



The Ohio State University

Engineering Experiment Station

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August 24, 1983

J.G. Kepler, Director  
Region III, U.S. Nuclear  
Regulatory Commission  
799 Roosevelt Road  
Glen Ellen, Illinois 60137

Dear Sir:

During a training session for Reactor Operator trainees held August 2, 1983 it came to the attention of the Reactor Staff that there may have been two occasions of variation from performance specifications contained in the Technical Specifications of The Ohio State University Research Reactor (License No. R-75). Although the Reactor Staff does not consider either of these to be "substantial variances" that require reporting within thirty days, it seemed prudent that they be reported to be evaluated by your office. The two variances are discussed below.

- I. T.S. 5.8 "An air monitor located near the building exhaust fan, shall monitor reactor room effluent whenever the reactor is in operation."

During recent operations (July 25, 1983 and August 2, 1983), when a collimator was in place in BP#1, we briefly operated the effluent monitor in the "sniffer" mode to evaluate Ar-41 production in the vicinity of BP#1. The "sniffer" mode does not monitor the air near the building exhaust fan so for short times (~2 minutes on July 25 and 46 minutes on August 2) the effluent was not monitored at the point of discharge. However, since the sniffer was monitoring closer to the point of release than the building exhaust, it should have been providing a more conservative estimate of actual release. All values for these operations were less than MPC for a restricted area.

To resolve this problem the Reactor Staff will operate the effluent monitor only in the normal mode during future operations. They will also do further evaluations and decide if a Technical Specification change should be requested to allow operation in the sniffer mode.

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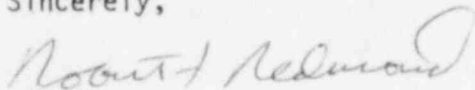
- II. T.S. 6.1.2(2) "The graphite thermal column with removable stringers shall have an airtight seal from the reactor room atmosphere."

The intent of this T.S. is to limit the production of Ar-41 produced in air in the thermal column. During normal operations, using other experimental facilities, the thermal column does have an airtight seal. However, when the thermal column is used for experiments it is not always possible or practical to maintain an airtight seal. For example, if an auxiliary detector is placed in a thermal column stringer the cables, as well as having a stringer removed, preclude an airtight seal. The reactor staff does not believe, however, that the intent of the T.S. is to limit the experimental operations in the thermal column.

To resolve this problem the Reactor Staff will operate with the airtight seal in place whenever practical. They will also evaluate time limitations appropriate to the operation of the reactor with one or more graphite stringers removed. This will be similar to the time restrictions placed on open beam port and rabbit experiments as discussed in section 2.2.3.4 of the Hazards Summary Report for The Ohio State University Research Reactor.

If you have any questions on these matters please contact Mr. Richard D. Myser or Mr. Brian K. Hajek at 614-422-6755.

Sincerely,



Robert F. Redmond, Director  
Engineering Experiment Station

cc: Richard D. Myser, Associate Director, Nuclear Reactor Laboratory  
Brian K. Hajek, Associate Director, Nuclear Reactor Laboratory  
Don W. Miller, Director, Nuclear Reactor Laboratory  
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Cecil O. Thomas, USNRC