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 FACIL:50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.
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 CONWAY,W.F. Florida Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION

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SUBJECT: Responds to NRC 880405 second ^{SEE DRAWINGS} request for addl info re ASME Code relief requests for safety-related pumps.

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Drawings To: Reg Files

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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: St. Lucie Unit 2
Docket No. 50-389
2nd Request for Additional Information - ASME Code
Relief Requests for Various Safety-Related Pumps

The purpose of this letter is to provide the additional information requested in your April 5, 1988 letter, "Request for Additional Information - ASME Code Relief Requests for Various Safety-Related Pumps" (TAC No. 64819). Attached is the additional information.

Should there be further questions, please contact us.

Very truly yours,

W. F. Conway
W. F. Conway
Senior Vice President - Nuclear

WFC/MSD/gp

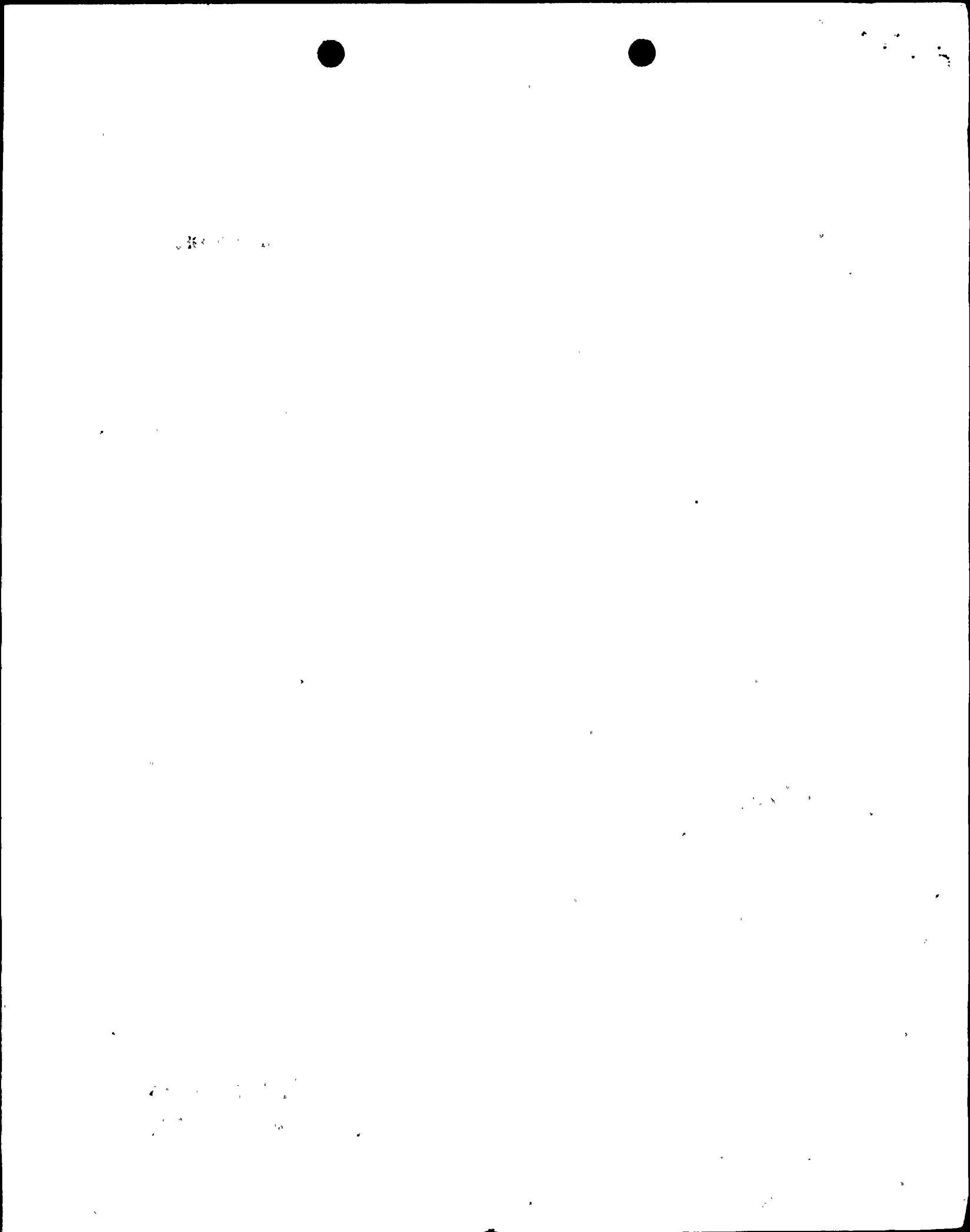
Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II,
USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

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*Accol
" " Drawings
To: Reg Files*

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INFORMATION PROVIDED

1. Drawings - All drawings are the latest revision per the "St. Lucie-Unit 1 Mechanical Drawing Index" dated 4/1/88 or the "St. Lucie-Unit 2 Drawing list" dated 3/31/88.

A. The following P&IDs are attached as requested:

<u>Drawing No.</u>	<u>Sht. No.</u>	<u>Rev. No.</u>	<u>System Name</u>
2998-G-079	1	15	Main Steam
2998-G-079	2	16	Main Steam
2998-G-079	3	16	Extraction Steam
2998-G-079	4	16	Extraction Steam
2998-G-079	5	13	Auxiliary Steam
2998-G-079	6	15	Air Evacuation
2998-G-080	1	18	Feedwater
2998-G-080	2	15	Feedwater
2998-G-086	-	16	Diesel Fuel Oil (Unit 2)
2998-G-088	-	18	Containment Spray
8770-G-086	-	17	Diesel Fuel Oil (Unit 1)
2998-G-078 (originally E-13172-310-110)	110	1	Reactor Coolant
2998-G-078 (originally E-13172-310-121)	121	2	Chemical and Volume Control
2998-G-078 (originally E-13172-310-122)	122	1	Chemical and Volume Control
2998-G-078 (originally E-13172-310-130)	130	2	Safety Injection
2998-G-078 (originally E-13172-310-131)	131	1	Safety Injection

B. The following piping isometrics requested are attached for the identified lines:

<u>Pipe Isometric No.</u>	<u>Sht. No.</u>	<u>Rev. No.</u>	<u>Line No.</u>	<u>System</u>
2998-G-125	SI-N-13	14	I-3"- SI-156	HPSI, LPSI Common Miniflow Line (B Pumps)
2998-G-125	SI-N-12	21	I-3"-SI-200	HPSI, LPSI Common Miniflow Line (A Pumps)
2998-G-125	SI-N-12	21	6"-CS-500	LPSI, Containment Spray Recirc. Line
2998-G-125	CS-K-3	21	6"-CS-500	LPSI, Containment Spray Recirc. Line
2998-G-125	CS-K-9	12	6"-CS-500	LPSI, Containment Spray Recirc.
2998-C-124	BF-3	6	I-2"-BF-47	AFW Pump Common Miniflow Line

2. Vendor Recommended Minimum Allowable Flow Rates

Pump	Vendor	Minimum Allowables Flow Rate*	Source
HPSI	Bingham-Willamette	30 GPM	Instruction Manual # 2998-6738
LPSI	Ingersoll-Rand	100 GPM	Instruction Manual # 2998-5946
Containment Spray	Ingersoll-Rand	150 GPM	Instruction Manual # 2998-4509
Auxiliary Feedwater (A&B - motor driven)	Ingersoll-Rand	50 GPM	Instruction Manual # 2998-6963
Auxiliary Feedwater (C-steam driven)	Ingersoll-Rand	70 GPM	Instruction Manual # 2998-6964

* The value given for the minimum allowable flow rate of each pump, according to the vendors, is that flow required to prevent the pump from overheating. To prevent overheating and possible pump seizure, regardless of system demand, a recirculation line around the pump (or bypass line) is provided in the piping system. This serves to insure that a flow rate (generally called "minimum flow", "bypass flow," or "minimum continuous flow"), is maintained thru the pump, in the event that the discharge valving is completely closed or there is no demand by the system (pump remaining at shut-off, i.e., zero flow). This minimum flow was calculated by each vendor to prevent harmful temperature rise in the pump due to the energy (horsepower) being delivered to the water by the pump. The heat, generated by the pump, can be rejected by the cooling action of the vessel receiving "minimum flow" via the bypass line; thus the temperature differential between suction and discharge connections can be held constant within acceptable limits, consistent with other system parameters.