

RES & EPRI Team Response to FAQ 06-0018
NUREG/CR-6850, EPRI TR-1011989

Final – 2/7/2007

Prepared by: S. Nowlen, B. Najafi, M. Kazarians, F. Joglar

FAQ 06-0018 requests clarification regarding the relationship between Appendix L and Task 6, bin 4, the Main Control Board. It is also the RES & EPRI team's understanding that there was some question as to what should be included in the Main Control Board given the wording provided in Appendix L. The FAQ as presented to the RES & EPRI team is included for reference as an attachment at the end of this response.

On the first point, the team's intent is that there is a *one-to-one* correspondence between the main control board as discussed in Appendix L and Bin 4 in the fire frequency task.

On the second point, what constitutes the main control board, the intent of the guidance was to *sharply limit* the scope of the panels to be included in this bin. The main intent was to capture the main "horseshoe" and little else. For many plants, the main control board will be the main horseshoe and *nothing else*. This is important given that fires in the main control room that occur outside the main horseshoe were binned with the general electrical panel fires and not with the main control board. Changing the definition of a fire frequency bin (i.e., what goes into a particular bin) creates an inconsistency with the binning of events (in Chapter 6) and the resulting fire frequency estimates.

The additional wording provided in Appendix L (the bullet list on page L-2) was intended to allow for some flexibility given the wide variability among control rooms around the country. The guidance was not intended to open the door to inclusion of more than a small handful of other control room panels. Any panel that is detached from the main horseshoe would generally be excluded from this definition of the main control board with few exceptions.

The joint RES/EPRI efforts included demonstration studies where we exercised the consensus methodology at volunteer pilot plants. To illustrate the intended exception, at one of our pilot plants we encountered two 'bench-board' panels that were detached from, but directly in front of, the main horseshoe. (At some plants such panels are referred to as 'consoles.') The two panels were an integral part of the main plant monitoring and control functions. They were also in the center of the operators' main work area and were manned on a nearly continuous basis. Our intent was to include these two bench-boards as a part of the main control board and the wording of the guidance was intended to allow for this flexibility.

However, this same plant had numerous smaller detached panels housing such things as computers and the event recording equipment and printers. These panels were in full view of the operators (generally behind or to the side of their main work area). None the

less, they were not treated as a part of the main control board because they were clearly and distinctly detached from the main control board and served unique functions.

There were also numerous “back panels” and other detached panels housing items such as balance of plant and offsite power controls and indicators. All of these panels were excluded from the main control board and were treated as general electrical panels.

In general, the definition of the main control board is intended to *sharply limit* the scope of that bin to the main horseshoe and under certain circumstances a very small number of other detached panels. The intent is to treat the vast majority of the detached panels, and any “back” panels, as general electrical panels, not as a part of the main control board.

NOTE: The pages which follow show the FAQ as it was presented to the RES & EPRI team for review and comment.

FAQ Number 06-0018, Revision 0

Plant:	<u>Harris Nuclear Plant (HNP)</u>	FAQ # <u>06-0018 Rev. 0</u>
Submittal Date:	<u>11-6-06</u>	
Licensee Contact:	<u>David Miskiewicz</u>	Tele/email <u>919-546-7588</u>
NRC Contact:	<u></u>	Tele/email <u></u>

Distribution: Check all that apply (*NEI Internal Use*)

☐ **FPWG** ☐ **RIRWG** ☐ **NSSS OG** ☐ **NFPA 805 TF** ☐

Subject: Clarification/enhancement of Ignition Source counting guidance for Main Control Board (MCB) in NUREG/CR-6850, supporting NFPA-805 Fire PRA application.

Interpretation of guidance? Yes

Proposed new guidance not in NEI 04-02? Yes

Details:

NEI 04-02 Guidance needing interpretation (include section, paragraph number, and line number):

New attachment on interpretation issues

Circumstances requiring guidance interpretation or new guidance:

NUREG/CR-6850, Section 6.5.6

The guidance provided in NUREG/CR-6850 for Task 6, Fire Ignition Frequency, is subject to application inconsistency in the treatment of Main Control Board (Bin 4). The guidance for Task 6 does not provide any specific definition or characterization of what constitutes a Main Control Board (MCB) other than a reference to it being the central element of the room. A discussion amongst the Pilot Plants that included consideration of other plants in their respective fleets found wide variability in the configuration of the main control room. There was a concern that inconsistent treatment of this bin would unnecessarily challenge the completion and review of the Fire PRA. This challenge would be manifested by a notable change in the fire frequency assigned to an individual panel depending on whether it was counted as Bin 4 or Bin 15.

Further review of NUREG/CR-6850 found that a definition of MCB is provided in Appendix L. However, this Appendix develops a fire modeling treatment of fire behavior within a panel enclosure. There was a concern that absent documented agreement, there could be a future challenge to the use of the definition in Appendix L for the purposes of Task 6, Bin 4 counting.

Detail contentious points if licensee and NRC have not reached agreement

This topic has impact on the NFPA-805 pilots, non-pilots and other users of NUREG/CR-6850.

Potentially relevant existing FAQ numbers:

This guidance is specific to the characterization of Main Control Board for Bin 4 determination. The characterization and counting of electrical cabinets for Bin 15 determination is addressed by FAQ 06-0016.

Response Section

It is proposed that the definition of Main Control Board provided in NUREG/CR-6850, Appendix L be accepted as also being applicable for Task 6, Bin 4 counting.

Basis:

The guidance proposed will provide more consistency when determining plant specific control room ignition frequencies while working within the bounds of the exiting data provided by the NUREG. This should facilitate the review and acceptability of the results.