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SUBJECT: Forwards response to NRC 810805 ltr re SEP Topic IX-5, "Ventilation," as discussed in 810828 telcons.

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JOHN E. MAIER
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September 17, 1981

Director of Nuclear Reactor Regulation
Attention: Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: SEP Topic IX-5, Ventilation
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

This letter responds to the NRC's request for additional information for this SEP topic, transmitted to RG&E by letter of August 5, 1981. The response to the NRC questions was discussed between RG&E personnel, Mr. Clyde Herrick of FRC, and Mr. Stewart Brown of the NRC by telephone conversations on August 28, 1981. The attachment serves to document this conversation.

Very truly yours,

John E. Maier

Attachment

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Attachment: Response to August 5, 1981 Letter,
SEP Topic IX-5, Ventilation Systems

1. Bypass Duct Damper, Auxiliary Building Main Exhaust Fan System

Dwg. 33013-533 indicates that the bypass damper is controlled by the Auxiliary Building charcoal filter fans. These are presumed to be the redundant fans on the lower floors of the auxiliary building. (1) Is this correct? (2) Please clarify the operation of the main fan bypass damper, and verify that it will be open for safe shutdown.

Response: The Auxiliary Building charcoal filter fans are redundant. The main bypass damper is activated by the charcoal filter fan's motor starters. Actuation of the fans causes opening of the damper.

2. Auxiliary Building Main Exhaust Line Positive Pressure

During shutdown of the reactor using onsite diesel generated power, the main exhaust fans, 1A and 1B will be shut down, their respective dampers will be closed and the main fan bypass duct damper will be open. The remaining exhaust fans on three separate lines leading to the main HEPA filter continue to operate. The loss of suction from the main exhaust fans now causes a positive back pressure on each line in the duct leading to the main HEPA filter. Please verify that the pressure produced here cannot cause backflow through any one operating fan. This is related to the flow vs. pressure characterisitcs of the fans used.

Response: The information is not available at this time. An evaluation of the flow vs. pressure characteristics of the respective fan will be undertaken shortly. It is expected that a response can be provided by 10/15/81.

3. Description, Auxiliary Building Exhaust Fan 1G

Please provide a complete description of Exhaust Fan 1G, including the variable blade angle or variable inlet vane control. How is its differential pressure control tied to the control of the exhaust system? What percentage of the flow area remains with the inlet vanes closed or the blades in flattest pitch?

Response: Exhaust fan 1G uses variable blade angle control. At its flattest pitch, 85½% of the inlet area is closed. Differential pressure control is via a venturi tube, which controls fan differential pressure to 4½ inches of water.

4. Auxiliary Building, Damper Control in Two Lines Leading to the New Charcoal-HEPA Filter

Drawing 33013-533 dated 1975 shows revisions to the system as compared to system descriptions in the FSAR. Dwg. 33013-533 shows a charcoal-HEPA filter fed by two exhaust lines, one from the general operating floor, boric acid, and drumming areas, and the other from a wide range of intermediate floor and basement areas. Both lines retain their respective actuator operated dampers just before the charcoal-HEPA filter. The drawing indicates "motor starter" as the controlling means for each damper. Since, in the system revision, the respective fans in each line were removed, what motor starter or starters are now used for each damper? Is it Fan 1G or some other control element?

Response: Fan 1G controls the dampers in both lines.

5. Hydrogen Recombiner Control Panel

Please describe the ventilation and cooling needs.

Response: Intermediate Building ventilation should maintain the environment in the area of the recombiner panel to less than 104°F.

6. Air Supply, Intermediate Building Fan 1C

It was not determined in the visit to Ginna whether the air source is from the turbine building or whether it is now outside air. Please indicate the present source.

Response: Outside air, drawn via louvres in the Intermediate Building, provide the necessary makeup air.

7. Response to Radiation Monitors R13 and R14

Please provide an outline of the exhaust system response to monitors R13 and R14, plus a brief statement as to the rationale.

Response: The following is a table of the plant ventilation system response for a high alarm on either R-13 or R-14: The general philosophy is to maintain the auxiliary building and the intermediate building at slightly negative pressures, to prevent out leakage of radioactivity, and to trip all fans except those exhausting to the plant vent via charcoal filters.

VENTILATION EQUIPMENT	"FILTER-OUT"	"FILTER-IN"
1A or 1B Auxiliary Building Main Exhaust Fan		
1C Auxiliary Building Exhaust Fan	X	
1G Auxiliary Building Exhaust Fan		
1F Auxiliary Building Exhaust Fan	X	X
1A Auxiliary Building Supply Air Handling Unit	X	
1B Auxiliary Building Supply Fan	X	
1A or 1B Intermediate Building Exhaust Fan	X	X
1C Intermediate Building Exhaust Fan	X	X
1A or 1B Controlled Access Exhaust Fan		
1A or 1B Auxiliary Building Charcoal Filter Fans		

X - Indicates the fan or Air Handling unit will trip

No marking - Indicates the fan or air handling unit will remain in service.

In addition, a high alarm on R-14 will close the Gas Decay Tank Release Valve RCV-014.