

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8610280550 DOC. DATE: 86/10/24 NOTARIZED: NO DOCKET #  
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
 AUTH. NAME AUTHOR AFFILIATION  
 WOODY, C. O. Florida Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 RUBENSTEIN, L. S. PWR Project Directorate 2

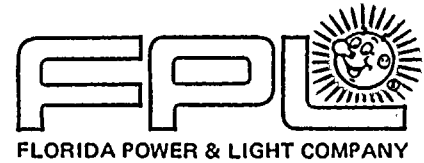
SUBJECT: Forwards load summary sheets for supports subj to PORV discharge loads corresponding to EPRI load combinations, per 860626 response to NRC 850714 request for addl info re NUREG-0737, Item II. D. 1.

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 TITLE: OR Submittal: TMI Action Plan Rgmt NUREG-0737 & NUREG-0660

NOTES:

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	PWR-A	PD2 LA	1	0	PWR-A	PD2 PD 01	5	5	
	McDONALD, D		1	1	PWR-A	PSB	1	1	
	PWR-A	RSB	1	1					
INTERNAL:	ADM/LFMB		1	0	AEOO/PTB		1	1	
	ELD/HDS4		1	0	IE/DEPER DIR 33		1	1	
	IE/DEPER/EPB		3	3	NRR BWR ADTS		1	1	
	NRR PAULSON, W.		1	1	NRR PWR-A ADTS		1	1	
	NRR PWR-B ADTS		1	1	NRR/DSRO EMRIT		1	1	
	<u>REG FILE</u>	04	1	1	RGN2		1	1	
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	NSIC	05	1	1					





OCTOBER 24 1986

L-86-420

Office of Nuclear Reactor Regulation  
Attention: Mr. Lester S. Rubenstein, Director  
PWR Project Directorate #2  
Division of PWR Licensing - A  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Rubenstein:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
NUREG-0737, Item II.D.1  
Performance Testing of Relief and Safety Valves  
Request for Additional Information  
NRC TAC Nos. 44626 and 44627

By letter dated June 26, 1986 (FPL Letter No. L-86-241) FPL responded to a July 14, 1985 request for additional information related to NUREG-0737, Item II.D.1, Performance Testing of Relief and Safety Valves. In the response to question 16, FPL indicated that additional analyses for certain PORV and SRV load combinations needed to be completed.

Attached are the load summary sheets for supports subject to PORV discharge loads which correspond to EPRI load combinations 2 and 3 (Table 2, Governing PORV and SRV Load Combinations 1 and 3 for Supports - Upset Condition).

Please note that the safety factors given are for allowable support loads vs. actual support loads (for the most limiting support component) in lieu of actual stresses vs. allowable stresses. This is more indicative of support loadings. The tabulated safety factors bound the normal allowable factors of safety for each respective component (e.g. if anchor bolt pullout load is limiting, a tabulated safety factor equal to 1.0 means that a normal pullout allowable factor of safety of 4.0 is also met.)

If you have any questions regarding the attached information, please call us. The submittal of this information completes our response to question 16.

Very truly yours,

*C. O. Woody*  
for C. O. Woody  
Group Vice President  
Nuclear Energy

8610280550 861024  
PDR ADOCK 05000250  
PDR

COW/TCG/gp  
Attachment

cc: Dr. J. Nelson Grace, NRC Region II  
Harold F. Reis, Esquire

*AOAB*  
*11*



TABLE 2

## GOVERNING PORV &amp; SRV LOAD COMBINATIONS FOR PIPES &amp; SUPPORTS

COMBINATION	PLANT/SYSTEM OPERATING CONDITION	LOAD COMBINATION	SERVICES STRESS LIMIT	
			CLASS 1	CLASS 2
1	UPSET (PIPING)	Sustained Loads + OBE + Relief Valve Discharge Transient	$1.8S_m$	$1.8S_h$
1	UPSET (SUPPORTS)	Sustained Loads + Relief valve Discharge transient	Stress Level B	
2	EMERGENCY (PIPING)	Sustained Loads + Safety Valve $2.25S_m$	$2.25S_m$	$2.25S_h$
2	EMERGENCY (SUPPORTS)	Sustained Loads + Safety Valve discharge transient	Stress Level C	
3	UPSET (SUPPORTS)	Sustained Loads + OBE + Relief Valve Discharge Transient	Stress Level C	

## NOTE:

$S_m$  = Basic Allowable Stress Intensity = 20 ksi

$S_h$  = Basic Material Allowable Stress at Maximum Temperature = 15 ksi

(From FPL Letter L-86-241 dated June 26, 1986)



# SUMMARY OF PIPE SUPPORT LOADS

TR-0002-1

TELETYPE ENGINEERING SERVICES

DESIGNED BY Leo Barron DATE 7/2/86 CHECKED BY WJM DATE 7/2/86 APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_

TITLE REACTOR COOLANT SYSTEM - INSIDE CONT JOB NO \_\_\_\_\_ PROJECT NO PL-2 UNIT 4 SHEET NO \_\_\_\_\_

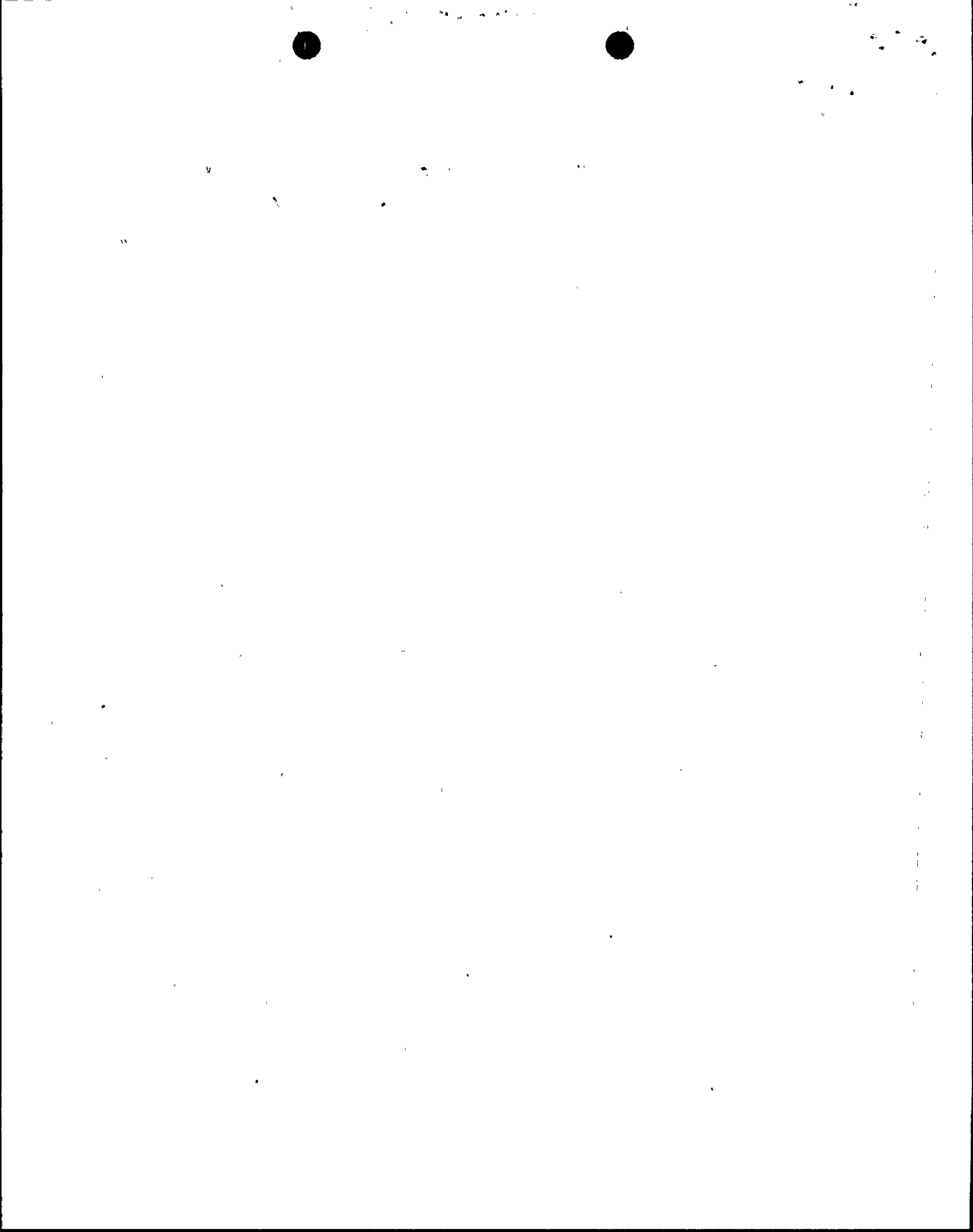
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SUBJECT SUPPORT LOADINGS SHEET NO \_\_\_\_\_ NOMINATED NO \_\_\_\_\_

SUPPORT NO.	DATA POINT	SUPPORT DIRECTION & TYPE	NOMINAL PIPE SIZE (IN)	SUPPORT LOADS (LBS)										EPR1 LOAD COMB 2 SAFETY FACTOR	EPR1 LOAD COMB 3 SAFETY FACTOR	COMMENTS
				OPERATING WEIGHT	OPERATING BASIS EARTH QUAKE	THERMAL EXPANSION	PRESS RELIEF VALVE	SRSS PRY & OBE	EPR1 COMB 2	EPR1 COMB 3						
4-PRH-3	4/40	X-RIGID	12	372	804	-815	1718	1897	2098	2269	1.05	1.04				
4-PRH-3	4/40	Z-RIGID	12	134	478	210	1521	1594	2141	2340	1.33	1.70				
4-PRH-4	13/30	Z-SNUB	12	N/A	420	N/A	2630	2663	±2630	±2663	1.0	1.0				
4-PRH-4	4/40	X-RIGID	12	46	603	848	2094	2179	2988	3073	1.0	1.0				
4-PRH-2	4/40	X-SNUB	12	N/A	265	N/A	111	287	±111	±287	10.7	4.16				
4-PRH-B	24/20	Y-SNUB	6	N/A	183	N/A	742	764	±742	±764	2.86	2.78				
4-PRH-B	27/20	X-RIGID	6	44	147	-412	484	506	628	650	1.37	1.78				
4-PRH-B	27/20	Z-RIGID	6	44	168	-769	573	597	67	641	1.37	1.78				
(WIL-6-2) 4-PRH-12	63/50	Z-RIGID	6	277	84	1892	238	243	2377	2416	1.0	1.0				
6A-1 PRH-11	57/50	X-RIGID	6	171	260	371	387	408	871	910	1.05	1.04				
6A-1 PRH-11	57/50	Z-RIGID	6	193	147	-186	349	377	156	186	1.05	1.04				

- NOTES:
- 1) EPRI Load Combinations per Interim Report dated July '82 Appendix E (Reference 1)
  - 2) Safety Factors Defined as  $\frac{\text{Allowable Support Load}}{\text{Actual Support Load}}$

BY LEB DATE 8-17-86  
 CHKD. BY WJM DATE 8-24-86





# SUMMARY OF PIPE SUPPORT LOADS

TR-0602-1  
TELEDYNE ENGINEERING SERVICES

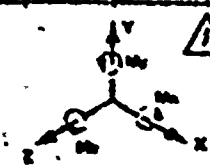
DESIGNED Lee Preece DATE 7/1/86 CHECKED WJM DATE 7/1/86 APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_  
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 SUBJECT SUPPORT LOADS SHEET NO. \_\_\_\_\_ NOMENCLATURE \_\_\_\_\_

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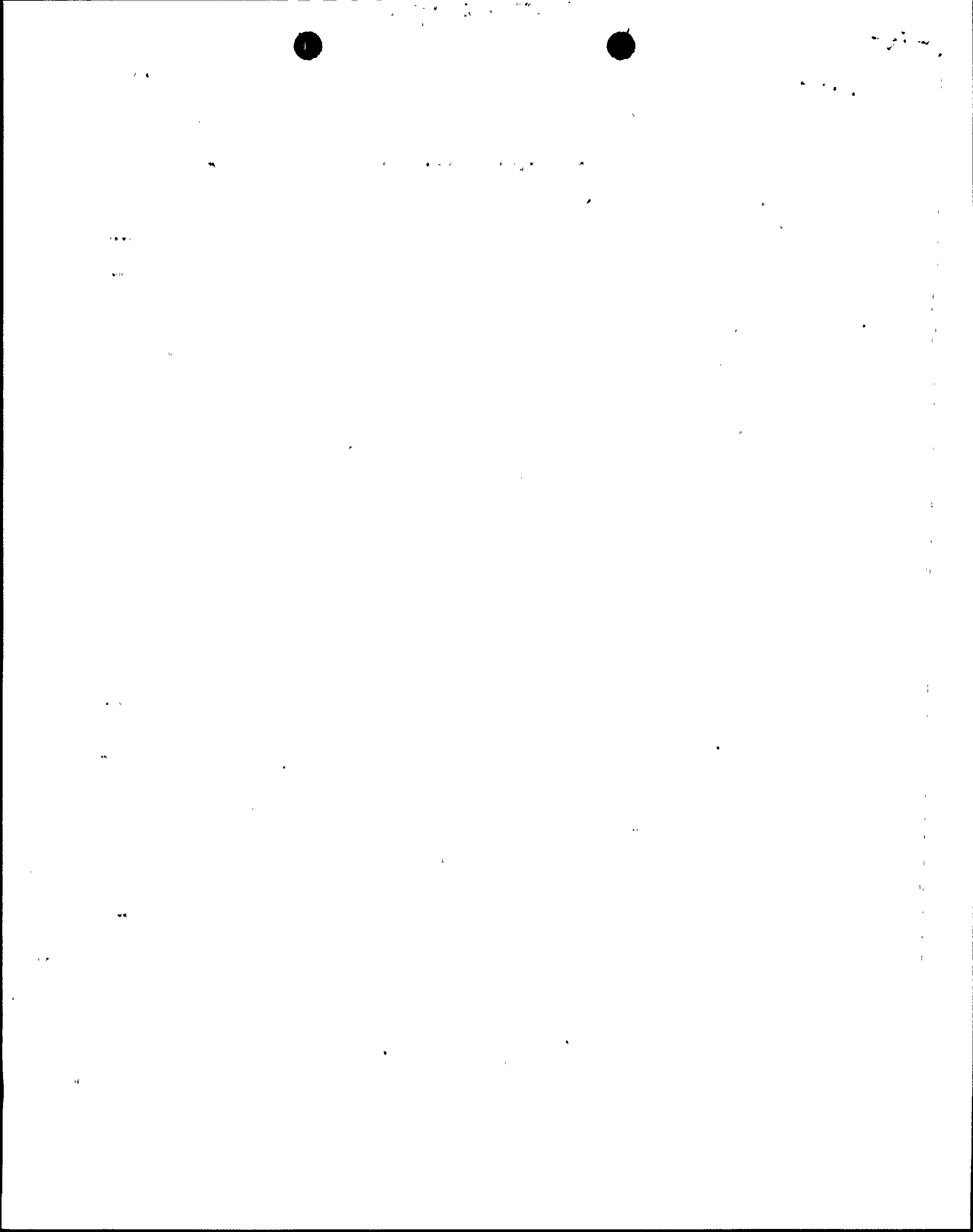
SUPPORT NO.	DATA POINT	SUPPORT DIRECTION & TYPE	NOMINAL PIPE SIZE (IN.)	SUPPORT LOADS (LBS.)						EPRI COMB 2	EPRI COMB 3	EPRI LOAD COMB-2 SAFETY FACTOR	EPRI LOAD COMB-3 SAFETY FACTOR	COMMENTS
				OPERATING WEIGHT	OPERATING BASIS EARTH QUAKE	THERMAL EXPANSION	PRESS. RELIEF	SACS PRV & OBE						
4-PRH-10	A1/710	Y-SUB	6	N/A	195	N/A	227	299	±227	±299	9.35	7.1		
4-PRH-10	62/721	RIGID LATERAL NE	6	-150	124	-448	538	562	300 / -1144	394 / -1158	1.0	1.0		
4-PRH-10	62/721	RIGID AXIAL NW	6	217	147	732	226	269	1175 / -9	1218 / -52	6.0	1.0		
4-PRH-9	76/710	Y-SUB	6	N/A	241	N/A	1184	1208	±1184	±1208	1.75	1.75		
4-PRH-9	78/780	X-RIGID	6	130	145	-555	368	396	498 / -773	526 / -821	6.23	6.6		
4-PRH-9	78/780	Z-RIGID	6	-163	124	45 / -345	229	260	109 / -737	140 / -768	6.23	6.6		
(WALL PEN) 4-RCH-4B	113/720	X-RIGID	6	-309	449	461 / -230	2913	2947	3065 / -3452	3077 / -3482	1.05	1.09		
4-PRH-6	125/118	Y-SUB	6	N/A	189	N/A	1184	1199	±1184	±1199	3.54	2.78		
4-PRH-6	125/125	Z-RIGID	6	104	330	150 / -330	1904	1932	2158 / -2130	2174 / -2158	1.82	2.3		

**NOTES:**

- 1) EPRI Load Combinations per Interim Report dated July '82 Appendix E (Reference 1)
- 2) Safety Factors Defined as  $\frac{\text{Allowable Support Load}}{\text{Actual Support Load}}$



BY LCB DATE 8-27-86  
 CHG. BY WJM DATE 8-28-86



# SUMMARY OF PIPE SUPPORT LOADS

TEL-002-1  
TELETYPE ENGINEERING SERVICES

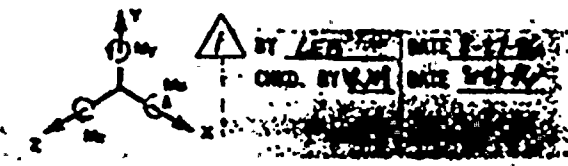
DESIGNER: LED DATE: 7/1/82 CHECKER: WHM DATE: 7/1/82 APPROVAL: \_\_\_\_\_ DATE: \_\_\_\_\_  
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 SUBJECT: SUPPORT LOADINGS SHEET NO: \_\_\_\_\_ REV: \_\_\_\_\_

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SUPPORT NO.	DATA POINT	SUPPORT DIRECTION & TYPE	NOMINAL PIPE SIZE (IN.)	SUPPORT LOADS (LBS.)					EPR1 COMB. 2	EPR1 COMB. 3	EPR2 LOAD COMB-2 SAFETY FACTOR	EPR2 LOAD COMB-3 SAFETY FACTOR	COMMENTS
				OPERATING WEIGHT	OPERATING BASIS EARTHQUAKE	THERM. EXPANSION	PRESS. RELIEF	WGS FIV & GRE					
4-PRH-5	z / 1332	SKREW SNUB	4	N/A	712	N/A	1828	1962	± 1828 ± 1962	1.26	1.19		
4-PRH-5	x / 1314	SKREW SNUB	4	N/A	1815	N/A	4437	4794	± 4437 ± 4794	1.0	1.05		
4-PRH-5	y / 1315	SKREW SNUB	4	N/A	1092	N/A	3057	3240	± 3057 ± 3240	1.0	1.12		

**NOTES:**

- 1) EPRI Load Combinations per Interim Report dated July '82 Appendix E (Reference 1)
- 2) Safety Factors Defined as  $\frac{\text{Allowable Support Load}}{\text{Actual Support Load}}$



BY: LED DATE: 7-1-82  
 CHD. BY: WHM DATE: 7-1-82