminology issues. In six standards the IEC term “Important to Safety” appeared and requires appropriate corrections or clarifications.

In order to tackle this problem, IEEE NPEC formed a working group at its summer meeting in July last year. This working group, WG 6.2, decided in its recent meeting in January to consider and validate a finer grading of safety classes also in regard to an alignment with international practices as documented in the IEC standard 61226 (please find further details below).

In the following, WG 6.2 addresses the four requests listed in Paragraph V. of doc. 2015-33287:

1. **New information and analysis that could provide the basis for changes to the NRC´s regulations:**

   Because of the subjective nature of “Important to Safety” which is highly dependent on the specific plant license and commitments made in the licensing of the operating plant, not to mention the differences in new reactor designs, a potential basis that is missing from the current SECY documents listed is:

   10 CFR 50.69, Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors.

   Any potential rule on “Important to Safety” should consider this risk-informed approach as a means to make the classification of both safety and non-safety “Important to Safety” components less subjective. In addition, IEEE/NPEC Working group 6.2 is working on a new standard for classification of safety related components of I&C and electrical systems and components that would be useful for a basis for this potential rulemaking, especially with respect to the differences in special treatments for the different levels of “Important to Safety.”

   Any rulemaking that results from this petition should be delayed until that standard has been completed and issued.

2. **Specific examples where the lack of a formal NRC definition of the terms “Safety Related” and “Important to Safety” directly resulted in adverse consequences to external stakeholders:**

   Licensing is one of the largest cost items in instrumentation and controls´ design. Regulatory

uncertainty has a substantial impact on the cost associated with these designs for the instrument manufacturer as well as for the owner of the plant. Thus, uncertainties due to lack of clearly defined guidance on the regulatory side should be avoided in order to mitigate this type of costs. This concerns application of appropriate engineering rules to ensure that the equipment is designed, manufactured, qualified, constructed, installed, commissioned, operated, tested, inspected and maintained with sufficient quality to fulfil the functions that the equipment is expected to perform unless credit can be taken from fleet similarity.

Some licensees require equipment that are not classified as safety related to meet the requirements of augmented quality. Since augmented quality is not clearly defined one licensee might require higher testing and acceptance criteria for seismic, radiological or other environmental robustness than another. This requires the manufacturers to perform additional tests for each licensee, in the worst case. The spent fuel pool level instrumentation is a good example. When the NRC order came out for these instruments, NEI worked with the industry and the NRC to define which specific attributes would apply. Nevertheless, some customers wanted to see evidence of testing for other effects (like smoke, debris etc.) that were not specifically called out in the order, but individually imposed by the customer. A clear and non-misleading definition could avoid these additional requirements and associated costs for the manufacturers.

Furthermore, the lack of a clear definition of the terms “Safety Related” and “Important to Safety” impedes the harmonization of IEEE standards with international IEC-standards for I&C and electrical systems and components. It imposed considerable difficulties with the topics where an alignment of the corresponding standards was attempted and finally achieved in the recent past. As a consequence, products developed for the US market have a tough position on the international market.

3. **What regulations would have to be revised to reflect the new definitions:**

Guidance on classification of systems and components would be better captured in a standards document rather than through regulation. The standard could provide a vehicle for NRC endorsement. There is already precedent for NRC Regulatory Guide endorsement of industry standards in other areas. The standard provides opportunity for more expansive discussion and examples than does regulation. In addition, standards/RGs are simpler to revise than regulation to account for nuances in new plants, advanced reactor designs, etc.

It should be also deliberated whether the terms “Safety Related” and “Important to Safety” should be applied directly to systems and components or rather to functions which have to be performed by such systems and components. The consequences of a failure to perform these functions should be also addressed by considering a severity level as the target to be achieved, i.e. to bring the plant into a safe state or to avoid the release of radioactivity beyond defined limits at all.

As mentioned above, IEEE/NPEC Working group 6.2 is working on a new standard for classification of safety related I&C and electrical systems and components. The working group attempts to align the new standard with IEC 61226 to support ongoing harmonization efforts / MDEP activities. This kind of alignment would be easier achieved through standards/guidance documents than through rulemaking. Thus, the working group requests delay of any rulemaking decision until such time as the standard can be completed and issued.

4. **What, if any guidance would be needed to implement the new definition:**

The new IEEE NPEC Working Group 6.2 was formed at the summer meeting held at Salt Lake City in July, 2015 to address nuclear power plant system classification of I&C and electrical systems and components. At its recent meeting in January, the working group reviewed the IAEA SSG-30 approach to categorization of functions and classification of systems as adopted by IEC 61226. The working group has begun to draft a classification standard with the goal of international alignment and potential of a joint logo international standard in the future.

As a representation of industry utilities, vendors, and other providers, the working group requests delay of any rulemaking decision until such time as the standard can be completed and issued, which would provide the opportunity for regulatory endorsement.

We thank you in advance for considering our request for delay.

Yours sincerely

Wolfgang König

IEEE Secretary Subcommittee 6 & intermediate Chair of WG 6.2

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