ABB
ASEA BROWN BOVERI

June 4, 1993
LD-93-087

Docket No. 52-002

Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: System 80+™ Supplemental Information for Additional Submittal #2 Design Descriptions and ITAAC

Dear Sirs:

Enclosed is information requested by the staff to supplement information on the System 80+ design descriptions which is already on the docket.

ABB-CE has initiated an Integrated Review of the CESSAR-DC and Design Descriptions/ITAAC to ensure consistency among and within these documents. It is possible that changes to the enclosed material may be necessary should the review uncover any inconsistencies. It is our intention to incorporate such changes in our final amendment targeted for June 30, 1993.

If you have questions related to this material, please contact me or Mr. John Rec at (203) 285-2861.

Very truly yours,

G. D. Hess for

C. B. Brinkman
Acting Director
Nuclear Systems Licensing

gdh/lw
Enclosure: As Stated

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SUPPORTIVE INFORMATION FOR THE SAFETY DEPRESSURIZATION SYSTEM (2.4.1)

1. Amplifying Information for the Safety Depressurization System

   See CESSAR-DC Section 6.7

2. CESSAR-DC Chapter 14 Tests Applicable to the Safety Depressurization System

   See CESSAR-DC Section 14.2.12.1.39

REFERENCE INFORMATION FOR THE SAFETY DEPRESSURIZATION SYSTEM (2.4.1)

Relationship of the Safety Analysis to the Safety Depressurization System

1) Minimum capacity of reactor vessel upper head vent = 10,500 lb/hr saturated steam at 2500 psia

2) Minimum capacity of pressurizer vent = 50,000 lb/hr saturated steam at 2500 psia

REFERENCE INFORMATION FOR THE SAFETY DEPRESSURIZATION SYSTEM (2.4.1)

Relationship of the PRA to the Safety Depressurization System

1) The RDS has two redundant trains.

REFERENCE INFORMATION FOR THE SAFETY DEPRESSURIZATION SYSTEM
(2.4.1)

Relationship of the Shutdown Risk Evaluation to the Safety Depressurization System

None

SUPPORTIVE INFORMATION FOR CONTROL COMPLEX VENTILATION SYSTEM (2.7.17)

1. Amplifying Information for the CCVS

   See CESSAR DC Section 9.4.1

2. CESSAR-DC Chapter 14 Tests Applicable to the CCVS

   14.2.12.1.103 Control Building Ventilation System Test

   14.2.12.1.111 Control Building Ventilation Subsystem Test

REFERENCE INFORMATION FOR CONTROL COMPLEX VENTILATION SYSTEM (2.7.17)

Relationship of the Safety Analysis to the CCVS

See: CESSAR-DC TABLE 15A-10

The Safety Analysis assumes a maximum filtered air intake rate of 2000 CFM and recirculating iodine filter efficiencies.

elemental	≥	0.95
organic	≥	0.95
particulate	≥	0.99

REFERENCE INFORMATION FOR CONTROL COMPLEX VENTILATION SYSTEM (2.7.17)

Relationship of the PRA to the CCVS

Divisional separation of ventilation system assumed.

REFERENCE INFORMATION FOR CONTROL COMPLEX VENTILATION SYSTEM (2.7.17)

Relationship of the Shutdown Risk Evaluation to the CCVS

None

SUPPORTIVE INFORMATION FOR THE EMERGENCY FEEDWATER SYSTEM (2.8.8)

1. Amplifying Information for the EFWS

   See CESSAR-DC Section 10.4.9

2. CESSAR-DC Chapter 14 Tests Applicable to the EFWS

   See CESSAR-DC Section 14.2.12.1.36

REFERENCE INFORMATION FOR THE THE EFWS
2.8.8

Relationship of the Safety Analysis to the EFWS

1) Minimum flow rate to a steam generator requiring emergency feedwater = 500 gallons per minute with steam generator pressure at 1200 psia.

2) Maximum flow rate to a steam generator requiring emergency feedwater = 800 gpm at runout conditions.

3) Emergency feedwater storage tank capacity is 350,000 gallons each.

REFERENCE INFORMATION FOR THE THE EFWS
2.8.8

Relationship of the PRA to the EFWS

1) The EFWS has two redundant divisions for supplying feedwater to the steam generators to achieve heat removal from the reactor to the entry conditions for using the SCS.

2) Each EFWS Division has two EFW pumps, each with a pump driver diverse from the other.

3) In each EFWS Division, the two EFW pump discharge pipes are joined together inside containment to a single pipe upstream of a cavitating venturi that connects to the SG downcomer feedwater line.

4) The EFW pumps in one Division can supply feedwater to the SG in the other division through a pipe having at least two normally closed isolation valves installed.

5) Each EFW Storage Tank (EFWST) can be supplied by gravity flow from the Condensate Water Storage Tank (CST). This source is isolated by at least two normally closed isolation valves.

6) The EFW turbine-driven pump in each Division is supplied steam from the SG in its division via a pipe connection located upstream of the MSIV.

7) The EFWS is actuated by an EFAS and an APS actuation signal on Low SG Water Level.

8) Upon receipt of an actuation signal, the EFWS:

   a. Starts the associated motor-driven pump,
   b. De-energizes the solenoid to open the associated turbine steam supply valve.
   c. Opens the associated EFW isolation valves to the appropriate SG.

9) Each EFW Division provides at least 500 gpm to the downcomer line of either SG.

10) Installed instrumentation provides the capability to monitor the performance of the system and the major components from the control room.

11) Each EFW pump can deliver EFW flow to the SGs when the SG pressure is at the Main Steam Safety Valve (MSSV) setpoint.

12) Each EFWST has a useable volume of at least 350,000 gallons.

REFERENCE INFORMATION FOR THE THE EFWS
2.8.8

Relationship of the Shutdown Risk Evaluation to the EFWS

None