



INSTRUCTURE  
RESPONSE  
SPECTRA  
FOR

CONTAINMENT  
BUILDING

TUSI  
NUCLEAR  
POWER  
PLANT

GIBBS  
&  
HILL

AUGUST  
1976

## RESPONSE SPECTRA FOR TUSI - REACTOR BUILDING

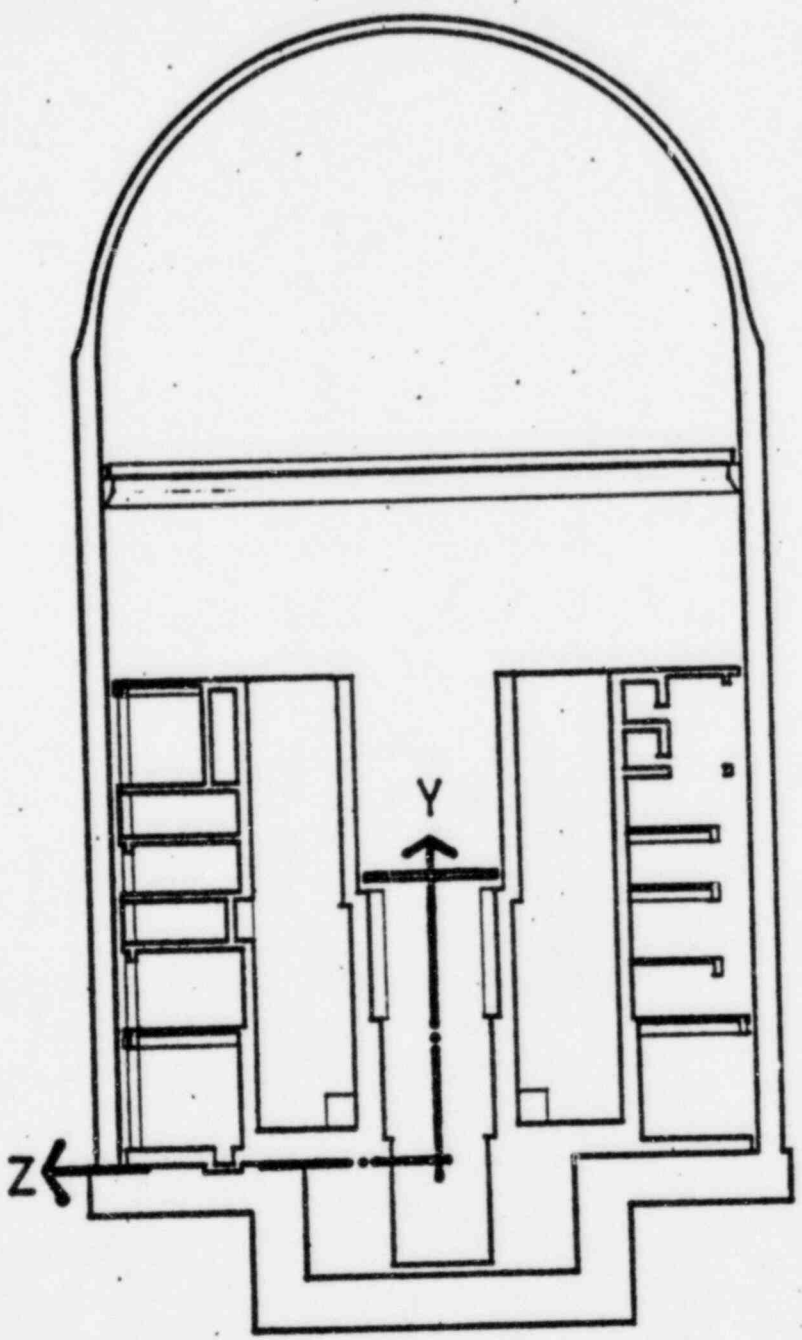
The instructure response spectra for the Containment Bldg. are presented in Figures 1106-A through 1147-A, which are summarized in Tables No. 1 through 3.

Six figures, for example, Figures 1106-A through 1111-A, represent a complete set of instructure response spectra for a specific value of equipment damping due to the combined effect of SSE earthquake excitations in the vertical direction (Y) and the two principal horizontal directions (X & Z).

Each figure refers to a specific floor of the building, and contains three curves labeled Ax, Ay and Az, which respectively represent the spectra in the X, Y and Z directions due to the combined effect of the three simultaneous earthquakes.

All spectra presented in this report include the coupling effects of the non-symmetric structure. The curves shown are for the most critical location of the floor, considering the combined effect of translation and rotation.





SECTION 2-2

**TUSI**  
 REACTOR BUILDING

*Gibbs & Hill, Inc.*  
 ENGINEERS, DESIGNERS, CONSTRUCTORS  
 NEW YORK

SCALE - 1/8" = 5'0"

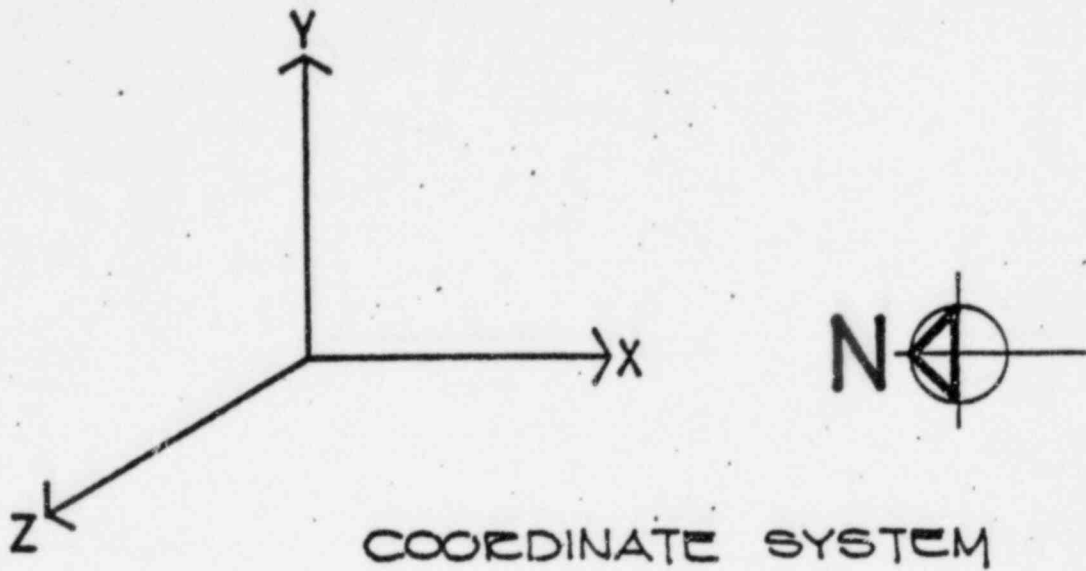
SKETCH 2

JOB NO. 2323-A

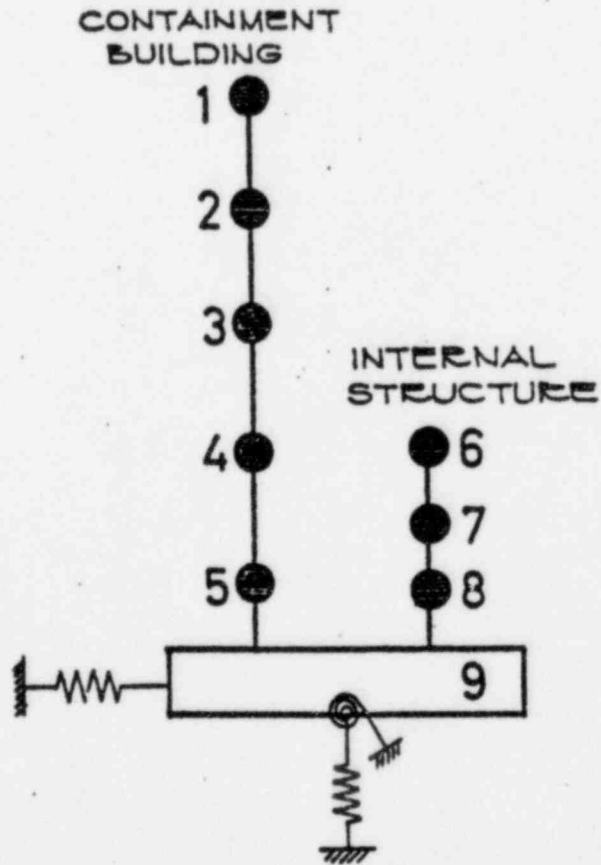
NO	DATE	BY	CHKD	REV	APP'D	REMARKS

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APPROVALS



COORDINATE SYSTEM



DYNAMIC MODEL

<b>TUSI</b>	
REACTOR BUILDING	
<i>Gibbs &amp; Hill, Inc.</i> ENGINEERS, DESIGNERS, CONSTRUCTORS NEW YORK	
SCALE: -	SKETCH 3
JOB NO 2323-A	

DATE	BY	CHKD	APP'D	REV	NO	DATE	BY	CHKD	APP'D	REV	NO	DATE	BY	CHKD	APP'D	REV	NO
APPROVALS												ISSUED FOR					

6/14 JOM PD

# SUMMARY OF RESPONSE SPECTRA

FIG.	NODAL LOCATION (ELEVATION)	DAMPING %	EARTH QUAKE	TYPE OF NODAL MOTION
1106-A	1000.50 FT.	2	SSS	TRANSL. & ROT.
1107-A	950.58	2	SSS	'
1108-A	905.75	2	SSS	'
1109-A	860.00	2	SSS	'
1110-A	805.50	2	SSS	"
1111-A	783.58	2	SSS	'
1112-A	1000.50 FT.	3	SSS	TRANSL. & ROT.
1113-A	950.58	3	SSS	'
1114-A	905.75	3	SSS	'
1115-A	860.00	3	SSS	'
1116-A	805.50	3	SSS	'
1117-A	783.58	3	SSS	'
1118-A	1000.50 FT.	4	SSS	TRANSL. & ROT.
1119-A	950.58	4	SSS	'
1120-A	905.75	4	SSS	'
1121-A	860.00	4	SSS	'
1122-A	805.50	4	SSS	'
1123-A	783.58	4	SSS	'

## TUSI

CONTAINMENT BLDG.

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SCALE -

TABLE 1

JOB NO. 72025-A

DATE	BY	CHKD	APP'D	REV	NO.	DATE	BY	CHKD	APP'D	REV	NO.
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## SUMMARY OF RESPONSE SPECTRA

FIG	NODAL LOCATION (ELEVATION)	DAMPING %	EARTH- QUAKE	TYPE OF NODAL MOTION
1124-A	1000.50 FT.	7	ESE	TRANS. & ROT.
1125-A	950.58	7	ESE	"
1126-A	903.75	7	ESE	"
1127-A	860.00	7	ESE	"
1128-A	805.50	7	ESE	"
1129-A	783.58	7	ESE	"

# TUSI

CONTAINMENT BLDG.

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NEW YORK

SCALE: -

TABLE 2

JOB NO. 7323-A

DATE	BY	CHKD	APP'D	REV	NO.	DATE	BY	CHKD	APP'D	REV	NO.	DATE	BY	CHKD	APP'D	REV	NO.	DATE	BY	CHKD	APP'D	REV	NO.	

ISSUED FOR

APPROVALS

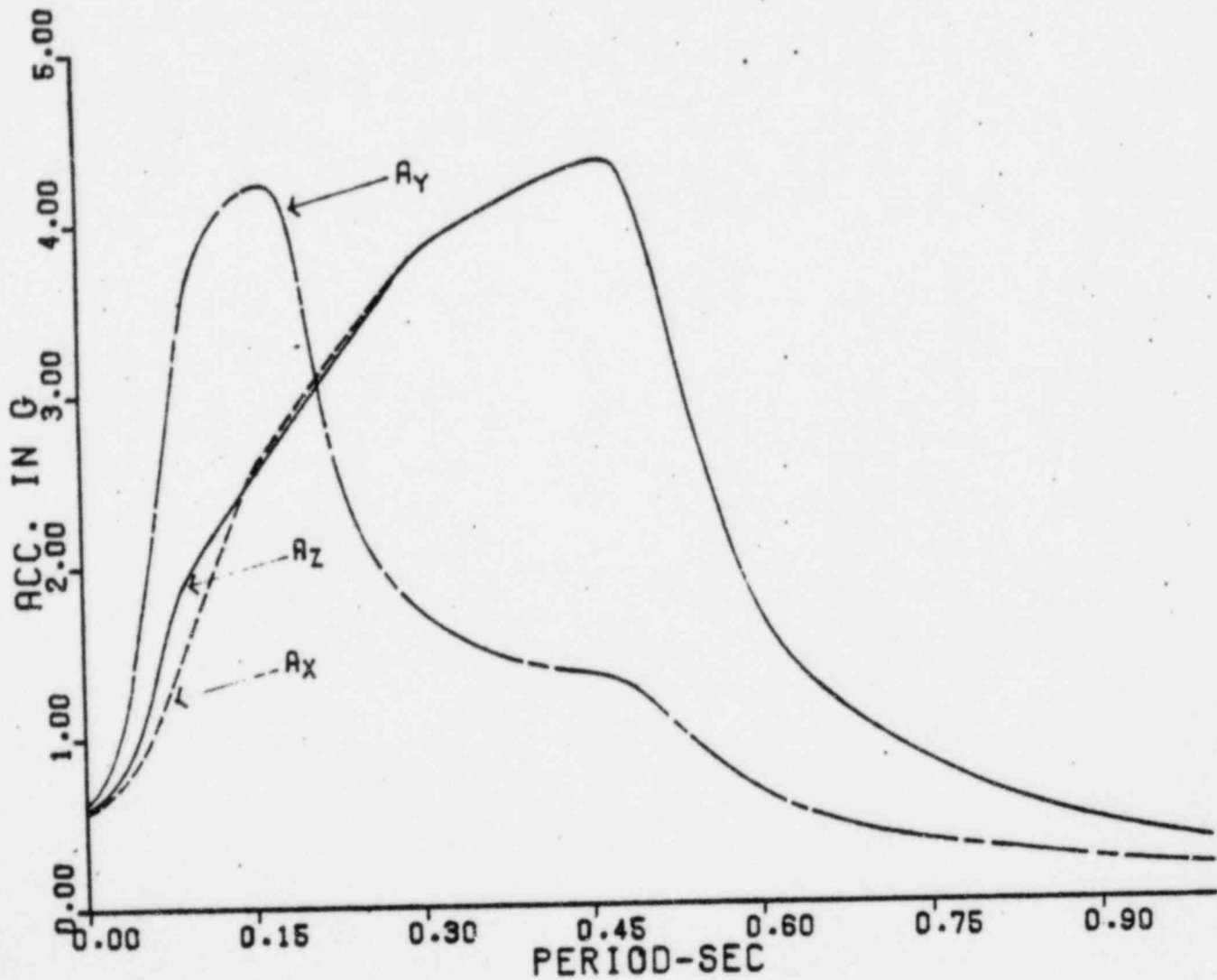






### IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 950.58 FT.  
 EQUIPMENT DAMPING: 0.02  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



# TUSI

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JOB NO. 2323-A

SCALE: -

FIGURE 1107A

NO.	REV.	DATE	BY	CHKD.	APP.	DATE	BY	CHKD.	APP.
APPROVALS									











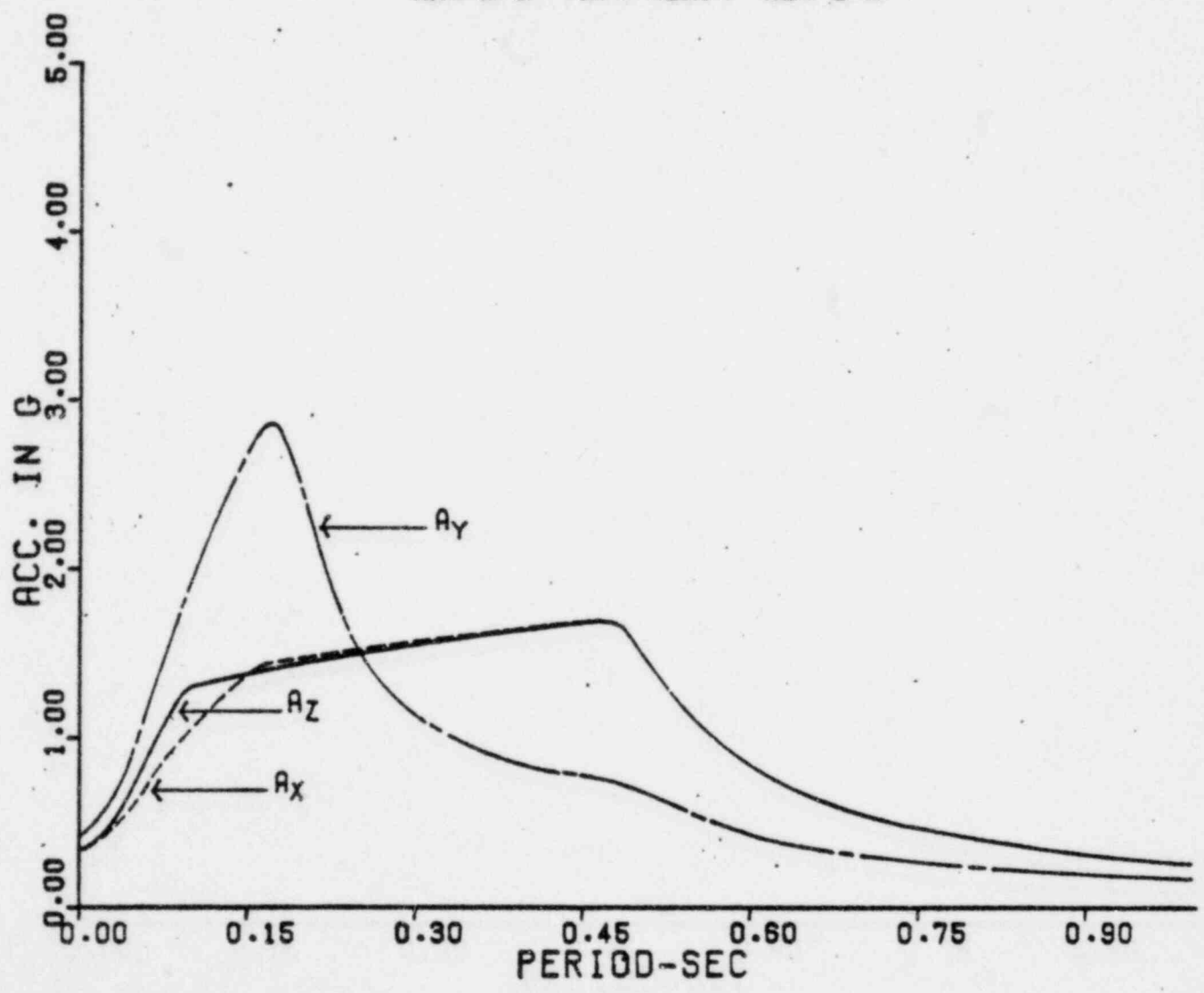






### IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 860.00 FT.  
 EQUIPMENT DAMPING: 0.03  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



# TUSI

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 2325-A

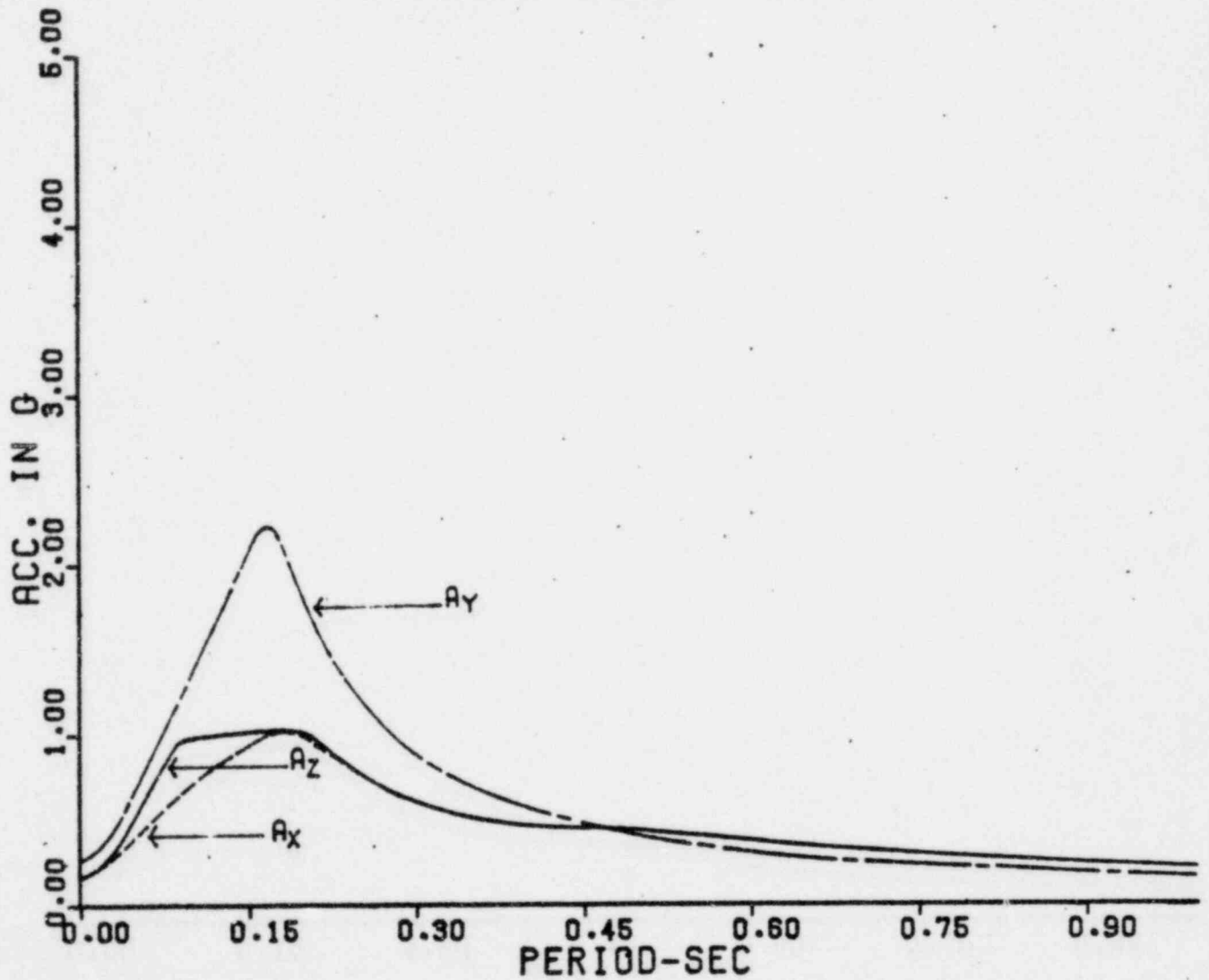
SCALE:-  
**FIGURE 1115 A**

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APPROVALS						ISSUED FOR			



IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 789.58 FT.  
 EQUIPMENT DAMPING: 0.03  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



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SCALE: -

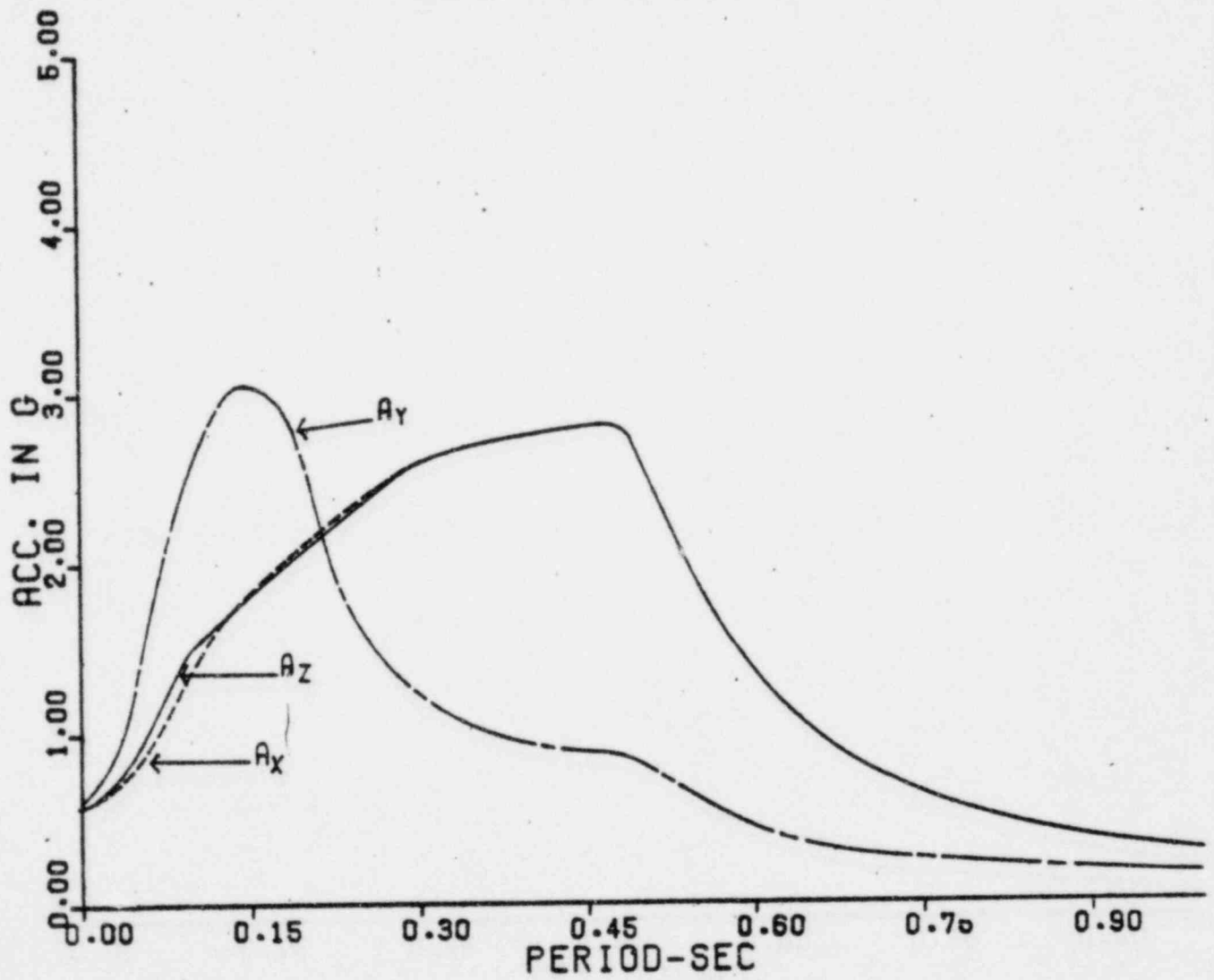
FIGURE 117A

DATE		BY		CHKD		APP'D		REV		NO.	
APPROVALS											
ISSUED FOR											

JOB NO. 2523-A



IN-STRUCTURE RESPONSE SPECTRA FOR:  
 CONTAINMENT BUILDING  
 ELEVATION: 950.58 FT.  
 EQUIPMENT DAMPING: 0.04  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



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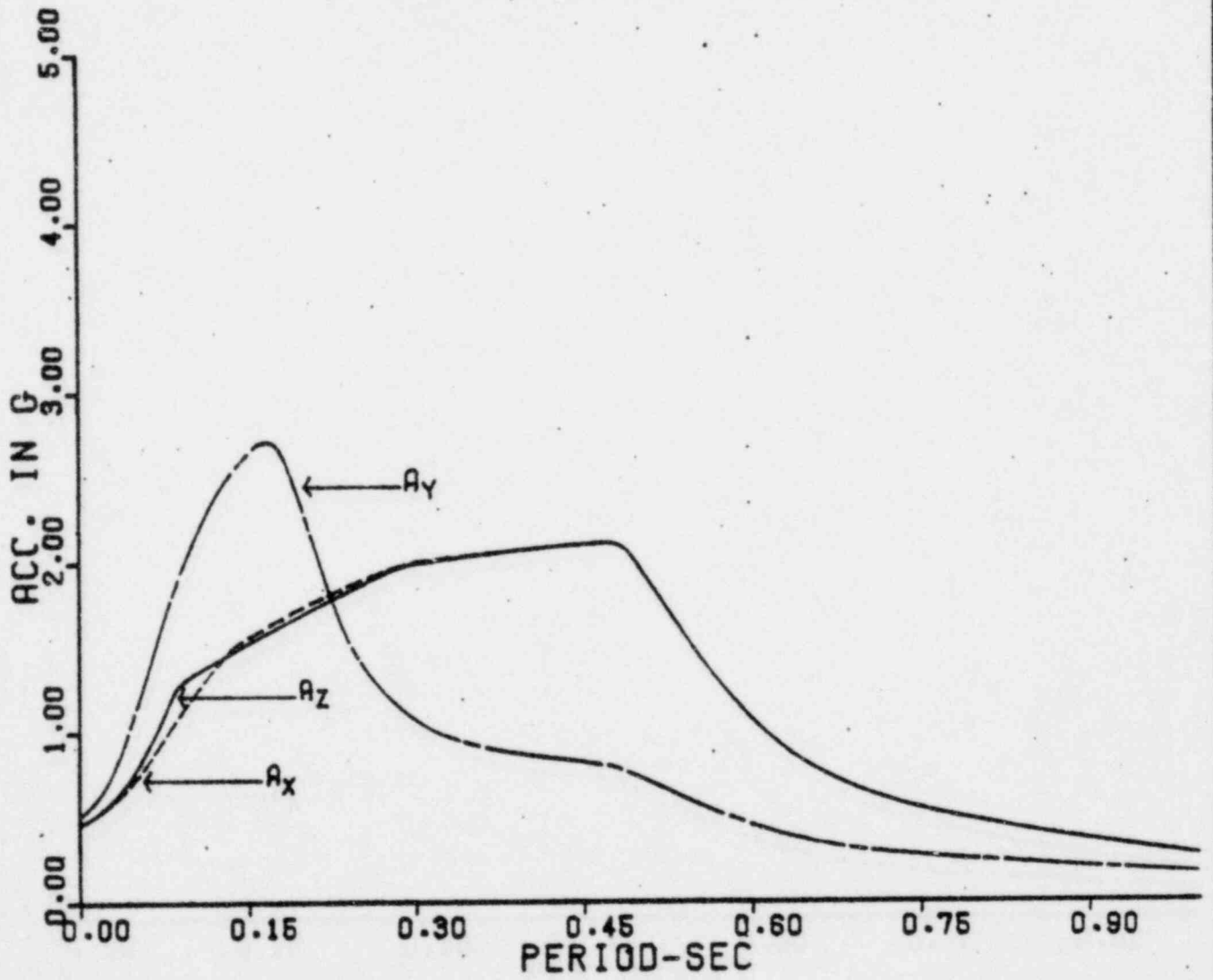
FIGURE 1119 A

JOB NO. 2525 - A

NO.	DATE	BY	CHKD.	APP'D.	REV.	DATE	DESCRIPTION

ISSUED FOR

IN-STRUCTURE RESPONSE SPECTRA FOR:  
 CONTAINMENT BUILDING  
 ELEVATION: 905.75 FT.  
 EQUIPMENT DAMPING: 0.04  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



**TUSI**

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SCALE: -  
 FIGURE 1120A

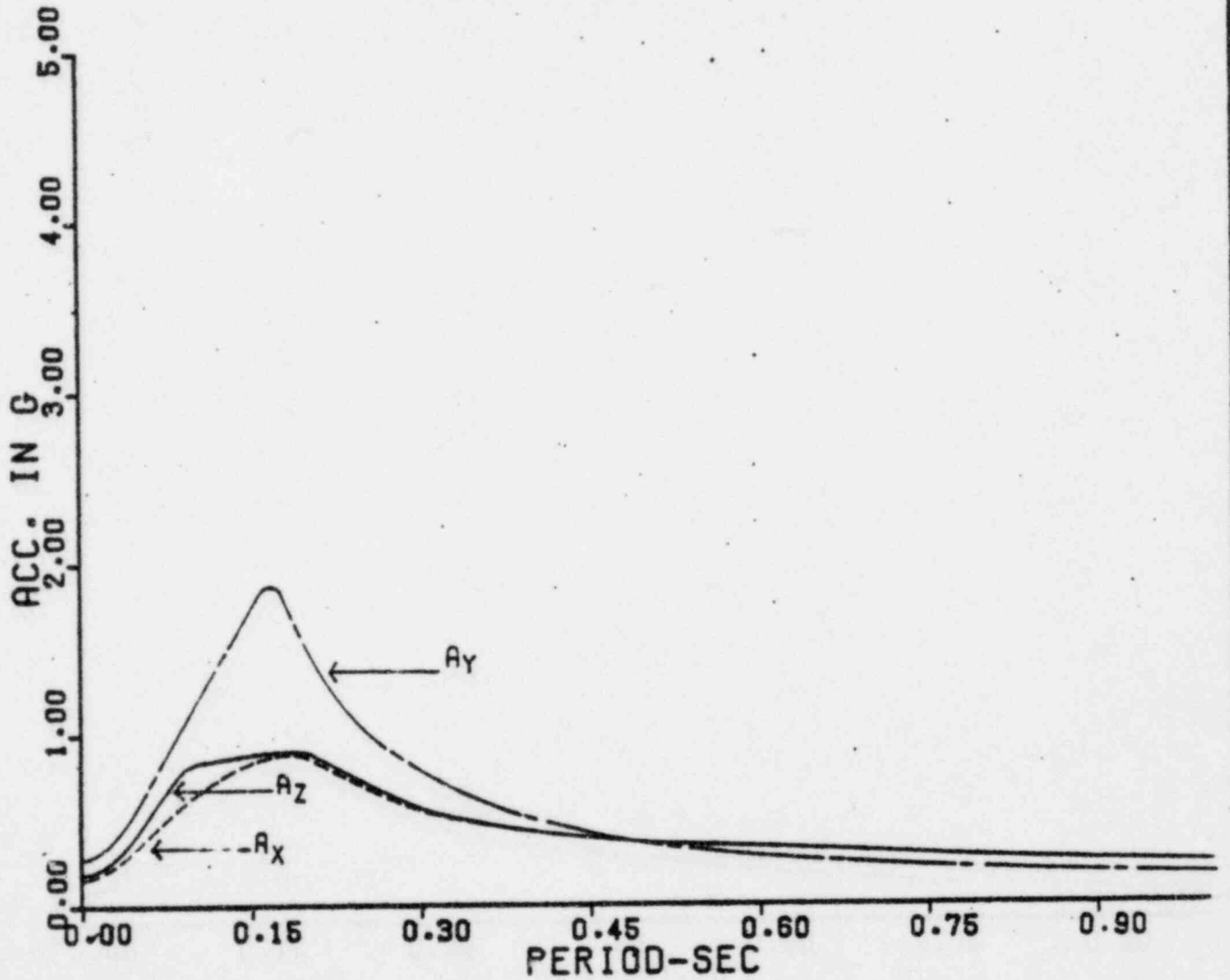






IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 789.58 FT.  
 EQUIPMENT DAMPING: 0.04  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



TUSI

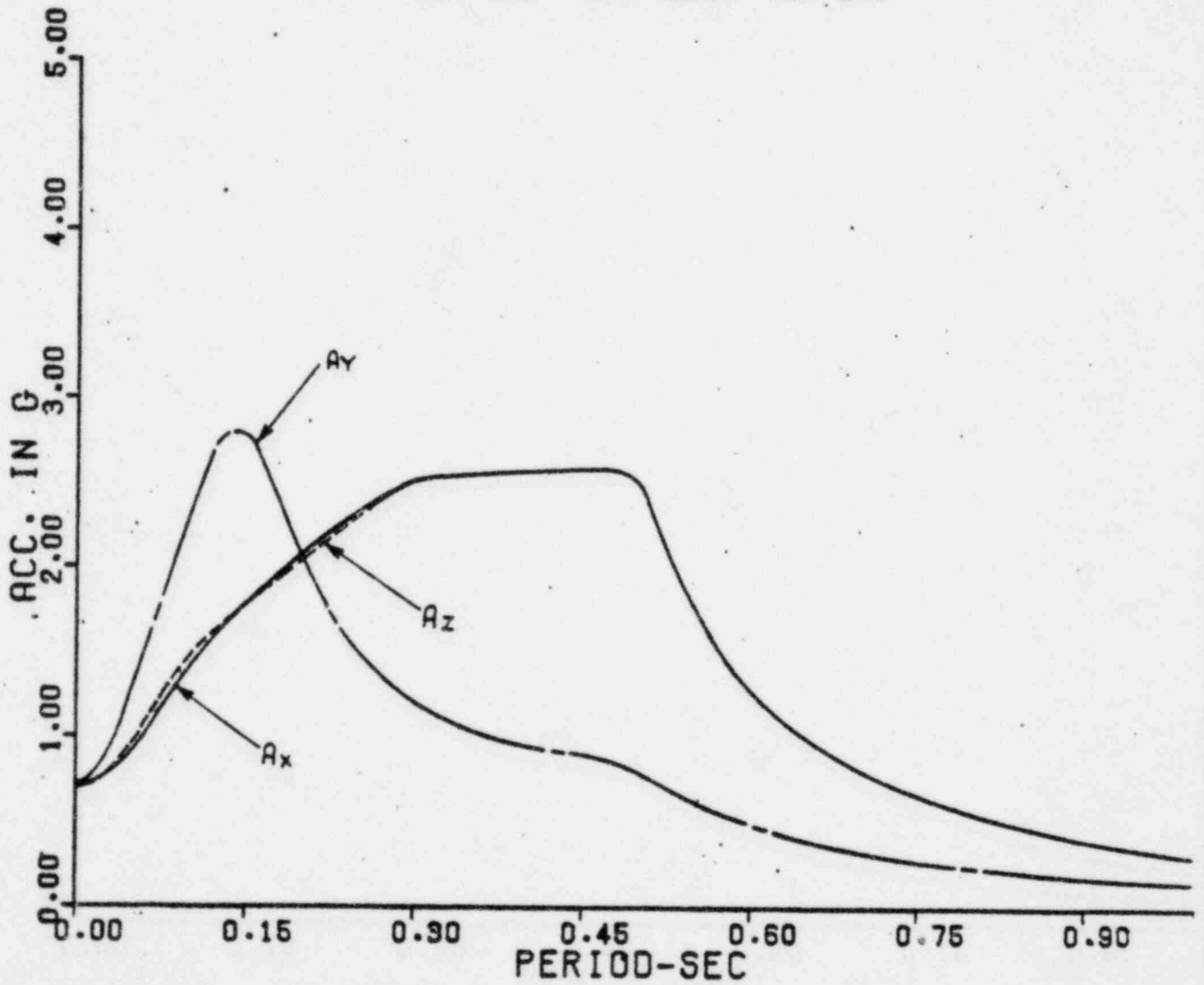
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SCALE: -  
 FIGURE 1123A

### IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
ELEVATION: 1000.50 FT  
EQUIPMENT DAMPING: 0.07  
SSE EARTHQUAKE  
AX: N-S AY: VERT. AZ: E-W



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SCALE: -

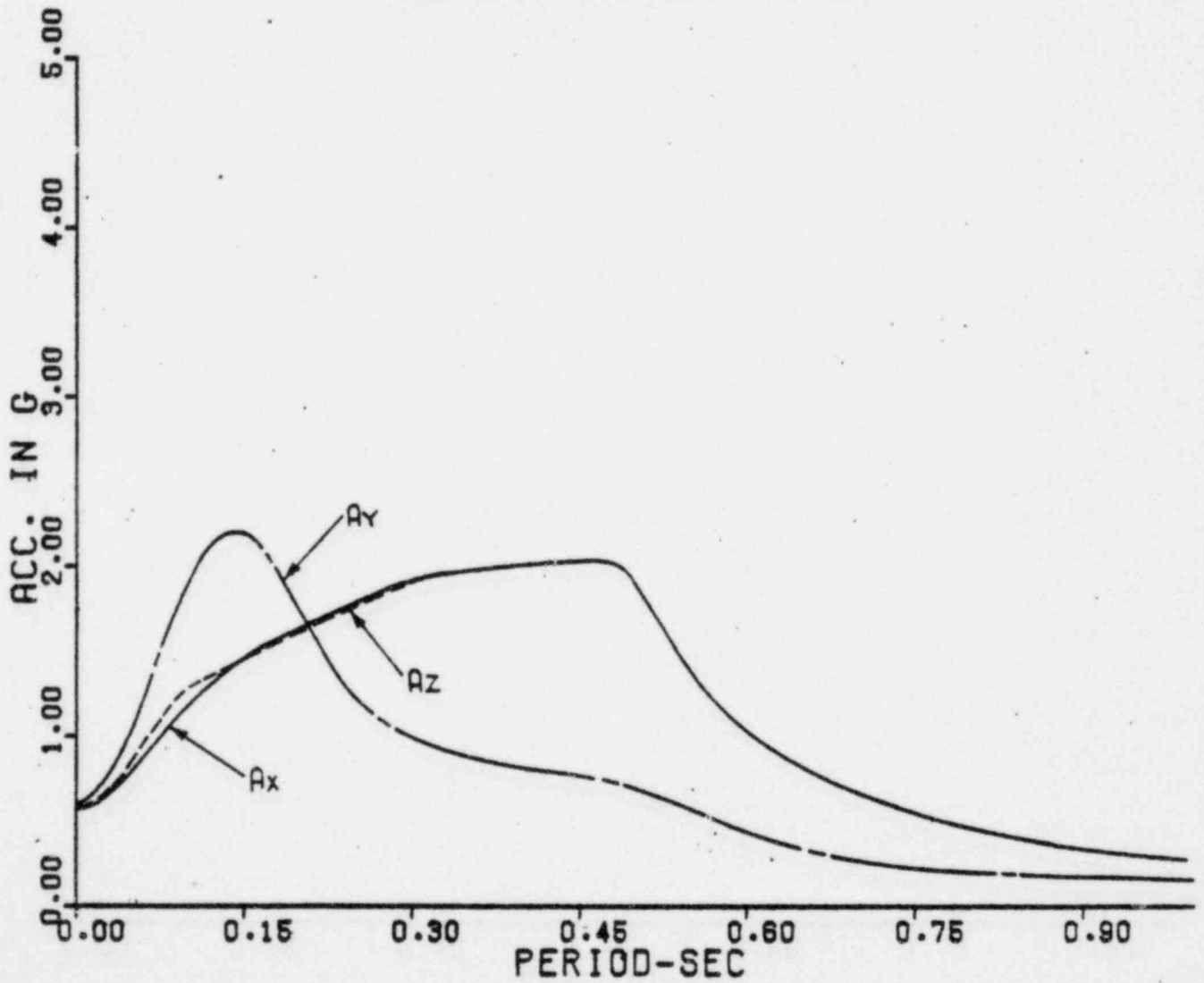
FIGURE 1124A

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JOB NO. 2325-A

IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 950.58 FT.  
 EQUIPMENT DAMPING: 0.07  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



TUSI

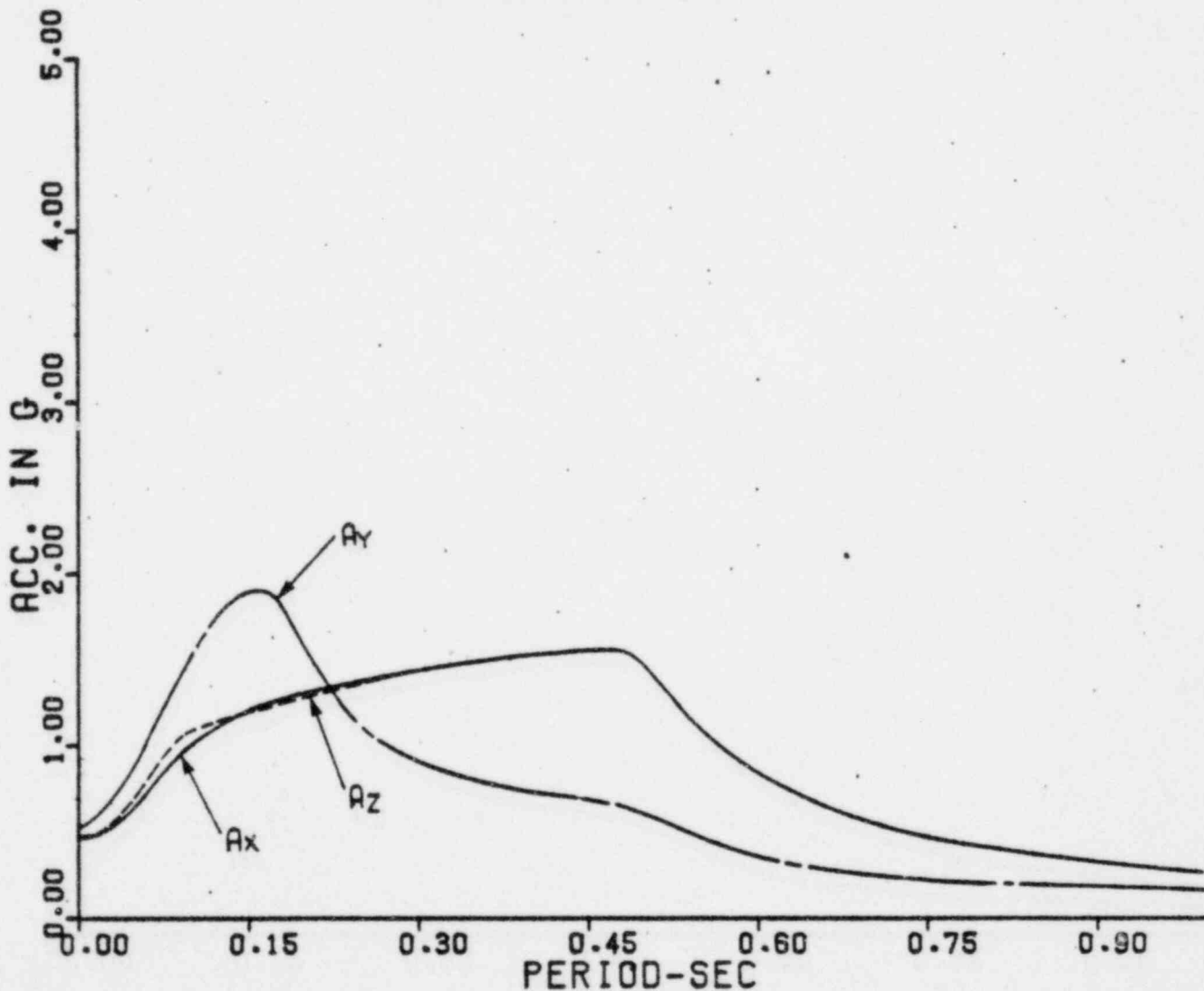
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SCALE: -  
 FIGURE 1125A

IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 905.75 FT.  
 EQUIPMENT DAMPING: 0.07  
 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



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FIGURE 1126A

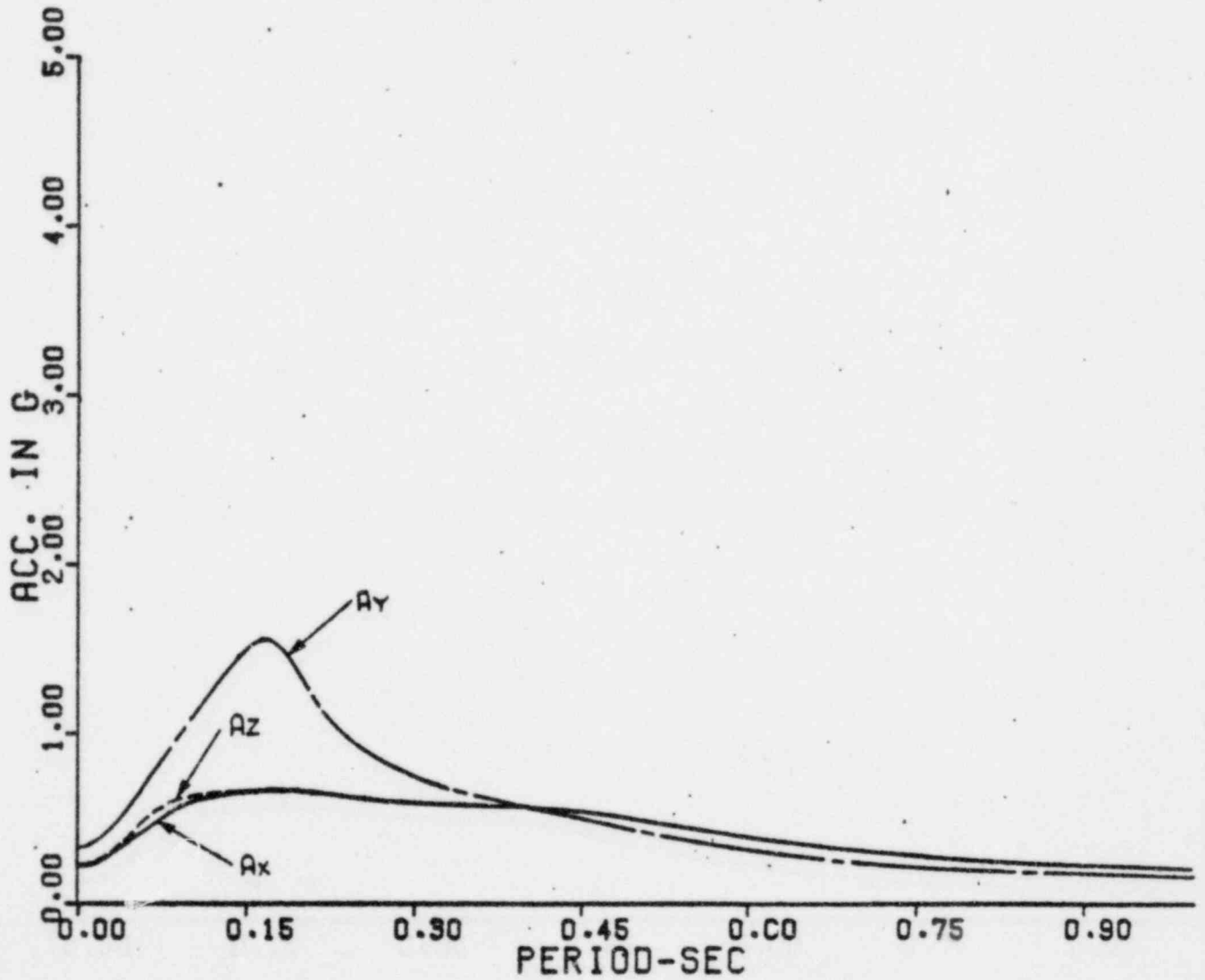
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APPROVALS



IN-STRUCTURE RESPONSE SPECTRA FOR:  
CONTAINMENT BUILDING  
ELEVATION: 806.50 FT.  
EQUIPMENT DAMPING: 0.07  
SSE EARTHQUAKE  
AX: N-S AY: VERT. AZ: E-W



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JOB NO. 2523-A

SCALE: -  
**FIGURE 1128A**

















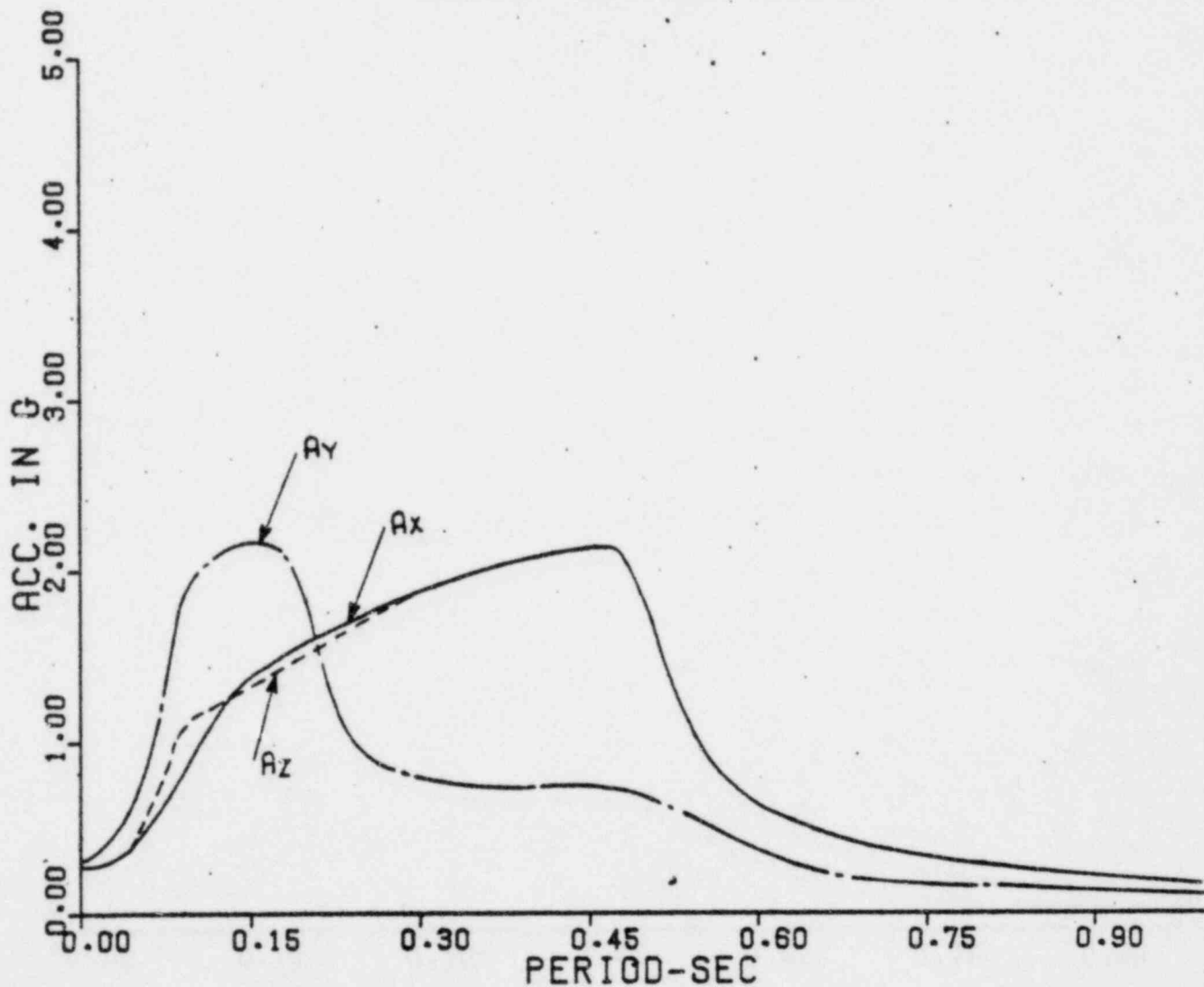






IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 965.75 FT.  
 EQUIPMENT DAMPING: 0.02  
 1/2 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



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REV. 1/68

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FIGURE 1138A

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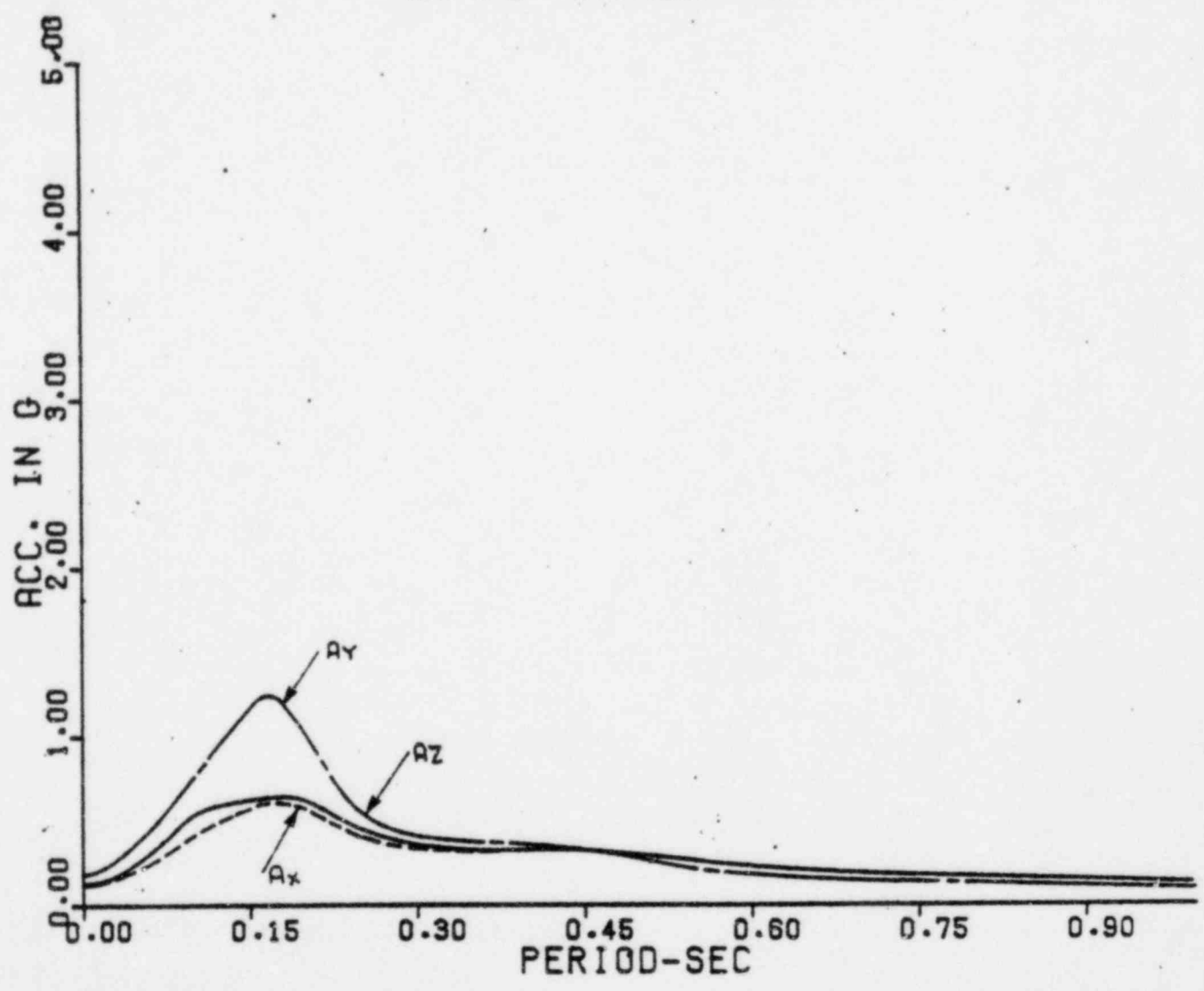






### IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 805.50 FT.  
 EQUIPMENT DAMPING: 0.04  
 1/2 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



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 JOB NO. 2325 - A

SCALE: -  
 FIGURE 1146A

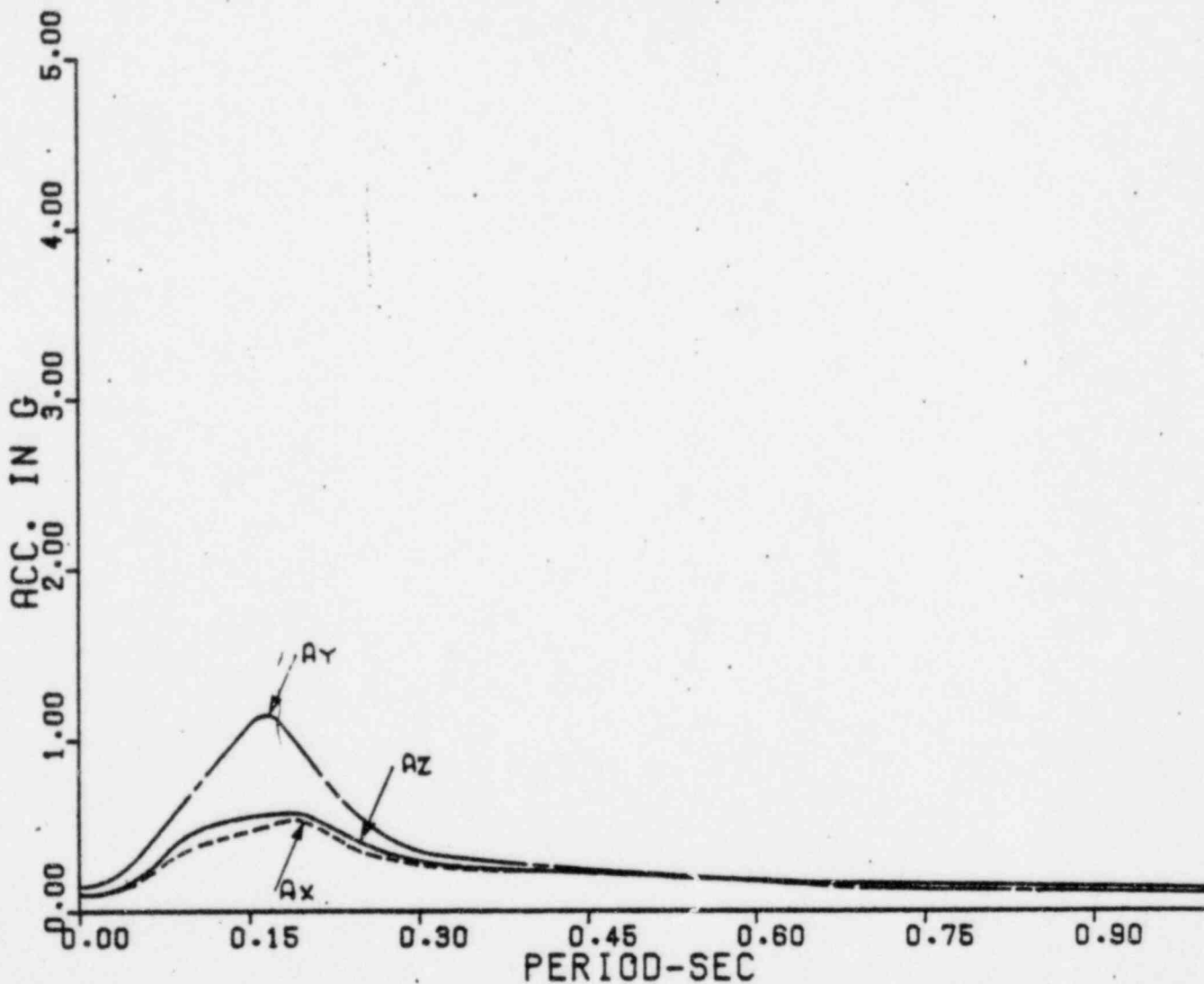
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APPROVALS																	

07-SEP-84

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IN-STRUCTURE RESPONSE SPECTRA FOR:

CONTAINMENT BUILDING  
 ELEVATION: 783.58 FT.  
 EQUIPMENT DAMPING: 0.04  
 1/2 SSE EARTHQUAKE  
 AX: N-S AY: VERT. AZ: E-W



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NO.	DATE	BY	CHKD	APP'D	REVISION

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 NEW YORK  
 JOB NO. 2323-A

SCALE: -  
 FIGURE 1147A