



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

*File*

DEC 15 1981

Docket No. 50-261

MEMORANDUM FOR: Thomas M. Novak, Assistant Director  
for Operating Reactors, DSI

FROM: William E. Kreger, Assistant Director  
for Radiation Protection, DSI

SUBJECT: H. B. ROBINSON, UNIT NO. 2, TRANSMITTAL TO LICENSEE OF  
TECHNICAL EVALUATION OF LICENSEE RESPONSE TO ITEM II.F.1,  
ATTACHMENT 1, NUREG-0737

The licensee's submittal of March 3, 1981, in response to requirements of Item II.F.1-1 of NUREG-0737, was identified as being in deviation with respect to the use of detectors mounted externally and internally to ducts containing potential plant gaseous effluents.

A technical evaluation of these deviations was performed by the staff's contractor, EXXON Nuclear Idaho Company, and submitted November 2, 1981. The technical evaluation concludes that a radiation detector mounted externally to the effluent duct is not sufficient to meet the requirements of Table II.F.1-1 of NUREG-0737 for the upper ranges of noble gas effluents, e.g.,  $10^2$  to  $10^5$  uCi/cc. Similarly, a radiation detector mounted internally to the duct, but not shielded from ambient radiation, is not sufficient to meet the requirements of Table II.F.1-1 for concentrations less than  $10^2$  uCi/cc, with the exception that if the detector is responsive only to beta radiation, e.g., a beta scintillation detector, such an arrangement could be considered acceptable.

Our concerns over these deviations have been transmitted through the NRR Operating Reactors Project Manager, who has made several phone calls to the licensee concerning this matter, without a resolution of the deviations.

Since no resolution of the deviations has been made, we request that a copy of the enclosed technical evaluation be forwarded to the licensee with a request for either a technical justification of his position or a change of that position by way of a commitment to meet the requirements of Table II.F.1-1 of NUREG-0737. Alternatively, the licensee can resolve the deviation for the high range detector and Table II.F.1-1 by preparing a procedure through which the thickness of the duct or pipe may be taken

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into account when measuring low-energy gamma radiation; however, such a procedure must satisfactorily consider the shifting energy spectrum resulting from radioactive decay following reactor shutdown.

Original signed by  
W. E. Kreger

William E. Kreger, Assistant Director  
for Radiation Protection  
Division of Systems Integration

Enclosure:  
Technical Evaluation

- cc: R. Mattson
- D. Eisenhut
- R. Capra
- S. Varga
- W. Gammill
- R. Bangart
- W. Ross
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