Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 22-H100.1A

File/dossier : 6.01.07
Date : 2022-02-18
e-Docs pdf : 6741164

Supplementary submission from Bruce Power

In the Matter of

Request to authorize Bruce Power to restart Bruce Nuclear Generating Station (NGS) A Unit 3 to service, following future outages

Public Hearing - Hearing in writing based on written submissions

February 2022

Renseignements supplémentaires de Bruce Power

À l'égard de

Demande d'autorisation de Bruce Power à remettre en service la tranche 3 de la centrale nucléaire de Bruce (NGS) A, à la suite de futures pannes

Audience Publique - Audience fondée sur des mémoires

Février 2022

Canada

Please find Bruce Power's responses to the EAC questions below.

Question #1:

Attachment A, Table A1.

Based on the failure frequency it appears that the Applied KEFF for ST-EH-2 and ST-EH-3 may have been switched - should they be 7.5 and 7.0, not 7.0 and 7.5?

Answer #1:

The values for the applied KEFF are not switched. The variation in the frequency numbers are confirmation that the threshold was not yet reached at those values.

Question #2:

There continues to be a discrepancy between the definition of the Region of Interest (ROI) in the CMD and in the Bruce Power submission. The former includes the full 360 degrees of the pressure tube near the burnish mark (CMD p.3), whereas the Bruce Power submission defines it as "…The axial and radial extents of the high levels of Heq inboard of the outlet rolled joint burnish mark have been found to be confined to a localized region with a central tendency about the top of the pressure tube. This localized region inboard of the outlet rolled joint burnish mark with a central tendency about the top of the pressure tube that has high levels of Heq is referred to as the region of interest" (Enclosure 1, p.64). This needs to be resolved now, not at a later point in the future as the CMD suggests (p.5, bullet 4). The difference in this case is significant. Bruce Power argues (correctly, in our view) that the high levels of H are limited to a region on the top side of the pressure tube, an area where the design of the plant prevents the formation of significant flaws. The CNSC definition includes the lower half of the pressure tube. It is not reasonable to argue that flaws are impossible in areas where trapping of debris under a fuel bearing pad can (and has) produced significant flaw in many CANDU units. The difficulty is that the CNSC recommends approval of the Bruce Power submission while the arguments are likely not valid for the CNSC-defined ROI.

Answer #2:

Bruce Power maintains its position on the region of interest. Work completed since the CNSC staff established the assessment criteria in August 2021 has consistently demonstrated the region of interest is limited to the top of the pressure tube. Technical data and evidence from this work has been provided to the CNSC for their consideration in re-assessing the current recommendation.

Question #3:

The summary of the CMD is not fully consistent with the text of the CMD. The CMD states following in the summary:

" …Commission authorize Unit 3 restart following any outage and close the Order for all

Bruce Power units". However, the text of the CMD does not recommend closing the order for "all Bruce

Power units", nor does the Bruce Power submission request this. This is not a big point, but it is an inconsistency that can surprise the reader and detract from the real message that is only focused on Unit 3.

Answer #3:

Bruce Power confirms its understanding that the information provided was in support of removing Unit 3 from the Order.

Question #4:

There continue to be acronyms used in the material that an audience that doesn't work in these assessments regularly would have difficulty understanding. But let me start with Kudos to Doug Scarth and his co-authors of Enclosure 1: their glossary was exemplary and made their complex paper easier to read. This issue has been discussed before: many authors forget to define some of their acronyms or use different acronyms for a single meaning, e.g. KIH and pc for KIH and pc. A suggestion offered by an EAC member that has been seen to work effectively is the development of a Global Glossary of Acronyms that includes all the acronyms being used by licensees, intervenors and CNSC staff. This will grow to be a long list, many pages long. But in the virtual world, attaching the Global Glossary to each Notice of Meeting is trivially easy. And if there is an easy way to add, deduct or revise acronyms (through a process that CNSC would control), this would be a very useful "live" tool to make the job of the Commission Members and the audience a little bit easier.

Answer #4:

Bruce Power thanks the EAC for their feedback.