

June 2, 2000

MEMORANDUM TO: Suzanne C. Black, Deputy Director  
Division of Licensing Project Management

FROM: Singh Bajwa, Director */RA by T. Mendiola acting for/*  
Project Directorate III  
Division of Licensing Project Management

SUBJECT: CLOSURE OF D.C. COOK RAM ISSUE R.3.8 (TAC NO. MA9020)

Attached is the recommended resolution for D.C. Cook RAM Issue R.3.8, "Control Room Habitability."

Attachment: As stated

Contact: J. Stang, 415-1345

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\*SEE PREVIOUS CONCURRENCES

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**ACCESSION NO. ML003720842**

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## **RAM ISSUE R.3.8:**

## **CONTROL ROOM HABITABILITY**

**BACKGROUND:** By letter dated October 28, 1998, the NRC documented the status of the current review of the D. C. Cook control room habitability evaluation. The letter documented an August 5, 1998, phone conversation where the licensee stated that the current control room ventilation dose calculations being evaluated by the NRC were determined to require technical and administrative upgrades. However, the licensee stated that the changes in the analysis did not affect the ability of the control room ventilation system to meet the requirements of GDC 19 or raise questions regarding the operability of these systems.

Following issuance of the letter, deficiencies in the Control Room Ventilation System (CRVS) were identified during the ESRR discovery process. The issues included single-failure problems related to control room isolation and pressurization and other deficiencies with control room dose assumptions, such as unfiltered in-leakage and atmospheric dispersion factors. In addition, a tracer gas test was conducted on the Unit 1 and Unit 2 control rooms, which resulted in higher than previously measured unfiltered in-leakage.

**LICENSEE'S CORRECTIVE ACTIONS:** As a result of the discovery of the nonconforming condition of the control room, the licensee followed the guidance contained in GL 91-18, Revision 1, and developed compensatory actions for the nonconforming condition. The licensee performed post-accident Control Room dose analysis, with the currently licensed TID-14844 source term, and determined that interim compliance with GDC 19 is achieved by operating with a more restrictive Reactor Coolant System (RCS) activity limit than the current Technical Specification (TS) limit of 1.0 micro-curies/gram dose equivalent I-131. The licensee is also using administrative controls to lower the allowable limits for total containment leakage and lower the allowable limits for total ECCS leakage. The licensee will also use KI for the operators as an additional compensatory measure. The licensee has performed a safety screening of the compensatory measures and concluded that the compensatory measures do not introduce a USQ.

For long-term resolution of the issue, the licensee has decided not to restore the plant to the original licensing basis as described the UFSAR. The licensee has elected to revise the control room analysis with new analysis assumptions, methodology, and acceptance criteria for the 10 C.F.R. § 50.67 Alternative Source Term. This submittal will also contain new Technical Specifications for recent plant upgrades and the implementation of Generic Letter 99-02 requirements. The licensee has performed a safety screening of the final resolution of the issue and determined that it constitutes a USQ and a license amendment will have to be submitted and approved by the NRC prior to making the changes to the UFSAR. The licensee is scheduled to submit the license amendment prior to the restart of Unit 2.

**NRC REVIEW:** The NRR technical staff provided an overview of the licensee's GL 91-18 evaluation of the nonconforming condition. The staff is aware of the following compensatory measures:

1. Maintain RCS activity less than 0.35 micro-curies/gm dose equivalent I-131;
2. Maintain total containment leak rate less than 0.125 weight %/day; and
3. Maintain total ECCS leak rate less than 0.2 gpm.

The staff considers that the implementation of such compensatory measures is a reasonable approach to limit the post-accident control room dose to within the limits specified by GDC 19 for Unit 2. The staff also notes that the licensee considers the availability of KI for control room operators a defense-in-depth measure in the event radiological conditions within the control room exceed the guidelines of the licensee's established procedures. The performance of the NRR overview will be mentioned in NRC Inspection Report (IR)200016.

**RECOMMENDATIONS/ACTIONS:** It is recommended to the MC 0350 Panel that RAM ISSUE R.3.8 be closed. No further inspection on this issue is necessary, based on the corrective actions taken by the licensee. In addition, the NRR staff finds that the timeliness of the licensee's corrective actions (prior to restart of Unit 2) for final resolution of the issue is commensurate with the safety significance of the issue.