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Activation Analysis
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September 13, 2004

Mr. Kevin M. Witt
Mail Stop O12-G13
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Witt:

As per our September 10, 2004, exit meeting on the September 2004 Operator Licensing written exam, we would like to summarize our comments as follows.

Section B – Normal/Emergency Procedures & Radiation Control

(B.1) We suggest this question be removed because the material is from the MITR-III SAR, which is not yet approved, and not a part of our current training. PM 5.0 of the AOPs is the normal source of dose information for various operation conditions and power histories. However, it doesn't address 100 kW operation. Also, the question does not indicate whether the 100 kW follows a period of prolonged operation for which there would be high levels of Na-24 or a long shutdown time for which there would be no Na-24.

(B.2) We suggest answers (a) and (d) both be acceptable because both are legitimate concerns if fission products are circulating in the primary coolant. (Note: For answer (d), see PM (AOP) 5.2.3-Immediate Action-Step 3).

(B.14) We suggest this question be removed because the official answer of "blockage of fuel element cooling channels" is taken from PM 4.5.2 which categorizes accidents as (1) credible accidents possibly leading to an off-site radiological emergency, (2) credible accidents not leading to an off-site radiological emergency, or (3) very-low probability accidents. It does not refer to which is the "most" credible. All of the answers given in this question are listed as per PM 4.5.2 and all would be equally valid answers. PM 4.5.2 does not address the issue of "most".

Section C – Facility and Radiation Monitoring Systems

(C.8) We suggest answers (a), (b), and (c) all be acceptable. Answer (a) is for manual initiation; answer (b) is the shut-off valve; answer (c) is for automatic initiation. (See RSM diagram of Secondary Coolant System).

(C.10) We suggest answers (b) and (c) both be acceptable because both are normal means of satisfying the subcritical interlock. Answer (c) contributes to meeting the interlock's requirements, while answer (b) is a means of defeating (i.e. bypassing) it. (See RSM Pg.4-3). The question hinges on the words 'normal' and 'defeating'.

We describe startups as 'routine' and 'non-routine' (PM 2.3.2) but not as 'normal' or 'abnormal'. So, the word 'normal' does not clarify the question for us. The word 'defeating' does have special meaning in that one bypasses the interlock during blade calibrations, which are otherwise done using the routine (normal) startup procedure (RSM 4-3). Hence, the question's language points to both (b) or (c) as valid answers.

(C.11) We suggest answers (a), (b) and (c) be acceptable because the Log N period signal is fed by the fission chambers and gamma ion chambers of Nuclear Safety System Channels 1 and 2, as well as by the compensated ion chamber of Channel 3. (See RSM Section 5.3.1 as well as 5.3.2. Also see Figure 5.3 of RSM Pg. 5-14 which shows that Channel 1,2 and 3 feed to the Log N recorder).

(C.18) We suggest answers (a), (b), and (d) all be acceptable because in-core sample assemblies have been constructed using all three materials. (Note: The outer material is normally aluminum, but it could be stainless steel (see TS 5.2.2(b) and TS 5.3 Specification). The interiors have been aluminum, steel and titanium).

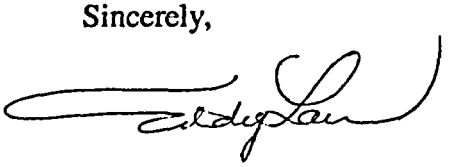
(C.19) We suggest answers (a) and (d) both be acceptable because Panel 1A and Panel 1 (Circuits 13-20) are the items supplied by emergency power. Certain control room wall receptacles are picked up. (See RSM Table 8-8-3 on Pg.8-34 and RSM Section 8.8.2 on Pg.8-30, especially the third paragraph). (Note: Strictly speaking, none of the answers is correct because:

a) Not all wall receptacles are supplied by emergency power. Only those supplied from Panel #1 Circuit #14 are covered.
b) Not true.
c) Not true.
d) Equipment from panel #1 (circuits 13-20) and panel #1A are operated on emergency power.

Another point of possible confusion is that the medical room wall receptacles were recently removed from the emergency power system.)

We thank you for the opportunity to comment on the exam. Thank you for your effort and time. Please do not hesitate to contact us if further questions arise.

Sincerely,



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