PRM-50-87
(72FR38030)

NUCLEAR ENERGY INSTITUTE

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OFFICE OF SECRETARY
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ADJUDICATIONS STAFF

James H. Riley
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September 25, 2007

Secretary
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Rulemaking and Adjudications Staff

Subject: Comments on Petition for Rulemaking on Radiological Dose Criteria for Control Room Habitability (PRM-50-87)

Project Number: 689

On July 12, 2007, the Federal Register published for comment a petition for rulemaking to amend the regulations that govern domestic licensing of production and utilization facilities to eliminate the specific criteria related to the radiological doses for control room habitability at nuclear power plants. (72FR38030). The Nuclear Energy Institute (NEI)[1] offers the following comments on the petition.

In general, NEI supports the petition, as the approach is largely consistent with industry positions pursued during the development of technical specifications related to control room habitability. However, since many aspects of the proposed rule would involve significant expense for some licensees to implement, it is recommended that the rule, if approved, be made optional. NEI also offers the specific comments on the petition included in the Enclosure.

If there are any questions on these comments, please contact me at (202) 739-8137; jhr@nei.org.

Sincerely,

James H. Riley

Enclosure

[1] NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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ENCLOSURE

Comments on the Petition for Rulemaking

Comments on the Petition for Rulemaking – Docket PRM-50-87
NEI offers the following comments on the petition. Some comments support and some oppose the suggested changes.

1. The petitioner suggests that the regulations should be revised to eliminate the specific radiological criteria for control room habitability. The petitioner believes this would result in the ability to revise the industry guidelines to eliminate the specified guidance for performing deterministic dose analyses and eliminate many negative safety consequences. Specifically, the petitioner recommends that 10 CFR 50.67(b)(2)(iii) and the second sentence of Criterion 19 of Appendix A to Part 50 that contain specific criteria for control room habitability be removed from the regulations.

   COMMENT: It is not so much the value of the exposure limits that is the problem. The NRC should be more open to other methods of analysis proposed by licensees. Every Regulatory Guide states that the guidance is one method acceptable to the staff and that other methods proposed by licensees will be evaluated on a case-by-case basis. However, in practice it is often difficult to justify different approaches.

2. The petitioner suggests that the current guidelines be replaced with guidelines that he believes would ensure that the control room remains habitable under most postulated conditions. These new guidelines could have significant implementation costs and effects on operator training such as:

   (1) The control room ventilation system should isolate on the detection of high radiation or toxic gas intake.

      a. *COMMENT: A good many control rooms in the industry already operate in this manner. Conversely, there are some plants that do not have automatic initiation of the emergency mode. Making this a requirement could result in an undue (and expensive) modification/backfit.*

      b. *COMMENT: For those plants susceptible to toxic gas intrusion, automatic initiation is typically the case (although not specifically implemented in all cases). If required, this also could result in undue (and expensive) modifications.*

   (2) The control room should have a minimum of one foot of concrete shielding (or equivalent) on all surfaces.

      a. *COMMENT: It is unlikely that all control rooms have one foot of concrete shielding on all surfaces. This requirement could result in undue (and expensive) modifications. A similar concern applies to the technical support center, which may also be affected by this requirement.*

   (3) Self Contained Breathing Apparatus (SCBAs) and Potassium Iodide (KI) tablets should be readily available for operator use. Operators should maintain training in SCBAs.

a. *COMMENT: The use of these methods has merit, but additional evaluation of their effects is necessary. The medical complications of ingesting KI would have to be evaluated for all CR personnel. The use of SCBA credit would require specific training for which operators will need to demonstrate the ability to conduct their safety related functions while wearing a SCBA for several hours.*

(4) Procedures should be developed to ensure control room purging is considered when the outside concentration is less than the inside concentration.

a. *COMMENT: Although this appears to be a good practice, it can't be credited in the operator dose analyses. The timing of purging could be critical based on the timing of the release and the release pathway. Therefore, this recommendation may not have any practical merit.*

3. The petitioner suggests that existing emergency filtration systems should be maintained to practical performance criteria.

a. *COMMENT: Industry supports this suggestion; this area has a lot of potential for improvement. For example:*

- *The current practice (i.e., RG 1.52) is to apply a safety factor of 2 for laboratory testing of charcoal beds. The actual efficiencies are typically much higher than those allowed by the RGs.*
- *Some plants have 8-inch charcoal beds, for which, only 4 inches is allowed to be credited.*
- *Other plants have filtration systems in series, for which, only one composite filter can be credited.*

4. The petitioner also states that current TS for system performance should be eliminated and that the administrative portion of the TS could include a requirement to have a Control Room Habitability Program.

COMMENTS: This recommendation is covered by TSTF-448 and GL 2003-01.

5. The petitioner believes that because of the low risk significance of being outside the Control Room Habitability Program guidelines, a plant shutdown would not be required in this condition. Rather, the petitioner believes that the program could specify that timely actions should be taken to return the plant within the guidelines. If not complete within 30 days, the petitioner suggests that a special report would be sent to the NRC with a justification for continued operation and a proposed schedule for meeting the guidelines.

COMMENTS: This is a valid point that the industry supports.

6. The petitioner suggests that as an alternative to total removal of dose guidelines from the regulations, most of his concerns could be resolved if the dose criteria were based solely on the whole body dose from noble gases that he believes is the only possible dose impact that may result in control room evacuation.

COMMENTS: It is not clear that the noble gas contribution would be limiting in all cases. However, this may be the case if KI were allowed to be credited.

From: "RILEY, Jim" <jhr@nei.org>
Date: Tue, Sep 25, 2007 5:07 PM
Subject: Comments on Petition for Rulemaking on Radiological Dose Criteria for Control Room Habitability

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From: "RILEY, Jim" <jhr@nei.org>

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