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SEP 13 1984

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Docket No. 50-352  
50-353

SUBJECT: Limerick Generating Station, Units 1 and 2  
Information for Auxiliary Systems Branch (ASB)  
Regarding Technical Specification Surveillance  
Requirement 4.6.1.4

REFERENCES: Telecon between ASB & PECO on 9/13/84

FILE: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

Attached is a draft change to FSAR Figure 6.7-2 which is being made as a result of the referenced telecon.

The information contained on this draft FSAR change will be incorporated into the FSAR, exactly as it appears on the attachment, in the revision scheduled for October 1984.

Sincerely,

*John S. Kemper*  
*for*  
*J. Kemper*

JHA/dg/09138405

Attachment

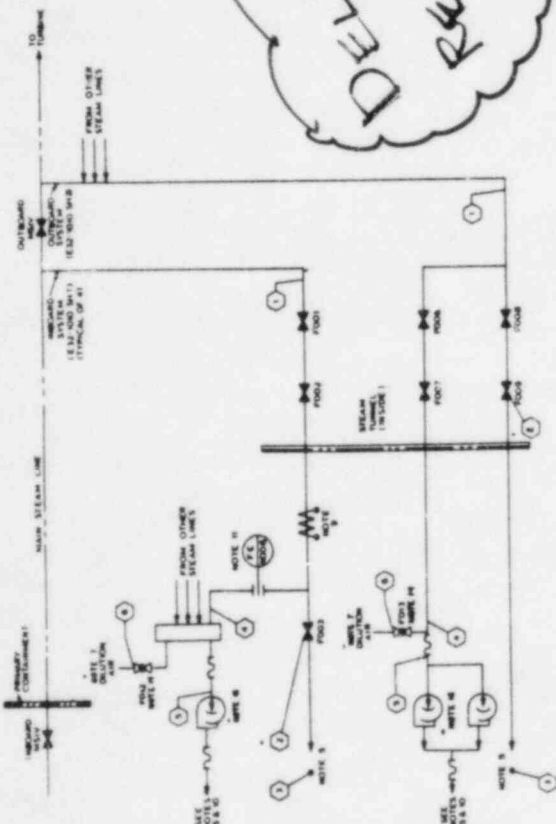
Copy to: (See Attached Service List)

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1/1

cc: Judge Lawrence Brenner	(w/enclosure)
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Judge Richard F. Cole	(w/enclosure)
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Docket & Service Section	(w/enclosure)
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Mr. Timothy R. S. Campbell	(w/enclosure)

DRAFT

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	1	2	3	4	5	6
1. Name of the institution						
2. Address						
3. Telephone number						
4. Fax number						
5. E-mail address						
6. Website URL						
7. Date of submission						
8. Signature of the representative						
9. Stamp of the institution						

PROPERTY	UNIT	TEST METHOD	1	2	3	4	5	6
POSS/CONTENT			100% POSS	100% POSS	100% POSS	100% POSS	100% POSS	100% POSS
FLOW (300 °C)	g/10 min	ASTM D 1238	10	10	10	10	10	10
TEMPERATURE (°C)			300	300	300	300	300	300
IMPRESSURE (MPa)			10	10	10	10	10	10

# MODE 1: NORMAL REACTOR POWER OPERATION

POSITION	1	2	3	4	5	6
FLOW (SEE NOTE 3)						
TEMPERATURE °F	500					
PRESSURE (SEE NOTE 3)	1000					

# MODE 2: STEAM LINE DEPRESSURIZATION

POSITION	1	2	3	4	5	6
FLOW (SEE NOTE 3)	NOTE 4	NOTE 4		NOTE 12 500 N/A	500 5000	NOTE 7
TEMPERATURE °F	500	510	NOTE 8	500 N/A	510 500	500
PRESSURE (SEE NOTE 3)	5.35	5.35	0.25 IN H <sub>2</sub> O	NOTE 8 N/A	0.25 IN H <sub>2</sub> O 0.25 IN H <sub>2</sub> O	0.25 IN H <sub>2</sub> O

# MODE 3: LONG TERM BLEEDOFF (UP TO 1 DAY AFTER S-STEAM INITIATION)

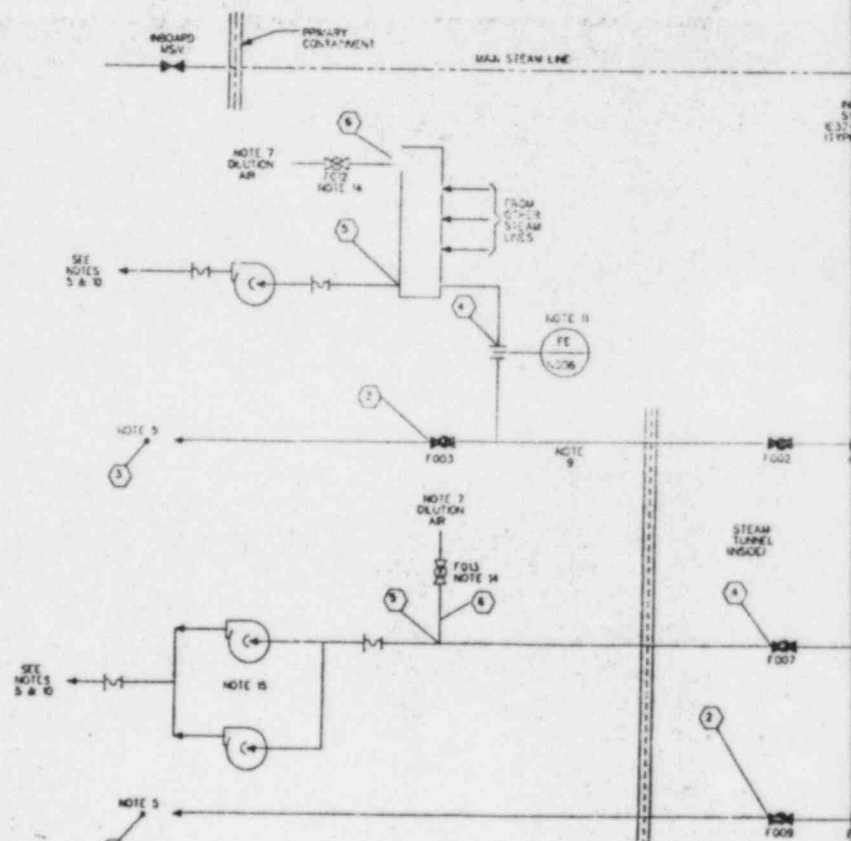
POSITION	1	2	3	4	5	6
FLOW (SEE NOTE 3)	3.50 SCFH NOTE 6A 540 NOTE 6B			3.50 SCFH NOTE 6A 540 NOTE 6B	500 5000	NOTE 7
TEMPERATURE °F	500			500	510	500
PRESSURE (SEE NOTE 3)	0.25 IN H <sub>2</sub> O			NOTE 8	0.25 IN H <sub>2</sub> O	0.25 IN H <sub>2</sub> O

# MODE 4: LONG TERM BLEEDOFF

POSITION	
FLOW (SEE NOTE 3)	
TEMPERATURE °F	
PRESSURE (SEE NOTE 3)	

# RECOMMENDED PIPING DESIGN









POSITION	
DESIGN PRESSURE (PSIG)	
DESIGN TEMPERATURE °F	
EST. LINE SIZE (IN)	



OFF 11 DAY TO 100 DAYS AFTER SYSTEM INITIATION

1	2	3	4	5	6
$\leq 100$ SCFH $\frac{H_2O}{hA}$ $\leq 40$ NOTE 6B			$\leq 100$ SCFH $\frac{H_2O}{hA}$ $\leq 40$ NOTE 6B	$\leq 100$ $\frac{H_2O}{hA}$ $> 200$	NOTE 7
$\leq 20$			$\leq 20$	$\leq 160$	$\leq 150$
$\geq 0.25$ M $H_2O$			NOTE 8	$\frac{H_2O}{hA}$ $\geq 0.25$ M $H_2O$	$0.25$ M $H_2O$

N PARAMETERS (SEE NOTE 8)



	1	2	3	4	5	6
	150	300		300	150	150
	575	575		575	196	150
	2					

TI  
APERTURE  
CARD

**DRAFT**

FSAR FIG. 6.7-2  
MSIV-LCS PROCESS  
DIAGRAM

1. SYSTEM PIPING LINE SIZES ARE FOR INFORMATION ONLY. ACTUAL LINE SIZES, AS DETERMINED BY OTHERS, SHALL MEET THE PROCESS HYDRAULIC REQUIREMENTS.

-  INDICATES INBOARD SYSTEM IN AND OUTBOARD SYSTEM PIT VALUES FOR THE MODES SPECIFIED WHERE SPECIFIED IS NOT SHOWN, VALUES ARE APPLICABLE FOR BOTH INBOARD AND OUTBOARD SYSTEMS.
-  INDICATES NOT APPLICABLE TO THE SPECIFIED MODE OR POSITION.
3. ALL PRESSURE AND FLOW LIMITS ARE IN PSIG AND SCFM RESPECTIVELY UNLESS OTHERWISE SPECIFIED. INCHES WATER PRESSURE LIMITS SHALL BE REFERRED TO VACUUM.
4. THE SYSTEM PIPING FROM THE MAIN STEAM LINE CONNECTION TO THE DEPRESSURIZATION LINE DISCHARGE POINT SHALL BE DESIGNED TO SATISFY THE FOLLOWING REQUIREMENTS:
- (A) THE INBOARD SYSTEM SHALL DEPRESSURIZE THE MAIN STEAM LINE FROM 35 PSIG TO .85 PSIG IN ONE MINUTE, TO .85 PSIG IN 10 MINUTES BASED ON STEAM FLOW. THE DEPRESSURIZATION TIME TO .85 PSIG SHALL BE ESTABLISHED DURING THE SYSTEM PRE-OP TEST. THE RESULT, BASED ON AIR FLOW, SHALL BE APPROXIMATELY 3 MINUTES.
- (B) THE OUTBOARD SYSTEM DEPRESSURIZATION OF THE MAIN STEAM LINE FROM 35 PSIG TO .5 PSIG SHALL BE BASED ON THE TOTAL VOLUME FROM THE OUTBOARD WAYS TO THE FLARING STOP VALVES OF THE INBOARD SYSTEM. THE DEPRESSURIZATION TIME TO ESTABLISH THE REQUIRED VACUUM FOLLOWING A DESIGN BASIS ACCIDENT, THE VOLUME SHALL INCLUDE THE BRANCH LINES UP TO THE FIRST SHUT-OFF VALVES.
- (C) PIPE EQUIVALENT LENGTH SHALL BE 100 FT.
5. BUILDING VOLUME SERVED BY STANDBY GAS TREATMENT:
- (A) FLOW IS TYPICAL FOR EACH INBOARD SUBSYSTEM LINE. THE LINE 8/P FROM MAIN STEAM LINE CONNECTION TO BLOWER SUCTION EXCLUDE FLOW ELEVANT. SEE NOTE IF SHALL BE LESS THAN 10 INCH WATER.
- (B) THE OUTBOARD SYSTEM LINE 8/P FROM MAIN STEAM LINE TO BLOWER SUCTION WITH THE SPECIFIED FLOW SHALL BE 20 INCHES WATER.
7. THE DELIVERY AIR FLOW VALVE SHALL BE THROTTLED TO SATISFY THE REQUIRED PARTIAL VACUUM IN MODE 2 POSITION (S). CONDITIONS. THE THROTTLED VALVE SHALL BE LOCKED AS THE PARAMETERS ARE ESTABLISHED. THE REQUIREMENTS SHALL BE ESTABLISHED WITH THE SYSTEM LOSS VALUES IN THE CLOSED POSITION. EXCEPTION: THE INBOARD SYSTEM VALVE F-103 ISQUANTITY OF FOUR SHALL BE IN THE OPENED POSITION. THE DELIVERY AIR TO LEAKAGE FLOW RATE MUST BE 2.5:3.
8. DATA BY OTHERS SHALL BE FILLED IN BASED ON ACTUAL PIPING ARRANGEMENT OR EQUIVALENT DATA SUBMITTED TO GE-BWSD FOR REVIEW.
9. THE PIPING WHERE HEAT/P ASSEMBLY IS INSTALLED SHALL WITHSTAND 800°F. THE HEATER SHALL BE CAPABLE OF EVAPORATING FLOOD BLOWOFF OF CONDENSATE. THE WATER-GENERATING TEMPERATURE SHALL STABILIZE AT 800°F MAXIMUM.
10. BLOWER DISCHARGE RESISTANCE SHALL BE LIMITED TO 75.0 INCHES WATER.
11. FE-H050 DESIGN 8/P SHALL BE 1.50 IN WATER AT 100 SCFM IF THE FLOW LIMITING SHALL ACT. LINE AN EXCESS FLOW CHECK VALVE SHALL BE MOVABLE ON BOTH 8/P AND 8/O. THE EXCESS FLOW FEATURE SHALL BE DESIGNED SO THAT WHEN SEATED FLOW CAPACITY IS 300 SCFM OF STEAM. THE EXCESS FLOW CHECK VALVE SHALL BE 2500 PSI. THE EXCESS FLOW CHECK VALVE SHALL BE ADJUSTABLE BETWEEN 15.0 PSIG AND 100 PSIG.
12. THE VALUE INDICATES THE STEAM FLOW FROM THE OTHER LINES ASSUMING EACH LINE IS IN THE LONG TERM DISCHARGE PHASE AND LEAKAGE IS THE FLOW INDICATED IN MODE 3 POSITION (S).
13. THE INBOARD MSW-LLCS SHALL PROCESS LEAKAGE THROUGH THE INBOARD MSW IN CASE OF FAILURE OF THE INBOARD MSW-LLCS. THE OUTBOARD MSW-LLCS SHALL PROCESS THE LEAKAGE THROUGH THE OUTBOARD MSW.
14. THE DIFFERENTIAL PRESSURE SWITCH SETPOINT INB-A & INB-S SETPOINT SHALL BE SET AT 5 AND 6 INCHES H<sub>2</sub>O RESPECTIVELY.
15. FLEXIBLE PIPE SECTION CAN BE OVERSIZED IF THE PIPE REACTION LOADS ARE WITHIN 600 LBS FORCE AND 1000 LBS MOMENT ON BOTH 8/P AND 8/O. THE OUTPUT FLANGE OF THE BLOWERS. SEE THE CURRENT DISCHARGE DATA REGARDING PIPEWORK INTERFACE.
16. PROCESS VALVES/MOTOR OPERATED SHALL HAVE OPENING TIMES NOT GREATER THAN 30 SECONDS.

**DRAFT**

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MPL NO. 632-1020

FORM 101-100  
 DATE 10/10/10  
 TIME 10:10  
 EQUIPMENT CLASS CODE  
 SAFETY CLASS 1E  
 THIS ITEM IS ON CONTAMINATED SAFETY CLASS 1E  
 CONTAMINATED ITEM ☐ YES ☐ NO  
 YES ☐ NO ☐ NO  
 SERIAL NUMBER  
 C-00000000000000000000  
 21 9 00  
 GENERAL ELECTRIC  
 DEPT LOC SAN JOSE  
 PROCESS DIAGRAM  
 WSW LEAKAGE CONTROL SYSTEM  
 APPLIED PRACTICES  
 UNLESS OTHERWISE SPECIFIED  
 TOLERANCES  
 FRACTIONS  
 DECIMALS  
 ANGLES  
 762E953AM  
 2537  
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