



General Electric Company
175 Curtner Avenue, San Jose, CA 95125

April 25, 1994

Docket No. 52-001

Chet Poslusny, Senior Project Manager
Standardization Project Directorate
Associate Directorate for Advanced Reactors
and License Renewal
Office of the Nuclear Reactor Regulation

Subject: Submittal Supporting Accelerated ABWR Schedule - HVAC
Information

Dear Chet:

Enclosed are the SSAR markups resulting from our April 20, 1994 telephone call. These changes will be incorporated into the next amendment.

Please provide a copy of this transmittal to Jim Lyons.

Sincerely,

Jack Fox
Advanced Reactor Programs

cc: Alan Beard (GE)
Gary Ehlert (GE)
Norman Fletcher (DOE)
Joe Quirk (GE)

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- (d) On manual initiation, the clean area HVAC system can be put into high radiation mode. On switch over, exhaust fans stop and emergency filter train starts. System pressurizes clean areas of the service building.
- (e) Instrumentation is provided for the monitoring system operating variable during normal station operating conditions. The loss of airflow, high and low system temperature, and high differential pressure across various filters are annunciated on the local control panel. Trouble on the local panel is annunciated in the main control room.
- (8) All power and water is provided from non-safety-related sources.
- (9) The COL applicant will provide a detailed P&ID, system flow rates an equipment list, and compliance with RG 1.140 and toxic gas protection requirements for the Service Building HVAC system, including the TSC and the OSC, for NRC review. (See Subsection 9.4.10.1 for COL License Information.)

9.4.8.3 Safety Evaluation

- (1) The Service Building HVAC System is not safety-related and is not required to assure either the integrity of the reactor coolant pressure boundary or the capability to shut down the reactor and maintain it in a safe shutdown conditions.
- (2) Pressure control dampers are employed between clean and potentially contaminated areas and are of the backflow type and fail closed. This minimizes the backflow of contaminated air to clean areas when there is a loss of power and subsequent fan system shutdown.
- (3) The system incorporates features to assure its reliable operation over the full range of normal station conditions.
- (4) Clean areas are provided with emergency filtration system and a high radiation mode of operation.

→ **INSERT A**

9.4.8.4 Testing and Inspection

All equipment is factory inspected and tested in accordance with the applicable equipment specifications and codes. System ductwork and erection of equipment is inspected during various construction stages. Preoperational tests are performed on all mechanical components and the system is balanced for the design air, and water flows and system operating pressures. Controls, interlocks and safety devices on each system are checked, adjusted, and tested to ensure the proper sequence of operation. A final integrated preoperational test is conducted with all equipment and controls operational to verify the system performance.

INSERT A

- (5) Since there are no sources of radioactivity inside the Service Building, automatic isolation provisions are not required. However, if radiation levels inside the Service Building are found to be high due to leakage from the secondary containment or from the Turbine Building, the Service Building HVAC system can be manually isolated to prevent releases to the environment.

**Table 9.4-4f HVAC System Component Descriptions
(Response to Question 430.243) (Continued)**

Non-Safety-Related Equipment List			
Heating/Cooling Coils	Quantity	Cooling (MJ/h)	Heating (MJ/h)
R/B Secondary Containment HVAC	(1 bank)	6435.95	9601.17
RIP ASD HVAC Division A	1	2110.15	
RIP ASD HVAC Division B	1	2110.15	

**Table 9.4-4g HVAC System Component Descriptions
(Response to Question 430.243) (Continued)**

Non-Safety-Related Equipment List		
Fans	Quantity	Capacity (m ³ /h)
R/B Secondary Containment Supply Fans	3 (1 on standby)	84,250
R/B Secondary Containment Exhaust Fans	3 (1 on standby)	86,250
R/B Primary Containment Supply Fan	1	22,000
R/B Primary Containment Exhaust Fan	1	22,000
RIP ASD Division A Supply Fans	2 (1 on standby)	50,000
RIP ASD Division B Supply Fans	2 (1 on standby)	50,000

**Table 9.4-4h HVAC System Component Descriptions
(Response to Question 430.243)**

Non-Safety-Related Equipment List		
Filters	Quantity	Capacity (m ³ /h)
R/B Secondary Containment HVAC	(1 bank)	172,500
R/B Primary Containment Intake HEPA Filter	1	22,000
RIP ASD HVAC Division A	1	50,000
RIP ASD HVAC Division B	1	50,000

Table 9.4-4i HVAC System Component Descriptions
(Response to Question 430.243) *

Non-Safety-Related Equipment List		
Non-Safety-Related Fan Coil Units	Quantity	Capacity (MJ/h)
Main Steam Tunnel	2	628.02
Refueling Machine Control Room	1	83.74
ISI Room AC	2	54.43
MG Set Room AC	2	1047.96
C/B Non-Safety-Related Electric Room	1	211.01
R/B FPC Room	2	28.47
CRD Replacement Room	1	18.42
RIP/CRD/FMCRD Repair Area	2	18.42
PCV L/T Measurement Room	1	0.042
Plant Stack Monitor Room	1	0.461
R/B SPCU Room	1	42.29

* The COL applicant shall supply equipment lists for the Service Building HVAC and the Radwaste Building HVAC System. See Subsection 9.4.10.1 for the Service Building, and 9.4.10.2 for the Radwaste Building.