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

Subject: TAC Report titled “OUTCOME OF HAMAOKA MODEL PLANT LEVEL 2 TSUNAMI PRA PROJECT” dated June 03, 2022

Dear Chairman Stetkar:

We thank the committee for the discussion at the TAC meeting on the Level 2 PRA results in the Hamaoka Model Plant Tsunami PRA. We also thank the committee for its assessment that "the completion of this project is a milestone achievement for the Japanese nuclear industry, and it has extended the methods and modeling tools that can be used to analyze risk in tsunami-prone areas worldwide."

The NRRC responds to TAC's recommendations as follows.

1. Need for independent technical review

We understand the importance and necessity of an independent technical review. Since the methods and the models, data, and supporting analyses developed and used in this project are extensive and vast, we would like to determine the scope of the review and then implement it.

2. Need for targeted sensitivity analysis

We agree with the TAC recommendation regarding the need for a targeted sensitivity analysis. Since this research project has already been completed, we will discuss the possibility of conducting a sensitivity analysis in the context of NRRC's in-house research activities.

3. Need to consider how timing considerations are typically modeled throughout the actual

full scope PRA

We have identified the consideration of the timing of the loss of function of each equipment during tsunami inundation in the MAAP analysis as one of the medium- to long-term issues in the actual plant application. We accept TAC's recommendation on this issue. However, since resolution of this issue is not a high priority at this time, we do not intend to implement any immediate action. In the future, when the need to account for the timing of loss of function for each equipment during the inundation becomes more necessary in the MAAP analysis, we intend to examine how timing considerations are typically modeled throughout the practical full-scope PRA in advance, in line with TAC's recommendations.

4. Need to develop tsunami risk assessment guidance

We aim to present the Hamaoka Tsunami PRA assessment case study as an example of a concrete realization of the requirements of the regulations and guidelines in the PRA standard of AESJ (Atomic Energy Society of Japan), and to position this case study as a technical report as well. This will enable Japanese utilities to apply the results of this project when conducting tsunami risk assessments with reference to the tsunami PRA standard of AESJ. For this purpose, we recognize the need to publish the technologies/methodologies developed in the Tsunami PRA as publicly available documents. Some of the results have already been made publicly known as academic papers, and we plan to make other results publicly known sequentially in the future.

In addition, NRRC members with expertise and experience will actively cooperate with the Standards Committee in the development of tsunami risk assessment guidance.

Sincerely,

George Apostolakis