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CURTIS,N.W. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
YOUNGBLOOD,B.J. Licensing Branch 1

SUBJECT: Forwards response to Containment Sys Branch 810309-10 questions re FSAR review,COPDA was used for subcompartment pressurization analysis,Blowdown data was generated by hand calculations.

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APR 9 1981

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PP&L

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Vice President-Engineering & Construction-Nuclear
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April 3, 1981

Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
NRC MEETING - MARCH 9-10 1981
FSAR REVIEW - CONTAINMENT BRANCH
ER 100450 FILE 841-1
PLA-710

Dear Mr. Youngblood:

The attached responds to concerns expressed by the Containment Systems Branch at the March 9 and 10, 1981 meeting between NRC and PP&L.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

TEG/mks

Attachment

B001
S 1/1

ATTACHMENT TO PLA-710

Question #1

Does PP&L meet the NRC position on WCAP 7709L for H_2 recombiners? (Reference memo Rosa to Kintner dated 5/11/78.)

Response

Yes. PP&L utilizes the automatic temperature controller. However, we do not use the cold reference junction box with this type of penetration. We use chromel-alumel penetrations (not copper) for the hydrogen recombiner thermocouples.

Question #2

Will the H_2 recombiner work in an inerted atmosphere?

Response

Westinghouse has documented that the H_2 recombiners will work in an inerted atmosphere.

Question #3

P&ID M-157 shows group alarms on the inboard and outboard vacuum breakers. Is there position indication on the individual valves?

Response

Yes. There is position indication in the main control room for each valve. (Ref. P&ID M-100, sht. 2, notes 1 thru 4.)

Question #4

NRC did not receive a copy of table 6.2-23.

Response

Table 6.2-23 is included in Revision 22 to the Susquehanna FSAR. A copy is attached.

Question #5

What codes were used for subcompartment pressurization analysis and for blowdown data for this analysis?

Response

COPDA was used for subcompartment pressurization analysis. Blowdown data was generated by hand calculations.

Question #6

For 0-60 and 0-250 psig drywell pressure monitors:

a. Is manual action needed to provide indication in each range?

b. What is accuracy?

c. What is response time?

Response

a. No. Each is recorded on a separate channel.

b. Minimum accuracy is $\pm$3% of full scale.

c. Less than three seconds for full scale deflection.

Question #7

What is accuracy for suppression pool water level indication and hydrogen analyzer?

Response

Minimum accuracy is $\pm$2% of full scale.

Question #8

Change the description of penetration X-88 in Tables 6.2-12 and 6.2-22 to agree with the description given in paragraph 6.2.4.3.2.2 of the FSAR.

Response

The FSAR will be corrected.

Question #9

How far is the outboard isolation valve for penetration X-217 from the containment?

Response

Two and a half feet.

Question #10

What is the free volume of the secondary containment?

Response

Zone I	1,560,000 $ft.^3$
Zone II	1,670,000 $ft.^3$
Zone III, Unit 1	1,428,000 $ft.^3$
Zone III, Unit 2	1,300,000 $ft.^3$

Question #11

How many vacuum breakers are assumed to open in the containment pressure analysis? (To relieve pressure from wetwell.)

Response

Four.

TABLE 6.2-23

INITIAL AND BOUNDARY CONDITIONS FOR INADVERTENT SPRAY ACTUATION STUDY

	t -00	Time Zero to
Drywell		
Volume (Ft^3)	239600	239600
Pressure (PSIA)	14.8	34.83
Temperature (F)	150	259
Relative Humidity (%)	100	100
Spray Rate (GPM/ TRANS)	0/0	10700/1
Wetwell		
Volume - Vapor Region (Ft^3)	148590	145900
- Suppression Pool (Ft^3)	131550	131550
Pressure (PSIA	14.8	30.28
Temperature (F)	50	50
Relative Humidity (%)	100	100
Suppression Pool Free Surface Area (Ft^2)	5277	5277
Wetwell-to-Drywell Vacuum Breakers		
Number of Valve Assemblies		4 of 5
Flow Area Per Assembly (Ft^2)		2.05
Flow Coefficient		0.35
Assumed Vacuum Breaker Lifting Pressure (psid)		3
RHR System - Drywell Spray Mode		
Service Water Flow Rate (GPM)		9000
Service Water Temperature (F)		32
Heat Exchange Effectiveness		0.245