

50-247

APR 21 1971

D. Muller, PWR Branch #1, DRL

STAFF COMMENTS ON QUESTION SET H FROM INTERVENOR IN INDIAN POINT - 2 HEARING

Comments on the questions assigned the SE&RS Branch, and on the applicant's responses, are attached.

T. R. Wilson, Acting Chief
Site, Environmental and Radiation
Safety Group

Enclosure
cc: w/encl.
M. McCoy
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DATE ▶	4/ 21 /71	4/ /71				

39.

The staff has evaluated the charcoal adsorbers in terms of a minimum 10% removal effectiveness for organic iodides per pass over the entire period of operation. This analysis is based on the most adverse results reported in ORNL -TM - 2728, where very low efficiencies were reported for charcoal beds after flooding. The staff does not expect flooding to occur over an extended period, but the possibility of such occurrence cannot be precluded.

42. Extensive tests on the iodine removal capability of containment spray systems have been completed at Oak Ridge National Laboratory and at Battelle Northwest Laboratory. The scaling factors were of the order of 1:5000 and 1:100 of full size, respectively. All results indicated rapid iodine removal and could be correlated with theoretical calculations. Therefore, the current staff model for the evaluation of spray effectiveness, which incorporates a factor of conservatism of greater than three in the iodine removal constant, tends to considerably underpredict the expected minimum performance of sprays. The staff is convinced that the effectiveness tests have given adequate assurance of the performance characteristics of spray systems and have defined the degree of conservatism of the current staff model.

Iodine removal by sprays and by plateout are both realistically taken as time-dependent mechanisms, and are therefore interrelated. The considerably slower rate of iodine removal by sprays predicted by the staff model would therefore permit greater plateout than the much more rapid spray removal rate chosen by the applicant. A comparison of a realistic performance model, based on simultaneous plateout and spray removal, with the model based on the TID-14844 plateout assumptions and the same spray removal performance showed that the latter model (as presently applied by the staff) yields the more conservative results.

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