ISO SHT. NO. 2161

QSL	ITEM	QTY.	SIZE	MATERIAL DESCRIPTION	TAG No. OR ASTM MAT'L.	HEAT NO.
04	1	1	6"	B.W. DIAPH. CONTROL VA. S.S.	WCR-911	
01	2	1	6"	125# C.I WAFER BUTTERFLY VA.	12FW06 RS	
	3	5	1"	200# SCR'D. GLOBE VA. BRONZE OR BRASS	Y100T23	
	4	1	1/2"	200# SCR'D. GLOBE VA. BRONZE OR BRASS	Y050T23	
	5	2	1/2"	3000# SCR'D. CAP. C.S.	A-105 GR. I OR II	
	6	2	6"	1/8" THK. FULL FACE CLOTH ASBESTOS RUBBER BONDED GASKET		
	7	8	3/4"Ø	3 1/2" LG. HEX. HD. MACH. BOLT.	A-307 GR. B.	
	8	16	3/4"	HEAVY HEX. NUT. CL. 2 TOL.		
	9	8	3/4"Ø	5 1/2" LG. HEX. HD MACH. BOLT		
	10	AS REQ'D	1"	PIPE (SCH. 80) SMLS. C.S.	A-106 GR. B	
	11	AS REQ'D	1/2"	PIPE (SCH. 80) SMLS. C.S.		
	12	1	1"	BI-METAL THERM. WELL	WTI-911	
04	13	1	1/2"	600# SW. CS. GLOBE VA.	Y-050T36	
	14	1	1"	600# S.W C.S GLOBE VA.	Y-100T36	
	15	1	1"	1" S.W x 3/4" THR'D. 3000# RED. INSERT		
	16	1	3/4"	THR'D. PLUG C.S		
	17	1	6"	B.W. DIAPH. CONTROL VA. S.S.	WCR-910	
	18	AS REQ'D.	1/2"	PIPE SCH. 40S SMLS	A-312 GR. TP304	
	19	AS REQ'D	1/2	PIPE (SCH. 80) SMLS. C.S.	A-106 GR. B	
	20	1	1/2	3000# SCR'D CAP C.S.	A-181 GR. I OR II	
	21	1	1"	3000# SCR'D PLUG, C.S.		

REVISION RECORD

NO.	DATE	DR. CHK	DESCRIPTION	REMARKS
1	1-20-76	DR. B.R.	REVISED BY AEP DESIGN: PER RFC-DC-12-671: ADDED; 6" BW. CONTROL VA., WCR-910, 1/2" DRAIN-VALVE N.S Y-050T36, 1" VENT-VALVE N.S Y-100T36.	ACTION REQ'D.
2	10-25-76	D.V.K. J.B.	REVISED PIPING BY AEP DESIGN.	ACTION REQ'D.
MF 3	4/7/77	WNC	PER RDM-NC-0162 ITEM # 14 WAS Y-100T23. ADDED ITEMS # 15 & 16 TO B/M	
MF 4	9/11/78	A.G. D.R.	PER RFC-DC-12-2549 ADDED: PIPE SPEC. G-14, DIM 'S, PCM K # 6,7,8 & 16, FIELD WELD BOX, NOTES 5, 6 & 7. FIELD WELDS 17 THRU 20. FSW 25 & 25, ITEM NO'S 17 TO 20. REVISED ITEM NO 1 IN B/M, MODIFIED 2-NSW-116-2	FIELD ACTION REQ'D.
MF 5	6/1/81 8/12/82	SG E.G.	PER REC DC-12-2549 BOXED DIM. INDI. FIELD INFO. DIM. 9" WAS 11 1/8", 10 3/16" WAS 11 5/8", 10 5/16" WAS 9 1/8", 5 7/8" WAS 5 3/8", 62° 38" ANGLE WAS 62°4', & RELOCATED FIELD CUT. REVISED ELBOW TO 30° S.R. ELL. DELETED FW 22, 17 AND PC MK. 2-NSW-116-7. ADDED DIM. 5 1/8". W.P. EL. 615'-3 7/8" WAS WREL. 615'-3 5/8".	FIELD ACTION REQ'D.
MF 6	7/21/90	RDM SGM LB	TO REFLECT AS-FOUND CONDITIONS FOR RFC-DC-12-3010 PER FWR # 180 REV. 1 ADDED: 1" VENT & DIMS. & ITEM 21 OF B/M. REVISED: ITEM # 3 & 14 OF B/M TO SUIT. ADDED: SUPPORT MARK NOS. & SUPERSEDES HGR. 150. # 2-GNSW-116.	NO FIELD ACTION REQ'D.

TOTAL FW 16

INDICATES LOCATION OF PIPE SUPPORT AND SUPPORT DETAIL NUMBER

SUPPORT MARK NUMBERS SHOWN ARE FOR GENERAL AND SEQUENTIAL LOCATION OF SUPPORTS ONLY FOR EXACT LOCATIONS SEE PIPE SUPPORT DETAIL

SITE FAB. PIECE MARK

2-NSW-116-L1
-L2
-L3
-L4
-L5
-L6

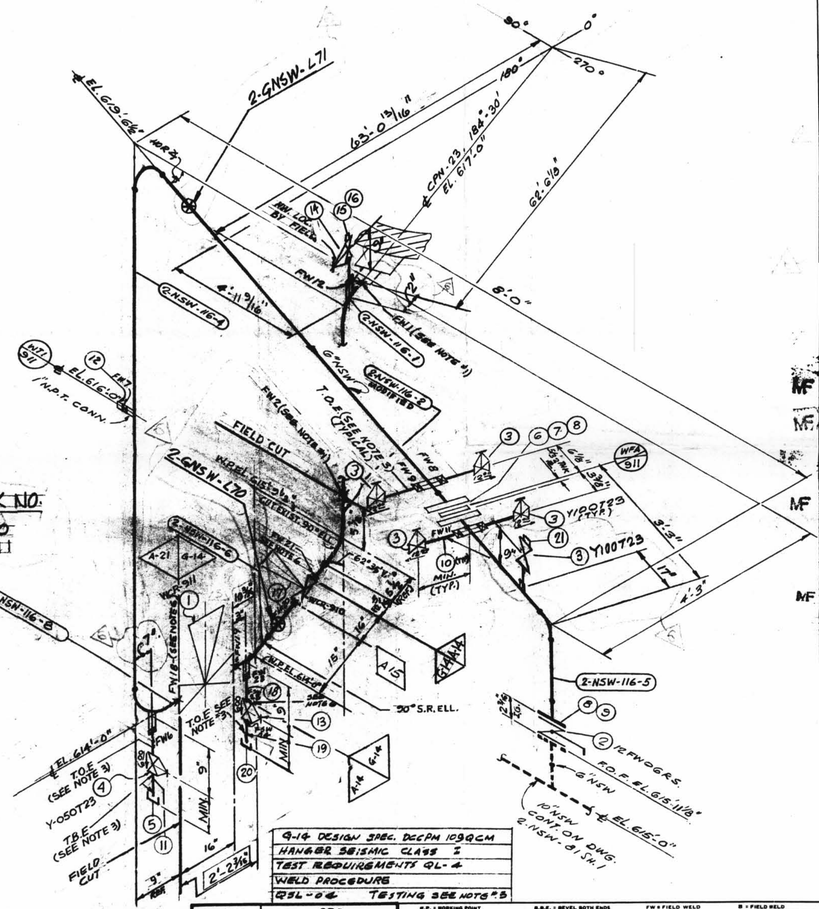
SUPPORT MARK NO:
2-GNSW-L70
2-GNSW-L71

TOTAL FW 9	FOR REV. 6 ONLY	
SIZE	QUAN.	FW
6"	2'	6
3/4"	1'	3

NOTES:

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 CRANE 425-A COMPOUND ON ALL THR'D. CONNECTIONS.
4. WELD PROCEDURE AS FOLLOWS: C/S 2" & UNDER C/S 2 1/2" & OVER
5. BUTTWELDS = RT-100% TESTING SOCKET WELDS = PT-100% TESTIN.
6. PROVIDE BI-METALLIC WELDS (STAINLESS STEEL-CARBON STEEL)
7. REMOVE BONNET ASSEMBLY BEFORE VALVE BODY TO PIPE LINE.

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



D-27

G-14 DESIGN SPEC. DCCPM 1039QCM	
HANGER SEISMIC CLASS I	
TEST REQUIREMENTS QL-4	
WELD PROCEDURE	
QSL-04	TESTING SEE NOTE #5

A-14 DESIGN SPEC. DCCPM 1039QCN
HANGER SEISMIC CLASS I
TEST REQUIREMENTS QL-4
WELD PROCEDURE SEE NOTE 4
QSL-04 TESTING R.T. 100%

A-21 DESIGN SPEC. DCCPM 1028QCS
HANGER SEISMIC CLASS II
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.

B.P. = BORING POINT
T.B.E. = THREAD ONE END
T.B.E. = THREAD BOTH ENDS
B.B.E. = BEVEL ONE END
T.O.P. = TOP OF PIPE ELEV.
B.O.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. = SHAPE ONE END
B.O.P. = BOTTOM OF PIPE ELEV.

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

B = FIELD BELD
O = AUTOMATIC SHOP WELD
M = MANUAL SHOP WELD
R = VERIFY DIMENSION IN FIELD

PIPE

A-53	A-106	A-376	A-312									
	GR B		GR.TP304									
STD.	XY	XXY	10	20	30	40	60	80	100	120	140	160
						X						
SMLS	WLDD											

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 2-5141A
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-116
Lower Containment Ventilation
Unit 1 Return Line

DWN. S.G. DATE 1/9/72
CKD. LDB DATE 7/9/82
ISSUED
REF. DWG. 2-5497

AUX. BLDG.
DWG. NO. 2-NSW-116
REV. 6