Nuclear Risk Research Center (NRRC)
Central Research Institute of the Electric Power Industry (CRIEPI)
1-6-1 Otemachi, Chiyoda-ku, Tokyo, 100-8126, Japan

Dr. George Apostolakis
Director

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Mr. J.W. Stetkar, Chairman
Technical Advisory Committee

Subject: RISK-INFORMED CHANGES TO CONTAINMENT VESSEL LEAK RATE TESTING
                 INTERVAL

Dear Chairman Stetkar:

We thank the committee for the discussion at the TAC meeting on the risk-informed changes to containment vessel leak rate testing interval.

The NRRC responds to the TAC conclusions and recommendations as follows.

1. Simplified computation framework on this study

  We would like to encourage to use this risk assessment approach on this risk-informed application for Japanese utilities even if they don't have a Level 2 PRA.

2. Appropriately conservative bound on this study

  We believe your conclusion is good for supporting explanation and negotiation to JEA members and regulator.

3. Evaluation of Core Damage Frequency (Consideration on all hazards and all modes)

・We would like to add two items to the NRRC study report as below.
  - the basic RIDM guidance about total CDF assessment on how to deal with PRA scope
    including all plant hazards and all plant modes with reference to Regulatory Guide 1.174 and
    NUREG-1855
  - ideas for LRT interval extension

4. Estimation of Containment Standby Failure Rate

This recommendation was good. We realize that our standby failure rate estimation was not appropriate.

The incorrect time-based standby failure rate in our presentation shows the approximated time averaged during test interval but, in this study, we have to consider the timing at the end of test interval so that the time-based standby failure rate would be equivalent to the demand-based standby failure rate.

The formula of the time-based standby failure rate model can be easily modified to evaluate the reliability at the end of test interval to be comparable with the demand-based model.

There are two ways to go forward on this issue, one is to use the demand-based standby failure rate estimation as you pointed out at the TAC meeting, and another is to discuss options to use the time-based estimate with modification to the formula.

At this time, we would like to continue to discuss using the time-based standby failure rate model for effective data usage. This is because operating data suitable for evaluating CCFPs for containments with tests performed every refueling outages and every three refueling outages are only a few to use the demand-based model. By this estimation, uncertainty could be larger.

5. Evaluation of Uncertainties

We would like to add three items to the CRIEPI study report as below.
- the basic RIDM guidance of consideration of probability estimation and uncertainties on the risk assessment with reference to Regulatory Guide 1.174 and NUREG-1855
- ideas for LRT interval extension
- parameter studies in the light of statistics uncertainty of CDF and CCFP in the assessment of ΔCFF

Sincerely,

George Apostolakis