



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

TERA

May 15, 1980

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Transmittal of Confirmatory Piping
Analysis Information
NRC Docket Nos. 50-454, 50-455, 50-456,
and 50-457

References (a): February 4, 1980 letter from L. S. Rubenstein
to D. Louis Peoples

(b): April 30, 1980 letter from D. L. Peoples
to H. R. Denton

Dear Mr. Denton:

Per Reference (a), the NRC Staff requested Commonwealth Edison Company to provide sufficient information to allow Argonne National Laboratory to perform a confirmatory piping analysis for Byron and Braidwood Stations. Commonwealth Edison provided a major portion of the requested information in Reference (b).

As indicated in Reference (b), some piping supports for the 1FW03DC-16" feedwater line were being redesigned based upon the formal analysis. This redesign effort has been completed and copies of the revised support drawings and analyticals are included with this letter.

Please address any additional questions that you might have concerning this matter to this office.

Boo!
5/14

8005290 482

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Commonwealth Edison

Mr. Harold R. Denton, Director
May 15, 1980
Page 2

As requested in Reference (a), two copies of this information are being forwarded to Argonne and four additional copies to the NRC Staff.

Very truly yours,

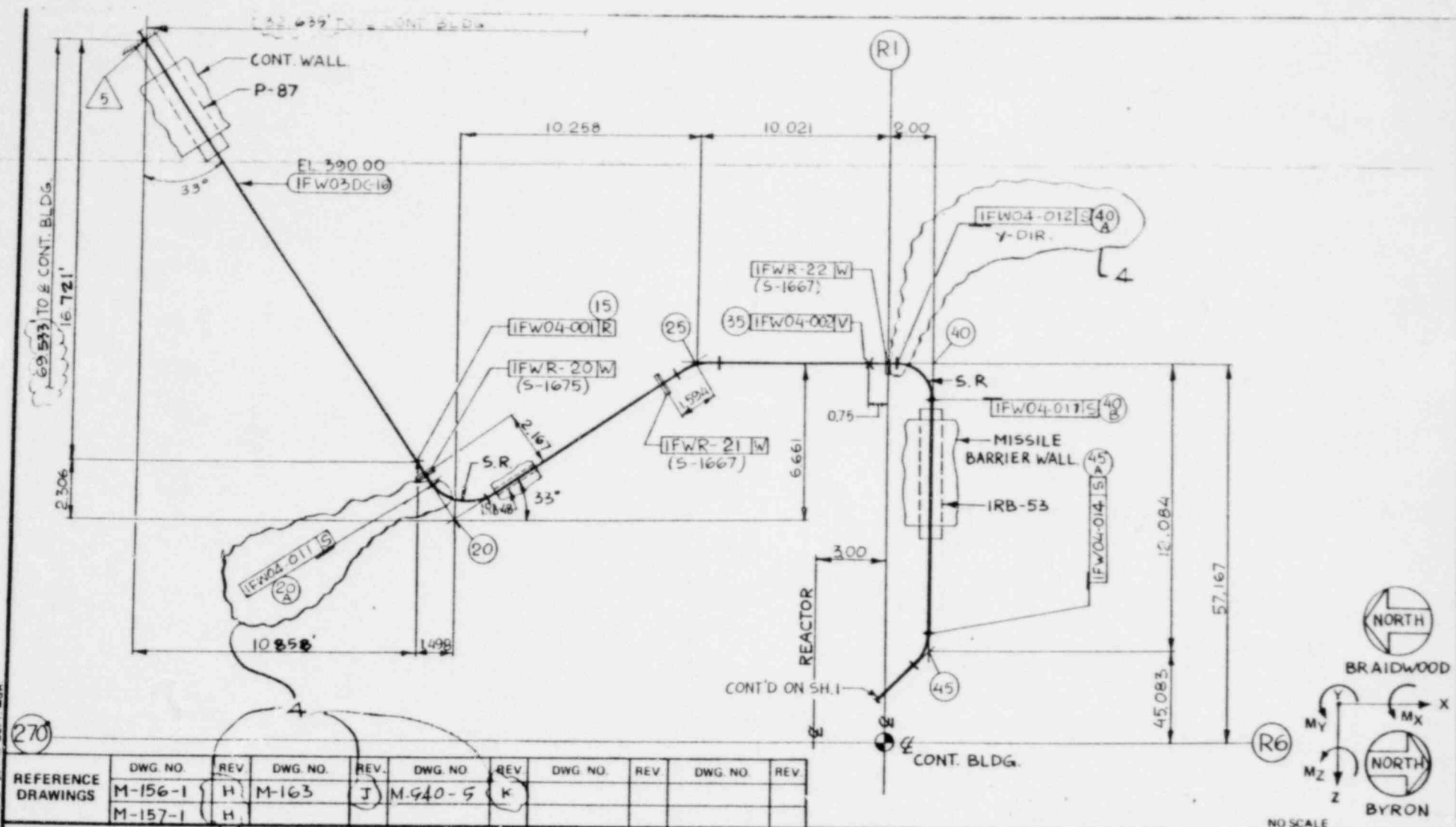
D. L. Peoples
Director of
Nuclear Licensing

DLP:WFN:rap

enclosure

cc: Ira Charak, ANL (2 w/encl.)

3850A



REFERENCE DRAWINGS	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.
	M-156-1	H	M-163	J	M-940-5	K				
	M-157-1	H								

REV.	DATE	PREPARED	CHECKED	ENG'R. APPL.	REV. DESCRIPTION	FILM
1	11-30-75	R. LAUD	R. Prasad	K39 Johnson	FOR COMMENTS	
2	1-16-76	R. LAUD	R. Prasad	K39 Johnson	FOR COMMENTS	
3	11-21-76	R. LAUD	R. Prasad	K39 Johnson	FOR ANALYSIS - SEISMIC	
4	11-16-77	J. AZAR	J. Azar	K39 Johnson	LOG FOR PIPE WHIP TEST	x
4	07-18-79	J. Azar	R. Prasad	K39 Johnson	FOR ANALYSIS - HYDRAULIC TRANSIENT	
4	03-31-80	J. Azar	R. Prasad	K39 Johnson	PER STRESS REPORT 03-31-80	

PIPING ANALYTICAL & PHYSICAL DATA		FOR FEED WATER SYSTEM	
PROJECT BYRON/BRAIDWOOD-1		SUB SYSTEM NO. IFW04	
CLIENT COMMONWEALTH EDISON CO.		REV. 4	
PROJECT NO. 4391-00 4683-00		SHEET 2 OF 4	

SARGENT & LUNDY
ENGINEERS
CHICAGO

[illegible][illegible]

RELEASE RECORD						
REV.	DATE	PREPARED	CHECKED	ENG'R APPL.	REV DESCRIPTION	FILM
1	11-20-75	R. LAUD	R. Prosaran	K. B. Johnson	FOR COMMENTS	
2	1-16-76	R. LAUD	R. Prosaran	K. B. Johnson	FOR COMMENTS	
3	11-21-76	R. LAUD	R. Prosaran	K. B. Johnson	FOR ANALYSIS - SEISMIC	
4	12-16-77	I. AZEEL	J. Azeeel	K. B. Johnson	LOG FOR PIPE WHIP TEST	X
4	07-18-79	F. Lauer	R. Lauer		FOR ANALYSIS - HYDRAULIC TRANSIENT	
4		R. Lauer	R. Lauer		PER STRESS REPORT 03-21-80	

SARGENT & LUNDY ENGINEERS, INC. CHICAGO	
SUB SYSTEM NO.	REV.
IFW04	
SHEET 3 OF 4	4

SCHEMATIC OF MODES TO BE ANALYZED

TOTAL NO. OF MODES REQUIRED

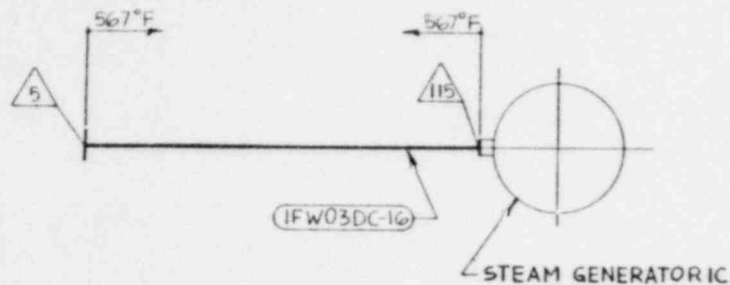
MODE NO.

1

MODE DESCRIPTION MAX OPER.

MODE NO.

MODE DESCRIPTION



R E V.	MODE NO. 1						EQUIPMENT INFORMATION						R E V.	MODE NO.					
	NODE POINT	TEMP.	TERMINAL MOVEMENTS			CALC. BY VDR S&L	EQUIPMENT NUMBER	EQUIPMENT TITLE	VENDOR	DRAWING NO.	RE V.	REMARKS		NODE POINT	TEMP.	TERMINAL MOVEMENTS			CALC. BY VDR S&L
			ΔX	ΔY	ΔZ											ΔX	ΔY	ΔZ	
4	5	567	0.000	0.000	0.000			PENEY ANCHOR P-87											
4	115	567	1.062	0.448	2.178		IRCOIBC	STEAM GEN. IC	WESTINGHOUSE	1099J30									
																		</	

RELEASE RECORD

REV.	DATE	PREPARED	CHECKED	ENG. APPL.	REV. DESCRIPTION	FILM
1	11-20-75	R. LAUD	R. PRASAD	M. B. Johnson	FOR COMMENTS	
2	1-26-76	R. LAUD	R. PRASAD	M. B. Johnson	FOR COMMENTS	
3	12-21-76	R. LAUD	R. PRASAD	M. B. Johnson	FOR ANALYSIS - SEISMIC	
4	12-16-77	I. AZDEL	(Signature)	M. B. Johnson	LOC. FOR PIPE WHIP TEST	X
4	07-18-79	(Signature)	(Signature)	(Signature)	FOR ANALYSIS - HYDRAULIC TRANSIENT	
4		(Signature)	(Signature)	(Signature)	PER STRESS REPORT 03-31-80	

PIPING ANALYTICAL & PHYSICAL DATA

FOR FEED WATER SYSTEM
 PROJECT BYRON/BRAIDWOOD-1
 CLIENT COMMONWEALTH EDISON CO.

PROJECT NO.

4391-00 4683-00

SARGENT & LUNDY
 ENGINEERS
 CHICAGO

SUB SYSTEM NO. REV.

IFW04

SHEET 4 OF 4

4

SECTION 'A-A'

KEY PLAN

BYRON REACTOR

ITEM	QTY	DESCRIPTION	UNIT	BY OTHERS
1	1	COMPONENT SUPPORT ASSEMBLY		BY BR
2	2	295 IN. 1/2" PIPE CLAMP		
3	1	1/2" WELDLESS EYE		
4	1	1/2" 30" W/12" TBE		
5	1	1/2" 30" W/12" TBE		
6	1	1/2" 30" W/12" TBE		
7	4	1/2" HEX NUTS SA 301 GR B		
8	1	1/2" 30" W/12" TBE		
9	1	1/2" 30" W/12" TBE		
10	1	1/2" 30" W/12" TBE		
11	1	1/2" 30" W/12" TBE		
12	1	1/2" 30" W/12" TBE		
13	1	1/2" 30" W/12" TBE		
14	1	1/2" 30" W/12" TBE		

SECTION 'A-A'

KEY PLAN

BYRON REACTOR

ITEM	QTY	DESCRIPTION	UNIT	BY OTHERS
1	1	COMPONENT SUPPORT ASSEMBLY		BY BR
2	2	295 IN. 1/2" PIPE CLAMP		
3	1	1/2" WELDLESS EYE		
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5	1	1/2" 30" W/12" TBE		
6	1	1/2" 30" W/12" TBE		
7	4	1/2" HEX NUTS SA 301 GR B		
8	1	1/2" 30" W/12" TBE		
9	1	1/2" 30" W/12" TBE		
10	1	1/2" 30" W/12" TBE		
11	1	1/2" 30" W/12" TBE		
12	1	1/2" 30" W/12" TBE		
13	1	1/2" 30" W/12" TBE		
14	1	1/2" 30" W/12" TBE		

SECTION A-A

SECTION B-B

SECTION C-C

ITEM	QUANTITY	DESCRIPTION	BY	OTHERS
1	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
2	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
3	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
4	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
5	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
6	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
7	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
8	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
9	1	1/4" X 1/4" X 3'-0" STEEL	BSR	
10	1	1/4" X 1/4" X 3'-0" STEEL	BSR	

REFERENCE DRAWINGS

REV	SPEC NO	DATE	DRAWN	CHECKED	ENG APP'L	FIRM
A	—	2-14-78	—	—	—	—
B	—	11-06-78	—	—	—	—
C	—	5-5-80	—	—	—	—

REVISION DESCRIPTION

REV	DATE	DESCRIPTION
1	2-14-78	FOR CONSTRUCTION
2	11-06-78	FOR CONSTRUCTION
3	5-5-80	FOR CONSTRUCTION

BYRON REACTOR BUILDING

KEY PLAN

FL 300'-0"

ENGINEERING

PROJECT NO. 4863

PROJECT NO. 4863

BYRON RAILROAD STATION

UNIT - 1

CORPORATE HEALTH EDISON COMPANY

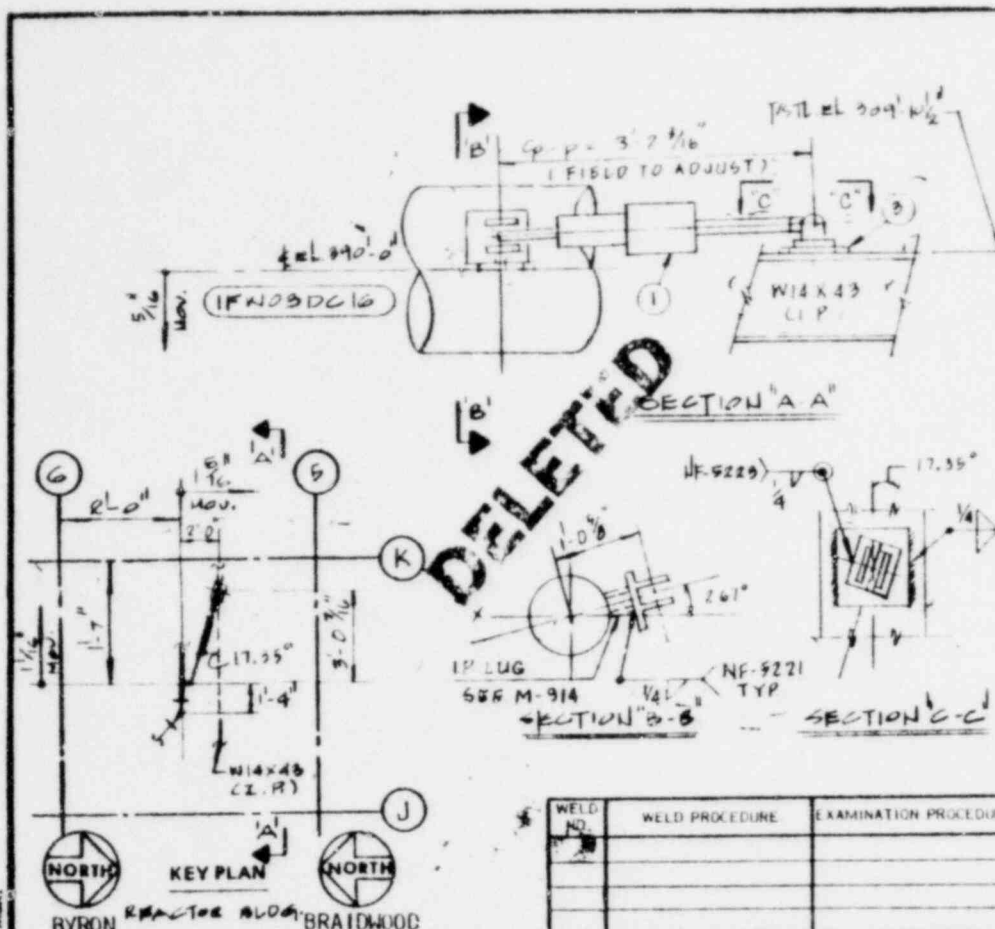
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

SARGENT & LUNDY

SUPPORT NO. M-IFWO4002V

SHEET 1 OF 1



BILL OF MATERIAL				BY OTHERS							
ITEM	QUAN	FIG NO OR PART NO	DESCRIPTION	COMPONENT WEIGHT	P.O.	ISS	PRIM.	SEC.	ALSC	BY	OR
1	1		COMPONENT SUPPORT ASSEMBLY								
1	1	207	MECHANICAL SHOCK SUPPRESSOR 10.32 5" STROKE Wt 1-1 1/2" C.S. #3 1/4" H.S. #1 1/4" NUCLAR CLASS I WITH ADDITIONAL REAR END BRACKET	40.26		X					
3	1		1/2" X 6" X 6" C.S. PLATE, 2A 26 DR. SA-BIS, 2R. 45	5.10						X	PC PL
DELETED											
1	1		BUNDLE & TAG PAINT W/ CARBOZINE								
				TOTAL WEIGHT	53.36						
				LOADS (LBS.)							
DESIGN		OPERATING		HYDRO TEST		EMERGENCY		FAULTED			
2944						5247					

REV.	SPEC NO.	DATE	DRAWN	CHECKED	ENG'R APPL	FILM	EMD REVIEW
A	-	10/21/76	RB Johnson	W. Carl Clem	RB Johnson		
B	-	8-1-78	W. Carl Clem	W. Carl Clem	W. Carl Clem		
C	-	5-5-80	W. Carl Clem	W. Carl Clem	W. Carl Clem		

REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.
1	U-157-1	D	5-906	P	U-155	P	62-1-322	C	
2	M-5403	F							

REV.	DESCRIPTION
REV C -	DELETED PER NEW ANALYSIS, LOADS EXCEEDED REPLACED BY IFN040143

BYRON/BRAIDWOOD STATION
UNIT-1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

SARGENT & LUNDY
ENGINEERS
CHICAGO

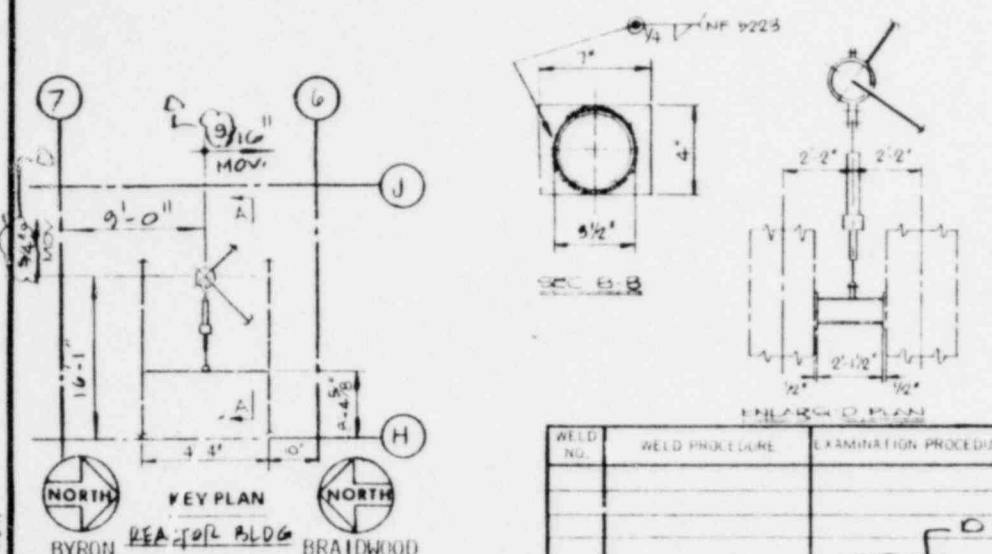
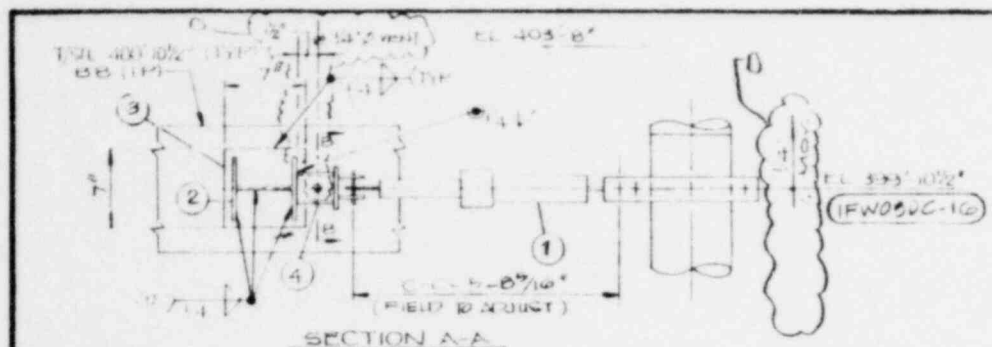
SUPPORT NO. M-IFW040043
SHEET 1 OF 1

DATE 10/21/76
DATE 10/26/76
DATE 10/26/76

PROJECT NO. 4391-00 4600-00

JOSEPH C. LAVALLEE
62 28271
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS

WILLIAM CARL CLEM
62-31871
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS



BILL OF MATERIAL				BY OTHERS			
ITEM	QUAN	FIG NO OR PART NO	DESCRIPTION	COMPONENT WEIGHT LBS	BY	BR	
COMPONENT SUPPORT ASSEMBLY:							
1	1	307	MECHANICAL SHOCK SUPPRESSOR NO. 10, 6" STROKE NUCLEAR CLASS 2 C.S. = 25.8" H.S. = 10.8" W = 31.5" 16" C.O. PIPE C.S. 104L 2362	234.72	X		
2	1		V 6 X 65 (SA 36) X 2' 1 1/2"	13.06		X	PC PC
3	2		1/2" X 1' X 1' C.G. PLATE (SA-36 OR SA-307 OR B)	6.94		X	PC PC
4			3" SCH 80 (CARBON STEEL) PIPE 0'-5" LONG	4.85		X	PC PC
1			BUNDLE & TAG PAINT W/ CARBOZINC II				
TOTAL WEIGHT				244.57			
LOADS (LBS)							
DESIGN 12,518							
OPERATING							
HYDRO TEST							
EMERGENCY 17,212							
FAULTED							

REFERENCE DRAWINGS	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.
	11-163		11-910		11-3773		11-1255	
DRAWING RELEASE RECORD								
REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENG. R. APPL.	FILM	END. REV. SW	
A		11/3/76	W. J. Johnson	W. J. Johnson	W. J. Johnson			
B		2-14-78	W. J. Johnson	W. J. Johnson	W. J. Johnson			
C		12-22-78	W. J. Johnson	W. J. Johnson	W. J. Johnson			
D		5-5-80	W. J. Johnson	W. J. Johnson	W. J. Johnson			
REVISION DESCRIPTION								
F/L 2771 SUPPLY UNAPPEARED, F/L 2739 FOR CONSTR. REVISION DUE TO NEW STRESS REPORT								

DESIGN 12,518

OPERATING

HYDRO TEST

EMERGENCY 17,212

FAULTED

BYRON/BRAIDWOOD STATION
UNIT-1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

SARGENT & LUNDY
ENGINEERS
CHICAGO

SUPPORT NO. M-IFW040055
SHEET 1 OF 1

JOSEPH C. LAVALLEE

62 24771

REGISTERED PROFESSIONAL ENGINEER

ILLINOIS

WILLIAM CARL CLEGG

62 31271

REGISTERED PROFESSIONAL ENGINEER

ILLINOIS

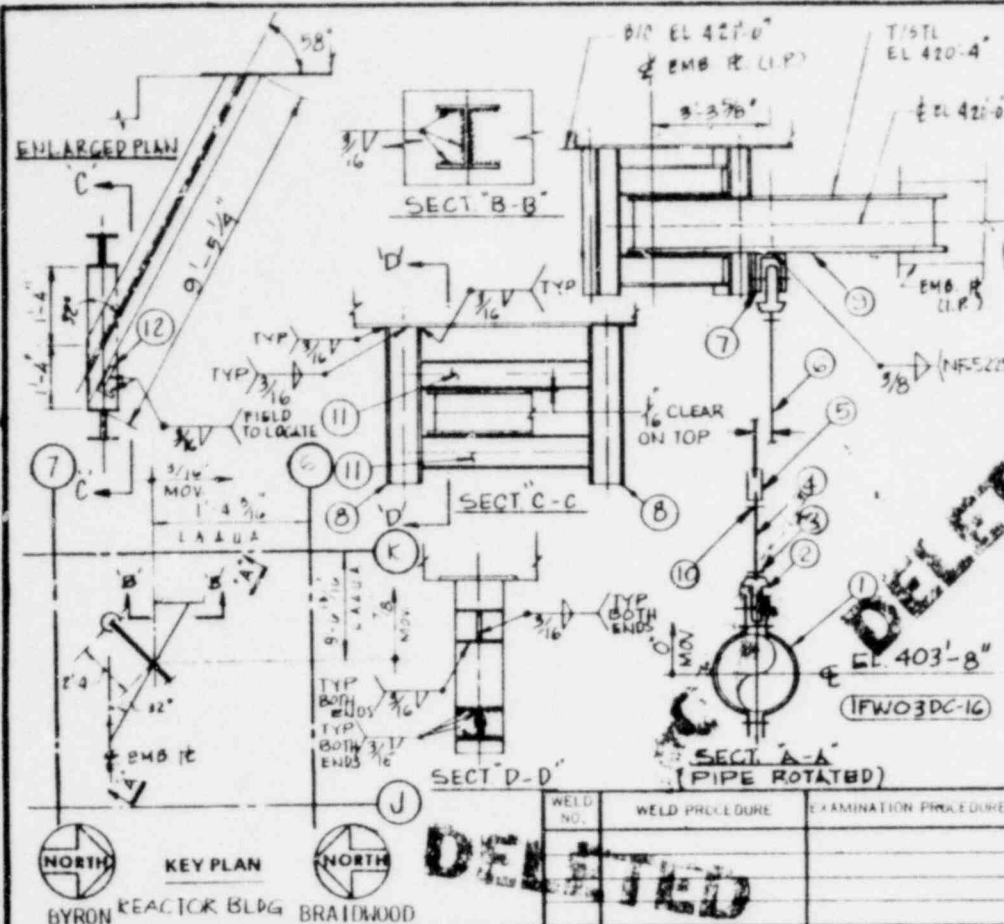
P. E. SEAL

PROJECT NO. 4391-00 4689-00

DATE 10/7/76

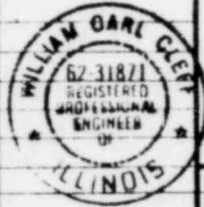
DATE 12/7/76

DATE 12-7-76



BILL OF MATERIAL				BY OTHERS	
ITEM	QUAN	FIG NO	DESCRIPTION	WEIGHT	
1	1	—	COMPONENT SUPPORT ASSEMBLY		
1	1	HS 41	3-BOLT PIPE CLAMP 1/2" DIA, 3'-7 3/4" E=18 1/4", G=24" X 6", H=1'-3 3/8", K=6 1/2", S=3" F=13 1/4" STUD BOLT, 1 1/2" LONG W/ 4 3/8" TBE, A=3 1/2" SA-307, W/ 6 HEX NUTS	153.21	X
2	2	290	1 1/2" WELDLESS EYE NUT	6.9	X
3	2	—	1 1/2" HEX NUTS, A-307, GR. B	2.46	X
4	253 N	—	1 1/2" Ø ROD X 2'-8 3/8" LONG, 12" TBE	16.32	X
	230	—	1 1/2" TURNBUCKLE	6.40	X
	140 N	—	1 1/2" Ø ROD X 10'-0" LONG, 12" TBE	60.08	X
	66	—	1 1/2" WELDED BEAM ATTACHMENT WITH PIN & COTTER PINS	19.02	X
8	2	—	W 5X16 (SA-36) 9'-9" LONG	96.00	PC PC
9	1	—	W 8X31 (SA-36) 9'-5 1/4" LONG (SEE ENLARGED PLAN-DETAIL)	292.56	X
10	1	—	1 1/2" L # THD. HEX NUT, SA-307 GR B	1.23	X
11	2	—	W 5X16 (SA-36) 2'-8" LONG	85.33	PC PC
12	1	—	5" X 2" X 3/8" ANGLE (SA-36) 0'-2" LONG	0.98	PC PC
1	—	—	BUNDLE & TAG PAINT W/ CARBONIZING II	700.49	
TOTAL WEIGHT				700.49	
LOADS (LBS)					
DESIGN	10436	OPERATING	7408	HYDRO TEST	EMERGENCY
				13464	FAULTED

REFERENCE DRAWINGS		DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	(REV 4)
M-163		G	S-1467	D	S-1481	P	M-340-S	F
M-1255		D	S-918	S	GE-1-3223			
DRAWING RELEASE RECORD								DATA PT 65 B
								SUPPORT CLASS B
REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENG'R APPL	FILM	END REVIEW	
A	—	10/21/76			RB Johnson			
B	—	1-15-79	<i>Ingulf...</i>	<i>Wanda Perry</i>	<i>St. J. Allen</i>			
C	—	5-5-80	<i>11/1/80</i>	<i>W. J. ...</i>	<i>W. J. ...</i>			
REVISION DESCRIPTION								
REV C - DELETED PER NEW ANALYSIS, LOADS EXCEEDED SEE IFW0401GR FOR REPLACEMENT								



BYRON/BRAIDWOOD STATION
UNIT-1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

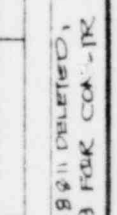
DRAWN: *[Signature]*
CHECKED: *[Signature]*
ENGINEER: *[Signature]*
APPROVED: *[Signature]*

NO SCALE
DATE: 10/19/76
DATE: 10/26/76
DATE: 10-16-76

SARGENT & LUNDY
ENGINEERS
CHICAGO

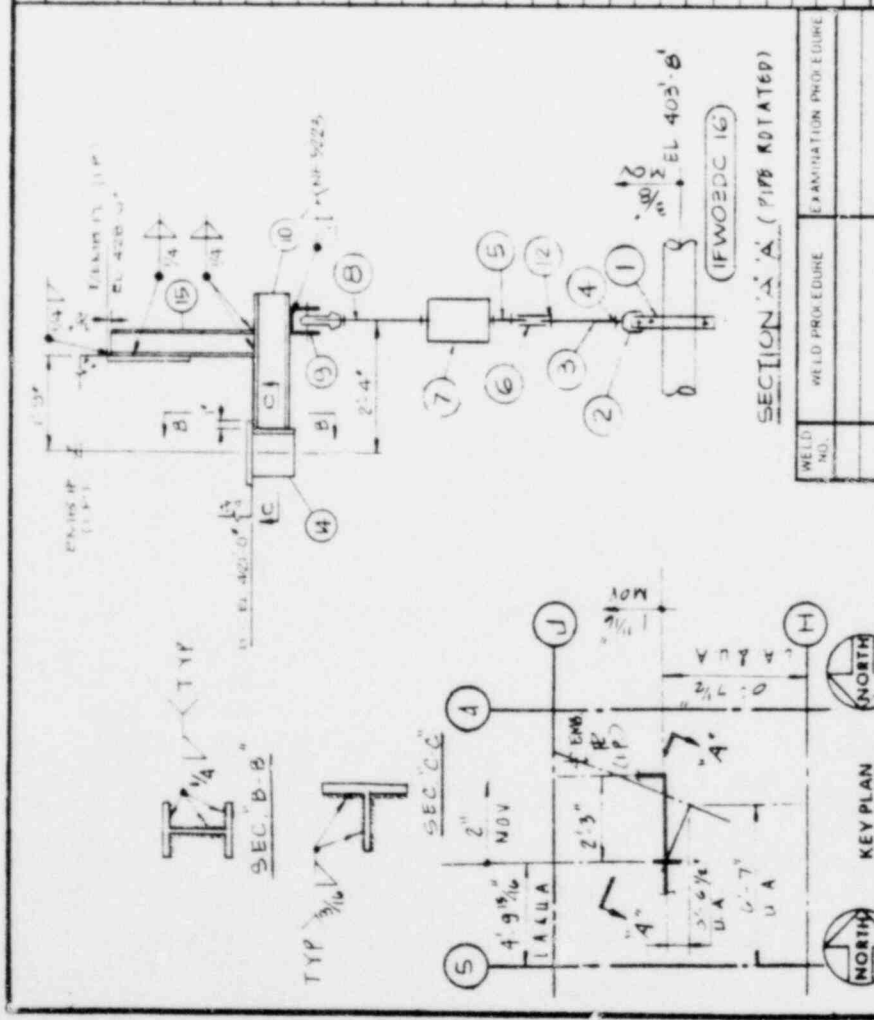
SUPPORT NO. **M-IFW04006R**
SHEET 1 OF 1

REV. **C**



	BYRON/GRAND STATION UNIT-1 COMMONWEALTH EDISON COMPANY CHICAGO, ILLINOIS		NUCLEAR SAFETY RELATED		SARGENT & LUNDY ENGINEERS CHICAGO	REV. D
	DRAWN CHECKED DATE	10/2/76 DATE	10/26/76 DATE	10-20-76 DATE	SUPPORT NO. V M-1FW04008	SHEET 1 OF 1
PROJECT NO. 4391-00		PROJECT NO. 4683-00				

[illegible]



REFERENCE DRAWINGS				DRAWING RELEASE RECORD				REVISION DESCRIPTION			
DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DATE	BY	DATE	BY
M-103	3	M-103	3	M-103	3	M-103	3	10/27/74	1939		
M-125	1	M-125	1	M-125	1	M-125	1	11/19/76	1939		
M-125	2	M-125	2	M-125	2	M-125	2	5-50	1939		

EXAMINATION PROCEDURE			
WELD NO.	WELD PROCEDURE	EXAMINATION PROCEDURE	WELD NO.

REVISIONS			
REV.	SPEC. NO.	DATE	DESCRIPTION
A		10/27/74	REVISION DUE TO NEW BRATWOOD REPORT, ITEM 1 FROM CORRECTIVE
B		11/19/76	REVISION DUE TO NEW BRATWOOD REPORT, ITEM 1 FROM CORRECTIVE
C		5-50	REVISION DUE TO NEW BRATWOOD REPORT, ITEM 1 FROM CORRECTIVE

BILL OF MATERIAL			
ITEM	QUANTITY	DESCRIPTION	REMARKS
1	253N	1/2" DIA. X 2'-1" LONG W/ 12" TEE	4.37
2	290	1/2" DIA. X 2'-1" LONG W/ 12" TEE	7.46
3	253N	1/2" DIA. X 2'-1" LONG W/ 12" TEE	7.04
4	5	1/2" DIA. X 2'-1" LONG W/ 12" TEE	2.775
5	140N	1/2" DIA. X 2'-1" LONG TFL	5.92
6	230	NBUCKLE	3.54
7	1 B 260	1/2" DIA. X 2'-1" LONG W/ 12" TEE	82.00
8	140N	1/2" DIA. X 2'-1" LONG TFL	33.80
9	56	1/2" DIA. X 2'-1" LONG W/ 12" TEE	6.18
10	1	1/2" DIA. X 2'-1" LONG W/ 12" TEE	52.0
11	1	1/2" DIA. X 2'-1" LONG W/ 12" TEE	1.55
12	1	1/2" DIA. X 2'-1" LONG W/ 12" TEE	5.9
13	1	1/2" DIA. X 2'-1" LONG W/ 12" TEE	56.36
14	1	1/2" DIA. X 2'-1" LONG W/ 12" TEE	58.10
15	1	1/2" DIA. X 2'-1" LONG W/ 12" TEE	

BY OTHERS		BY BR	

OPERATING		EMERGENCY	
LOADS (LBS)	HYDRO TEST	LOADS (LBS)	HYDRO TEST
3904			

BYRON/BRATWOOD STATION	
UNIT-1	
COMMONWEALTH EDISON COMPANY	
CHICAGO, ILLINOIS	
NUCLEAR SAFETY RELATED	

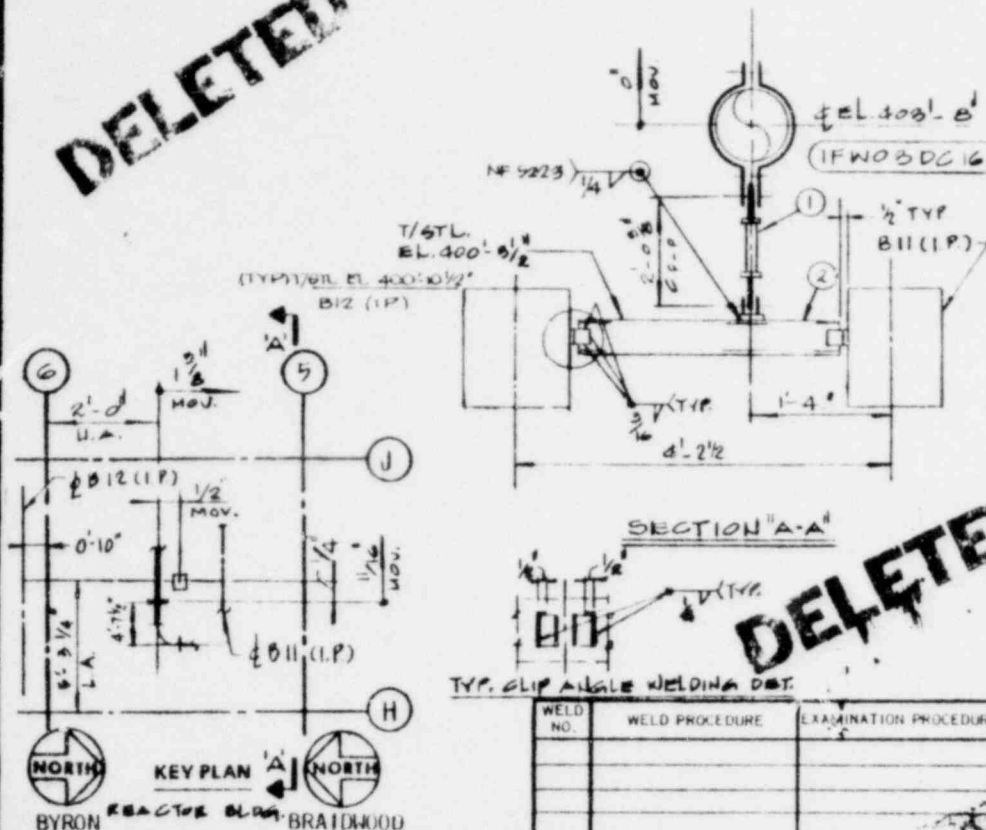
SARGENT & LUNDY	
CHICAGO	
NO SCALE	10/27/76
CHECKED	DATE
ENGINEER	DATE
APPROVED	DATE

PROJECT NO.	
4391-00	4483 00

SUPPORT NO.	
M-FW04 008V	

SHEET 1 OF 1	

FORM APPROVED 1-76



BILL OF MATERIAL					BY OTHERS				
ITEM	QUAN TY	FIG NO	PART NO	DESCRIPTION	COMPONENT WEIGHT	LAB NO	CS PRIM	SEC	ALU
	1			COMPONENT SUPPORT ASSEMBLY					
	1	211		SWAY TRUT ASSEMBLY SIZE NO. 1 W = 1' - 2" x 1/2" LONG, LOAD = 5000 WITH 1/2" O.D. PIPE, C.S. W/ BOLTS & STUDS PER AH-1493 4 AH-1463	131.06				
2	1			6" WIDE FLANGE @ 12 #/FT. 2'-0" LONG, SA-36 CUT FROM ORIGINAL STOCK	240				X
3	4			3' x 3" x 3/4" CLIP ANGLE 0'-4" LONG, SA-36	10.2				X
NOTE: FIELD TO CUT ITEM 2 TO THE NEW LENGTH AS SHOWN.									
1				BUNDLE & TAG PAINT W/ CARBOZINC II					
TOTAL WEIGHT					165.26				
LOADS (LBS.)									
DESIGN - 2897	OPERATING		HYDRO TEST		EMERGENCY - 6527		FAULTED		

REFERENCE DRAWINGS	DWG. NO.	REV	DWG. NO.	REV	DWG. NO.	REV	DWG. NO.	REV	DATE
	U-160	C	2-919	V	U-1897	B	08-1-1249		08-1-1249
	M-540-5	F	5-910	Z					

DRAWING RELEASE RECORD								SUPPORT CLASS
REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENG'R APPL.	FILM	EMD REVIEW	
A	-	10/27/76	J. R. [illegible]	[illegible]	B. B. [illegible]			
B	-	2-14-78	[illegible]	[illegible]	[illegible]			
C	-	11-04-78	[illegible]	[illegible]	[illegible]			
D	-	5-5-80	[illegible]	[illegible]	[illegible]			

REVISION DESCRIPTION	
REV. D -	DELETED PER NEW ANALYSIS, NO REPLACEMENT

WILLIAM CARL CLARK

62-31871

REGISTERED PROFESSIONAL ENGINEER

ILLINOIS

A circular professional engineer seal for William Carl Clegg, State of Illinois. The seal contains the text: WILLIAM CARL CLEGG, 62-31871, REGISTERED PROFESSIONAL ENGINEER, OF, ILLINOIS.

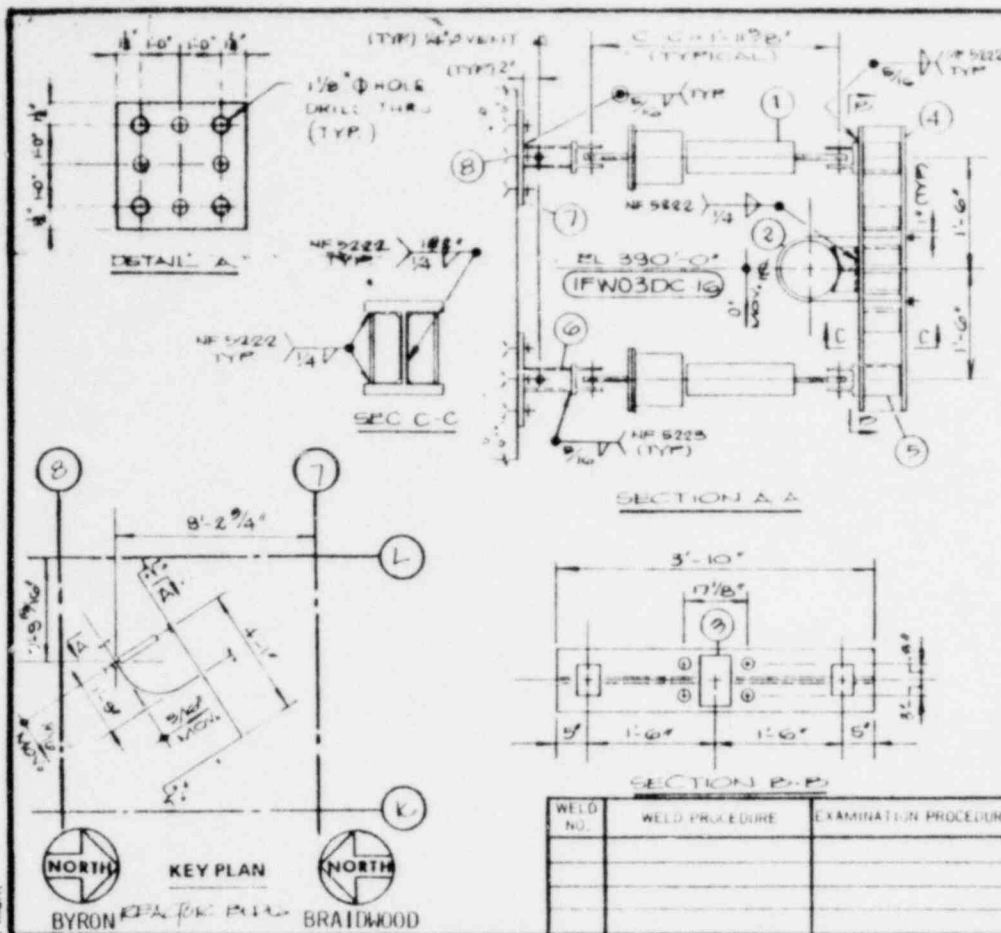
BYRON/BRAIDWOOD STATION
UNIT - 1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED:

SARGENT & LUNDY
ENGINEERS
CHICAGO

SUPPORT NO.	RE
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SHEET 1 OF 1



BILL OF MATERIAL				BY OTHERS	
ITEM	QUAN	FIG NO OR PART NO	DESCRIPTION	COMPONENT WEIGHT LBS	BY OTHERS
	1		COMPONENT SUPPORT ASSY		
1	2	300	SIZE 10, 6" STROKE, MESH SHOCK SUPPRESSOR, NUCLEAR CLASS 2 CS = 3 3/16", HS = 2 1/16" W/ ADD'L REAR END BOLT		
2	2	1375	1" Ø x 16" SPECIAL U-BOLT DEV LENGTH = 7.9"	1936	
3	1	159	SIZE 3, NUCLEAR PIPE PROTECTOR, NON SOLDER 16" O.D PIPE		
4	1		W/ 4 X 27 (SA 36) X 3'-10" LONG SEE GEC P/B	3335	
5	12		3/4" x 3/4" x 3/8" ANGLE (SA 36) X 11" LONG (FIELD CUT TO FIT)	792	
6	2		3/4" Ø PIPE, SCH 80 (SA 106 GR B) X 0'-5 3/16" LONG	449	
7	2		1 1/4" x 27" x 27" CS R (SA 36 OR SA SIS GR 20) (SEE DETAIL A)	25816	
8	16		1" Ø ANCHOR BOLT AS PER BY/PR/CEA		
	1		RUNNER 1/2" ID PC 43		
TOTAL WEIGHT					
LOADS (LBS)					
DESIGN 19.649	OPERATING		HYDROTEST	EMERGENCY 22.125	FAULTED

REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENG'R APPL	FILE	EMD REVIEW
A		5-5-80	M. J. J. J.	P. J. J. J.	P. J. J. J.		
REVISION DESCRIPTION							
F/L 2711 FOR FAB, F/L 2733 FOR CONSTR							

DESIGN 19.049

OPERATING

HYDRO TEST

EMERGENCY 22.185

FAULTED

BYRON/BRAIDWOOD STATION
UNIT-1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

NO SCALE

DATE 5-5-80

DATE 5/5/80

DATE 5/5/80

DATE

P. E. SEAL

PROJECT NO.

4331-00

4622-00

SARGENT & LUNDY
ENGINEERS
CHICAGO

SUPPORT NO. M-IPW040116

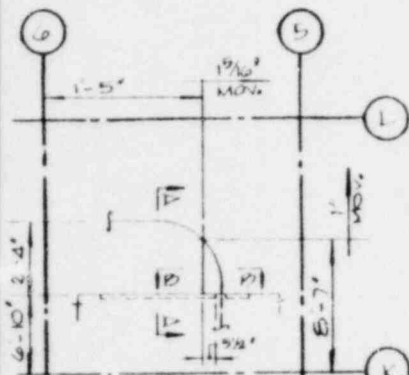
SHEET 1 OF 1

REV A

MD-15.15.1.2 (1-76) FORM APPROVED 1-76 DEPT. MGR.



SECTION P-P

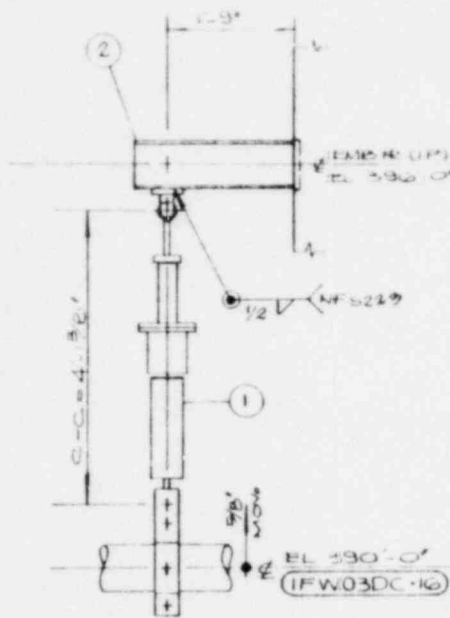


KEY PLAN

BYRON

REAL PC BUG

BRAIDWOOD



SECTION A-A
(PIPE ROTATED)

WELD NO.	WELD PROCEDURE	EXAMINATION PROCEDURE

BILL OF MATERIAL

ITEM	QUAN	FIG NO OR PART NO	DESCRIPTION	COMPONENT WEIGHT (LBS)	AS	CS	PR	SEC	ALSC	BY	PR
1	1		COMPONENT SUPPORT ASSEMBLY								
1	1	307	SIZE 10, 6" STROKE MECH SHOCK SURFACE MOUNT, NUCLEAR CLASS 2, CS = 3 1/2", HS = 2 1/4", W = 1'-9 1/2", 16" OD PIPE CARBON STEEL, LOAD = 4350 LBS								
2	1		W8X67 (SA 36) X 2'-3" LONG	10075							
1			BUNDLE # 126 FC 43								
				TOTAL WEIGHT							
				LOADS (LBS)							
				DESIGN	4361	OPERATING	HYDRO TEST	EMERGENCY	6342	FAULTED	

REFERENCE DRAWINGS	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	NP40 FR NP40A (REV 4)
	M-1561	H	M-163	J	S-910	SH	GE 19229		
	M-1571	H	M-940	B	K	HS-910	S-1473	R	SUPPORT CLASS B

DRAWING RELEASE RECORD

REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENG'R APPL	FILM	EMD REVIEW
A		5-5-80	11/1/80	R. T. Tinsdale	11/1/80		

REVISION DESCRIPTION

FIL 2771 FOR FAB, FIL 2739 FOR CONSTR



P E SEAL

PROJECT NO.

4391-00
4083-00

BYRON/BRAIDWOOD STATION
UNIT 1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

DRAWN: 11/1/80
CHECKED: 11/1/80
ENGINEER: 11/1/80
APPROVED: 11/1/80
NO SCALE
DATE: 5/1/80
DATE: 5/1/80
DATE: 5/1/80

SARGENT & LUNDY
ENGINEERS
CHICAGO

SUPPORT NO. M-IFW040125
REV. A
SHEET 1 OF 1

Total weight (g)LOADS (LBS.)PE SEAL

PROJECT NO.

4391-00	
4683-00	

SUPPORT NO.

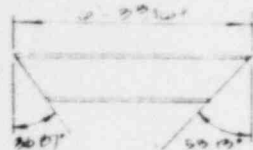
M-IFW040135

SHEET 1 OF 1

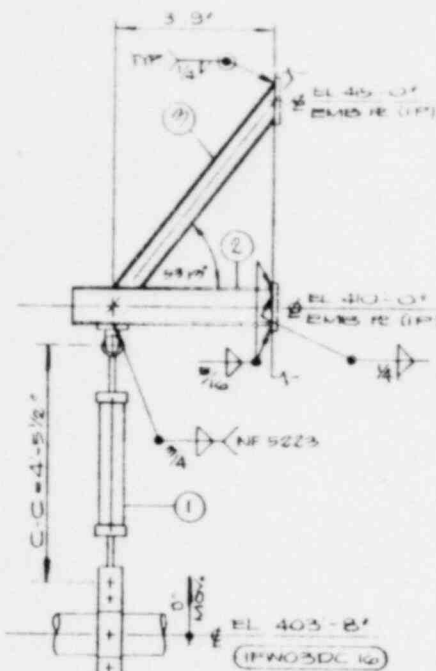
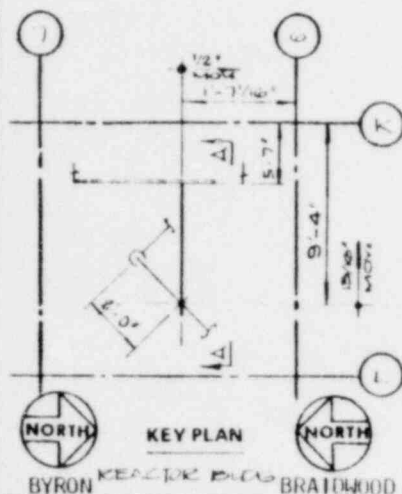
REV

A

MOS-15.1.2 (1-76) FORN APPROVED *mal* DEPT. MGR.



DETAIL A



SECTION A-A
(PIPE ROTATED)

WELD NO.	WELD PROCEDURE	EXAMINATION PROCEDURE

BILL OF MATERIAL				BY OTHERS				
ITEM	QUAN	FIG NO OR PART NO	DESCRIPTION	COMPONENT WEIGHT LBS	P.A.S.	P.S.	P.M.	BY
1			COMPONENT SUPPORT ASS'Y					
1	2H		SIZE 1, SAWYER TEST ASS'Y, W=3'-3 3/4", 15" O.D. PIPE, CARBON STEEL, LOAD=15,830 LBS			X		
2	1		W8 x 31 (SA 36) x 4'-0" LONG	124.0			X	PC-PC
3	1		W8 x 10 (SA 36) x 6'-9 3/16" LG (FIELD CUT TO SUIT)	100.25			X	PC-PC
1			BUNDLE & TAG FC 49					
TOTAL WEIGHT								
LOADS (LBS)								
DESIGN 15,830/-3673				OPERATING 6561/-1024	HYDRO TEST	EMERGENCY 18,540/-6395	FAULTED	

REFERENCE DRAWINGS	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	NP65B (REV 4)
M-156	1	H	M-163	J	S-916	M	2E13222		
M-157	1	H	M-540-5	K	HLG 916				SUPPORT CLASS P

DRAWING RELEASE RECORD							EMD REVIEW
REV	SPEC. NO.	DATE	DRAWN	CHECKED	ENG'R APPL	FILM	
A		5-5-80	J. J. Taylor	J. J. Swartz	M. J. Johnson		

REVISION DESCRIPTION
REPLACES IFW04006R
F/L 2771 FOR FAS, F/L 2733 FOR CONCRE



P.E. SEAL
PROJECT NO.
4391-00
4083-00

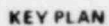
BYRON/BRAITHWOOD STATION
UNIT - 1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

DRAWN: J. J. Taylor
CHECKED: J. J. Swartz
ENGINEER: M. J. Johnson
APPROVED: J. J. Swartz
DATE: 5-1-80
DATE: 5-1-80
DATE: 5-5-80



SUPPORT NO. M-IFW04016R
REV A
SHEET 1 OF 1



BYRON

BRAIDWOOD

REFERENCE DRAWINGS	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	DWG. NO.	REV.	NP 40B (REV 4) SUPPORT CLASS B
	M-156 1	H	M-163	J	S-910	ALL	6-19-223		
	M-157 1	H	M-540 5	K	HLS-910				

REVISION DESCRIPTION

F/L 2771 FOR FAB, F/L 2733 FOR CONGR
REPLACES IFW040039

P E SEAL

PROJECT NO.

4391-00
4683-00

BYRON/BRAIDWOOD STATION
UNIT -1
COMMONWEALTH EDISON COMPANY
CHICAGO, ILLINOIS

NUCLEAR SAFETY RELATED

DRAWN *J. H. Reynolds*
CHECKED *J. H. Reynolds*
ENGINEER *R. S. Johnson*
APPROVED *W. C. [illegible]*

NO SCALE
5-1-80
DATE
5/1/80
DATE
5-5-80
DATE

SARGENT & LUNDY
ENGINEERS
CHICAGO

SUPPORT NO.	REV
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M- IFW040179

SHEET 1 OF 1

A