June 14, 2002

<u>PRA INFORMATION REQUEST (PRELIMINARY)</u>

AEP is requesting the following PRA information in order to complete the review of D. C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2, NRC SPECIAL INSPECTION REPORT 50-315/01-17(DRP); 50-316/01-17(DRP); PRELIMINARY YELLOW FINDING, J. E. Dyer to A.C. Bakken III, June 10, 2002.

1. Section b.1 <u>Engineering Evaluation</u>, Topic <u>Large Early Release Frequency</u>

    a. "In such scenarios, recent NRC studies (e.g., studies for the containment significance determination process and for the resolution of the generic issue for the combustible gas issue) indicated that the conditional probability of large early release given a core damage event for an ice condenser containment was approximately 0.82."

        Please identify the recent NRC studies.

    b. "Considering that both the licensee's and the NRC's LERF values were developed using NRC guidance, though with differing assumptions, and the potential uncertainty in assessing the effectiveness of the licensee's onsite and offsite emergency response efforts, a LERF value of 0.4 was used in subsequent NRC risk analyses."

        Please provide NRC's reasons for selecting the 0.4 value. As previously reported in the inspection report, the licensee's LERF values are from NUREG/CR-6595, <u>An Approach for Estimating the Frequencies of Various Containment Failure Modes and Bypass Events</u>, January 1999. NUREG/CR-6595 has a maximum conditional probability of LERF of 0.28 (corresponding plant configuration is high pressure RCS failure, feedwater failure, and no hydrogen igniters). This makes it appear that the LERF value used in the inspection report (0.4) is excessively high.

2. Section b.2 <u>Probabilistic Evaluation</u>

    a. "The results of the individual block evaluations were then combined into an D/G common cause failure factor."

        How were the individual block values combined, and how was the D/G common cause failure factor calculated?

    b. "This factor was then used to modify SPAR model risk analysis results."

        1) How was the SPAR model modified?

        2) Can the NRC provide the modified SPAR model to AEP?

        3) Which failure modes were considered, failure of individual EDGs in any combination or failure of the 4 EDGs as a set?

        4) Why is the SPAR model being used when the Cook PRA model, with greater modeling detail, was provided to the NRC (NRR and Region III) on March 15, 2002?

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3. Section b.2 Probabilistic Evaluation, Topic Risk Assessment Considerations

    a. "Using the NRC's SPAR model and the assumptions stated above, the inspectors and NRC Headquarter's staff determined that the per plant delta CDF value was dominated by a dual unit LOOP event. The calculated dual unit LOOP delta CDF value was determined to be 1.8E-05 per year (Yellow)."

        Since the inspection report discusses only the dual unit LOOP as a finding, AEP infers that all events and sequences other than dual unit LOOP are not significant, i.e., would be green findings. AEP requests NRC confirmation of this implication. If this inference is incorrect, please provide all events and sequences that the NRC has determined to be significant (non-green) findings.

4. AEP is preparing a request that all information specified in MC 0612, but was not included in the inspection report, be provided. In general, this will be the information and description required to reconstruct NRC's analysis. In particular, the assumptions used in the determination are requested to supplement the inspection report.