

OCT 20 1972

Docket 50-286

R. C. DeYoung, Assistant Director for Pressurized Water Reactors, I

**REQUEST FOR INFORMATION ON IP-3 CONTROL ROOM DOSES**

We require the information indicated in the enclosure to complete our review of the Indian Point 3 application with regard to compliance with Criterion 19. Calculations based on our present interpretation of the applicant's system indicate that the thyroid dose may be unacceptably high. The questions were formulated by K. Murphy of the Accident Analysis Branch.

Original signed by

H. R. Denton

Harold R. Denton, Assistant Director  
for Site Safety  
Directorate of Licensing

**Enclosure:**

Request for Information in Regard  
to Indian Point Unit No. 3  
Control Room Ventilation System

cc w/o encl:

A. Giambusso  
W. McDonald

cc w/encl:

D. Vassallo  
H. Specter  
W. Gamill  
C. Ferrell  
K. Murphy

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SURNAME ▶	MURPHY: emh	ECRIMES	HDENTON			
DATE ▶	10/19/72	10/19/72	10/20/72			

ACCIDENT ANALYSIS BRANCH

REQUEST FOR INFORMATION IN REGARD  
TO INDIAN POINT UNIT NO. 3  
CONTROL ROOM VENTILATION SYSTEM

1. Describe the physical location of the fresh air inlets to the control room.
2. Describe the charcoal filter unit planned for use in the control room ventilation system.
3. Are all miscellaneous ducting and openings leading from and to the control room isolated during emergencies to eliminate possible inleakage, e.g., locker room exhaust duct?
4. The 35 cfm filtered air make-up assumed in the safety analysis does not agree with the design fresh air make-up of 1000 cfm reported in Section 9.0. The amount of air make-up should be based on maintaining at least a  $1/8$ " Wg pressure within the control room. Using the 1000 cfm flow rate, our calculations indicate that the requirements of Criterion 19 are not met. Discuss the feasibility of accurate damper adjustment to achieve very low air-makeup flow rates. The tests proposed to verify that the control structure can be pressurized to  $1/8$ " Wg at the flow rate claimed should be indicated.
5. For two-inch charcoal bed filters a 90% iodine removal efficiency is normally applied for elemental iodine and a 70% removal efficiency for methyl iodine. How does this affect the thyroid dose presented in the FSAR?
6. Present the beta dose computed for control room operators. Discuss any departures from Safety Guide 3 calculational methods. Discuss any actions proposed to reduce beta exposure of personnel.
7. What is the strategy used to operate the ventilation system (using the 3 modes discussed in Section 9.9.3) during the first few hours after the accident occurs versus the first few days? What is the operating strategy for a long-term versus a short-term radioactive cloud passage?
8. Describe the initial verification test program and periodic surveillance tests necessary to assure system availability and proper operation.
9. Present a calculation of the doses received by control room operator from a main steam line break accident.
10. In the case of the LOCA allowances may be made for control room occupancy. Occupancy factors of 1.0 for 0 - 24 hours, 0.6 for 1 - 4 days, and 0.4 for 4 - 30 days are acceptable.