ISO SHT. NO. 2160

QSL	ITEM	QTY.	SIZE	MATERIAL DESCRIPTION	TAG No. OR ASTM MAT'L.	HEAT NO.
04	1	1	6"	B.W. DIAPH. CONTROL VALVE S.S.	WCR-906	
01	2	1	6"	125# C.I. WAFER BUTTERFLY VA.	12FW06R5	
	3	4	1"	200# SCR'D. GLOBE VALVE BRONZE OR BRASS	Y100T23	
	4	1	1½"	200# SCR'D. GLOBE VALVE	Y050T23	
	5	2	6"	125# THK. FULL FACE, COMP. ASBESTOS JUNKER, BONDED GASKET		
	6	8	⅝"ø	3½" LG. HEX. HD. MACH. BOLT	A-307 GR. B	
	7	16	¾"	HEAVY HEX. NUT. CL. 2 TOL.		
	8	8	¾"ø	5½" LG. HEX. HD. MACH. BOLT.		
	9	AS REQ'D	1"	PIPE (SCH. 80) SMLS. C.S.	A-106 GR. B	
	10	1	1½"	3000# SCR'D. CAP	A-181 GR. I OR II	
	11	AS REQ'D	½"	PIPE (SCH. 80) SMLS. C.S.	A-106 GR. B	
	12	1	1"	BI-METAL THERM WELL	WTI-907	
04	13	1	1½"	600# C.S. SW GLOBE VA.	Y-050T36	
	14	1	1"	600# C.S. SW GLOBE VA.	Y-100T36	
	15	1	½"	3000# SCR'D CAP	A-181 GR I OR II	
	16	AS REQ'D	1"	PIPE (SCH. 80) SMLS. C.S.	A-106 GR. B	
	17	1	1"	1" SW. X ¾" THRD. 3000# RED INSERT		
	18	1	¾"	THR'D. PLUG C.S.		
	19	1	6"	B.W. DIAPH. CONTROL VALVE S.S.	WCR-907	
	20	AS REQ'D	1½"	PIPE SCH. 40S SMLS. S.S.	A-312 GR. TP304	

QSL	ITEM	QTY.	SIZE	MATERIAL DESCRIPTION	TAG NO. OR ASTM MAT'L.
01	21	1	1"	3000# SCR'D. PLUG, C.S.	A-181 GR. I OR II
	22	1	1"	150# GATE VALVE, SCR'D. BRONZE OR BRASS	Y-100 B/22
	23	1	1"	3000#-90° ELBOW, S.W., C.S.	A-181 GR. I OR II
					A-182

REVISION RECORD

NO.	DATE	DR. CHK.	DESCRIPTION	REMARKS
1	1/20/76	D.R. B.R	REVISED BY AEP DESIGN. PER RFC-DC-12-671: ADDED; 6" B.W. CONTROL VALVE - WCR-906, ½" DRAIN-VALVE No Y-050T36 (2) 1" VENT - Y-100T23	ACTION REQ'D.
2	1-3-77	W.R	REVISED ITEM 13; ADDED ITEMS 15 & 16; 2 7/16" WAS 2 3/16", 63'-0" WAS 62'-11 7/8";	
3	8/26/77	W.R.	PER RDM ML-0162 VA Y-050T36 WAS Y-050T23 Y-100T36 WAS Y-100T23, ADDED ITEMS # 17 & 18.	
4	9/14/81	J.L.	PER RFC DC-12-2549. REPLACED WCR-906, 907 WITH DIAPH. CONTROL VA'S. WCR-906, 907. ADDED: PIPE SPEC. G-14, DIM'S., PC-MK 6, 7, BELL WELD BOX, FIELD WELDS FW 19 TO 22, 25 TO 27, FSW 23, 24, ITEM NO'S 19, 20 TO B/M. REVISED ITEM NO. 1 IN B/M, MODIFIED, 2-NSW-115-2.	FIELD ACTION REQ'D
5	6/24/82	S.G. E.G.	PER RFC DC-12-2549 RELOCATED FIELD CUTS; DELETED FW'S 19 & 20, PC-MK 6 & 8, DIM. 10 1/8" WAS 9", 9" WAS 11 5/8", 63'-0" WAS 63'-1 7/8", 5 3/8". REVISED No OF FW'S.	FIELD ACTION REQ'D.
6	7/21/89	[illegible]	TO REFLECT AS-FOUND CONDITIONS FOR RFC-DC-12-3010 PER FWR #759 REV. 1, REVISED; 1" VENT PIPE CONFIG. ADDED: DIMS., PLUGS & ITEM #21-23 TO B/M & SUPPORT MARK NOS. & SUPERSEDES HGR. 150 #2-GNSW-115	NO FIELD ACTION REQ'D.

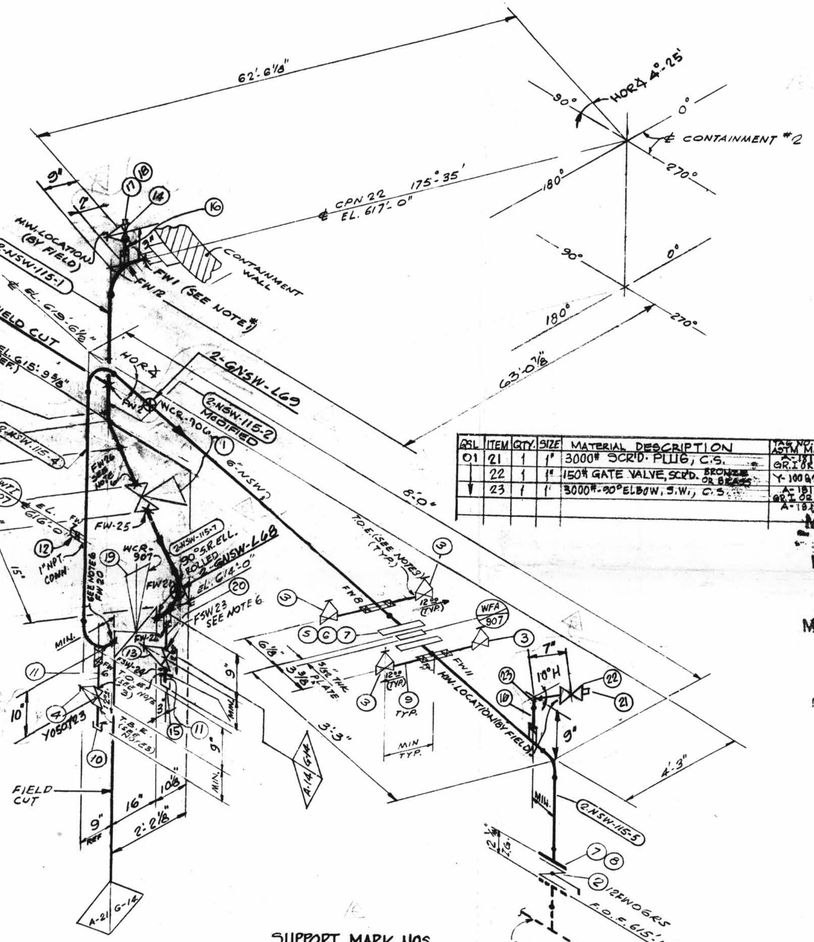
TOTAL FW 18

N

INDICATES LOCATION OF PIPE SUPPORT AND SUPPORT DETAIL NUMBER

SUPPORT MARK NUMBERS EXCEPT 1 ARE FOR GENERAL LOCATION OF SUPPORTS ONLY FOR EXACT LOCATIONS SEE PIPE SUPPORT DETAIL

TOTAL FW 7	FOR REV. 4 ONLY	
SIZE	QUAN	FW
6"	2'	4
1½"	1'	3



NOTES:

5. BUTT WELDS + PT-100% TESTING
SOCKET WELDS + PT-100% TEST ING

6. PROVIDE BI-METALLIC WELDS (STAINLESS STEEL - CARBON STEEL)

7. REMOVE BONNET ASSEMBLY BEFORE WELDING VALVE BODY TO PIPE LINE

1. FW'S PERTAINING TO THIS NOTE ARE TO BE MADE AFTER PIPE IS CUT, PRE-ALIGNED & ENDS HAVE BEEN PREPARED FOR WELDING TO SUIT AS-BUILT CPN.

2. FABRICATOR TO MAKE THIS END OF SPOOL 6" LONGER WITH PLAIN END TO FACILITATE INSTALLATION.

3. USE CRANB AES-A COMPOUND ON ALL THRD. CONNECTIONS.

4. WELD PROCEDURE AS FOLLOWS:
C/S 2" & UNDER -
C/S 2½" & OVER -

CONTINUED ABOVE

SIZE	QUAN.	FW
6"	26'	7
1"	3'	7
1/2"	1'	4

SUPPORT MARK NOS.
2-GNSW-L68
2-GNSW-L69

G-14	DESIGN SPEC. DCCPM 109QCN
HANGER SEISMIC CLASS	I
TEST REQUIREMENTS QL-	4
WELD PROCEDURE	SEE NOTE 4
QSL-	04 TESTING SEE NOTE #5
A-14	DESIGN SPEC. DCCPM 109QCN
HANGER SEISMIC CLASS	I
TEST REQUIREMENTS QL-	4
WELD PROCEDURE	SEE NOTE 4
QSL-	04 TESTING R.T. 100%
A-21	DESIGN SPEC. DCCPM 102QCS
HANGER SEISMIC CLASS	I
TEST REQUIREMENTS QL-	N/A
WELD PROCEDURE	SEE NOTE 4
QSL-	01 TESTING N.A.

DESIGN SPEC.	SEE
HANGER SEISMIC CLASS	DESIGN
TEST REQUIREMENTS	CODE
MATERIAL CLASS	STAMP

K.P. = NORMAL POINT
T.S.E. = THREAD ONE END
T.B.E. = THREAD BOTH ENDS
B.O.E. = BEVEL ONE END
T.O.P. = TOP OF PIPE ELEV.
G.S.L. = MATERIAL QUALITY REQUIREMENTS
T.L. = TRUE LENGTH

B.B.E. = BEVEL BOTH ENDS
P.O.E. = PLAIN ONE END
P.B.E. = PLAIN BOTH ENDS
S.O.E. = SHOPE ONE END
B.O.P. = BOTTOM OF PIPE ELEV.

FW = FIELD WELD
H = HORIZONTAL
V = VERTICAL
SW = SHOP WELD
FSW = FIELD SHOP WELD

R = FIELD REL'D
S = AUTOMATIC SHOP WELD
M = MANUAL SHOP WELD
D = VERIFY DIMENSION IN FIELD

PIPE																	
A-53			A-106 GR. B			A-376		A-312 GR. TP-304									
STD.	XY	XXY	10	20	30	40	60	80	100	120	140	160					
SMLS			WLDG														

FITTINGS		
A-105	A-234	A-182
A-403	A-181	

TESTING				
N.D.T. SEE DESIGN CODE STAMP				
M.T.	P.T.	R.T.	U.T.	
PRESSURE TEST				
MED.	PRESS.	DURATION		

ADDITIONAL

POUR/ZONE No. A-15
REQUIRED COMPLETION DATE
FABRICATED BY TUBECO

FLOW DIAGRAM 2-5114A
Q.S.L. SEE DESIGN
WELD PROCEDURE CODE STAMP.

NPS DESIGNS INC.
NEW YORK N.Y.

LIVSEY & COMPANY, INC.
INDIANA & MICHIGAN ELECTRIC CO.
DONALD C. COOK NUCLEAR PLANT

2NSW-115
Lower Containment Ventilation
Unit 3 Return Line

DWN. SG DATE 1-26-76
CKD. LdB DATE 3/3/76
ISSUED
REF. DWG. 2-5497

AUXILIARY BLDG.
DWG. NO. 2-NSW-115
REV. 6

D-26