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

Dear Mr. Witt:

Thank you for your letter dated October 7, 2004 informing us of the results of NRC administered written exam given at the MIT Nuclear Reactor Laboratory on September 7, 2004. This response is written to request an NRC staff review regarding the two candidates who did not score a passing grade in Section C.

The two candidates who failed the exam actually did quite well overall as evidenced by their scores for Sections A and B as well as for their oral / operating test. We reiterate that we have full confidence in the capabilities of these two individuals. Their performance on Section C was below passing but only slightly so. We do not feel that their low Section C scores are indicative of their reactor knowledge level but rather reflect confusion in their interpretation of some of the questions. Accordingly, we are requesting that NRC review the resolution of question C.11.

We believe that if Question 11 of Section C had only answers (a) and (b) acceptable, rather than (a), (b), and (c), the question would not have been deleted and both candidates would have received a passing grade in this section which would have led to their passing overall.

The question is repeated in its entirety below.

Question C.11 [1.0 point]

Which ONE of the following neutron flux detectors provides a signal indicating the Log N period of the reactor?

A. Fission chamber
B. Compensated ion chamber
C. Gamma ion chamber
D. Boron-trifluoride detector

The answer as given in the original NRC answer key is (b).

However, during the exam, a question was brought to the examiner's attention regarding at what power level the reactor was operating. The instruction given by the examiner to the candidates was that the reactor was operating "at subcritical power".

Using the clarified information the answers that should be accepted are (a) and (b) only because the startup channels used while commencing a reactor startup are Channels 1 and 2, which are in their fission chamber mode during reactor startups. Channel 3 is a compensated ion chamber and supplies a signal to the Log N count rate recorder as well. Please see RSM Sections 5.3.1, 5.3.2, and Figure 5.3 which shows that Channels 1, 2 and 3 feed the Log N count rate recorder.

When we sent in our comments on the exam on September 13, 2004, we had not remembered the clarification given to the candidates and so also added as a possible answer, (c), because shortly before achieving criticality, the chambers are switched to ion chamber mode. In hindsight we should not have included (c).

As noted above, we do feel that these two individuals are fully competent to operate the MITR. We await your decision on this matter; if at any time I can be of further assistance, please do not hesitate to contact us.

Sincerely,

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Superintendent
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