NRC FORM 195 (2-76)

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NUMBER 50-387/388

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DESCRIPTION

LTR RE OUR 12-10-75 LTR AND THEIR 1-14-76 SUBMITTAL.....TRANS THE FOLLOWING.....

PLANT NAME: SUSQUEHANA 1&2

ENCLOSURE

RESPONSES TO NRC REQUEST FOR INFO DTD 12-10-75 ADD'L INFO ON COMPONENTS IN SUPPRESSION POOL W/ATTCH DRAWINGS.....

SAFETY	FOR ACTION/INFORMATION	ENVIRO 3-19-76 RKB
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Bicentennial Pennsylvania 1976

So your children can tell their children.

March 15, 1976

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Docket Nos. 50-387
and 50-388

ATTENTION: Dr. Walter R. Butler, Chief
Light Water Reactors Branch 1-2

SUSQUEHANNA STEAM ELECTRIC STATION
ADDITIONAL INFORMATION ON COMPONENTS IN
SUPPRESSION POOL
ER 100450 FILES 840-2, 172
PLA-108

Dear Dr. Butler:

On December 10, 1975, you requested additional information on piping and components located in the suppression pool. On January 14, 1976, we sent you our schedule indicating that this information would be provided by March 15, 1976. Consequently, we have enclosed fifteen copies of our responses to your request for additional information.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction

WEB:AAW

RECEIVED
MAR 19 1976
U.S. NUCLEAR REGULATORY COMMISSION
Mail Section

2759

Responses to NRC Request for
Information dated December 10, 1975

1. Provide a list of piping and mechanical components which could be subjected to suppression pool hydrodynamic loadings or loadings from operation of the primary system pressure relief valves, including detailed drawings and functional description of such piping and components.

   A list of all piping and mechanical components in the suppression chamber is attached. It includes a description of the function of each item and reference to the appropriate drawings. The following drawings are included:

8856-M-25-3	Rev. 8	8856-M-28-9	Rev. 4
8856-M-25-8	5	8856-M-29-1	7
8856-M-27-1	7	8856-M-29-3	4
8856-M-27-2	7	8856-M-157	1
8856-M-27-3	12	8856-M-242	6
8856-M-28-1	9	8856-M-247	4
8856-M-28-2	8	8856-C-157	3
8856-M-28-3	5		

2. Provide a description of methods and procedures used to define the pool dynamic loads and relief valve actuation loads acting on the listed piping and components.

   In September 1975 General Electric and Sargent and Lundy jointly published NEDO-21061 and NEDE-21061-P entitled Dynamic Forcing Function Information Report (DFFR). The DFFR provides methods and procedures for predicting potential LOCA hydrodynamic and MSRV discharge loads. Further definition of these loads will be obtained through the Mark II Containment Long Range Program.

3. Provide a description of methods and procedures, either by analysis or by testing, being used to ensure design adequacy of the listed piping and components under pool dynamic loads or relief valve actuation loads.

   The Susquehanna suppression chamber piping and components will be designed according to the requirements of the applicable codes as described in the Safety Analysis Report and the applicable portions of the DFFR. Since the piping and other internal components are not on the critical path for construction, their design has not been finalized. The piping and components will be relocated where possible to minimize the effects of the dynamic loads. We do not anticipate any testing to establish adequacy of the piping and components under pool dynamic or relief valve actuation loads.

4. Provide a description regarding how the pool dynamic loads or valve actuation loads are being concurrently considered and combined with other operation or accident loads acting on the listed piping and components.

A discussion of load combinations is given in the DFFR. As the design of piping and components is finalized, a complete and detailed analysis of the load combinations will confirm that the maximum stresses will not exceed the allowable stress limits. This analysis will be included in the FSAR.

5. Identify design limits used for the listed piping and components under pool dynamic or relief valve actuation loads. If analysis or testing has been done, a summary of analysis or testing results and their comparison with design limits should be provided. If analysis or testing has not yet been done, a description of the future program to perform such testing or analysis should be provided.

   As discussed in answer to Question 3 above, the piping and components will be designed to the limits specified in the applicable codes as described in the Safety Analysis Report. Piping and components will be relocated where possible to remove them from the pool swell zone. Preliminary analyses indicate that the piping can be adequately supported to withstand the pool dynamic and relief valve actuation loads.

SUSQUEHANNA STEAM ELECTRIC STATION

UNITS 1 & 2
SUPPRESSION CHAMBER PIPING & EQUIPMENT

Piping Line No.	Quantity	Function	Reference Drawing
18" HBD-185	2	RHR Pump full flow test	8856-M-25-2, M-27-2
10" HBB-120	2	RHR relief valve discharges	8856-M-28-2, M-29-2
21" HBB-110	4	RHR pump suctions	8856-M-28-1, M-28-9, M-29-1
6"-HBD-186	2	RHR pump min. flow bypass	8856-M-28-2, M-29-2
16"-HBB-104	2	Core Spray pump suctions	8856-M-25-1, M-27-1
10"-HBD-183	2	Core Spray full flow test lines	8856-M-25-1, M-27-1
4"-HBD-183	2	Core Spray pump. min. flow bypasses	8856-M-25-1, M-27-1
12"-HBB-101	1	RCIC turbine exhaust	8856-M-28-1, M-28-9
6"-HBB-102	1	RCIC pump suction	8856-M-28-1, M-28-9, M-28-2
2"-HBB-114	1	RCIC pump min. flow bypass	8856-M-28-2
2"-HBB-101	1	RCIC Turbine Exhaust Vent	8856-M-28-2
2"-HBB-101	1	RCIC vacuum pump discharge	8856-M-28-2
16"-HBB-109	1	HPCI pump suction	8856-M-28-1, M-28-9
3"-HBB-108	1	HPCI turbine exhaust vent	8856-M-28-2
24"-HBB-108	1	HPCI turbine exhaust	8856-M-28-2, M-28-8, M-28-1

Piping Line No.	Quantity	Function	Reference Drawing
4"-HBB-133	1	HPCI pump min. flow bypass	8856-M-28-2
12"-GBC-101	16	MSRV discharge lines	8856-M-25-1, M-27-1, M-28-1, M-29-1, M-25-8
6"-GBB-120	2	Suppression Chamber Spray	8856-M-25-3, M-27-3, M-28-3, M-29-3 M-25-8
1"-JCD-115	5	Inst. Gas to Primary Copntainment Vacuum Relief Valves	8856-M-157
1"-JCD-115	76	Leak Chase piping	8856-C-298, M-157
1"-JCD-115	1	Inst. Gas to leak chase piping	8856-M-157
Equipment No.			
1F037-A,B,C,D	5	Primary Containment Vacuum Relief Valves	8856-M-27-3, M-29-3
1F-402-AB	2	HPCI suction strainer	8856-M-28-9
1F-404-A,B,C,D	4	Core Spray suction Strainers	8856-M-25-8
1F-407, 408, 409, 410-A,B	8	RHR suction strainers	8856-M-28-9
1F-401-A,B	2	RCIC suction strainers	8856-M-29-9
1F-013	16	MSRV discharge quenchers	8856-M-25-8
	87	Downcomer Vents	8856-M-252, M-247
E-404-A,B	2	Containment Hydrogen Recombiners	8856-M-242