

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

AUG 23 1975

Docket Nos. 50-322, 50-352 & 50-353,  
50-358, 50-367, 50-373 & 50-374,  
50-387 & 50-388, 50-397, 50-410

APPLICANT: Long Island Lighting Company, Philadelphia Electric Company, Cincinnati Gas & Electric Company, Northern Indiana Public Service Company, Commonwealth Edison Company, Pennsylvania Power & Light Company, Washington Public Power Supply System, Niagra Mohawk Power Corporation

FACILITIES: Shoreham Nuclear Power Station, Unit 1; Limerick Generating Station, Units 1 & 2; Wm. H. Zimmer Nuclear Power Station, Unit 1; Bailly Generating Station, Nuclear 1; LaSalle County Station, Units 1 & 2; Susquehanna Steam Electric Station, Units 1 & 2; WPPSS Nuclear Project No. 2; Nine Mile Point Nuclear Station, Unit 2

SUMMARY OF MEETING HELD ON AUGUST 21, 1975 WITH MARK II OWNERS AND ARCHITECT-ENGINEERS

On August 21, 1975 representatives of certain of the above - named Mark II Owners, Sargent & Lundy, Bechtel, Stone & Webster, Burns & Roe, and the NRC staff met in Bethesda, Maryland. The primary purpose of the meeting was to discuss load factors and load combinations proposed by the Mark II Owners and their architect-engineers for assessing the capability of Mark II containment structures to accommodate safety/relief valve (SRV) loads (LOCA loads are still being evaluated by G. E. and were not to be discussed.) An attendance list and copies of some of the tables and figures used in presentations made at the meeting are enclosed.

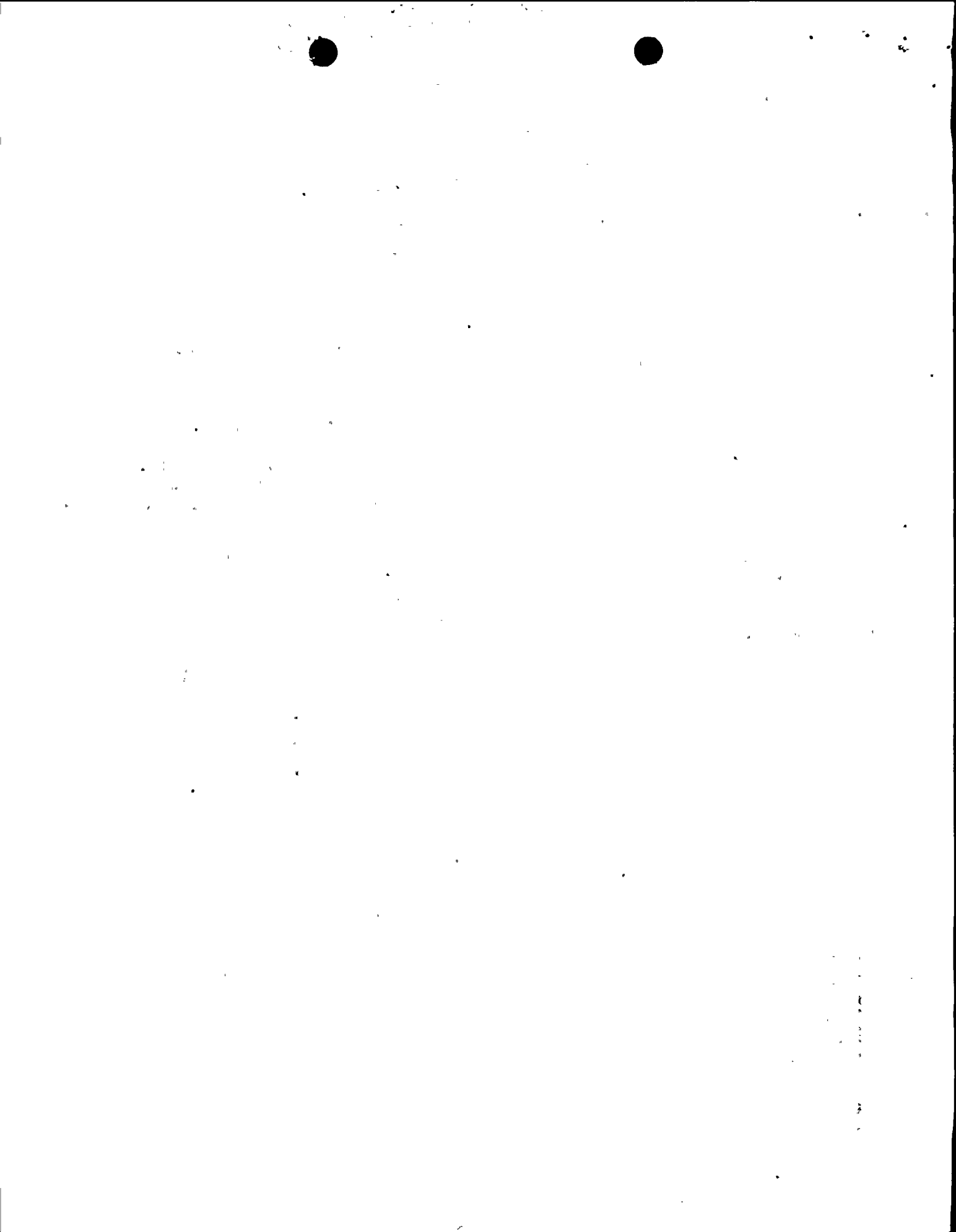
Messrs. Crawford and Bergstrom of Sargent & Lundy made presentations. Some of the major points made were:

1. The SRV load is a major load which was not considered in the original design of Mark II containments.
2. The SRV load has been added to the load combinations, and load factors associated with other loads in the load combinations are being reassessed (and reduced where possible to allow inclusion of the SRV loads without design modifications.)

ME710



*[Handwritten signature]*



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3. Present plans are to combine the SRV loads with the small- and intermediate-break LOCA loads but not with the large-break LOCA loads. (GE is assessing the time sequences of the LOCA and SRV loads to see if the SRV and large-break LOCA loads should be combined.)
4. Current philosophy is to include conservatism in the load rather than in the load factor.

Representatives of the NRC staff asked a number of questions, many of which cannot be answered until after the Preliminary Forcing Function Report is completed and design assessments are made of individual containment designs.

The Mark II owners were advised not to allow the schedule for submittal of required information to the NRC staff to begin to slip. They were also advised that reductions in the margins presently included in the design of the containments or in the conservatism presently included in the load factors and load combinations presented in their PSAR's could be viewed as modifications to the principal architectural and engineering criteria for design included in their PSAR's and necessitate amendment of their construction permits.



J. M. Cutchin IV  
Light Water Reactors Branch 1-2  
Division of Reactor Licensing

Enclosures:  
As stated



ENCLOSURE 1

Attendance List  
Meeting with Mark II Owners & Architect-Engineer  
Room 6507 Maryland National Bank  
August 21, 1975

NRC

J. M. Cutchin IV  
Isa Sihweil  
L. C. Shao  
S. Hou  
F. P. Schauer  
C. P. Tan  
A. L. Gluckmann  
R. J. Stuart  
C. Grimes  
M. D. Lynch

Sargent & Lundy

R. N. Bergstrom  
Ray Crawford  
Adolf Walser

Stone & Webster

L. C. Dawson  
Donald J. Heesen  
Fabian Kovensky

Commonwealth Edison

Brent Shelton

Pa. Power & Light

W. E. Barberich

Bechtel

J. R. Schmiedel  
George Katanics

Long Island Lighting

Joseph P. Navarro

Phila. Electric Co.

John M. Madara

WPPSS

G. L. Gelhaus

Burns & Roe

J. Forman  
B. Bedrosian  
K. Ronis

G. E.

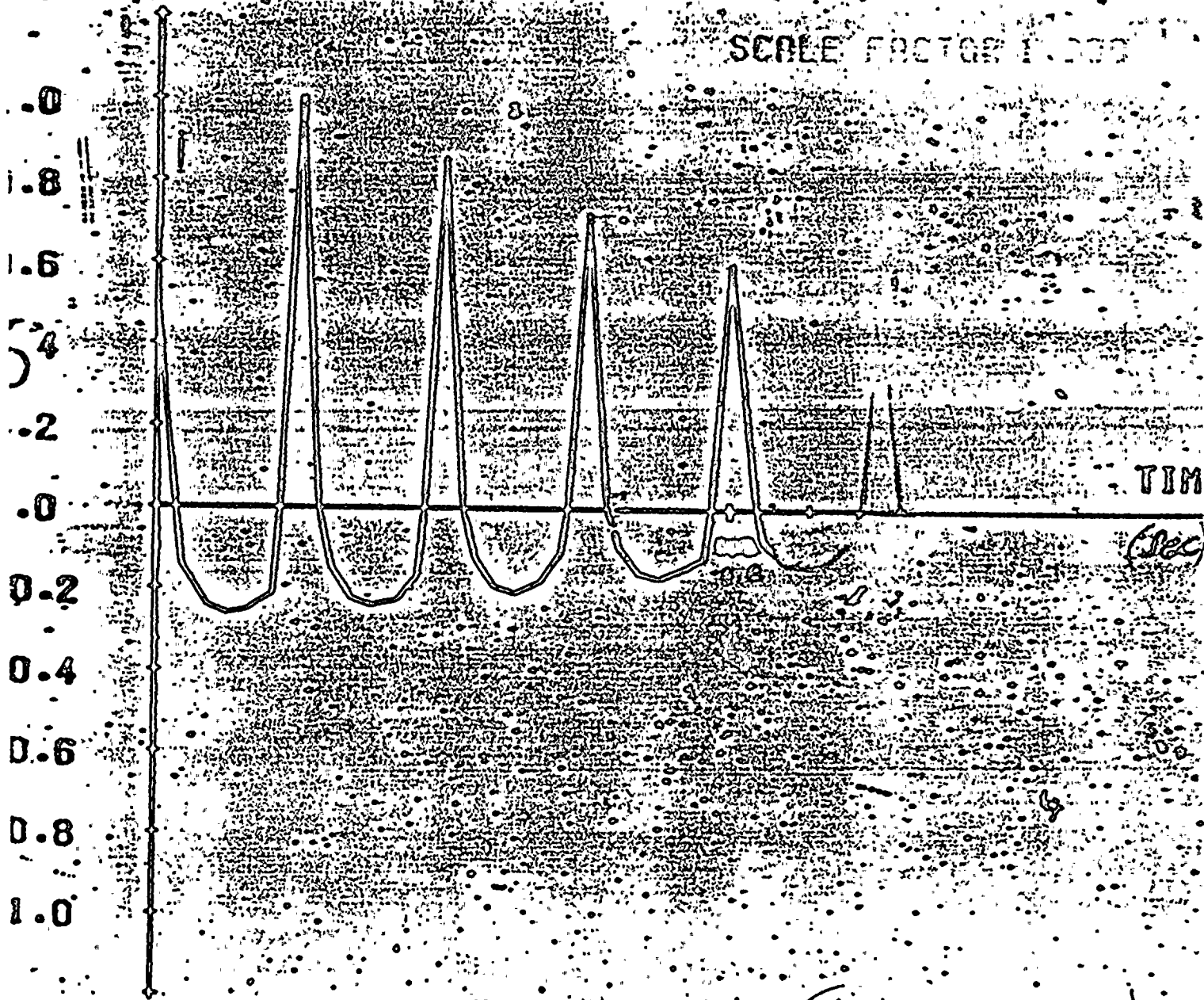
B. Roger  
A. R. Smith



NORMALIZED  
QUANTITY

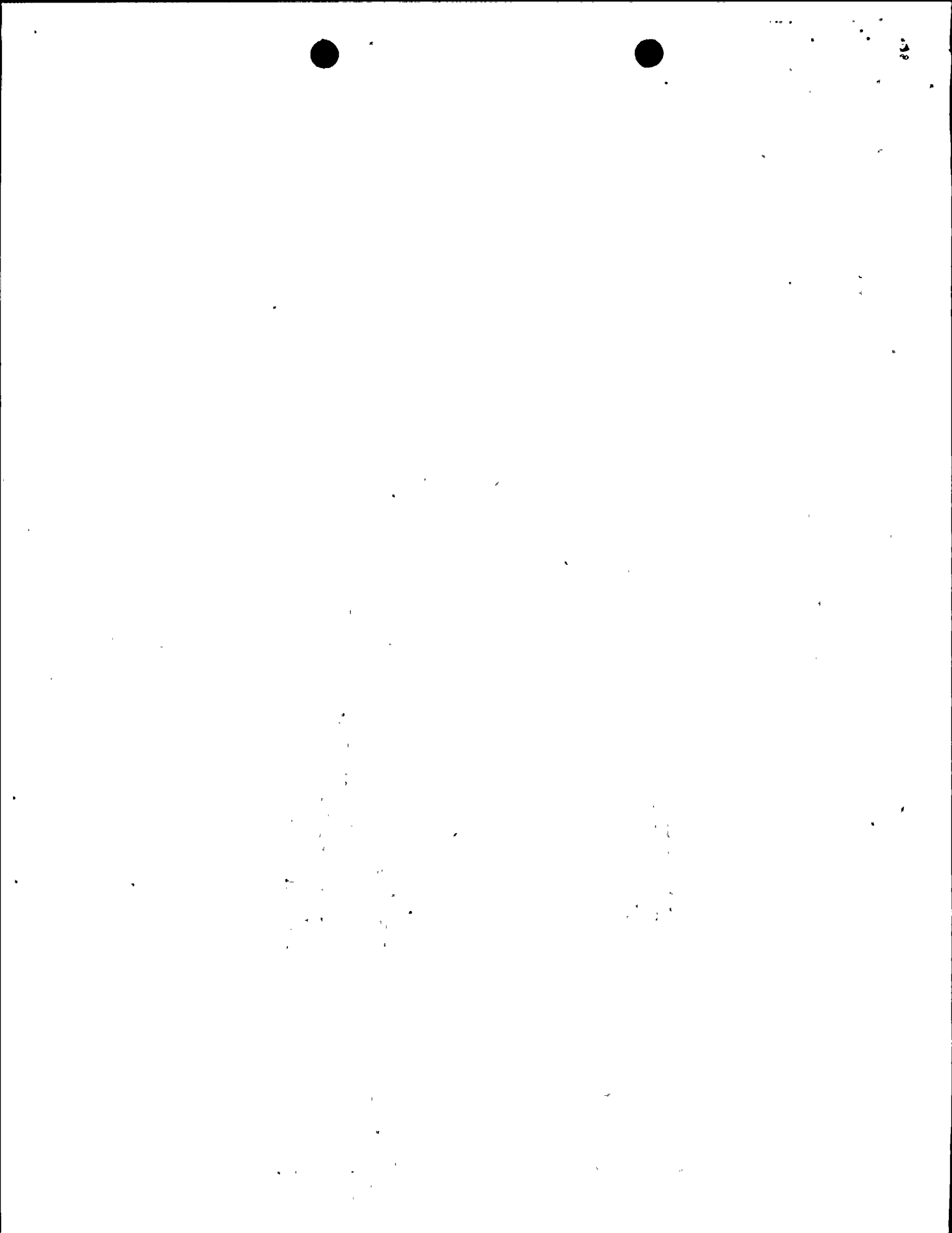
SYMMETRIC 5.4 HZ.

SCALE FACTOR 1.000



*SRV. load (typical for value)  
load on internal structure & components in  
suppression pool*

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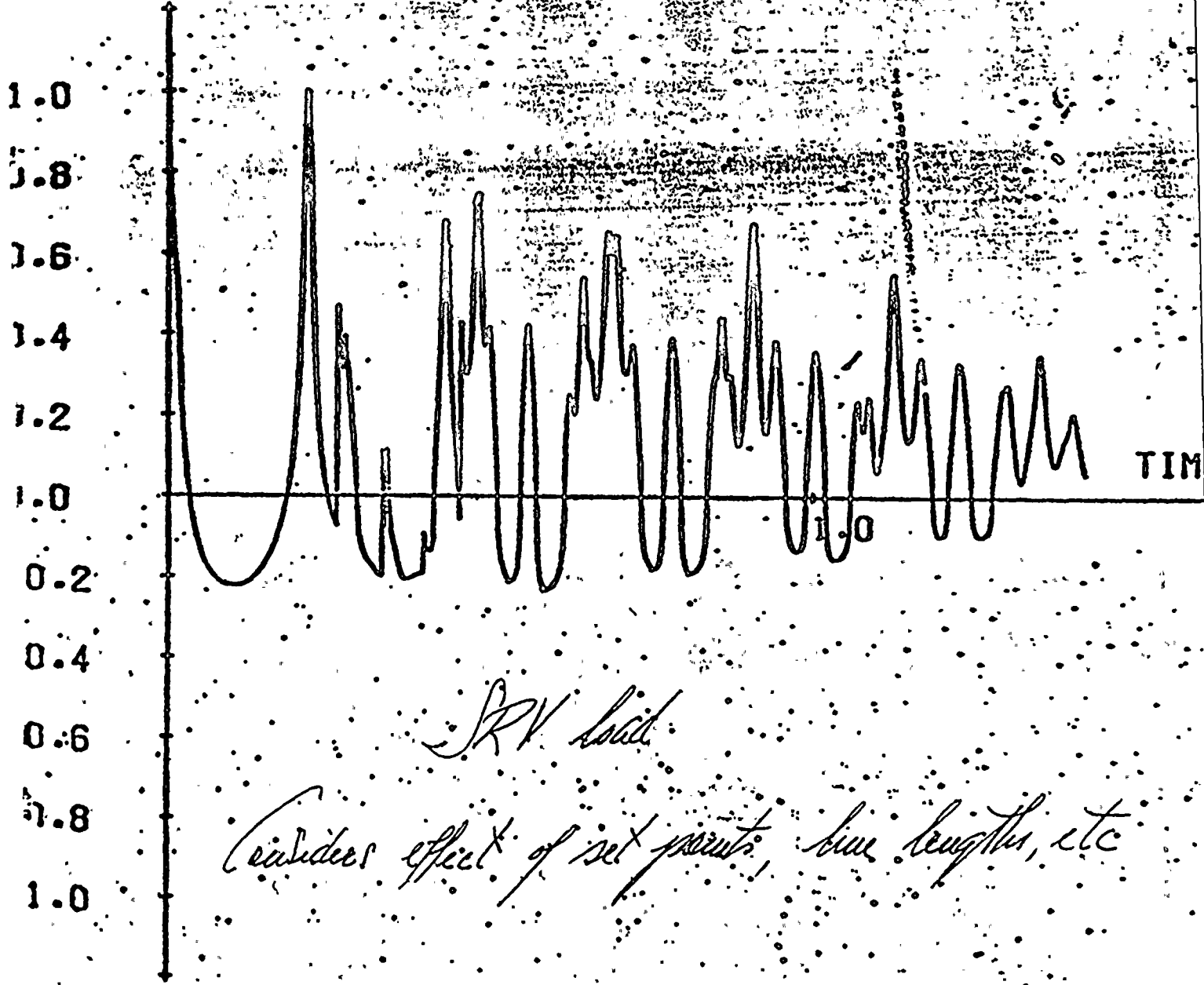


NSL

SEQUENCED SYMMETRIC

7/24/75

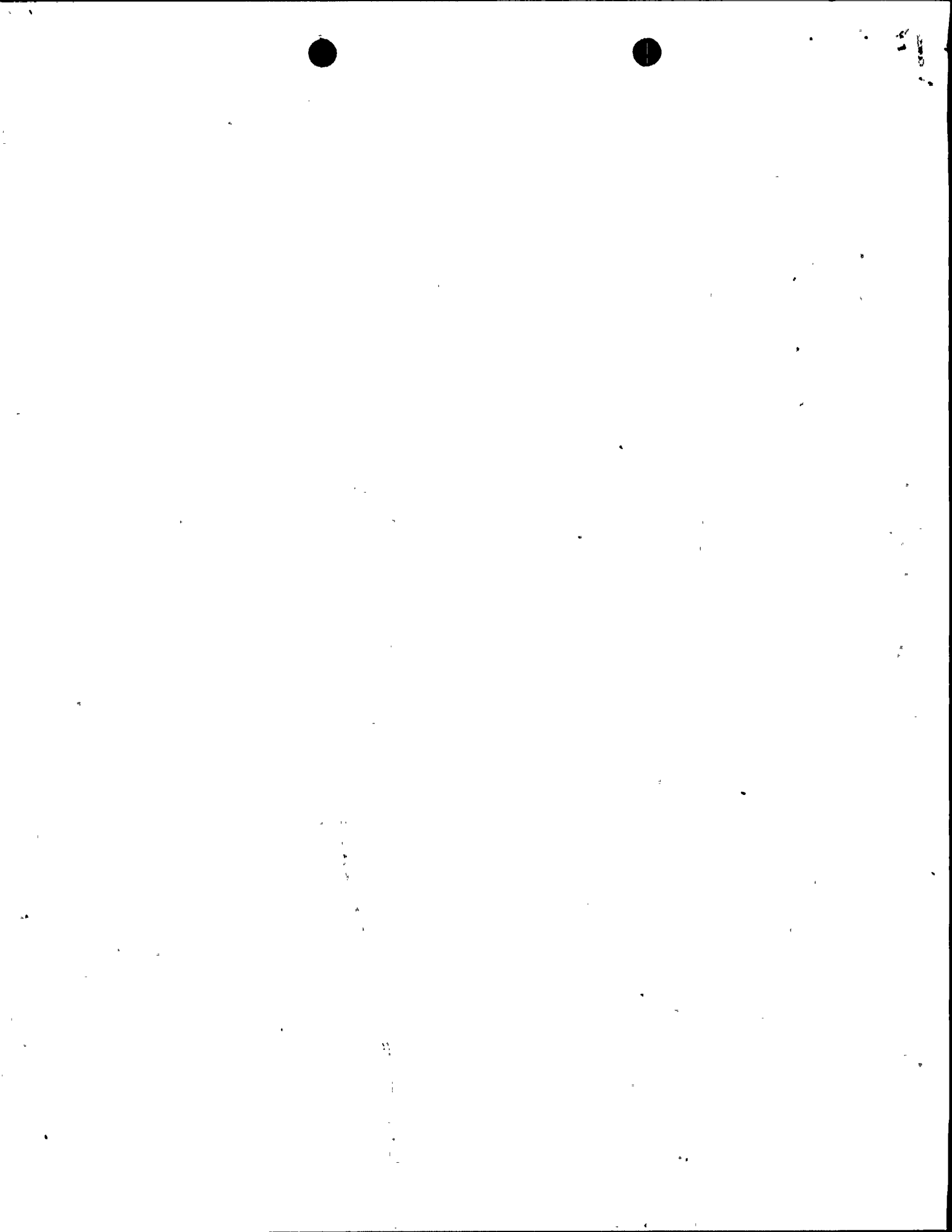
NORMALIZED  
QUANTITY



*RV load*

*considers effect of set points, line lengths, etc*

*(B)*



PRELIM

SRV LOAD

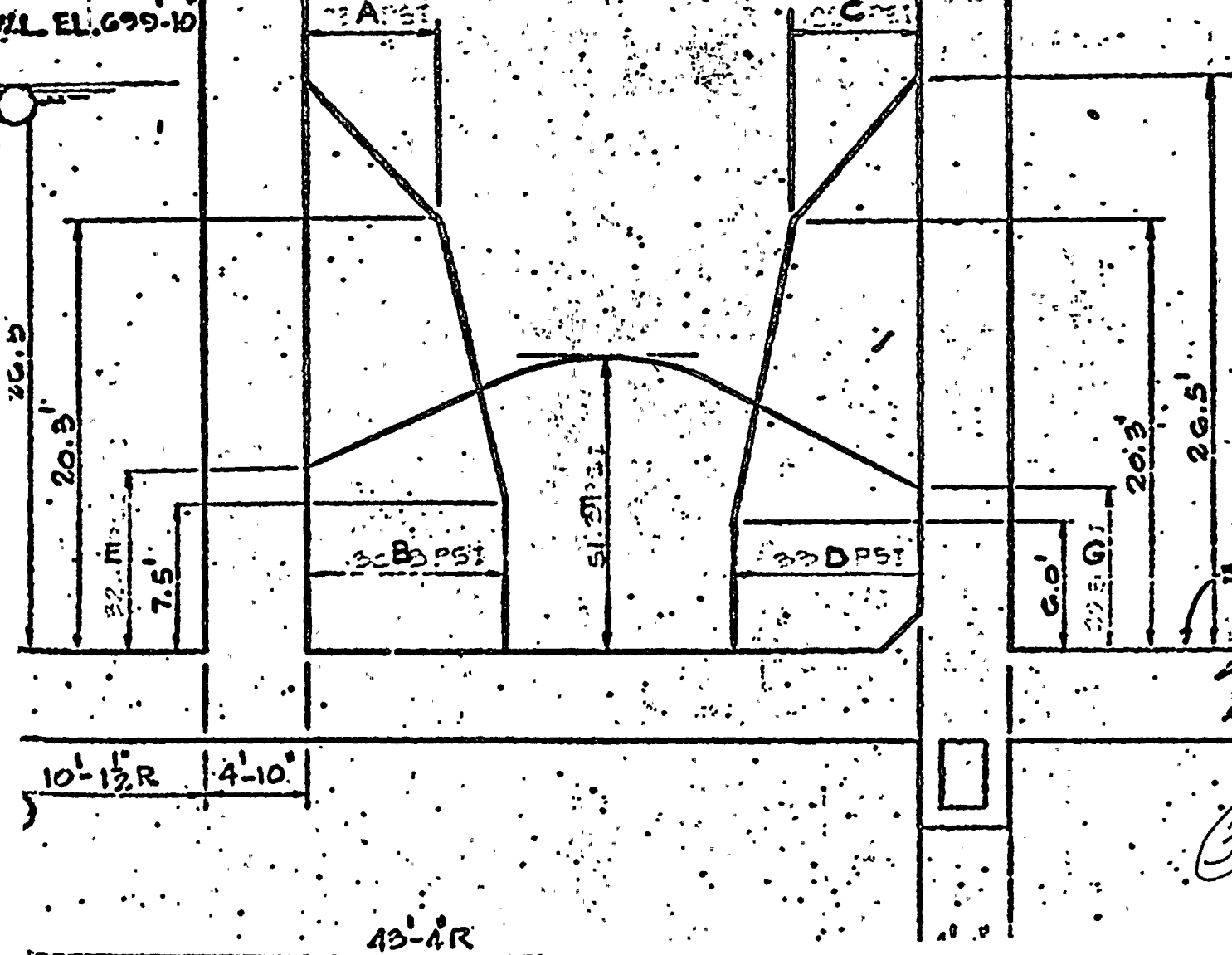
Pressure Distribution

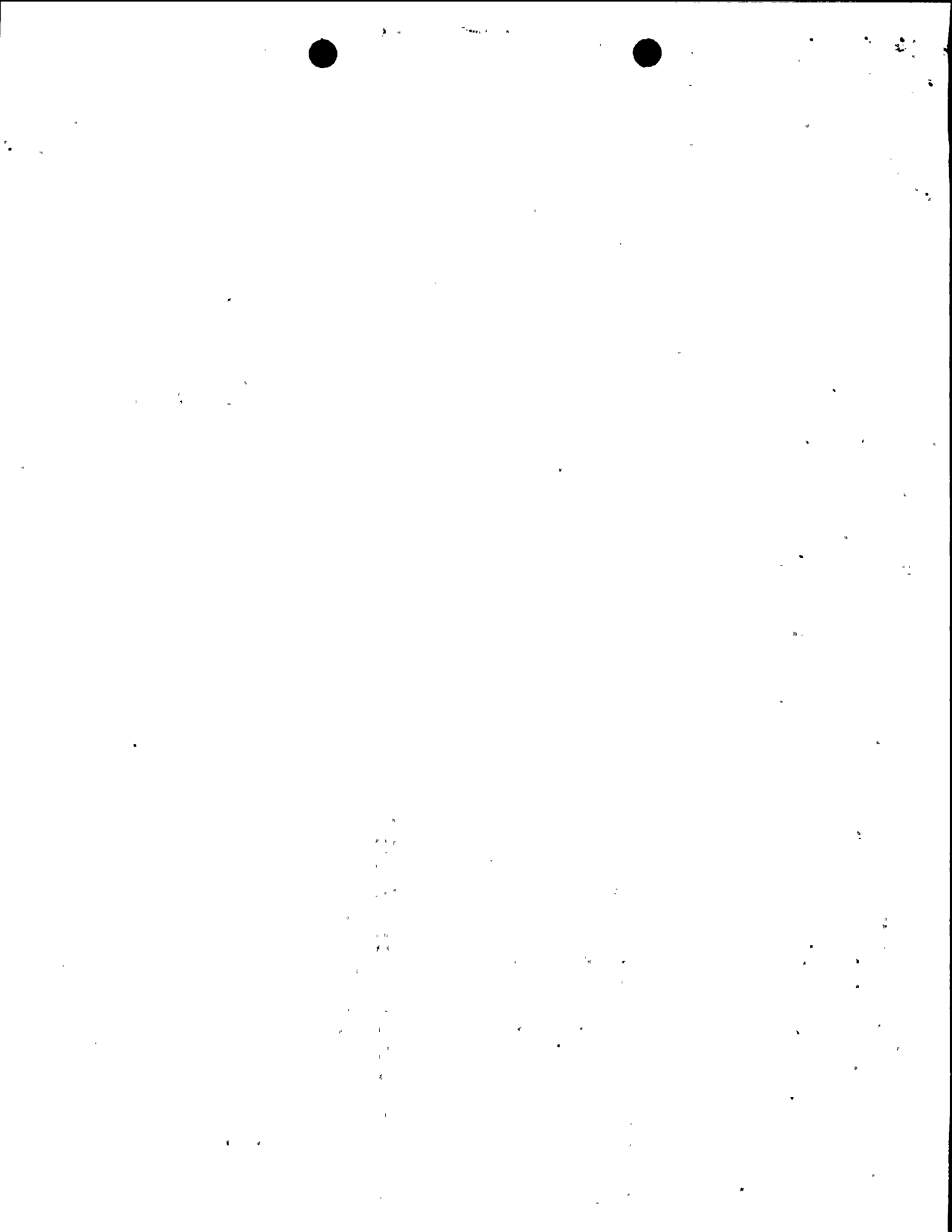
Source:

Date : APR 11, 1978

A-G DENOTE LOAD MAGNITUDES

Y.L. EL. 699-10





LOAD COMBINATIONS

EQN.	LOAD COND.	D	L	F	P <sub>O</sub>	T <sub>O</sub>	R <sub>O</sub>	E <sub>O</sub>	E <sub>SS</sub>	P <sub>B</sub>	T <sub>A</sub>	R <sub>A</sub>	SRV
1	Normal w/oTemp	1.4	1.7	1.0	1.0	-	-	-	-	-	-	-	1.5
2	Normal w/Temp	1.0	1.3	1.0	1.0	1.0	1.0	-	-	-	-	-	1.3
3	Normal Sev.Env.	1.0	1.0	1.0	1.0	1.0	1.0	1.25	-	-	-	-	1.25
4	Abnormal	1.0	1.0	1.0	-	-	-	-	-	1.25	1.0	1.0	1.25
5	Abnormal Sev.Env.	1.0	1.0	1.0	-	-	-	1.1	-	1.1	1.0	1.0	1.1
6	Normal Ext.Env.	1.0	1.0	1.0	1.0	1.0	1.0	-	1.0	-	-	-	1.0
7	Abnormal Ext.Env.	1.0	1.0	1.0	-	-	-	-	1.0	1.0	1.0	1.0	1.0

LOAD DESCRIPTION

- |  |  |
|--|--|
| D = Dead Loads                               | SRV = Srv. Load  |
| L = Live Loads                               | E <sub>O</sub> = Operating Basis Earthquake  |
| F = Prestressing Loads                       | E <sub>SS</sub> = Safe Shutdown Earthquake   |
| T <sub>O</sub> = Operating Temperature Loads | P <sub>B</sub> = Pipe Break Pressure Load<br><del>(Pipe Break Pressure Load)</del> |
| R <sub>O</sub> = Operating Pipe Reactions    | T <sub>A</sub> = Accident Temperature Load   |
| P <sub>O</sub> = Operating Pressure Loads    | R <sub>A</sub> = Reaction Loads <del>including</del><br><del>Reaction Loads</del>  |

} For small  
of intermediate  
breaks on



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AUGUST 21, 1975

CONTAINMENT LINER CRITERIA

ACCEPTANCE CRITERIA FOR MECHANICAL LOADS  
IN ACCORDANCE WITH ASME BOILER PRESSURE VESSEL CODE  
SECTION III, DIVISION 1, SUBSECTION NE

ACCEPTANCE CRITERIA FOR SELFLIMITING LOADS  
IN ACCORDANCE WITH ASME BOILER PRESSURE VESSEL CODE  
SECTION III, DIVISION 2, SUBSECTION CC

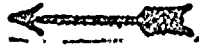
9





(Meeting Summary)

Distribution

Docket File   
NRC PDR  
Local PDR  
NRR Reading  
V. A. Moore  
R. C. DeYoung  
D. Skovholt  
D. Muller  
R. Denise  
W. Butler  
J. Stolz  
R. Clark  
T. Speis  
D. Vassallo  
K. Kniel  
K. Goller  
A. Schwencer  
P. Collins  
R. Purple  
D. Ziemann  
G. Knighton  
G. Dicker  
B. Youngblood  
W. Regan  
S. Varga  
R. W. Klecker  
R. Heineman  
H. Denton  
R. Tedesco  
R. Maccary  
V. Stello  
B. Grimes  
M. Spangler  
R. Ballard  
Jacob Kastner

R. S. Boyd  
W. Gammill  
V. Benaroya  
R. Vollmer  
J. Collins  
G. Lainas  
J. Knight  
S. Pawlicki  
L. Shao  
T. Ippolito  
R. Houston  
T. Novak  
D. Ross  
EP Project Manager  
Attorney, OELD.  
IE (3)  
M. Rushbrook  
R. Fraley (16)  
O. Parr  
G. Lear  
LWR 1-2 File  
P. Reihm  
I. Pelter  
I. Villalva  
R. Powell  
W. Kane  
J. Snell  
J. M. Cutchin IV  
Isa Sihweil  
L. C. Shao  
S. Hon  
F. P. Schauer  
C. P. Tan  
A. L. Gluckmann  
R. J. Stuart



11/11/11