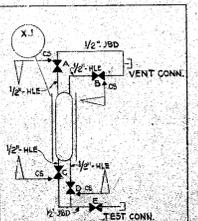


- NOTES:**
1. LPCI INITIATION SIGNAL - DRYWELL HIGH PRESSURE FROM PS-4315A, B, C, D, 4315B, 4315C, 4315D, 4315E, 4315F, 4315G, 4315H, 4315I, 4315J, 4315K, 4315L, 4315M, 4315N, 4315O, 4315P, 4315Q, 4315R, 4315S, 4315T, 4315U, 4315V, 4315W, 4315X, 4315Y, 4315Z, 4315AA, 4315AB, 4315AC, 4315AD, 4315AE, 4315AF, 4315AG, 4315AH, 4315AI, 4315AJ, 4315AK, 4315AL, 4315AM, 4315AN, 4315AO, 4315AP, 4315AQ, 4315AR, 4315AS, 4315AT, 4315AU, 4315AV, 4315AW, 4315AX, 4315AY, 4315AZ, 4315BA, 4315BB, 4315BC, 4315BD, 4315BE, 4315BF, 4315BG, 4315BH, 4315BI, 4315BJ, 4315BK, 4315BL, 4315BM, 4315BN, 4315BO, 4315BP, 4315BQ, 4315BR, 4315BS, 4315BT, 4315BU, 4315BV, 4315BW, 4315BX, 4315BY, 4315BZ, 4315CA, 4315CB, 4315CC, 4315CD, 4315CE, 4315CF, 4315CG, 4315CH, 4315CI, 4315CJ, 4315CK, 4315CL, 4315CM, 4315CN, 4315CO, 4315CP, 4315CQ, 4315CR, 4315CS, 4315CT, 4315CU, 4315CV, 4315CW, 4315CX, 4315CY, 4315CZ, 4315DA, 4315DB, 4315DC, 4315DD, 4315DE, 4315DF, 4315DG, 4315DH, 4315DI, 4315DJ, 4315DK, 4315DL, 4315DM, 4315DN, 4315DO, 4315DP, 4315DQ, 4315DR, 4315DS, 4315DT, 4315DU, 4315DV, 4315DW, 4315DX, 4315DY, 4315DZ, 4315EA, 4315EB, 4315EC, 4315ED, 4315EE, 4315EF, 4315EG, 4315EH, 4315EI, 4315EJ, 4315EK, 4315EL, 4315EM, 4315EN, 4315EO, 4315EP, 4315EQ, 4315ER, 4315ES, 4315ET, 4315EU, 4315EV, 4315EW, 4315EX, 4315EY, 4315EZ, 4315FA, 4315FB, 4315FC, 4315FD, 4315FE, 4315FF, 4315FG, 4315FH, 4315FI, 4315FJ, 4315FK, 4315FL, 4315FM, 4315FN, 4315FO, 4315FP, 4315FQ, 4315FR, 4315FS, 4315FT, 4315FU, 4315FV, 4315FW, 4315FX, 4315FY, 4315FZ, 4315GA, 4315GB, 4315GC, 4315GD, 4315GE, 4315GF, 4315GG, 4315GH, 4315GI, 4315GJ, 4315GK, 4315GL, 4315GM, 4315GN, 4315GO, 4315GP, 4315GQ, 4315GR, 4315GS, 4315GT, 4315GU, 4315GV, 4315GW, 4315GX, 4315GY, 4315GZ, 4315HA, 4315HB, 4315HC, 4315HD, 4315HE, 4315HF, 4315HG, 4315HH, 4315HI, 4315HJ, 4315HK, 4315HL, 4315HM, 4315HN, 4315HO, 4315HP, 4315HQ, 4315HR, 4315HS, 4315HT, 4315HU, 4315HV, 4315HW, 4315HX, 4315HY, 4315HZ, 4315IA, 4315IB, 4315IC, 4315ID, 4315IE, 4315IF, 4315IG, 4315IH, 4315II, 4315IJ, 4315IK, 4315IL, 4315IM, 4315IN, 4315IO, 4315IP, 4315IQ, 4315IR, 4315IS, 4315IT, 4315IU, 4315IV, 4315IW, 4315IX, 4315IY, 4315IZ, 4315JA, 4315JB, 4315JC, 4315JD, 4315JE, 4315JF, 4315JG, 4315JH, 4315JI, 4315JJ, 4315JK, 4315JL, 4315JM, 4315JN, 4315JO, 4315JP, 4315JQ, 4315JR, 4315JS, 4315JT, 4315JU, 4315JV, 4315JW, 4315JX, 4315JY, 4315JZ, 4315KA, 4315KB, 4315KC, 4315KD, 4315KE, 4315KF, 4315KG, 4315KH, 4315KI, 4315KJ, 4315KL, 4315KM, 4315KN, 4315KO, 4315KP, 4315KQ, 4315KR, 4315KS, 4315KT, 4315KU, 4315KV, 4315KW, 4315KX, 4315KY, 4315KZ, 4315LA, 4315LB, 4315LC, 4315LD, 4315LE, 4315LF, 4315LG, 4315LH, 4315LI, 4315LJ, 4315LK, 4315LL, 4315LM, 4315LN, 4315LO, 4315LP, 4315LQ, 4315LR, 4315LS, 4315LT, 4315LU, 4315LV, 4315LW, 4315LX, 4315LY, 4315LZ, 4315MA, 4315MB, 4315MC, 4315MD, 4315ME, 4315MF, 4315MG, 4315MH, 4315MI, 4315MJ, 4315MK, 4315ML, 4315MM, 4315MN, 4315MO, 4315MP, 4315MQ, 4315MR, 4315MS, 4315MT, 4315MU, 4315MV, 4315MW, 4315MX, 4315MY, 4315MZ, 4315NA, 4315NB, 4315NC, 4315ND, 4315NE, 4315NF, 4315NG, 4315NH, 4315NI, 4315NJ, 4315NK, 4315NL, 4315NM, 4315NN, 4315NO, 4315NP, 4315NQ, 4315NR, 4315NS, 4315NT, 4315NU, 4315NV, 4315NW, 4315NX, 4315NY, 4315NZ, 4315OA, 4315OB, 4315OC, 4315OD, 4315OE, 4315OF, 4315OG, 4315OH, 4315OI, 4315OJ, 4315OK, 4315OL, 4315OM, 4315ON, 4315OO, 4315OP, 4315OQ, 4315OR, 4315OS, 4315OT, 4315OU, 4315OV, 4315OW, 4315OX, 4315OY, 4315OZ, 4315PA, 4315PB, 4315PC, 4315PD, 4315PE, 4315PF, 4315PG, 4315PH, 4315PI, 4315PJ, 4315PK, 4315PL, 4315PM, 4315PN, 4315PO, 4315PP, 4315PQ, 4315PR, 4315PS, 4315PT, 4315PU, 4315PV, 4315PW, 4315PX, 4315PY, 4315PZ, 4315QA, 4315QB, 4315QC, 4315QD, 4315QE, 4315QF, 4315QG, 4315QH, 4315QI, 4315QJ, 4315QK, 4315QL, 4315QM, 4315QN, 4315QO, 4315QP, 4315QQ, 4315QR, 4315QS, 4315QT, 4315QU, 4315QV, 4315QW, 4315QX, 4315QY, 4315QZ, 4315RA, 4315RB, 4315RC, 4315RD, 4315RE, 4315RF, 4315RG, 4315RH, 4315RI, 4315RJ, 4315RK, 4315RL, 4315RM, 4315RN, 4315RO, 4315RP, 4315RQ, 4315RR, 4315RS, 4315RT, 4315RU, 4315RV, 4315RW, 4315RX, 4315RY, 4315RZ, 4315SA, 4315SB, 4315SC, 4315SD, 4315SE, 4315SF, 4315SG, 4315SH, 4315SI, 4315SJ, 4315SK, 4315SL, 4315SM, 4315SN, 4315SO, 4315SP, 4315SQ, 4315SR, 4315SS, 4315ST, 4315SU, 4315SV, 4315SW, 4315SX, 4315SY, 4315SZ, 4315TA, 4315TB, 4315TC, 4315TD, 4315TE, 4315TF, 4315TG, 4315TH, 4315TI, 4315TJ, 4315TK, 4315TL, 4315TM, 4315TN, 4315TO, 4315TP, 4315TQ, 4315TR, 4315TS, 4315TT, 4315TU, 4315TV, 4315TW, 4315TX, 4315TY, 4315TZ, 4315UA, 4315UB, 4315UC, 4315UD, 4315UE, 4315UF, 4315UG, 4315UH, 4315UI, 4315UJ, 4315UK, 4315UL, 4315UM, 4315UN, 4315UO, 4315UP, 4315UQ, 4315UR, 4315US, 4315UT, 4315UU, 4315UV, 4315UW, 4315UX, 4315UY, 4315UZ, 4315VA, 4315VB, 4315VC, 4315VD, 4315VE, 4315VF, 4315VG, 4315VH, 4315VI, 4315VJ, 4315VK, 4315VL, 4315VM, 4315VN, 4315VO, 4315VP, 4315VQ, 4315VR, 4315VS, 4315VT, 4315VU, 4315VV, 4315VW, 4315VX, 4315VY, 4315VZ, 4315WA, 4315WB, 4315WC, 4315WD, 4315WE, 4315WF, 4315WG, 4315WH, 4315WI, 4315WJ, 4315WK, 4315WL, 4315WM, 4315WN, 4315WO, 4315WP, 4315WQ, 4315WR, 4315WS, 4315WT, 4315WU, 4315WV, 4315WW, 4315WX, 4315WY, 4315WZ, 4315XA, 4315XB, 4315XC, 4315XD, 4315XE, 4315XF, 4315XG, 4315XH, 4315XI, 4315XJ, 4315XK, 4315XL, 4315XM, 4315XN, 4315XO, 4315XP, 4315XQ, 4315XR, 4315XS, 4315XT, 4315XU, 4315XV, 4315XW, 4315XX, 4315XY, 4315XZ, 4315YA, 4315YB, 4315YC, 4315YD, 4315YE, 4315YF, 4315YG, 4315YH, 4315YI, 4315YJ, 4315YK, 4315YL, 4315YM, 4315YN, 4315YO, 4315YP, 4315YQ, 4315YR, 4315YS, 4315YT, 4315YU, 4315YV, 4315YW, 4315YX, 4315YY, 4315YZ, 4315ZA, 4315ZB, 4315ZC, 4315ZD, 4315ZE, 4315ZF, 4315ZG, 4315ZH, 4315ZI, 4315ZJ, 4315ZK, 4315ZL, 4315ZM, 4315ZN, 4315ZO, 4315ZP, 4315ZQ, 4315ZR, 4315ZS, 4315ZT, 4315ZU, 4315ZV, 4315ZW, 4315ZX, 4315ZY, 4315ZZ
  2. RHR ISOLATION SIGNAL - DRYWELL HIGH PRESSURE FROM PS-4315A, B, C, D, M-113 (E, 7) AND/OR REACTOR LOW WATER LEVEL FROM L15-4535, 4536, 4537, 4538, M-113 (G, 2, G, 7)
  3. RHR LOOP SELECTION SIGNAL - RECEIVED FROM SAME SENSING DEVICES THAT SEND LPCI INITIATION SIGNALS (NOTE 1); HOWEVER, REACTOR LOW WATER LEVEL SET POINTS ARE DIFFERENT.
  4. FOR RHR SYSTEM LOGIC, SEE RHR FUNCTIONAL CONTROL DIAGRAM 729E630CA.

**TABLE A EXPANSION JOINT TEST VALVES**

EXPANSION JOINT NO.	VALVE NO.	VALVING	VALVE NO.	VALVE NO.
XJ-1900	V-19-103	V-19-104	V-19-105	V-19-106
XJ-1906	V-19-108	V-19-109	V-19-110	V-19-111
XJ-1908	V-19-115	V-19-114	V-19-115	V-19-116
				V-19-117



**REGULATORY DOCKET FILE COPY**

REV.	DATE	DESCRIPTION	BY	CHKD.	APP.
12/22		REVISED PER DCR 961			
12/22		REVISED PER DCR 883			
12/22		REVISED PER DCR 423			
12/22		REVISED PER DCR 335			
12/22		REVISED PER DCR 38			
12/22		REVISED PER DCR 493			
12/22		DELETED SUS-1930 & 1931, PER DCR #176; CO-ORD: (B-6)R (C-9)			
12/22		REVISED AS SHOWN ON REVISION SHEET LAST VALVE NO-V-19-102			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-103			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-104			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-105			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-106			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-108			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-109			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-110			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-111			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-115			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-116			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-117			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-103			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-104			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-105			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-106			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-108			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-109			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-110			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-111			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-115			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-116			
12/22		REVISED AS NOTED ON REV SHEET LAST VALVE NO-V-19-117			

**TI APERTURE CARD**

**BECHTEL**  
SAN FRANCISCO

**DUANE ARNOLD ENERGY CENTER - UNIT NO 1**  
IOWA ELECTRIC LIGHT AND POWER COMPANY  
CEDAR RAPIDS, IOWA

P & I D  
**RESIDUAL HEAT REMOVAL SYSTEM**  
SHEET 1

FOR INFORMATION ONLY

7884 M-119 21

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