

SECTION LOOKING NORTH

- LEGEND:
- ELECTRIC HOIST
 - HAND HOIST WITH CEILING RING
 - ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
 - MOBILE TRUCK CRANE
 - ▬ MONORAIL AND LOAD PATH AREA
 - ⊖ JIB CRANE AND LOAD PATH AREA

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

HEAVY LOAD HANDLING
CONTAINMENT INTERNAL
SECTION LOOKING NORTH

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.									
NO.	ISSUED PER REA 96-VA0054	DATE	DR	LVL	RDW	CBH	WFP	CHK	APPV DTL
1	REVISED								
2									
3									
4									
5									
6									
7									
8									

SCALE: NONE

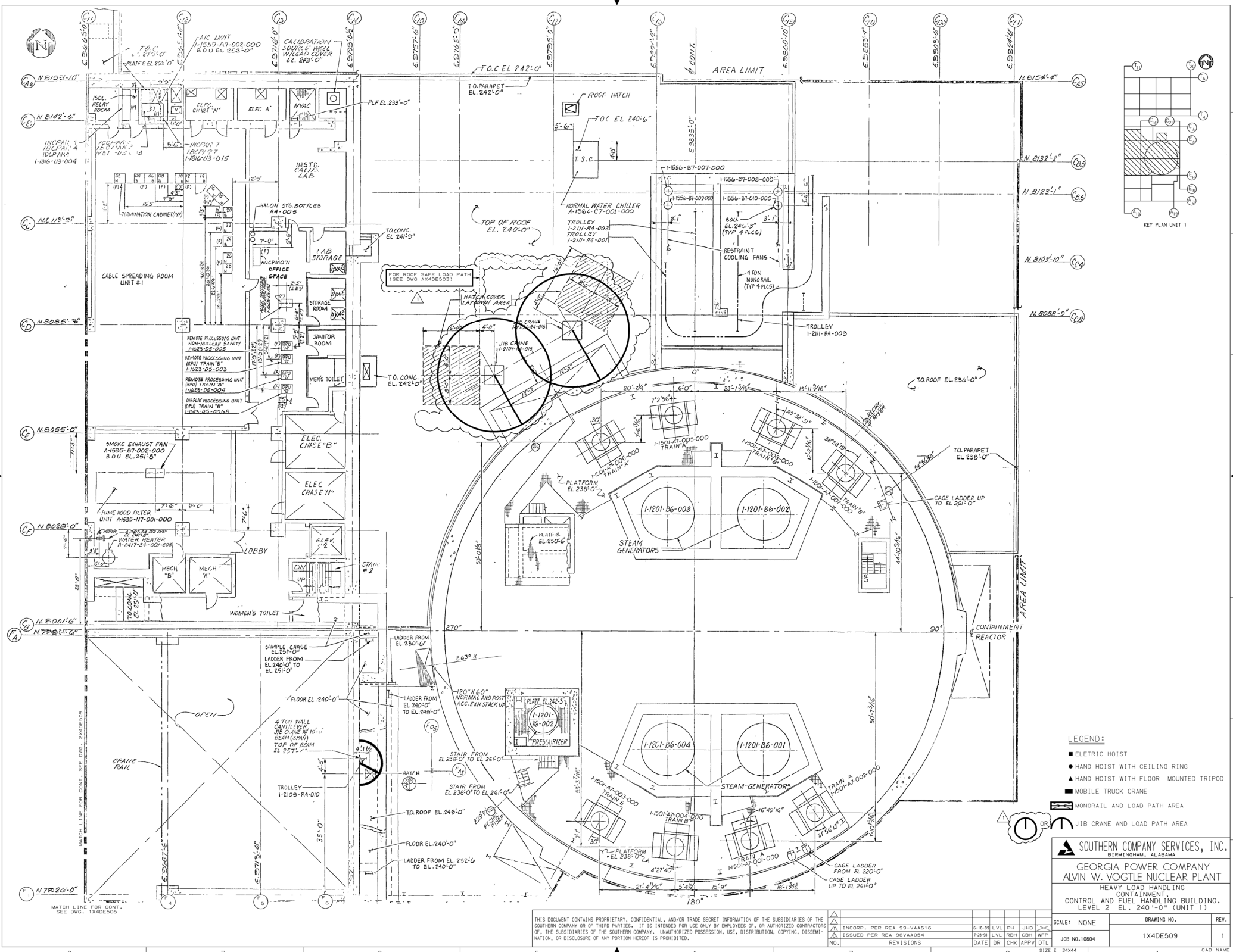
DRAWING NO. 1X4DE508

REV. 0

JOB NO. 10604

SIZE E 34X44

CAD NAME 1X4DE508



LEGEND:

- ELEC. HOIST
- HAND HOIST WITH CEILING RING
- ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
- MOBILE TRUCK CRANE
- ▬ MONORAIL AND LOAD PATH AREA
- JIB CRANE AND LOAD PATH AREA

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
HEAVY LOAD HANDLING
CONTAINMENT
CONTROL AND FUEL HANDLING BUILDING.
LEVEL 2 EL. 240'-0" (UNIT 1)

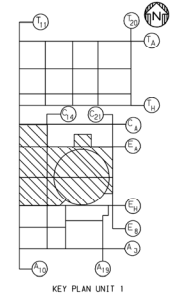
SCALE:	DRAWING NO.	REV.
NONE	1X4DE509	1








NO.	REVISIONS	DATE	DR	CHK	APPV
1	INCORP. PER REA 99-VAAB16	6-16-98	LVL	PH	JHD
2	ISSUED PER REA 96VAAB08	7-28-98	LVL	RBH	CSH

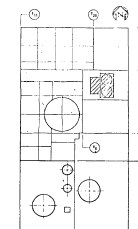
SIZE E 34x44

CAD NAME 1X4DE509

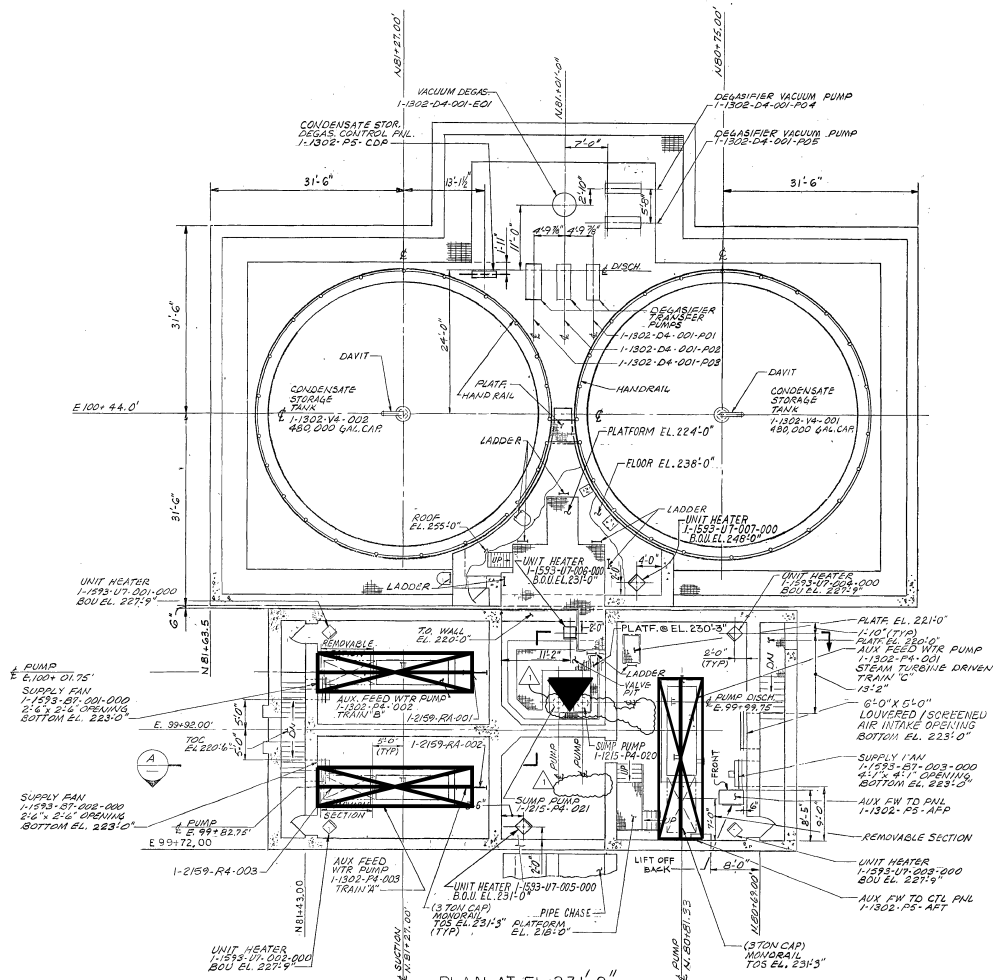
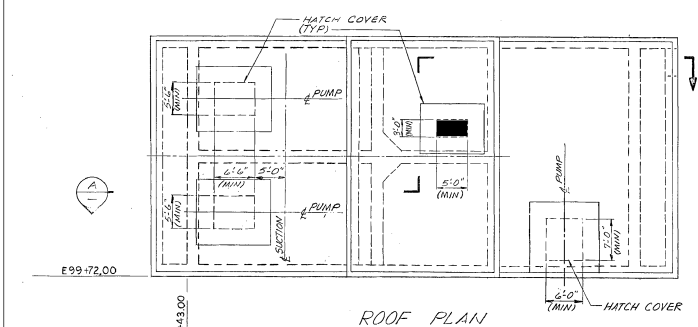
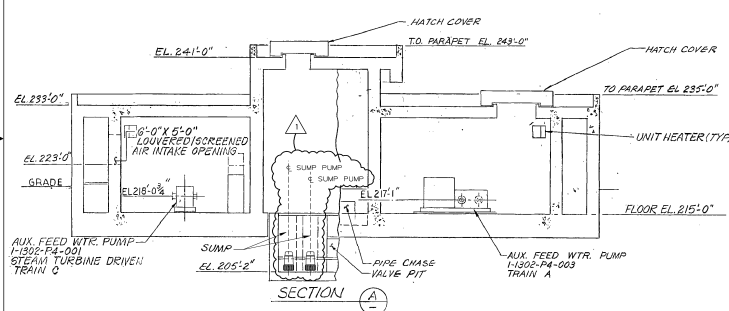
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.



	LEGEND:  HANDED HOIST WITH CEILING RING  HANDED HOIST WITH FLOOR MOUNTED TRIPOD  MOBILE TRUCK CRANE  MONORAIL AND LOAD PATH AREA  JIB CRANE AND LOAD PATH AREA
	
SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA	
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT	
HEAVY LOAD HANDLING CONTAINMENT CONTROL AND FUEL HANDLING BUILDING, LEVEL 3 EL. 260'-0" (UNIT 1)	



KEY PLAN UNIT 1



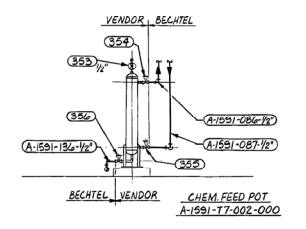
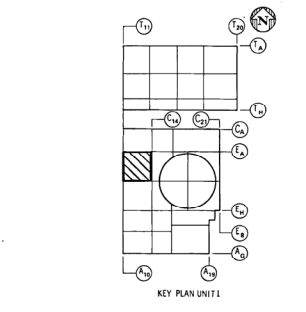
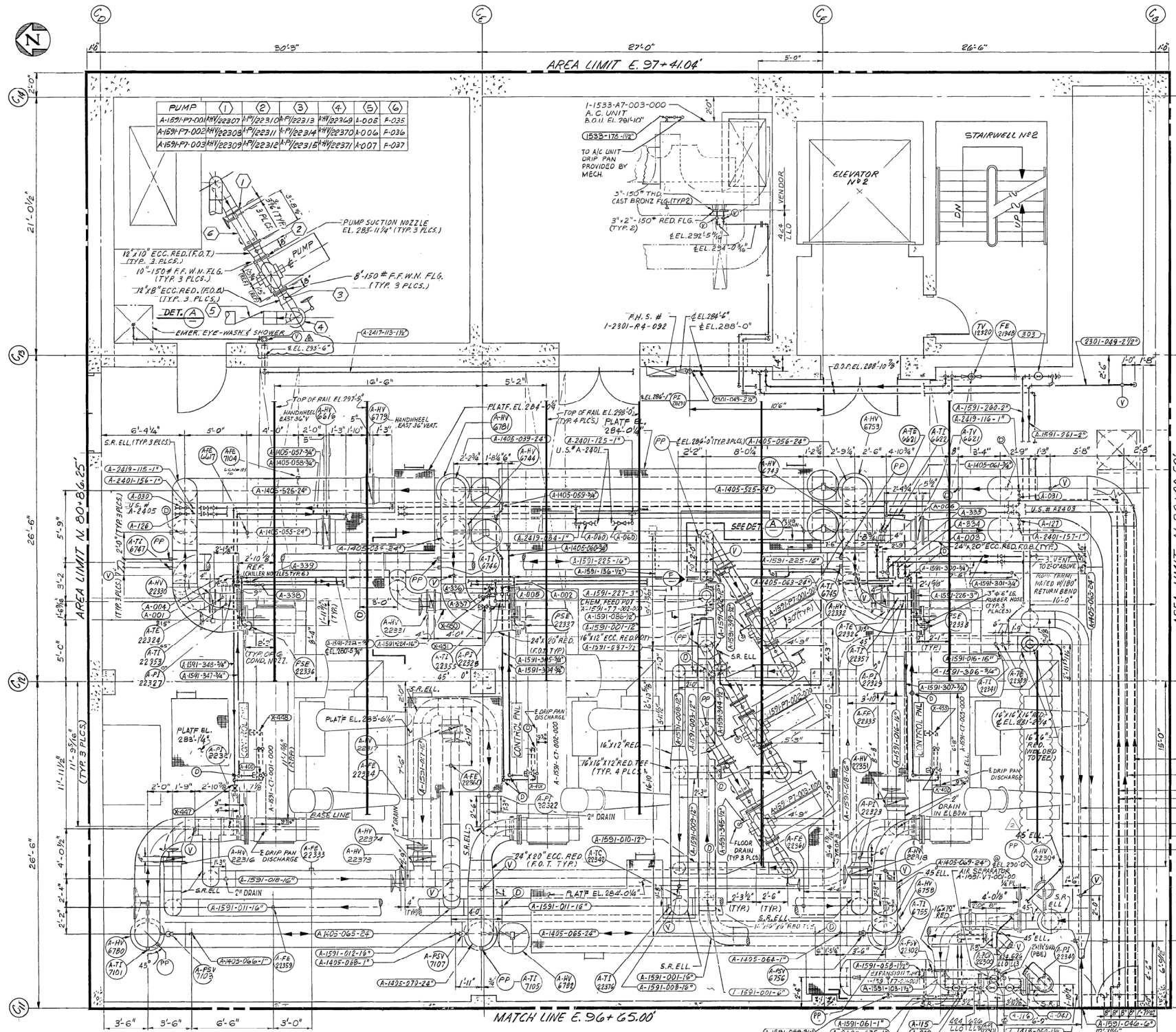
- LEGEND:**
- ELECTRIC HOIST
 - HAND HOIST WITH CEILING RING
 - ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
 - MOBILE TRUCK CRANE
 - ▬ MONORAIL AND LOAD PATH AREA
 - JIB CRANE AND LOAD PATH AREA

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

HEAVY LOAD HANDLING
AUX. FEEDWATER
PUMP HOUSE AND CONDENSATE
STORAGE TANK

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.										<div>△</div> <div>△</div> <div>△</div> <div>△</div> <div>△</div> <div>△</div> <div>△</div> <div>△</div> <div>△</div> <div>△</div>		STORAGE TANK		SCALE: NONE		DRAWING NO. 1X4DE512		REV. 1	
NO. REVISIONS										DATE, DR		CHK [APPV] DTL		JOB NO. 10604		SIZE E 34x44		1	
5										3		2		1					



- LEGEND:**
- ELECTRIC HOIST
 - HAND HOIST WITH CEILING RING
 - HAND HOIST WITH FLOOR MOUNTED TRIPPOD
 - MOBILE TRUCK CRANE
 - ▬ MONORAIL AND LOAD PATH AREA
 - JIB CRANE AND LOAD PATH AREA

- BOPEL 285'-10 1/8"**
- A-2418-030-1"
 - A-2401-081-1 1/8"
 - A-2417-115-1 1/2"
 - A-1591-040-16"
 - A-1591-024-6"
 - BOPEL 273'-4"
 - BOPEL 290'-10"

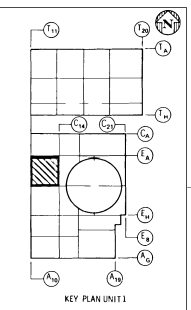
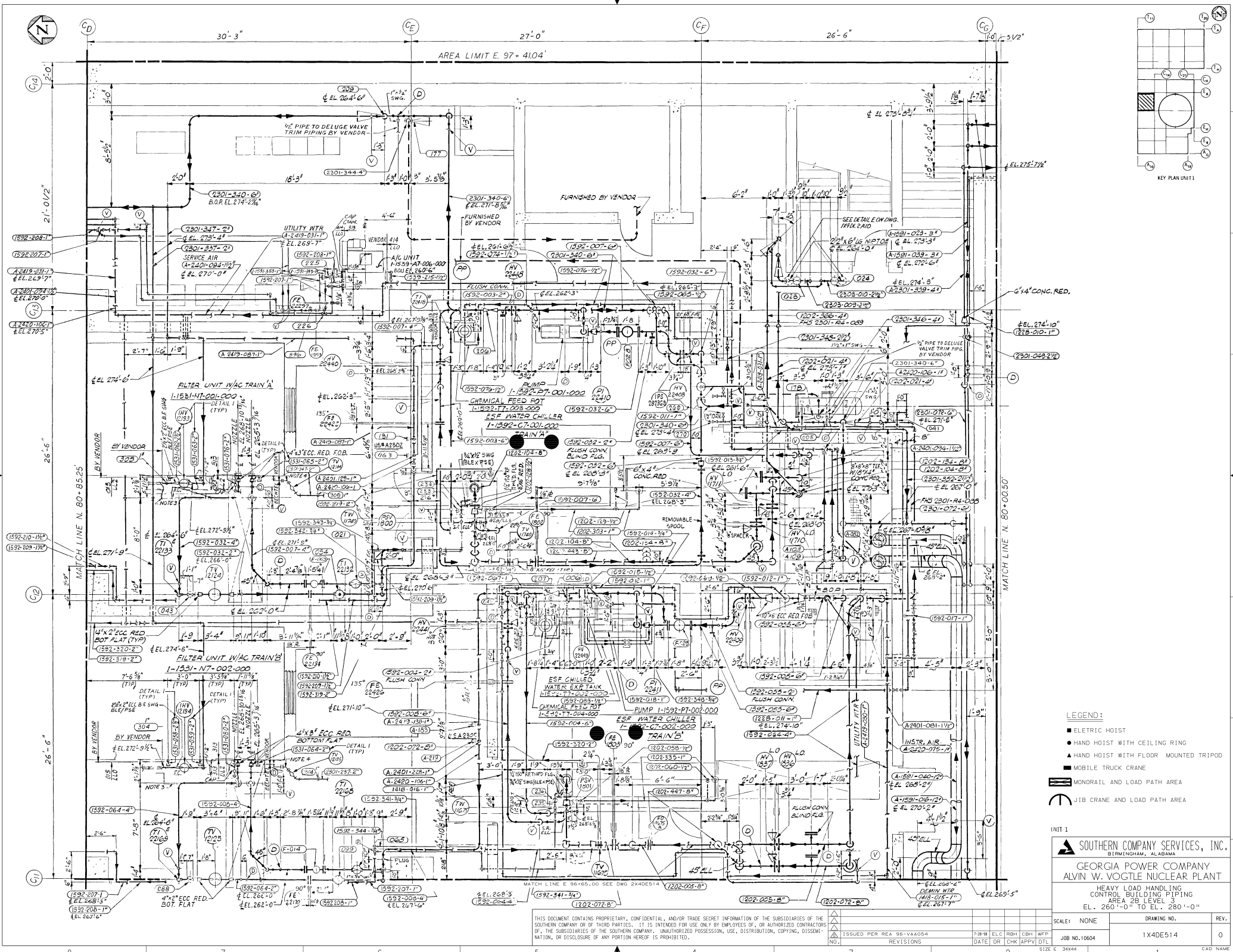
SOUTHERN COMPANY SERVICES, INC.
 BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTE NUCLEAR PLANT

HEAVY LOAD HANDLING CONTROL BUILDING
 PIPING AREA 2B LEVEL 4
 EL. 280'-0" AND ABOVE

SCALE: NONE	DRAWING NO. 1X4DE513	REV. 2
JOB NO. 10604		

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.



LEGEND:

- ELECTRIC HOIST
- HAND HOIST WITH CEILING RING
- ▲ HAND HOIST WITH FLOOR MOUNTED TRIP
- MOBILE TRUCK CRANE
- ▬ MONORAIL AND LOAD PATH AREA
- ⌒ JIB CRANE AND LOAD PATH AREA

UNIT 1

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

HEAVY LOAD HANDLING
CONTROL BUILDING PIPING
AREA 2B LEVEL 3
EL. 260'-0" TO EL. 280'-0"

SCALE:	NONE	DRAWING NO.	REV.
		1X4DE514	0

NO.	ISSUED PER	DATE	DR	CHK	APPV	WFO
1	PER 96-VAA054					

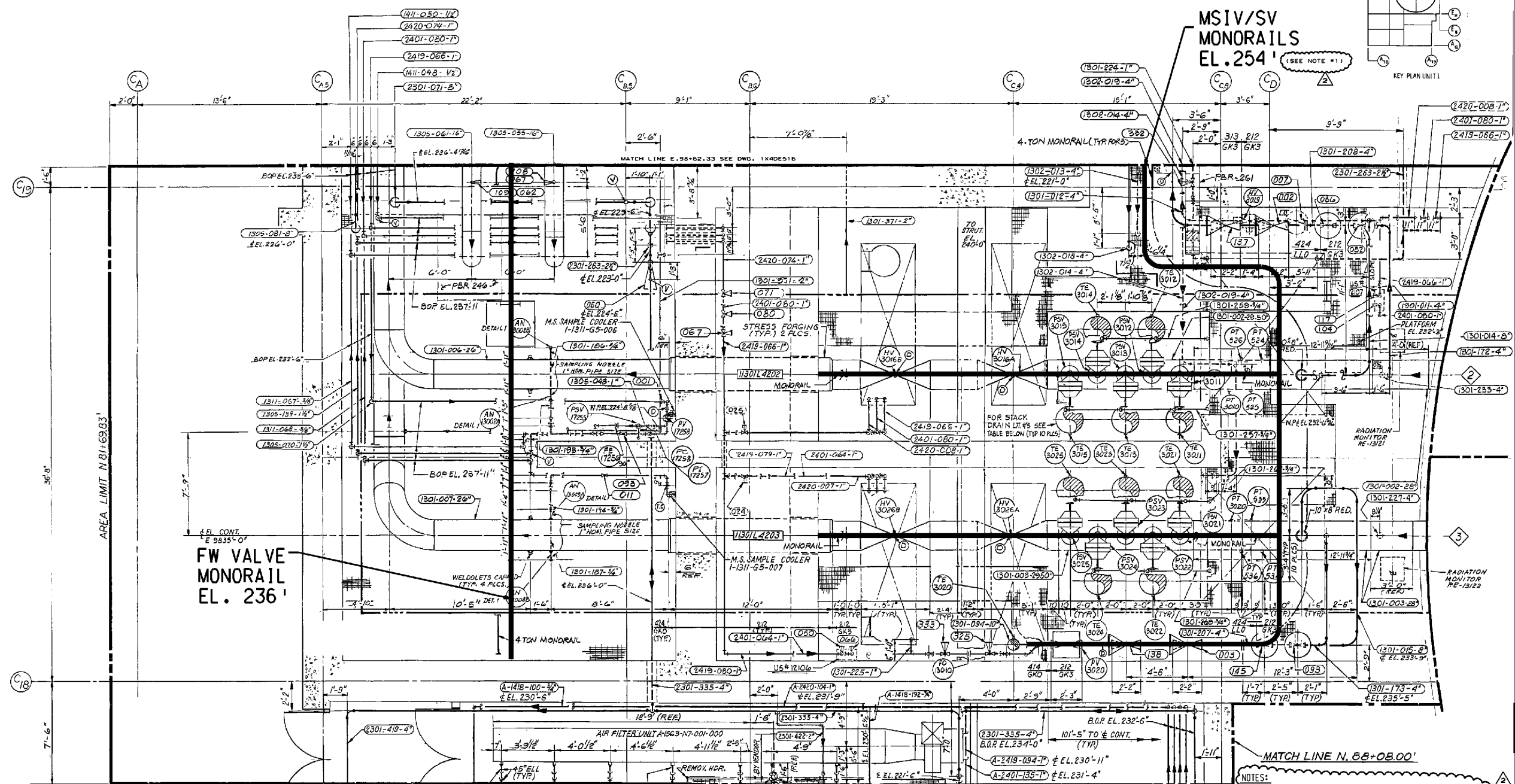
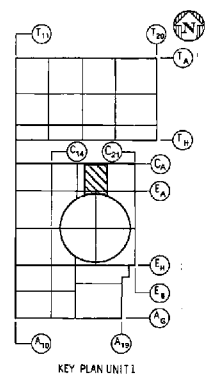
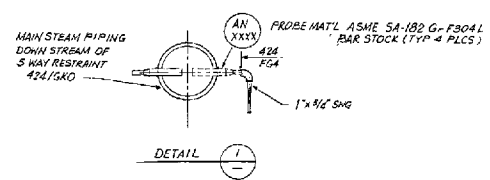
REVISIONS

NO.	DATE	DESCRIPTION
1		

SIZE: 34X44

CAD NAME: 1X4DE514

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.



AREA LIMIT N 81-69.33'

FW VALVE MONORAIL
EL. 236'

MSIV/SV
MONORAILS
EL. 254' (SEE NOTE #1)

NOTES:
1. THE MSIV/SV MONORAIL WITH TROLLEY 1-1211-R4-001 MAY BE USED FOR LIFTING THE ACTUATOR OF ATMOSPHERIC RELIEF VALVE 1PV-3020 OVER THE MAIN STEAM LINES UPSTREAM OF MSIV. DURING PLANT OPERATION, WITHOUT DOUBLE RIGGING, THE HOIST, THE SLING CONFIGURATION, AND THE CROSBY SHACKLE USED IN THE ACTUATOR LIFT SHALL HAVE A MINIMUM WORKING LOAD LIMIT OF TWO TONS.

- LEGEND:
- ELECTRIC HOIST
 - HAND HOIST WITH CEILING RING
 - ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
 - MOBILE TRUCK CRANE
 - MONORAIL AND LOAD PATH AREA
 - JIB CRANE AND LOAD PATH AREA

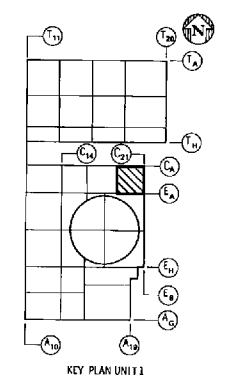
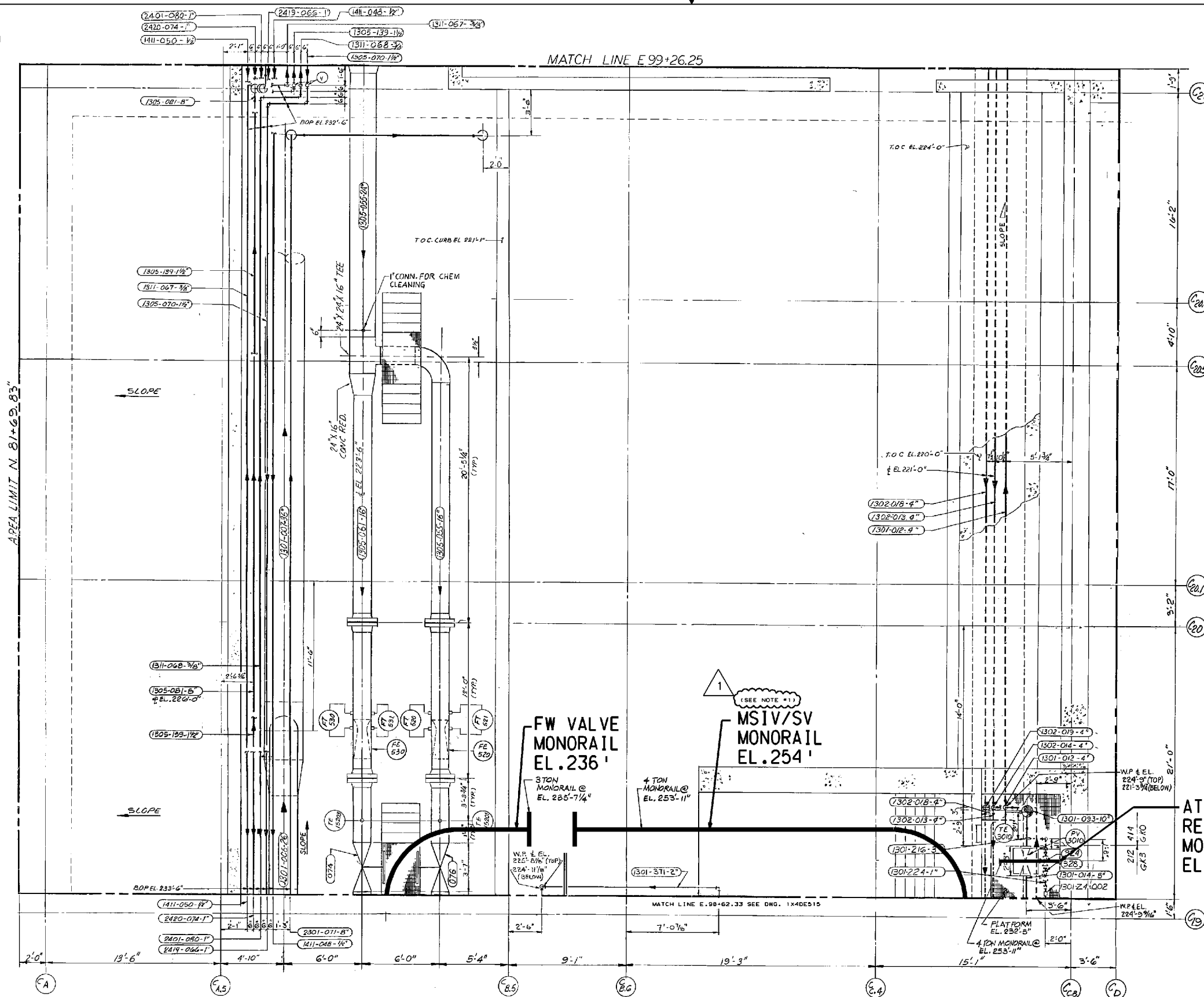
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

HEAVY LOAD HANDLING
NORTH MAIN STEAM VALVE ROOM
PIPING AREA 2E LEVEL 1
EL. 220'-0" AND ABOVE

SCALE:	DRAWING NO.	REV.
NONE	1X4DE515	2



ATMOSPHERIC
RELIEF VALVE
MONORAIL
EL. 254'

- LEGEND:
- ELECTRIC HOIST
 - HAND HOIST WITH CEILING RING
 - ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
 - MOBILE TRUCK CRANE
 - MONORAIL AND LOAD PATH AREA
 - JIB CRANE AND LOAD PATH AREA

NOTES:

1. THE MSIV/SV MONORAIL WITH TROLLEY 1-1211-R4-0001 MAY BE USED FOR LIFTING THE ACTUATOR OF ATMOSPHERIC RELIEF VALVE 1PV-5000 OVER THE MAIN STEAM LINES UPSTREAM OF MSIV, DURING PLANT OPERATIONS, WITHOUT DOUBLE RIGGING. THE HOIST, THE SLING CONFIGURATION, AND THE CROSBY SHACKLE USED IN THE ACTUATOR LIFT SHALL HAVE A MINIMUM WORKING LOAD LIMIT OF TWO TONS.

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	REVISIONS	DATE	DR	CHK	APPR	DTL
1	INCORP. PER ABN 51635	3-20-93	LRP	HAB	ASK	

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

HEAVY LOAD HANDLING
CONTROL BUILDING PIPING
AREA 2F LEVEL 1
EL. 220'-0" AND ABOVE

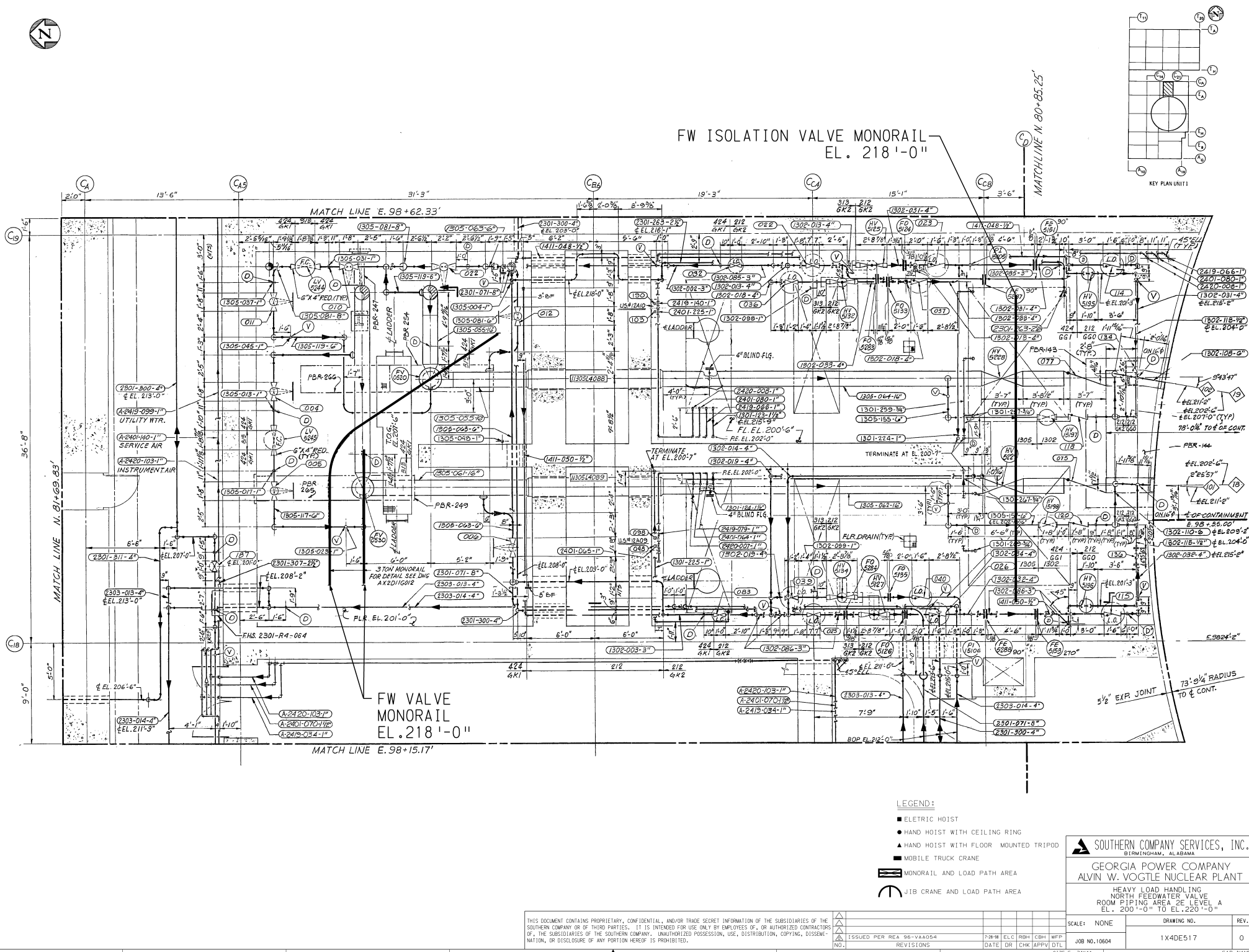
SCALE: NONE

DRAWING NO. 1X4DE516

REV. 1

JOB NO. 10604

CAD NAME 1X4DE516



LEGEND:

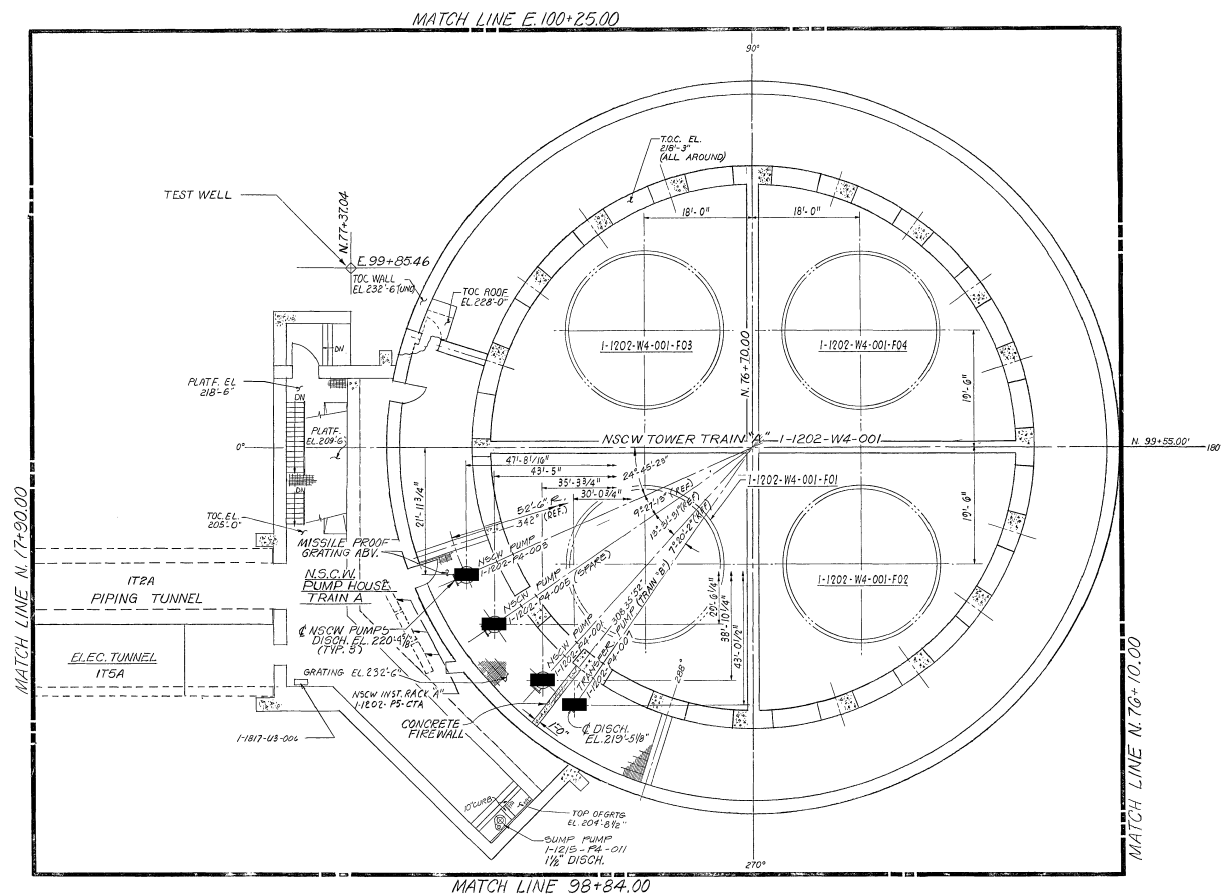
- ELECTRIC HOIST
- HAND HOIST WITH CEILING RING
- ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
- MOBILE TRUCK CRANE
- ▬ MONORAIL AND LOAD PATH AREA
- ⌒ JIB CRANE AND LOAD PATH AREA

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
HEAVY LOAD HANDLING
NORTH FEEDWATER VALVE
ROOM PIPING AREA 2E LEVEL A
EL. 200'-0" TO EL. 220'-0"

SCALE:	NONE	DRAWING NO.	REV.
		1X4DE517	0
JOB NO.	10604		
SIZE	34X44		

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	ISSUED PER	REV.	DATE	DR	CHK	APPV	DTL
1	96-VAA054						
2							
3							
4							
5							



LEGEND:

- ELECTRIC HOIST
- HAND HOIST WITH CEILING RING
- ▲ HAND HOIST WITH FLOOR MOUNTED TRIPOD
- MOBILE TRUCK CRANE
- ▬ MONORAIL AND LOAD PATH AREA
- ⌢ JIB CRANE AND LOAD PATH AREA

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

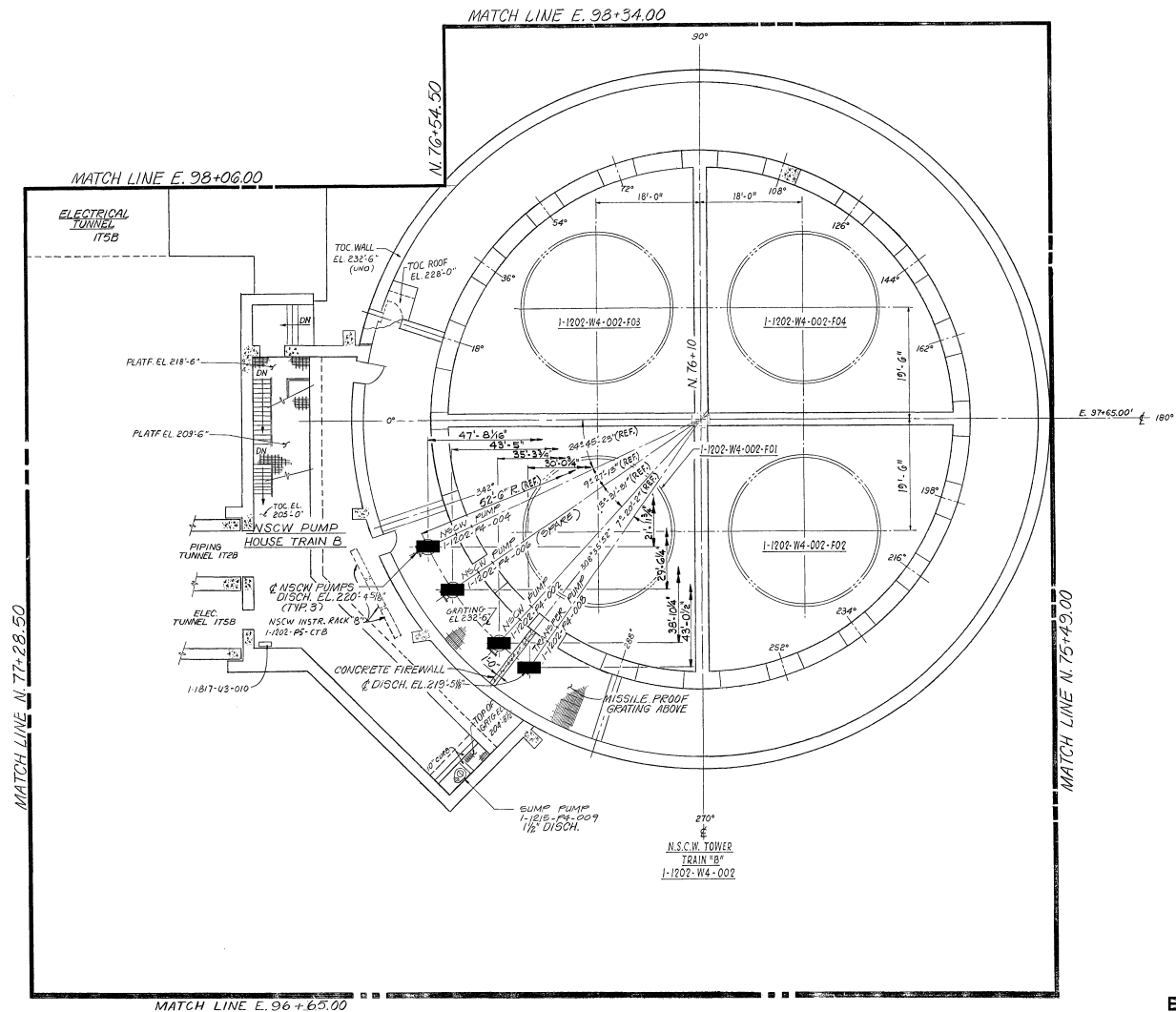
HEAVY LOAD HANDLING
TRAIN A
NUCLEAR SERVICE COOLING WATER TOWER
LEVEL 1, EL. 220'-0" (UNIT 1)

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	ISSUED PER	REV.	DATE	BY	CHK	APPV	DTL	SCALE	DRAWING NO.	REV.
1	PER REA 96-VA4054	1	7/28/98	JLH	RDW	CBH	WFP	NONE	1X4DE518	0
2										
3										
4										
5										
6										
7										
8										

SIZE E 34X44

CAD NAME 1X4DE518



LEGEND:

- ELECTRIC HOIST
- HAND HOIST WITH CEILING RING
- ▲ HAND HOIST WITH FLOOR MOUNTED TRIPPOD
- MOBILE TRUCK CRANE
- MONORAIL AND LOAD PATH AREA
- JIB CRANE AND LOAD PATH AREA

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

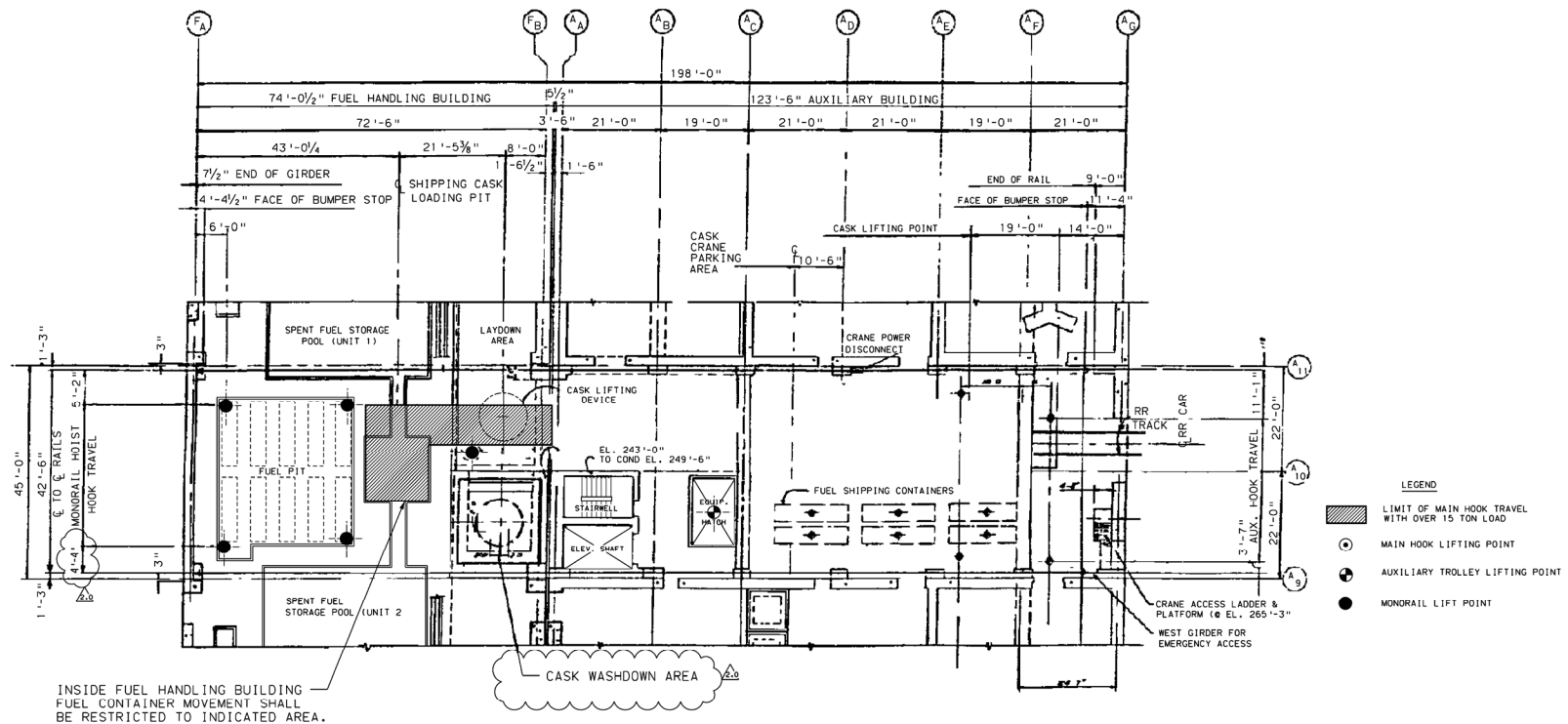
HEAVY LOAD HANDLING
TRAIN B
NUCLEAR SERVICE COOLING WATER TOWER
LEVEL 1 EL. 220'-0" (UNIT 1)

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	ISSUED PER	REV.	DATE	DR	CHK	APPY	DTL
1	PER REA 96-VA0054	3/28/98	JLH	RDW	CBH	WFP	
2	REVISED						

SCALE:	DRAWING NO.	REV.
NONE	1X4DE519	0

JOB NO. 10604
SIZE E 34X44
CAD NAME 1X4DE519



THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	REVISED PER AIN	DATE	DR	CHK	APPV	SIZE	E
2.0	REVISED PER AIN SHC142STHAGES, VER. 2.0	11/20/16	HL	JMM	JMM		
VERSIONS							

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

SAFE LOAD PATH FOR MOVEMENT OF
FUEL CONTAINERS UTILIZING SPENT
FUEL CASK BRIDGE CRANE A-2109-R4-001

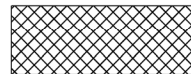
SCALE: NONE	DRAWING NO.	VER.
JOB NO. 10604	1X4DE603	2.0

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

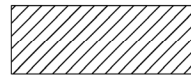
NOTES: (UNIT 1 ONLY)

1. LIFTS IN THE MEZZANINE AREA OVER THE SEAL INJECTION FILTER PITS, R-B151 OR R-B152, WHEN CONCRETE PLUGS ARE NOT INSTALLED SHALL BE LIMITED TO THE EQUIPMENT REQUIRED TO PERFORM CARTRIDGE FILTER ELEMENT REPLACEMENTS (I.E. WORKING SHIELD PLUG, CENTRAL PLUG, AND TRANSFER CASK).

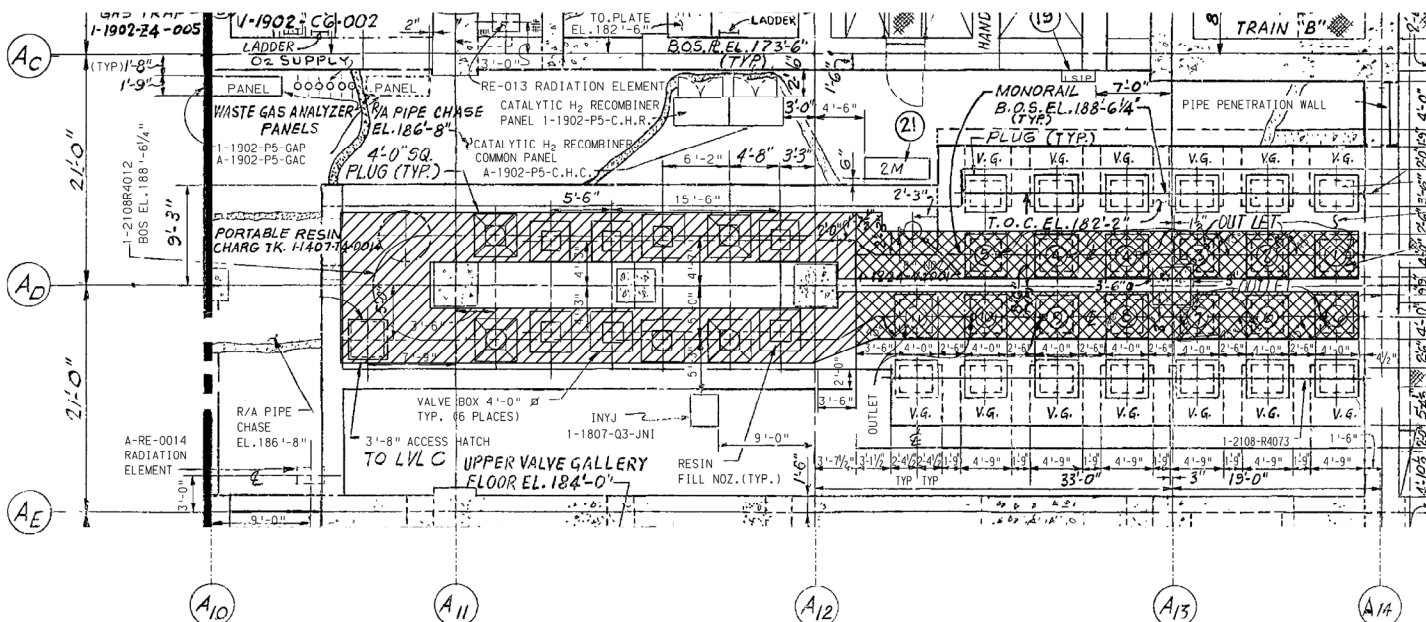
LEGEND



THE LOAD IN THIS AREA SHALL NOT BE LIFTED HIGHER THAN 3 FEET (AS MEASURED FROM SLAB TO BOTTOM OF LOAD).



THE LOAD HEIGHT IN THIS AREA IS NOT LIMITED.



NOTE: UNIT 1 SHOWN. UNIT 2 IS A MIRROR IMAGE.

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

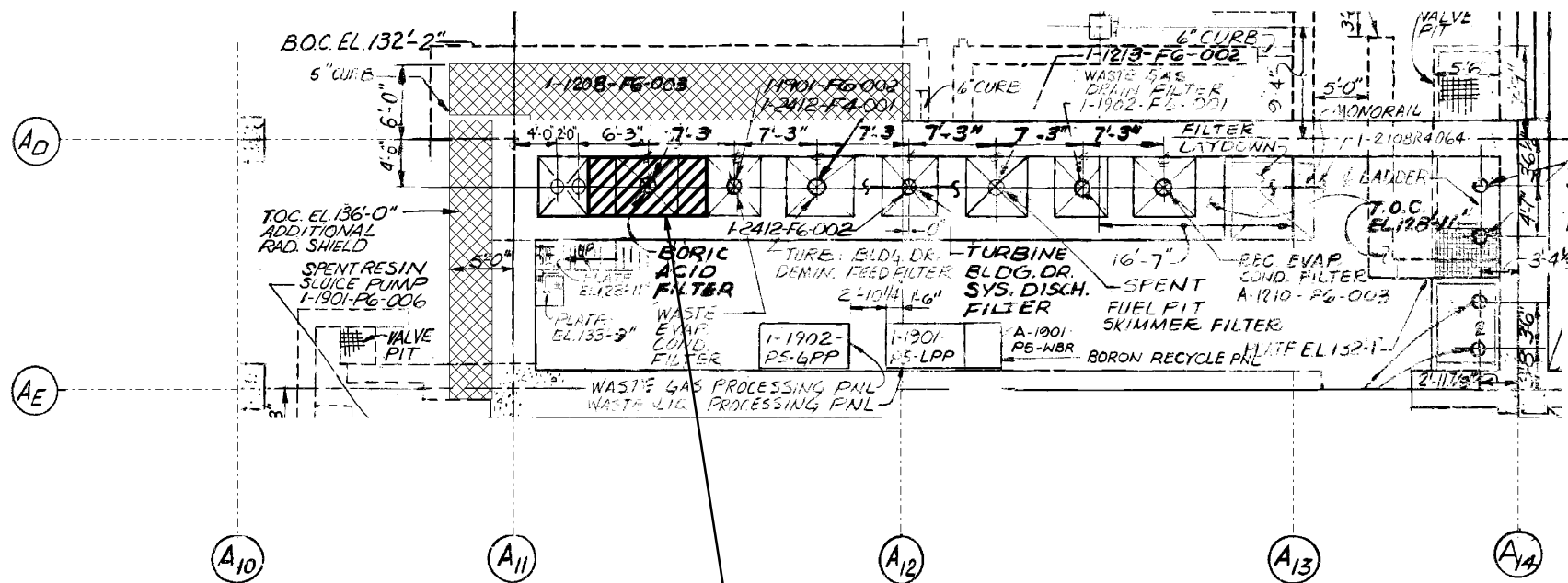
SAFE LOAD PATH FOR BACKFLUSHABLE
FILTER MONORAIL
AUXILIARY BUILDING
LEVEL B MONORAIL 2108-R4-012

NO.	VERSIONS	DATE	DR	CHK	APPV
1.0	REVISED PER ABN SNC517148C010, VER.1.0	09/15/14	JLO	CYN	TSL


SCALE: NONE	DRAWING NO.	VER.
JOB NO. 10604	1X4DE605	1.0

5126 U 222X34

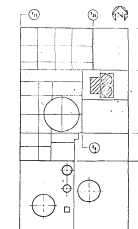
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.



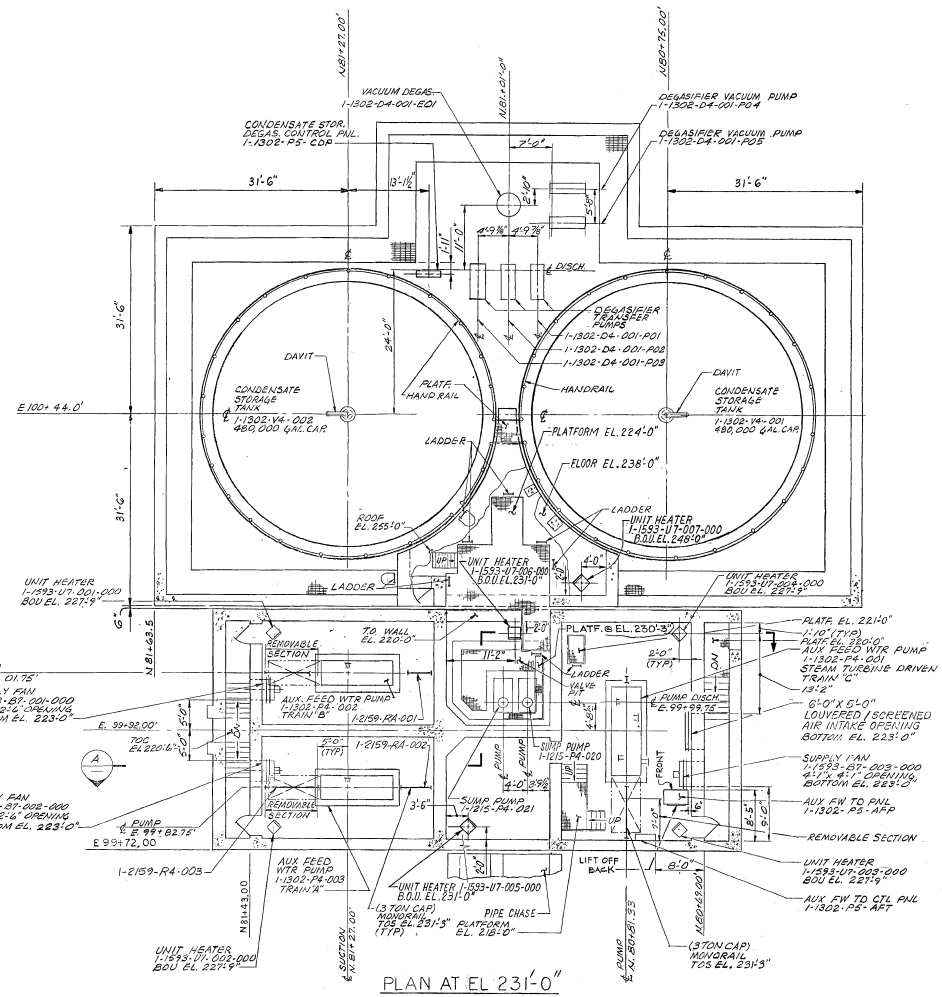
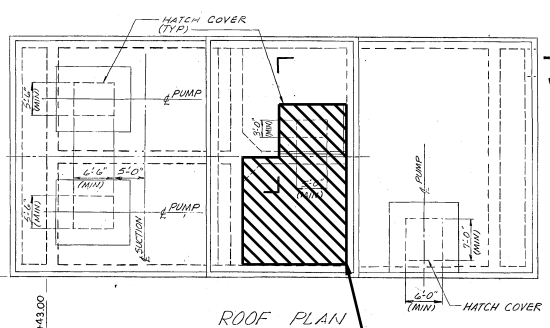
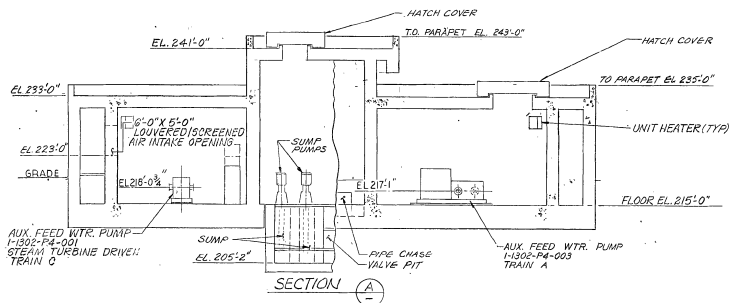
IN THE INDICATED AREA THE LOAD
SHALL NOT BE LIFTED HIGHER THAN 1 FOOT
(AS MEASURED FROM SLAB TO BOTTOM OF LOAD)

 SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
SAFE LOAD PATH FOR CARTRIDGE FILTER MONORAIL AUXILIARY BUILDING LEVEL D MONORAIL 2108-R4-064 (UNIT 1)		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 10604	1X4DE606	1

△									
△	REVISED PER REA 96-VAA054	10-1-98	GS	RBH	CBH				
△	ISSUED PER REA 96-VAA054								
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL			



KEY PLAN UNIT 1



THE LOAD SHALL BE LIFTED ONLY IN THE INDICATED AREA AND SHALL NOT BE LIFTED HIGHER THAN 2 FT. (AS MEASURED FROM THE SLAB TO THE BOTTOM OF THE LOAD).

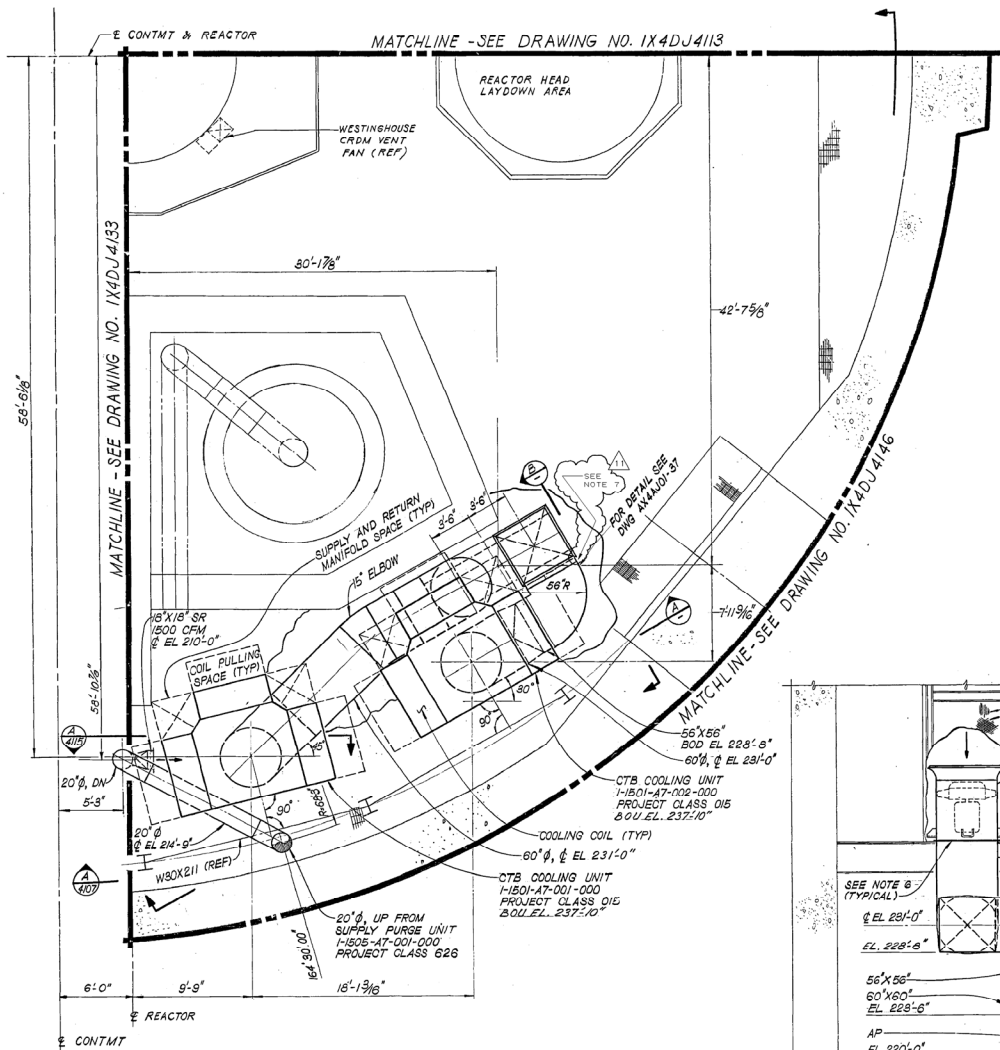
NOTE: UNIT 1 SHOWN. UNIT 2 IS A MIRROR IMAGE.

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

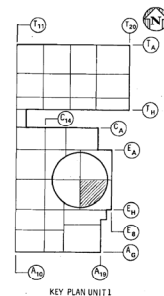
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

SAFE LOAD PATH
FOR AUXILIARY FEEDWATER PUMPHOUSE
SUMP PUMP HATCHES

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.		ISSUED PER REG 96-VA0054		7/8/98	SRM	RDW	CBH	WFP
NO.		REVISONS		DATE	DR	CHK	APPV	DTL
				JOB NO. 10604		DRAWING NO.		REV.
						1X4DE607		0
				SCALE: NONE		SIZE: 34X44		CAD NAME: 1X4DE607



PLAN - EL. 210'-0" TO 238'-0"
SCALE: $\frac{1}{4}" = 1'-0"$

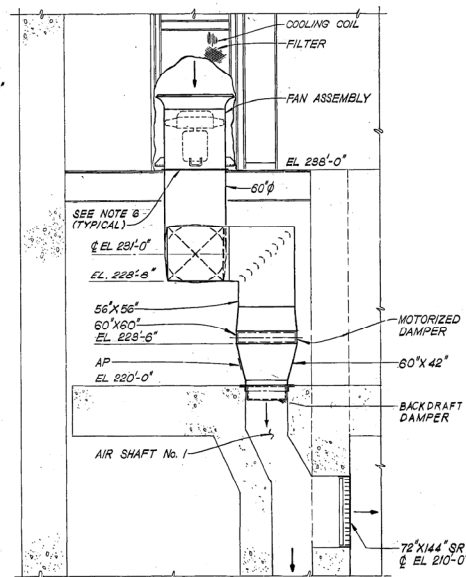


NOTES :

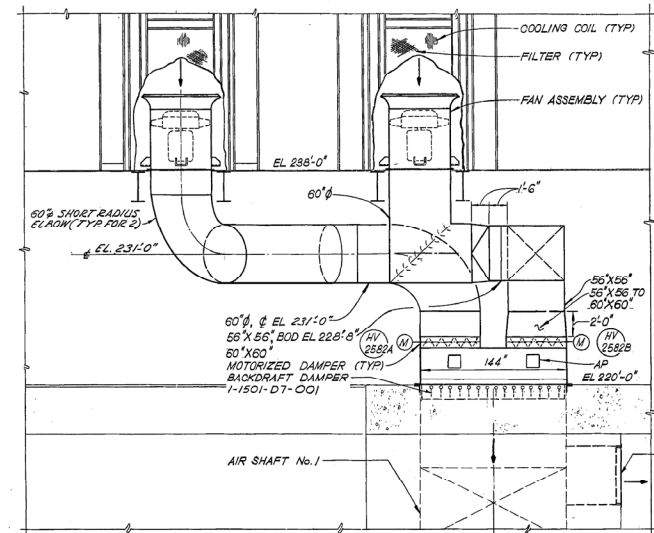
1. FOR GENERAL NOTES AND LEGEND SEE DWG AX4ADJ0001 AND AX4ADJ0002.
2. FOR AREA ABOVE SEE DWG IX4DJ4102.
3. FOR AREA BELOW SEE DWG IX4DJ4105.
4. ALL DUCTWORK SHOWN IS PROJECT CLASS O/S UNLESS OTHERWISE NOTED.
5. FOR FLOW TRANSMITTERS LOCATIONS SEE CONTROL BLDG. DRAWING IX4D'E111.
6. DUCTWORK SHALL BE BOLTED TO THE BOTTOM OF SYSTEM 1501-001-000 4 022-000 SYSTEM. BOLT PATTERN TO CONFORM TO DWG AX2D6TWO01 REQUIREMENTS.

REFERENCE DRAWINGS

PE&D	<u>IX40B212, 213 & 251</u>
CIVIL	<u>IX2D48A012</u>
STRUCTURAL	<u>IX2D48F115, F113</u>
ARCHITECTURAL	
PIPING	<u>IX4DL4A02, A03</u>
PLUMBING	
ELECTRICAL	<u>IX3DK513, K514</u>
DUCT SUPPORT	



SECTION (B)
SCALE: $\frac{1}{4}" = 1'-0"$



SECTION (A)
SCALE: $\frac{1}{4}" = 1'-0"$

ACTIVITY PACKAGE NO. 412101116A



SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTAINMENT BLDG
AREA 4A LEVEL 1
PLAN EL. 210'-0" TO 238'-0"

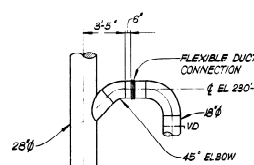
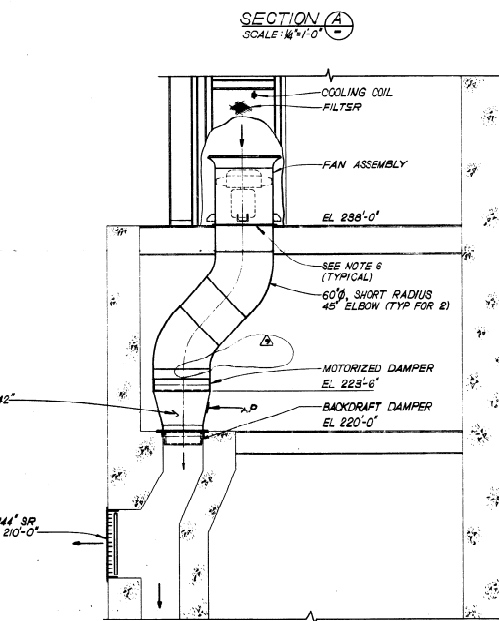
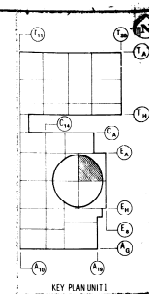
SCALE: NONE	DRAWING NO.	REV.
JOB NO.10604	1X4DJ4103	11

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

INCORP. PER ABN-42696	12-23-97	SRM	EOG	MWD	
ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR SIGNATURE				
NO. REVISIONS	DATE	DR	CHK	APPV	DT

SCALE: NONE	DRAWING NO.	REV.
JOB NO.10604	1X4DJ4103	11

CAD NAME
1-4D 1-41 O'



SECTION (D)
SCALE: 1/4" = 1'-0"

SECTION (B)
SCALE: 1/4" = 1'-0"

- 1 FOR GENERAL NOTES AND LEGEND SEE
DWG X4ADJ0002 AND X4ADJ0002.
- 2 FOR AREA ABOVE SEE DWG X4ADJ4112
- 3 FOR AREA BELOW SEE DWG X4ADJ4115
- 4 ALL DUCTWORK SHOWN IS PROJECT CLASS
015 UNLESS OTHERWISE NOTED.
- 5 FOR FLOW TRANSMITTER LOCATION SEE
CONTROL BLDG DRAWING X4ADJ0103.
- 6 DUCTWORK SHALL BE BOLTED TO THE BOTTOM OF
SYSTEM (150'-4" DIA) 000'-0" 008'-0" UNITS BOLT
PATTERN TO CONFORM TO DWG X42867W001/
REQUIREMENTS.

REFERENCE DRAWINGS

P&ID	IX4DB212, 213, 251 & 213-1
CIVIL	IX2D48A012
STRUCTURAL	IX2D48F114
ARCHITECTURAL	
PIPING	IX4DLB02, B03
PLUMBING	IX4DH4103
ELECTRICAL	IX3DK503 & 513
DUCT SUPPORT	

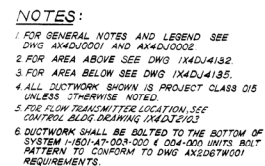
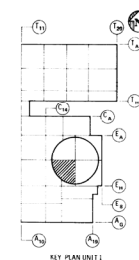
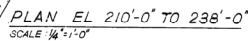
412101B067A
[ACTIVITY PACKAGE NO.] 412101116A

BECHTEL
LOS ANGELES
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTAINMENT BLDG
AREA 4B LEVEL 1
PLAN EL. 210'-0" TO 238'-0"

SCALE: $\frac{1}{4}'' = 1'-0''$	DRAWING NO.	REV.
JOB NO. 9510	1X4114113	

A										B										C										D										E										F										G										H										I										J										K										L										M										N										O										P										Q										R										S										T										U										V										W										X										Y										Z										AA										AB										AC										AD										AE										AF										AG										AH										AI										AJ										AK										AL										AM										AN										AO										AP										AQ										AR										AS										AT										AU										AV										AW										AX										AY										AZ										BA										BB										BC										BD										BE										BF										BG										BH										BI										BJ										BK										BL										BM										BN										BO										BP										BQ										BR										BS										BT										BU										BV										BW										BX										BY										BZ										CA										CB										CC										CD										CE										CF										CG										CH										CI										CJ										CK										CL										CM										CN										CO										CP										CQ										CR										CS										CT										CU										CV										CW										CX										CY										CZ										DA										DB										DC										DD										DE										DF										DG										DH										DI										DJ										DK										DL										DM										DN										DO										DP										DQ										DR										DS										DT										DU										DV										DW										DX										DY										DZ										EA										EB										EC										ED										EE										EF										EG										EH										EI										EJ										EK										EL										EM										EN										EO										EP										EQ										ER										ES										ET										EU										EV										EW										EX										EY										EZ										FA										FB										FC										FD										FE										FF										FG										FH										FI										FJ										FK										FL										FM										FN										FO										FP										FQ										FR										FS										FT										FU										FV										FW										FX										FY										FZ										GA										GB										GC										GD										GE										GF										GG										GH										GI										GJ										GK										GL										GM										GN										GO										GP										GQ										GR										GS										GT										GU										GV										GW										GX										GY										GZ										HA										HB										HC										HD										HE										HF										HG										HH										HI										HJ										HK										HL										HM										HN										HO										HP										HQ										HR										HS										HT										HU										HV										HW										HX										HY										HZ										IA										IB										IC										ID										IE										IF										IG										IH										II										IJ										IK										IL										IM										IN										IO										IP										IQ										IR										IS										IT										IU										IV										IW										IX										IY										IZ										JA										JB										JC										JD										JE										JF										JG										JH										JI										JJ										JK										JL										JM										JN										JO										JP										JQ										JR										JS										JT										JU										JV										JW										JX										JY										JZ										KA										KB										KC										KD										KE										KF										KG										KH										KI										KJ										KK										KL										KM										KN										KO										KP										KQ										KR										KS										KT										KU										KV										KW										KX										KY										KZ										LA										LB										LC										LD										LE										LF										LG										LH										LI										LJ										LK										LM										LN										LO										LP										LQ										LR										LS										LT										LU										LV										LW										LX										LY										LZ										MA										MB										MC										MD										ME										MF										MG										MH										MI										MJ										MK										ML										MM										MN										MO										MP										MQ										MR										MS										MT										MU										MV										MW										MX										MY										MZ										NA										NB										NC										ND										NE										NF										NG										NH										NI										NJ										NK										NL										NM										NO										NP										NQ										NR										NS										NT										NU										NV										NW										NX										NY										NZ										OA										OB										OC										OD										OE										OF										OG										OH										OI										OJ										OK										OL										OM										ON										OO										OP										OQ										OR										OS										OT										OU										OV										OW										OX										OY										OZ										PA										PB										PC										PD										PE										PF										PG										PH										PI										PJ										PK										PL										PM										PN										PO										PP										PQ										PR										PS										PT										PU										PV										PW										PX										PY										PZ										QA										QB										QC										QD										QE										QF										QG										QH										QI										QJ										QK										QL										QM										QN										QO										QP										QQ										QR										QS										QT										QU										QV										QW										QX										QY										QZ										RA										RB										RC										RD										RE										RF										RG										RH										RI										RJ										RK										RL										RM										RN										RO										RP										RQ										RR										RS										RT										RU										RV										RW										RX										RY										RZ										SA										SB										SC										SD										SE										SF										SG										SH										SI										SJ										SK										SL										SM										SN										SO										SP										SQ										SR										SS										ST										SU										SV										SW										SX										SY										SZ										TA										TB										TC										TD										TE										TF										TG										TH										TI										TJ										TK										TL										TM										TN										TO										TP										TQ										TR										TS										TT										TU										TV										TW										TX										TY										TZ										UA										UB										UC										UD										UE										UF										UG										UH										UI										UJ										UK										UL										UM										UN										UO										UP										UQ										UR										US										UT										UU										UV										UW										UX										UY										UZ										VA										VB										VC										VD										VE										VF										VG										VH										VI										VJ										VK										VL										VM										VN										VO										VP										VQ										VR										VS										VT										VU										VV										VW										VX										VY										VZ										WA										WB										WC										WD										WE										WF										WG										WH										WI										WJ										WK										WL										WM										WN										WO										WP										WQ										WR										WS										WT										WU										WV										WW										WX										WY										WZ										XA										XB										XC										XD										XE										XF										XG										XH										XI										XJ										XK										XL										XM										XN										XO										XP										XQ										XR										XS										XT										XU										XV										XW										XX										XY										XZ										YA										YB										YC										YD										YE										YF										YG										YH										YI										YJ										YK										YL										YM										YN										YO										YP										YQ										YR										YS										YT										YU										YV										YW										YX										YY										YZ										ZA										ZB										ZC										ZD										ZE										ZF										ZG										ZH										ZI										ZJ										ZK										ZL										ZM										ZN										ZO										ZP										ZQ										ZR										ZS										ZT										ZU										ZV										ZW										ZX										ZY										ZZ									
INCOB, M FOMB 10995 & M FOMB 15302, REVISIONS										0-1-98 (1.8)										11.562										INCOB DON-10-5 & 8										2-18-98										7-11-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98										11-1-98																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													



REFERENCE DRAWINGS

P&ID	<u>IX40B2/2, 2/3 & 25</u>
CIVIL	<u>IX2048A015</u>
STRUCTURAL	<u>IX2048F115, F113</u>
ARCHITECTURAL	
PIPING	<u>IX4DL4002, D03</u>
PLUMBING	
ELECTRICAL	<u>IX3DK513, K514</u>
DUCT SUPPORT	

4/2/01B067A
ACTIVITY PACKAGE NO. 4/2/01/116A

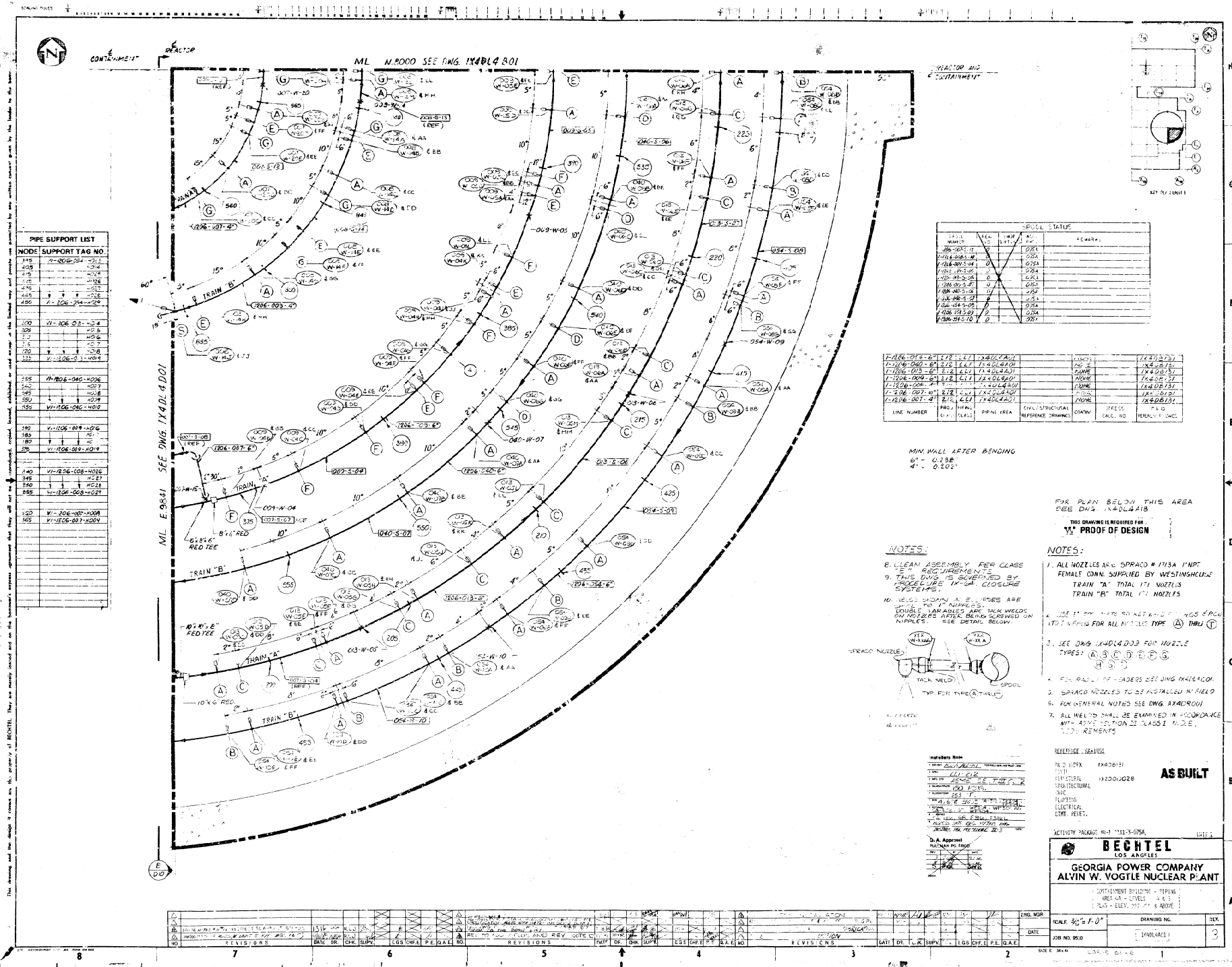
BECHTEL
LOS ANGELES

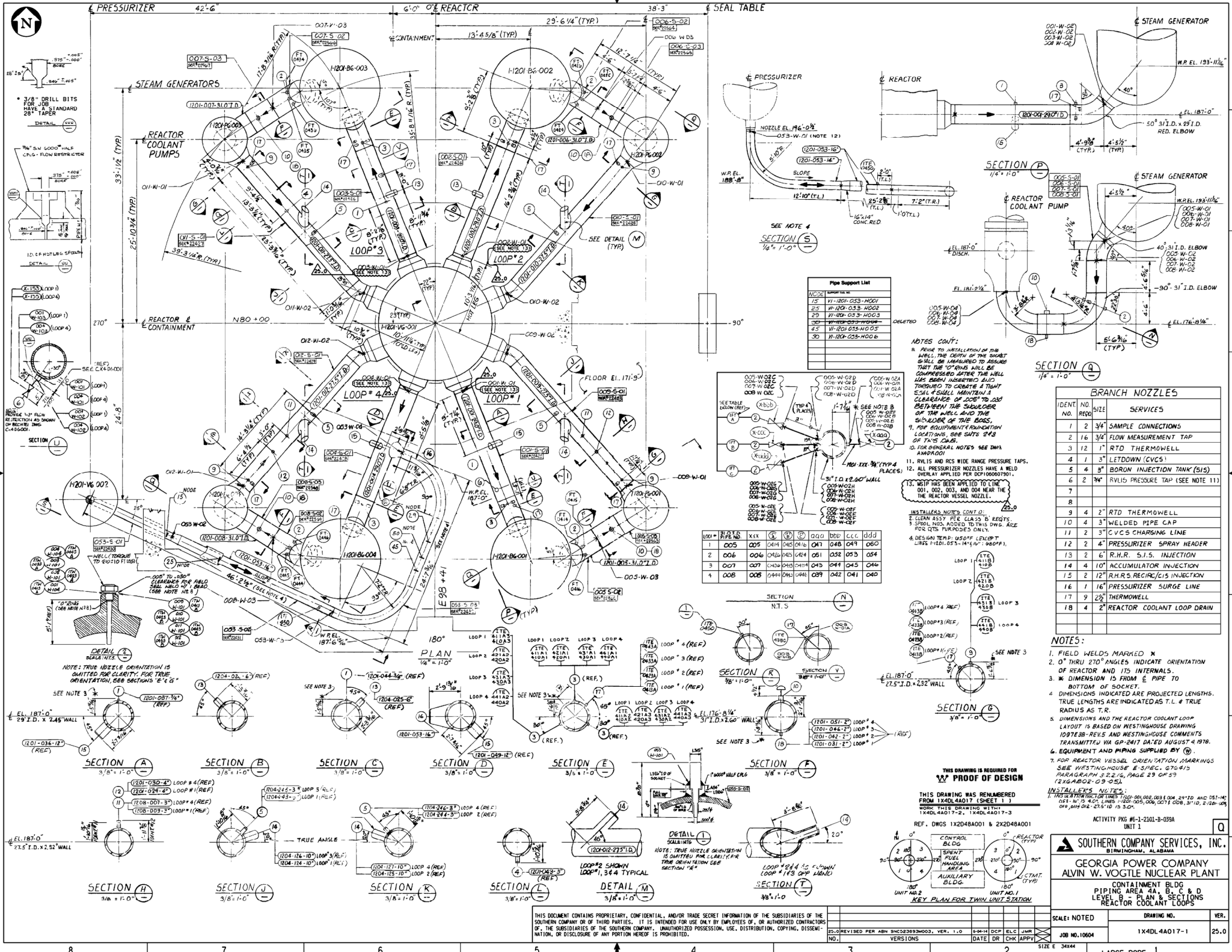
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTAINMENT BLDG
AREA 4D LEVEL 1
PLAN EL. 210'-0" TO 238'-0"

SCALE: $\frac{1}{4}'' = 1'-0''$	DRAWING NO.	REV.
JOB NO. 9510	1X4DJ4133	

[illegible]





Pipe Support List

NO.	DESCRIPTION
15	11-1201-033-H001
25	11-1201-033-H002
29	11-1201-033-H003
30	11-1201-033-H005
30	11-1201-033-H006

BRANCH NOZZLES

IDENT. NO.	NO. REQ.	SIZE	SERVICES
1	2	3/4"	SAMPLE CONNECTIONS
2	16	3/4"	FLOW MEASUREMENT TAP
3	12	1"	RTD THERMOWELL
4	1	3"	LETDOWN (CVCS)
5	4	3"	BORON INJECTION TANK (SIS)
6	2	3/4"	RYLIS PRESSURE TAP (SEE NOTE 11)
7			
8			
9	4	2"	RTD THERMOWELL
10	4	3"	WELDED PIPE CAP
11	2	3"	CVCS CHARGING LINE
12	2	4"	PRESSURIZER SPRAY HEADER
13	2	6"	R.H.R. S.I.S. INJECTION
14	4	10"	ACCUMULATOR INJECTION
15	2	12"	R.H.R. RECIRC/IS INJECTION
16	1	16"	PRESSURIZER SURGE LINE
17	9	2 1/2"	THERMOWELL
18	4	2"	REACTOR COOLANT LOOP DRAIN

- NOTES:**
- FIELD WELDS MARKED X
 - 0° THRU 270° ANGLES INDICATE ORIENTATION OF REACTOR AND ITS INTERNALS.
 - 3/4" DIMENSION IS FROM E PIPE TO BOTTOM OF SOCKET.
 - DIMENSIONS INDICATED ARE PROJECTED LENGTHS. TRUE LENGTHS ARE INDICATED AS T.L. & TRUE RADIUS AS T.R.
 - DIMENSIONS AND THE REACTOR COOLANT LOOP LAYOUT IS BASED ON WESTINGHOUSE DRAWING 100738-REV.5 AND WESTINGHOUSE COMMENTS TRANSMITTED VIA GP-2417 DATED AUGUST 4, 1978.
 - EQUIPMENT AND PIPING SUPPLIED BY (M).
 - FOR REACTOR VESSEL ORIENTATION MARKINGS SEE WESTINGHOUSE E-SPEC. 670-615 PARAGRAPH 3.2.2, PAGE 29 OF 39 (1X401-03-03).

INSTALLER'S NOTES:

1. THIS DRAWING IS FOR THE REACTOR COOLANT LOOP. THE REACTOR COOLANT LOOP IS A CLOSED LOOP. THE REACTOR COOLANT LOOP IS A CLOSED LOOP. THE REACTOR COOLANT LOOP IS A CLOSED LOOP.

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTAINMENT BLDG
PIPING AREA 4A, B, C & D
LEVEL 1
REACTOR COOLANT LOOPS

SCALE: NOTED	DRAWING NO.	VER.
25.0	1X4DL4A017-1	25.0
NO.	VERSIONS	DATE DR
NO.	DATE DR	CHK APPY

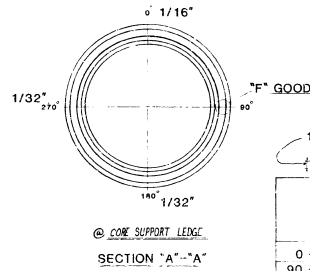
PLAN DIM. FROM REF. DWG. 1X4DL4A17

REACTOR COOLANT PUMP CASING ELEV. & LOC.									
STA	PLAN	LOOP 1	LOOP 2	LOOP 3	LOOP 4				
PLAN	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
A	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
A1	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
B	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
B1	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
C	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
C1	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
NORTH	25.8274	-25.8010	+25.9190	+25.9074	-25.8963				
EAST	28.5016	+25.4836	+25.4811	-25.5016	-25.4963				
WEST	48-42-41	48-42-04	48-39-55	48-42-11	48-39-28				
FIELD BOOK		SC-40	SC-38	SC-36	SC-41				

+ NORTH / EAST FROM C. R.V.
- SOUTH / WEST FROM C. R.V.

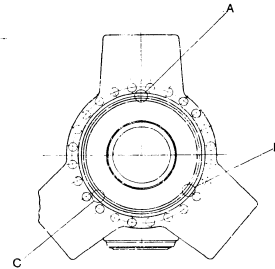
STEAM GENERATOR ELEV., LOC. PLUM.									
STA	PLAN	LOOP 1	LOOP 2	LOOP 3	LOOP 4				
PLAN	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
X	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
Y	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
Z	N/A	185-6.0920	185-6.0920	185-6.0920	185-6.0920				
NORTH	33.125	-33.0512	+33.0143	-33.0817	-33.0887				
EAST	13.3854	+13.5252	+13.4044	-13.4814	-13.3596				
WEST	0	-13/16"	+1/8"	0	-1/2"				
FIELD BOOK		SC-40	SC-38	SC-36	SC-41				

+ NORTH / EAST FROM C. R.V.
- SOUTH / WEST FROM C. R.V.

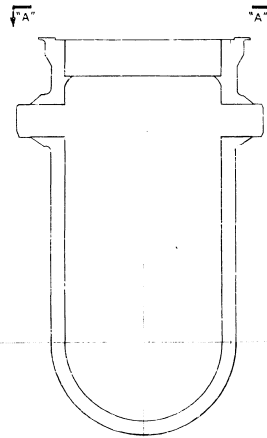


TYP. FOR ALL 4 SHOTS

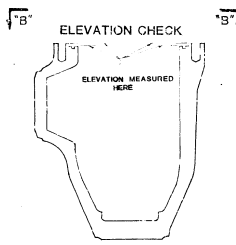
ELEVATIONS	
0 - 192	- 11.062
90 - 192	- 11.059
180 - 192	- 11.053
270 - 192	- 11.050
AVG. PLAN	- 11.0126



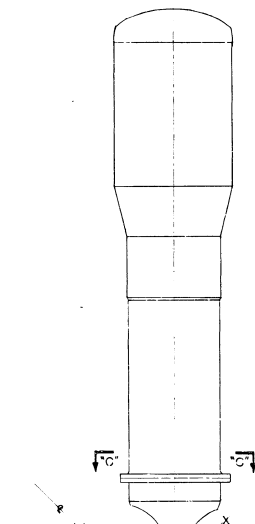
SECTION "B"-B"



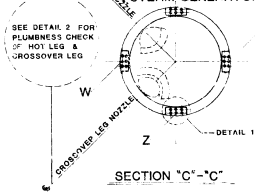
REACTOR VESSEL



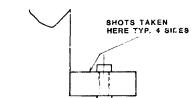
REACTOR COOLANT PUMP CASING
TYP. 3 PLACES



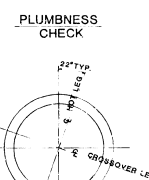
STEAM GENERATOR



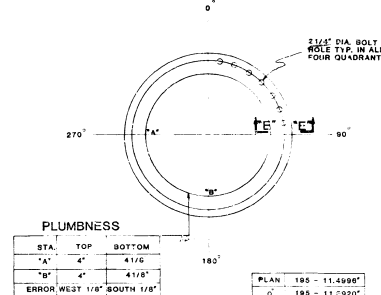
SECTION "C"-C"



SECTION "E"-E"



DETAIL 2
TYP. 4 PLACES



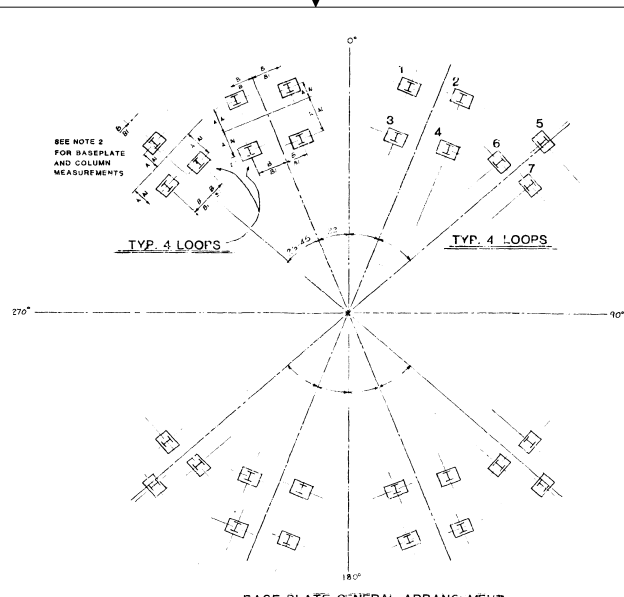
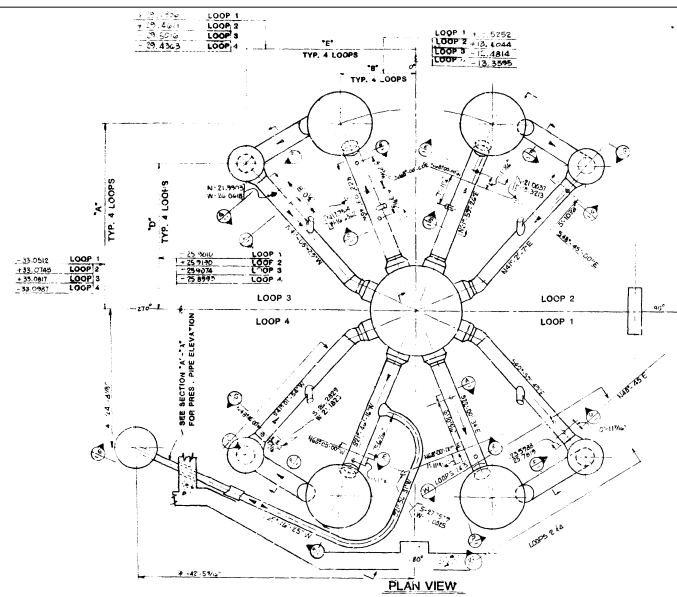
SECTION "D"-D"

NOTES: 1) DETAIL 2 IS TYPICAL FOR ALL FOUR (4) STEAM GENERATOR
2) DETAIL 3 IS TYPICAL FOR ALL FOUR (4) REACTOR COOLANT PUMP CASING

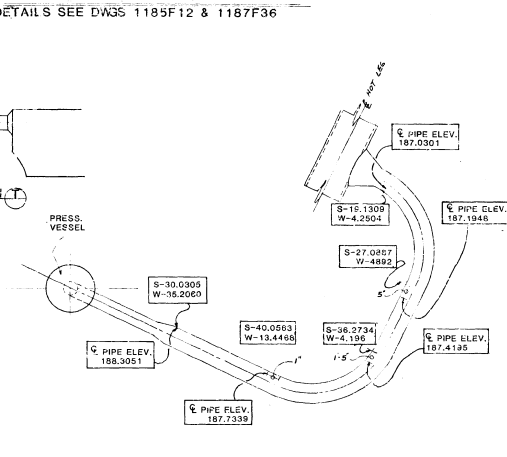
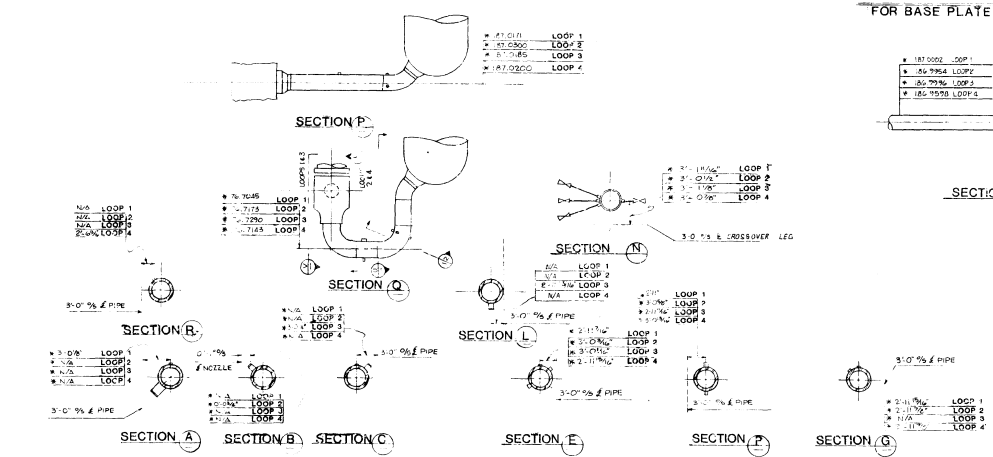
THIS DRAWING WAS RENUMBERED FROM 1X4DL4A017 (SHEET 2) TO 1X4DL4A017-2 (SHEET 2)

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
CONTAINMENT BLDG
PIPING AREA 4A, B, C & D
LEVEL B - PLAN & SECTIONS
REACTOR COOLANT LOOPS

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.		NO.		1		2		3		4		5		6		7		8	
INCORP PER ABN 38665		4-25-03		DFV		LRP		ASK		DATE		CHK		APPV		DL		SCALE: NTS	
REVISIONS		JOB NO. 10604		DRAWING NO.		REV.		1X4DL4A017-2		22		SIZE E 30x44		CADD NAME		1X4DL4A017-2			



BASE PLATES LOCATION & EL.									
LOOP#	PLATE#	ACTUAL A'	PLAN A'	ACTUAL B'	PLAN B'	ACTUAL EL.	PLAN EL.	FIELD BOOK	
1	1	3'-0 1/2"	3'-0"	3'-0"	3'-0 1/2"	172.8480	172.8887	SC-40	
1	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8533			
1	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8731			
1	4	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8843			
1	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8733			
1	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8731			
1	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8578			
2	1	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8888		SC-38	
2	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8743			
2	3	3'-0 1/2"	3'-0 1/2"	3'-0"	3'-0"	172.8878			
2	4	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8843			
2	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8751			
2	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8775			
2	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8775			
2	8	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8722			
2	9	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8717		SC-39	
3	1	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8838			
3	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8808			
3	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8808			
3	4	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8808			
3	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8838			
3	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8838			
3	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
3	8	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888		SC-41	
3	9	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	1	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	4	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	8	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	9	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			



SUPPORT COL'S - LOCATION & PLUMBNESS									
LOOP#	COL#	ACTUAL A'	PLAN A'	ACTUAL B'	PLAN B'	ACTUAL EL.	PLAN EL.	FIELD BOOK	
1	1	3'-0 1/2"	3'-0"	3'-0"	3'-0 1/2"	172.8480	172.8887	SC-40	
1	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8533			
1	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8731			
1	4	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8843			
1	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8733			
1	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8731			
1	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8578			
2	1	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8888		SC-38	
2	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8743			
2	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8878			
2	4	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8843			
2	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8751			
2	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8775			
2	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8775			
2	8	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8722			
2	9	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8717		SC-39	
3	1	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8838			
3	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0"	172.8808			
3	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8808			
3	4	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8808			
3	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8838			
3	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8838			
3	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
3	8	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888		SC-41	
3	9	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	1	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	2	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	3	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	4	3'-0 1/2"	3'-0"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	5	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	6	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	7	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	8	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			
4	9	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	3'-0 1/2"	172.8888			

- NOTES:
1. DENOTES AS-BUILT DIMENSION.
 2. A - MEASURED TO Q BASE PLATE A1 - MEASURED TO Q COL.
 3. ALL C L PIPE D'S ARE FROM ACTUAL C L PIPE, NOT THEORETICAL.
 4. FROM VESSEL OR TOWARD VESSEL MEANS THE VESSEL THAT THE COLUMNS ARE HOLDING UP.
 5. N/A - NOT APPLICABLE
 6. O/S - OFF SET

THIS DRAWING WAS RENAMBERED FROM 1X4DL40017 (SHEET 3) WORK THIS DRAWING WITH 1X4DL40017-3

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
CONTAINMENT BLDG
PIPING AREA 4A, B, C & D
LEVEL B - PLAN & SECTIONS
REACTOR COOLANT TAPS

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	REVISIONS	DATE	BY	CHK	APPV	DL	SCALE: NOTED	DRAWING NO.	REV.
1	INCORP PER ABN 38665	4-25-01	DFV	LRP	ASK	-		1X4DL40017-3	22
2									
3									
4									
5									
6									
7									
8									
9									
10									

SCALE: 1/8" = 1'-0"



PIPE SUPPORT LIST

NO.	PIPE	SUPP. TAG NO.
1	100-001-001	100-001-001
2	100-001-002	100-001-002
3	100-001-003	100-001-003
4	100-001-004	100-001-004
5	100-001-005	100-001-005
6	100-001-006	100-001-006
7	100-001-007	100-001-007
8	100-001-008	100-001-008
9	100-001-009	100-001-009
10	100-001-010	100-001-010
11	100-001-011	100-001-011
12	100-001-012	100-001-012
13	100-001-013	100-001-013
14	100-001-014	100-001-014
15	100-001-015	100-001-015
16	100-001-016	100-001-016
17	100-001-017	100-001-017
18	100-001-018	100-001-018
19	100-001-019	100-001-019
20	100-001-020	100-001-020

PIPE SUPPORT LIST

NO.	PIPE	SUPP. TAG NO.
21	100-001-021	100-001-021
22	100-001-022	100-001-022
23	100-001-023	100-001-023
24	100-001-024	100-001-024
25	100-001-025	100-001-025
26	100-001-026	100-001-026
27	100-001-027	100-001-027
28	100-001-028	100-001-028
29	100-001-029	100-001-029
30	100-001-030	100-001-030
31	100-001-031	100-001-031
32	100-001-032	100-001-032
33	100-001-033	100-001-033
34	100-001-034	100-001-034
35	100-001-035	100-001-035
36	100-001-036	100-001-036
37	100-001-037	100-001-037
38	100-001-038	100-001-038
39	100-001-039	100-001-039
40	100-001-040	100-001-040

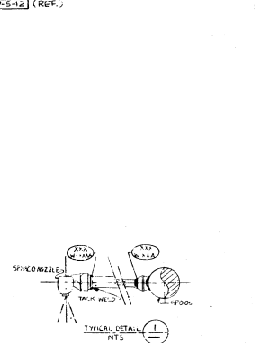
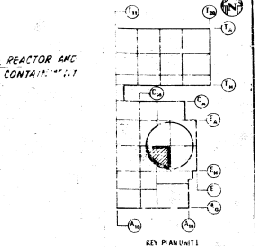
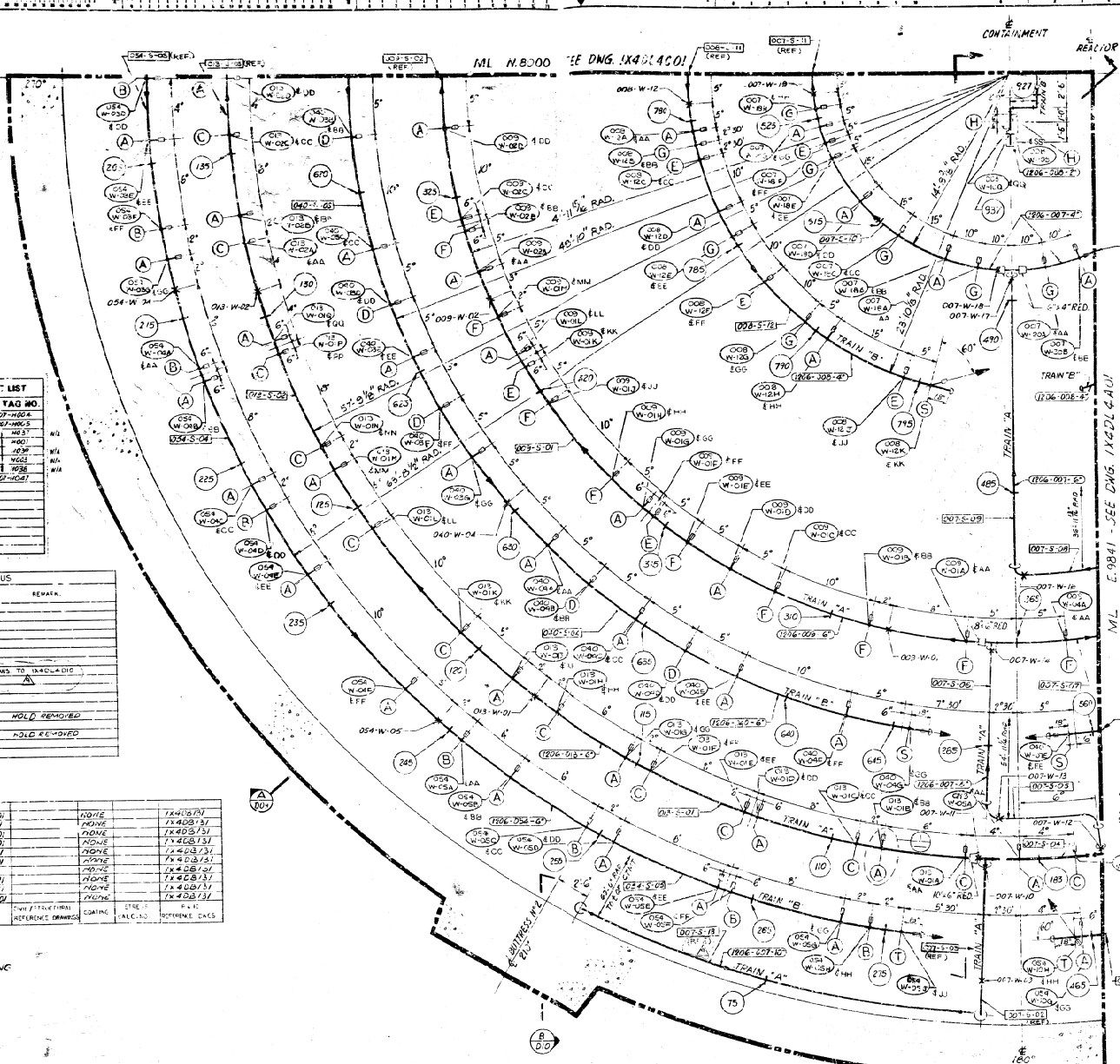
SPOOL STATUS

NO.	PIPE	SPOOL	STATUS	REMARKS
1	100-001-001	100-001-001	OK	
2	100-001-002	100-001-002	OK	
3	100-001-003	100-001-003	OK	
4	100-001-004	100-001-004	OK	
5	100-001-005	100-001-005	OK	
6	100-001-006	100-001-006	OK	
7	100-001-007	100-001-007	OK	
8	100-001-008	100-001-008	OK	
9	100-001-009	100-001-009	OK	
10	100-001-010	100-001-010	OK	
11	100-001-011	100-001-011	OK	
12	100-001-012	100-001-012	OK	
13	100-001-013	100-001-013	OK	
14	100-001-014	100-001-014	OK	
15	100-001-015	100-001-015	OK	
16	100-001-016	100-001-016	OK	
17	100-001-017	100-001-017	OK	
18	100-001-018	100-001-018	OK	
19	100-001-019	100-001-019	OK	
20	100-001-020	100-001-020	OK	
21	100-001-021	100-001-021	OK	
22	100-001-022	100-001-022	OK	
23	100-001-023	100-001-023	OK	
24	100-001-024	100-001-024	OK	
25	100-001-025	100-001-025	OK	
26	100-001-026	100-001-026	OK	
27	100-001-027	100-001-027	OK	
28	100-001-028	100-001-028	OK	
29	100-001-029	100-001-029	OK	
30	100-001-030	100-001-030	OK	
31	100-001-031	100-001-031	OK	
32	100-001-032	100-001-032	OK	
33	100-001-033	100-001-033	OK	
34	100-001-034	100-001-034	OK	
35	100-001-035	100-001-035	OK	
36	100-001-036	100-001-036	OK	
37	100-001-037	100-001-037	OK	
38	100-001-038	100-001-038	OK	
39	100-001-039	100-001-039	OK	
40	100-001-040	100-001-040	OK	

MIN. WALL AFTER BENDING

NO.	PIPE	MIN. WALL
1	100-001-001	100-001-001
2	100-001-002	100-001-002
3	100-001-003	100-001-003
4	100-001-004	100-001-004
5	100-001-005	100-001-005
6	100-001-006	100-001-006
7	100-001-007	100-001-007
8	100-001-008	100-001-008
9	100-001-009	100-001-009
10	100-001-010	100-001-010
11	100-001-011	100-001-011
12	100-001-012	100-001-012
13	100-001-013	100-001-013
14	100-001-014	100-001-014
15	100-001-015	100-001-015
16	100-001-016	100-001-016
17	100-001-017	100-001-017
18	100-001-018	100-001-018
19	100-001-019	100-001-019
20	100-001-020	100-001-020
21	100-001-021	100-001-021
22	100-001-022	100-001-022
23	100-001-023	100-001-023
24	100-001-024	100-001-024
25	100-001-025	100-001-025
26	100-001-026	100-001-026
27	100-001-027	100-001-027
28	100-001-028	100-001-028
29	100-001-029	100-001-029
30	100-001-030	100-001-030
31	100-001-031	100-001-031
32	100-001-032	100-001-032
33	100-001-033	100-001-033
34	100-001-034	100-001-034
35	100-001-035	100-001-035
36	100-001-036	100-001-036
37	100-001-037	100-001-037
38	100-001-038	100-001-038
39	100-001-039	100-001-039
40	100-001-040	100-001-040

MIN. WALL AFTER BENDING
 10" - 0.315"
 6" - 0.214"
 4" - 0.255"
 2" - 0.218"



AS BUILT
 100-001-001 - 100-001-040
 100-001-001 - 100-001-040
 100-001-001 - 100-001-040

THIS DRAWING IS REQUIRED FOR
 W/ PROOF OF DESIGN

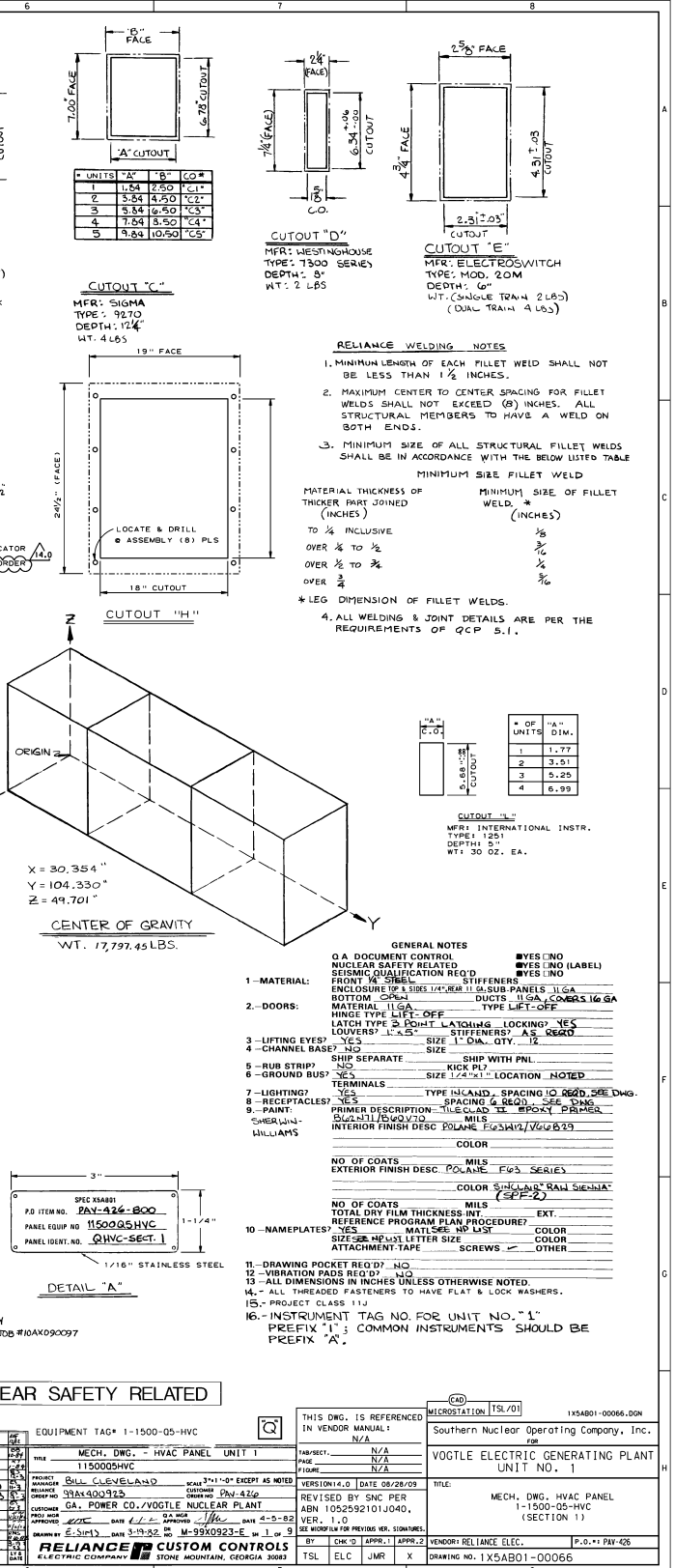
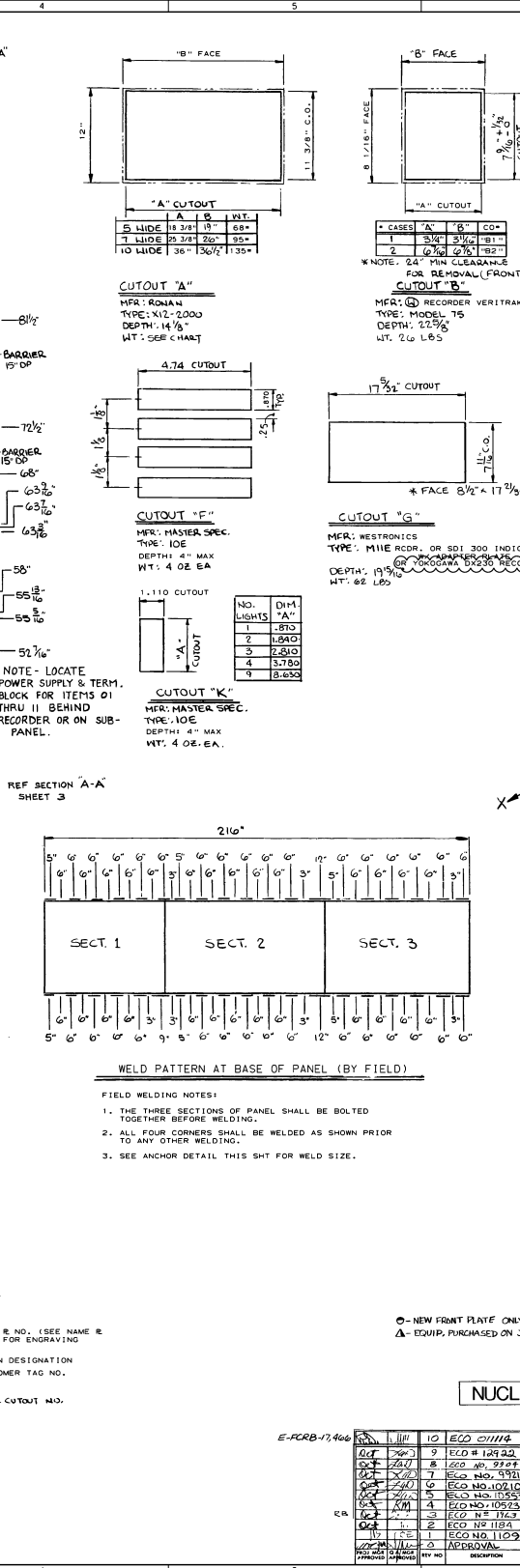
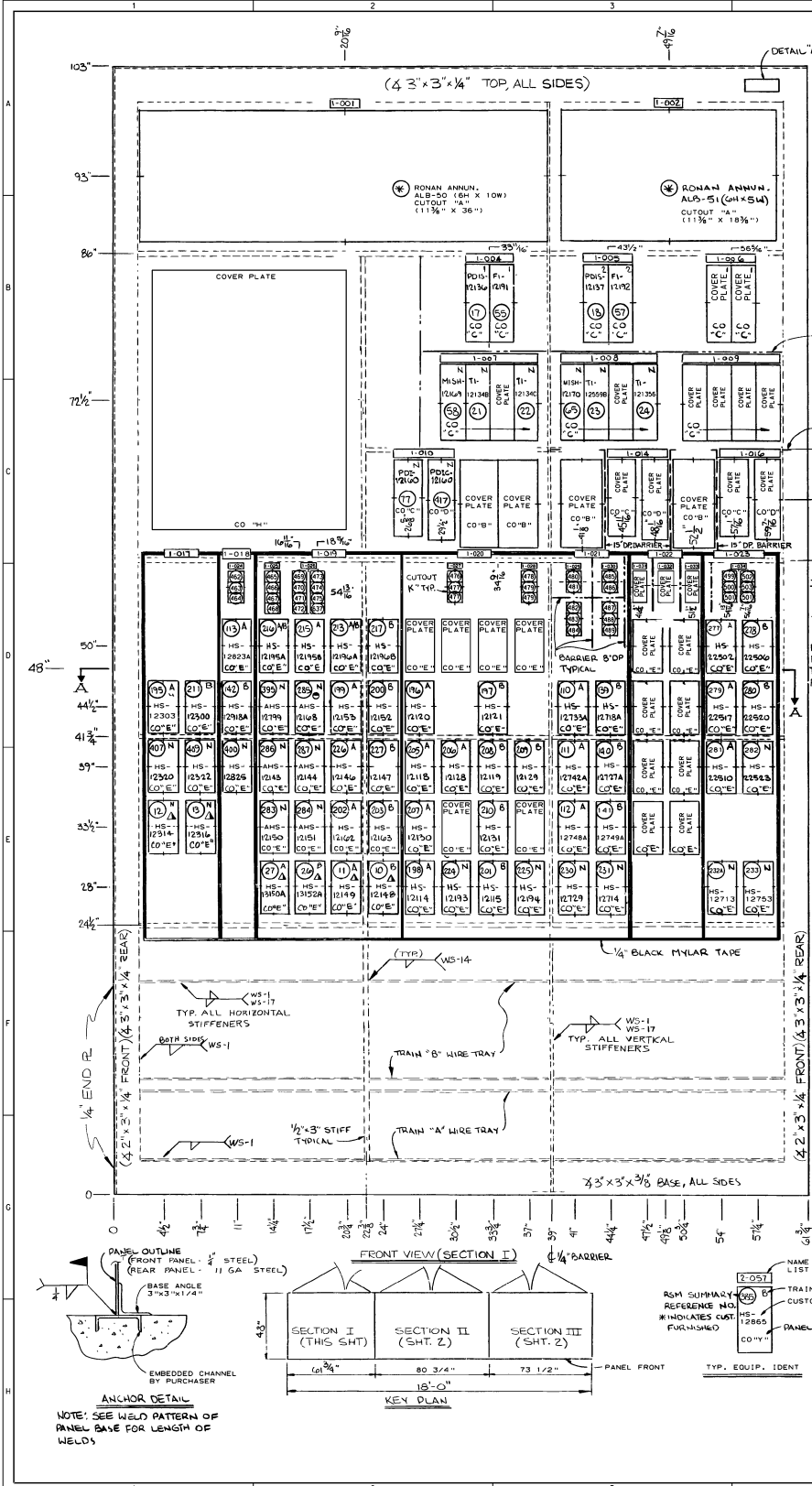
FOR DETAIL & FIELD WELD JOBS ON
 LINE NO. 100-001-001 SEE DWG. 100-001-001
 FOR NOTES - SEE DWG. 100-001-001
 FOR PLAN REWORK THE AREA
 SEE DWG. 100-001-001

REFERENCE DRAWINGS
 100-001-001
 100-001-002
 100-001-003
 100-001-004
 100-001-005
 100-001-006
 100-001-007
 100-001-008
 100-001-009
 100-001-010
 100-001-011
 100-001-012
 100-001-013
 100-001-014
 100-001-015
 100-001-016
 100-001-017
 100-001-018
 100-001-019
 100-001-020
 100-001-021
 100-001-022
 100-001-023
 100-001-024
 100-001-025
 100-001-026
 100-001-027
 100-001-028
 100-001-029
 100-001-030
 100-001-031
 100-001-032
 100-001-033
 100-001-034
 100-001-035
 100-001-036
 100-001-037
 100-001-038
 100-001-039
 100-001-040

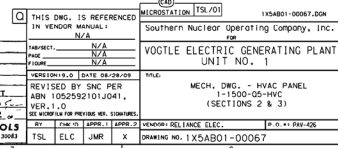
BECHTEL
 LOS ANGELES
 GEORGIA POWER COMPANY
 ALVIN W. VOGTLE NUCLEAR PLANT
 CONTAINMENT BUILDING - PIPING
 AREA NO. 100-001-001
 PLAN - ELEV. 100-001-001

SCALE: 3/8" = 1'-0"
 DRAWING NO. 100-001-001
 REV. 1
 DATE 10/1/78
 JOB NO. 946

[illegible]

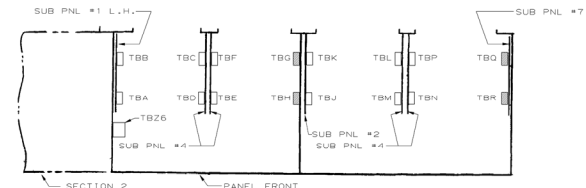
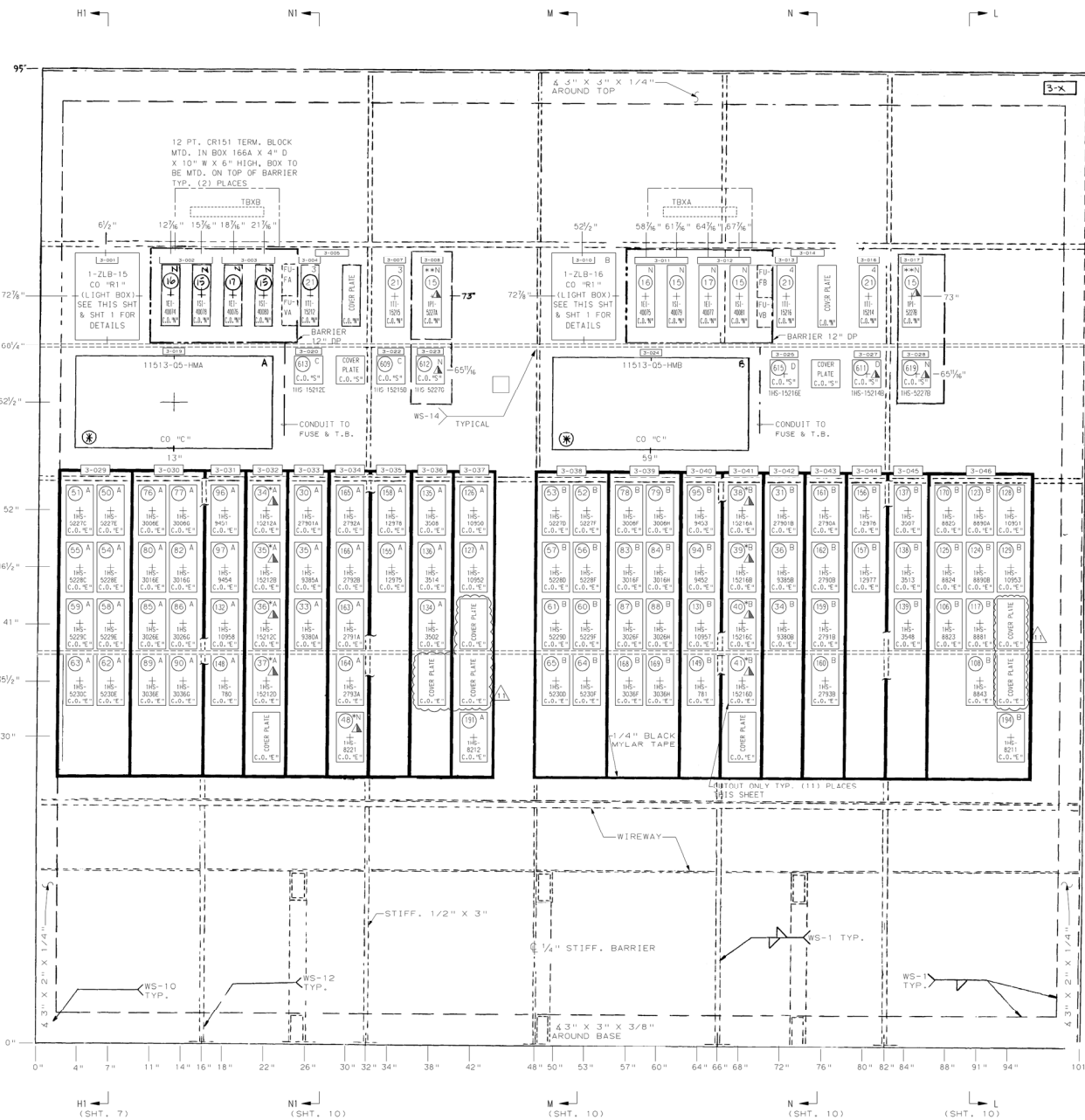


THIS DWG. IS REFERENCED IN VENDOR MANUAL:		MICROSTATION TSL/701	
N/A		15X5A01-00066.DWG	
FOR		Southern Nuclear Operating Company, Inc.	
PAGE		VOGTLE ELECTRIC GENERATING PLANT	
UNIT NO. 1		UNIT NO. 1	
REVISIONS BY SNC PER		TITLE	
ABN 105252101J040		MECH. DWG. HVAC PANEL	
VER. 1.0		1-1500-05-HVC	
BY		(SECTION 1)	
TSL ELC JMR		VENDOR: RELIANCE ELEC.	
X		DRAWING NO. 15X5A01-00066	

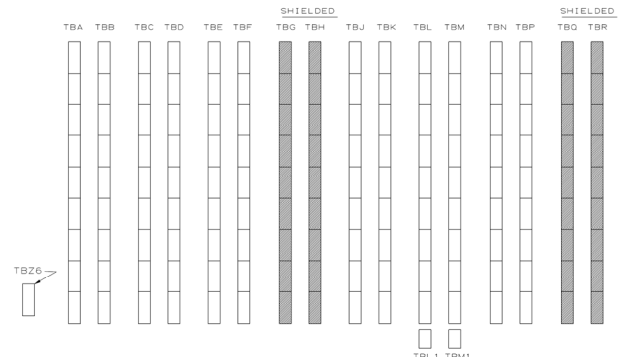


9	TITLE:	
	MISCELLANEOUS SYSTEMS EQUIPMENT PANEL (QPCP) SECTION 1	
RES.		
2	VENDOR: RELIANCE ELEC.	P.O. #: PAV-426
	DRAWING NO. 1X5AB01-00557	

THIS DWG. IS PREPARED IN VENDOR MANUAL N/A			MICROSTAT10 DFW/02			1XSAB01-00560.DGN		
FAB-SET: N/A			Southern Nuclear Operating Company, Inc.					
PAGE: N/A			FOR					
TITLE: VOOLTE ELECTRIC GENERATING PLANT			UNIT NO. 1					
VERSION: 1.0 DATE: 5-14-07			TITLE					
REVISED BY SNC PER ABN-V00606, VER. 1.0			MISCELLANEOUS SYSTEMS EQUIPMENT PANEL (OPCP) SECTION 2					
SEE MICROFILM FOR PREVIOUS REV. SIGNATURES								
BY	CHK'D	APP'R	APPR'D	VENDOR RELIANCE	P.G.# 1 PAV-426			
DFW	WNN	WLN	X	DRAWING NO.	1XSAB01-00560			



"TOP VIEW" TERM. BLOCK ARRANGEMENT
(SEE SHT 11 FOR SUB PANEL DETAILS)



3-001 1-ZLB-15

617	618	619	620
521	516	516	516
522	523	516	516
524	525	526	527
516	516	516	516
516	516	516	515

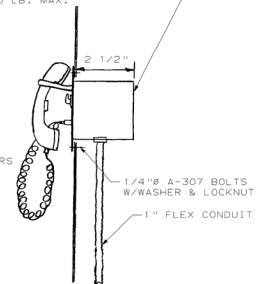
3-010 1-ZLB-16

630	631	632	633
534	529	529	529
529	529	529	529
535	536	537	538
529	529	529	529
529	529	529	528

MASTER SPEC. LIGHTS ARRANGEMENT

NOTE: NUMBER INSIDE SQUARE INDICATES RELIANCE'S ITEM NUMBER.

A RETAINING CLIP (PART NO. AUDIO SEARS 12791) SHALL BE MOUNTED (LATER) ON THE COVER PLATE TO PREVENT UNINTENTIONAL FALLING OF THE HANDSET FROM THE PUSHBAR (HOOK)



SECTION A - A (SEE SH. 5)
N.T.S.

* REFER TO SUMMARY OF MATERIALS BM-10X0097-A, BECHTEL LOG N° 1X5AB01-1108
** REFER TO SUMMARY OF MATERIALS BM-10X0199-A, BECHTEL LOG N° 1X5AB01-1136

▲ - EQUIPMENT PURCHASED ON JOB # 10AX090097

ECO NO. 11530	ECO NO. 11530
ECO NO. 01984	ECO NO. 01984
ECO NO. 01396	ECO NO. 01396
ECO NO. 1242	ECO NO. 1242

MISCELLANEOUS SYSTEMS/EQUIPMENT			
PANEL (QPCP) SECTION 3, UNIT 1			
ECO NO. 11530	ECO NO. 11530	ECO NO. 11530	ECO NO. 11530
ECO NO. 01984	ECO NO. 01984	ECO NO. 01984	ECO NO. 01984
ECO NO. 01396	ECO NO. 01396	ECO NO. 01396	ECO NO. 01396
ECO NO. 1242	ECO NO. 1242	ECO NO. 1242	ECO NO. 1242


NUCLEAR SAFETY RELATED

THIS DWG. IS REFERENCED IN VENDOR MANUAL:		1X5AB01-00563.DWG	
FOR:		Southern Nuclear Operating Company, Inc.	
FOR:		VOGTLE ELECTRIC GENERATING PLANT UNIT NO. 1	
REVISION 11 DATE 2/17/04		TITLE: MISCELLANEOUS SYSTEMS/EQUIPMENT PANEL (QPCP) SECTION 3	
REVISED BY SNC PER BCP 01-VIN0021		DRAWN BY: RELIANCE ELECTRIC	
SEE WORKPLAN FOR PREVIOUS REV. SIGNATURES		P.D.#/LINK	
BY: CHW/S BY: J11 BY: J2		DRAWING NO. 1X5AB01-00563	
LDT WND DEW X		SIZE E	

FUNCTION	SYMBOL	MEANING
AND		OUTPUT EXISTS ONLY WHEN ALL INPUTS ARE PRESENT.
OR		OUTPUT EXISTS ONLY WHEN ANY INPUT IS PRESENT.
NOT		OUTPUT EXISTS ONLY WHEN THE INPUT IS NOT PRESENT.
TIME DELAY (ON DELAY)		OUTPUT EXISTS AFTER A TIME DELAY WHEN THE INPUT IS CONTINUOUSLY PRESENT. OUTPUT CEASES WHEN THE INPUT IS NOT PRESENT.
TIMED DELAY (OFF DELAY)		OUTPUT EXISTS WHEN THE INPUT IS PRESENT AND CONTINUES TO EXIST FOR A TIME AFTER THE INPUT CEASES.
OFF RETURN MEMORY		MEMORY OUTPUT EXISTS WHEN THE MEMORY INPUT IS PRESENT AND CONTINUES TO EXIST UNTIL THE RESET INPUT IS PRESENT, EXCEPT UPON INTERRUPTION OF POWER, MEMORY OUTPUT DISAPPEARS.
RETENTIVE MEMORY		MEMORY OUTPUT EXISTS WHEN THE MEMORY INPUT IS PRESENT AND CONTINUES TO EXIST (ALSO UPON INTERRUPTION OF POWER) UNTIL THE RESET INPUT IS PRESENT. RESET OUTPUT EXIST ONLY WHEN THE MEMORY OUTPUT IS NOT PRESENT.
COINCIDENCE MATRIX		OUTPUT EXISTS ONLY WHEN AT LEAST A OUT OF B INPUTS ARE PRESENT.
SPECIAL		A FUNCTION WHICH PRODUCES AN OUTPUT UNDER SPECIAL CONDITIONS STATED IN L2 ADJACENT TO THE SYMBOL.
LIGHT		R-RED - OPERATING, FLOWING, OR INCREASING G-GREEN - NOT OPERATING, NOT FLOWING, OR DECREASING A-AMBER - ELECTRICAL OR MECHANICAL PROTECTION TRIP W-WHITE - MONITOR B-BLUE - MISCELLANEOUS
ANNUNCIATOR		INPUT TO ANNUNCIATOR
ANNUNCIATOR		COMMON INPUT TO ANNUNCIATOR
COMPUTER		INPUT TO COMPUTER
DEMARICATION LINES		DASHED LINES INDICATE OUTLINED AREAS OF LOGIC THAT ARE SUPPLIED BY A STATED VENDOR, OR AS NOTED
CROSS REFERENCE		CROSS REFERENCE TO ANOTHER LOGIC DRAWING

GENERAL NOTES

1. PROCESS EQUIPMENT WILL CHANGE STATE WHEN A CHANGE IS INITIATED, AND WILL REMAIN IN THAT STATE UNTIL A CHANGE TO ANOTHER STATE IS INITIATED.
2. PROCESS EQUIPMENT WILL REMAIN IN, OR RETURN TO, THE ORIGINAL STATE AFTER A LOSS AND RESTORATION OF POWER, UNLESS OTHERWISE NOTED.
3. INHERENT EQUIPMENT INTERLOCKS, SUCH AS CIRCUIT BREAKER TRIP FREE AND REVERSING STARTER CROSS INTERLOCKS, ARE NOT SHOWN. EQUIPMENT CANNOT BE OPERATED WHEN PROTECTIVE INPUTS EXIST.
4. THE BLOCKING OF EQUIPMENT OPERATING CIRCUITS WHEN OVERLOAD OR GROUNDS OCCURS IS GENERALLY NOT SHOWN. SWITCHGEAR CIRCUITS WHICH USE LOCKOUT RELAYS FOR PROTECTIVE TRIPS AND ALL MCC CIRCUITS REQUIRE OPERATION OF A SWITCH AT THE SWITCHGEAR OR MCC TO RESET A PROTECTIVE TRIP.
5. IF A CIRCUIT BREAKER HAS BEEN TRIPPED ON BUS VOLTAGE FAILURE, IT WILL NOT RECLOSE ON BUS VOLTAGE RESTORATION.
6. THE TEST CONTROL SWITCHES AT THE SWITCHGEAR WHICH FUNCTION ONLY WHEN BREAKER IS IN THE TEST POSITION ARE NOT SHOWN. WHEN A CIRCUIT BREAKER IS IN THE TEST POSITION, REMOTE CONTROL IS CUT OFF.
7. FINAL INSTRUMENT SET POINTS ARE SHOWN ELSEWHERE. SET POINTS SHOWN ON SYSTEM CONTROL LOGIC DIAGRAMS ARE APPROXIMATE.
8. THE LOGIC TO SHOW THAT VALVE AND DAMPER POSITION LIGHTS ARE BOTH ON WHEN THE EQUIPMENT IS IN AN INTERMEDIATE POSITION IS NOT SHOWN.
9. MOTOR OPERATED VALVES GO TO FULLY OPEN OR FULLY CLOSED POSITION WITH MOMENTARY COMMAND UNLESS JOG PUSHBUTTON IS NOTED.
10. LIMIT AND TORQUE SWITCHES TO STOP VALVE AND DAMPER MOTOR ACTUATORS AT THE END OF TRAVEL ARE NOT SHOWN IN THE LOGIC. THE VALVE TYPE AND REQUIRED ACTIONS WILL BE NOTED ON THE DIAGRAM WHEN AVAILABLE.
11. THE HAND SWITCH FUNCTION ABBREVIATION WILL BE USED ON SYSTEM CONTROL LOGIC DIAGRAMS AS FOLLOWS:
(M) - MAINTAINED CONTACT SWITCH
(P) - MOMENTARY CONTACT SWITCH

 SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM LEGEND

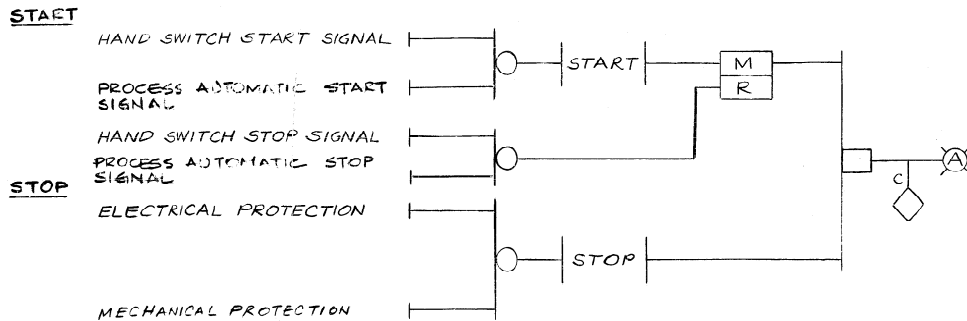
INC. ABN-20808.	6/2/95	CD	236	DNH													ENG MGR
REVISIONS	DATE	DR	CHK	APPV	DTL												
ISSUED FOR CONSTRUCTION																	
NO.	REVISIONS	DATE	DR														

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN002-1	2

SIZE B 11x17

SECTION SUPERVISOR


This drawing and the design it covers are the property of BECHTEL. They are produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.



TYPICAL AUTOMATIC PROTECTION ALARM AND INDICATION

													ENG. MGR.
	ISSUED FOR CONSTRUCTION	5/17/94	H.L.	FAL	MKV								DATE
NO.	REVISIONS	DATE	DR	CHK	SUPV.			EGS	CHF.E.	P.E.	Q.A.E.		

BM 9510

 <div style="text-align: center;"> BECHTEL LOS ANGELES </div>		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM TYPICAL		
SCALE: NONE	DRAWING NO.	REV
JOB NO. 9510	1X5DN002-3	0

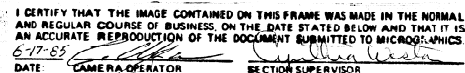
SIZE B 11 x 17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 12-1-77 CAMERA OPERATOR [Signature] SECTION SUPERVISOR [Signature]
LAO-2591 6/78

For the full story on the new
generation of the
Lexus LS, visit LexusUSA.com

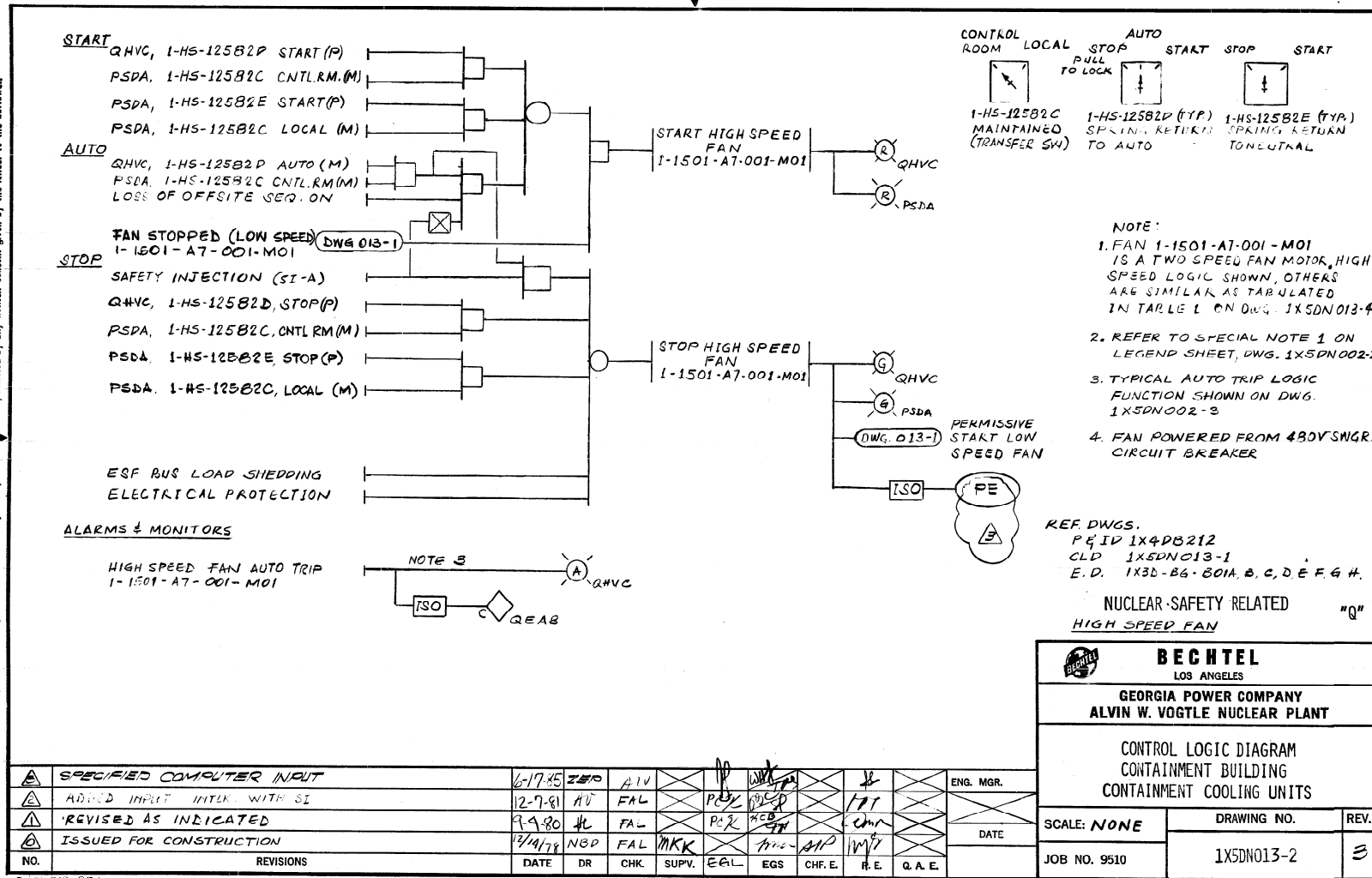
8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---



I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS

6-17-85
DATE: CAMERA OPERATOR SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are loaned to you and are to be used only for the purpose for which they are loaned. They are not to be reproduced, copied, altered, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.



P&ID212 REV

SIZE B 11 x 17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS

6-17-85
DATE: CAMERA OPERATOR SECTION SUPERVISOR

14.5X

DATE: 5-17-85 CAMERA OPERATOR: [Signature] SECTION SUPERVISOR: [Signature]

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS

6-17-85 [Signature] [Signature]
DATE: CAMERAMAN SECTION SUPERVISOR

8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

OPEN QPCP, 1-HS-2790A. OPEN(P)

NOTE 2

ENERG. SOL
OPEN VALVE
1-HV-2790A

 χ_{QPCP}

MONITOR LIGHT GROUP 1

QMCB

CLOSE OPEN



1-HS-2790A TYP.

SPRING RETURN
TO NEUTRAL

CLOSE QPCP, 1-HS-2790A, CLOSE(P)

DE-ENERG.
SOL CLOSE
VALVE
1-4V-2790A

QPCP

 F

NOTE :

1. VALVE 1-HV-2790A SHOWN, OTHER VALVE LISTED IN TABLE 1 SIMILAR.

2. HAND SWITCH SHALL BE HELD ON OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW CIRCUIT TO SEAL IN THROUGH VALVE POSITION SWITCH

3. VALVE 1-HV-8221 IS A NON IE VALVE AND
 4 DOES NOT REQUIRE MONITOR LIGHT ON
 QMCB.

REF. DWGS:

PÉID 1X4DB213-2

E.D 1X3D-BG-B05B,E

TABLE 1

SERVICE		TRAIN	SOL VALVE	SWITCH
HYDROGEN SAMPLE INLET - IRC		B	1-HV-2790A	1-HS-2790A
	INLET - IAC	B	-2790B	-2790B
	INLET - ORC	A	-2791A	-2791A
	INLET - ORC	B	-2791B	-2791B
	INLET - IRC	A	-2792A	-2792A
	INLET - IRC	A	-2792B	-2792B
	OUTLET - OAC	A	-2793A	-2793A
	OUTLET - ORC	B	-2793B	-2793B
	INLET - ORC	NOTE 3	-8221	-8221

NOTE 3

4

③	ADDED SAMPLE VALVE FOR PASS HV-8221	9-21-82	HV	FAL		PCZ	PCZ		AT		ENG. MGR.
③	REVISED REF DWGS.	12-8-81	AT	FAL		PCZ	PCZ		AT		
④	DEGRADED VALVE 1-HV8221 PER DCN34 ADDED ERF INPUT	3-27-84	4LV	FAL		PCZ	PCZ		AT		DATE
③	ISSUED FOR CONSTRUCTION	12/14/78	NBL	FAL	MKK		har	AP	ms		
NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EGL	EGS	CHF. E	P. E.	Q. A. E.	

NUCLEAR SAFETY RELATED
CNMT HYDROGEN SAMPLING



BECHTEL

LOS ANGELES

**GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT**

CONTROL LOGIC DIAGRAM

CONTAINMENT AIR PURIFICATION AND CLEAN-UP SYSTEM

SCALE: NONE

DRAWING NO.

REV.

JOB NO. 9510

1X5DN015-1

4

SIZE B 11 x 17

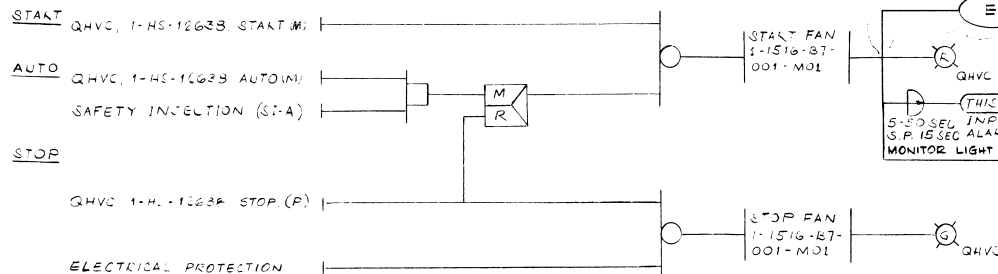
22M

BM 9510
PEJD 213-2 REV. 1

14.5X

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS
5/19/85
DATE
CAMERA OPERATOR
SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are loaned and used on the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, or used except in the limited way and for the purpose intended by the lender to the borrower.



- NOTE:
1. FAN 1-1516-B7-001-M01 SHOWN. OTHER FAN LISTED IN TABLE 1 IS SIMILAR EXCEPT AS TABULATED.
 2. TYPICAL AUTO TRIP LOGIC FUNCTION SHOWN ON DWG 1X5DN002-3
 3. 480V MOTOR STARTER

ALARM
FAN AUTO TRIP
1-1516-B7-001-M01
FAN AIR FLOW LOW
1-FC-12638
FAN RUNNING
1-1516-B7-001-M01

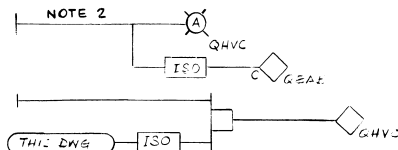


TABLE 1

TRAIN	EQUIP	CNTL. CW	FLOW CW	SFTY SIG
A	1-1516-B7-001-M01	1-HS-12638	1-FSL-12638	SI-A
B	1-1516-B7-001-M01	1-HS-12638	1-FSL-12638	SI-B

REF DWG:
P&ID 1X4DB214-2
ED 1X3D-B7-A-1,2,3,4

NUCLEAR SAFETY RELATED

POST LOCA CAVITY PURGE FAN

"Q"

BECHTEL LOS ANGELES GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT CONTROL LOGIC DIAGRAM CONTAINMENT BUILDING CAVITY COOLING SYSTEM		
SCALE: NONE	DRAWING NO. 1X5DN017-2	REV. E
JOB NO. 9510		

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF.E	P.E	Q.A.E.	ENG. MGR.
1	ADDED COMP INPUT PER REF I/O LIST REV. 5	5-1-85	ZEP	A							
2	REVISED TO CONFORM WITH IE-80-6 BULLETIN 4AS INDICATED	5-6-81	FAL	VV							
3	REVISED AS INDICATED	3-17-80	HL	FAL							
4	ISSUED FOR CONSTRUCTION	1-4-77	HL	FAL							

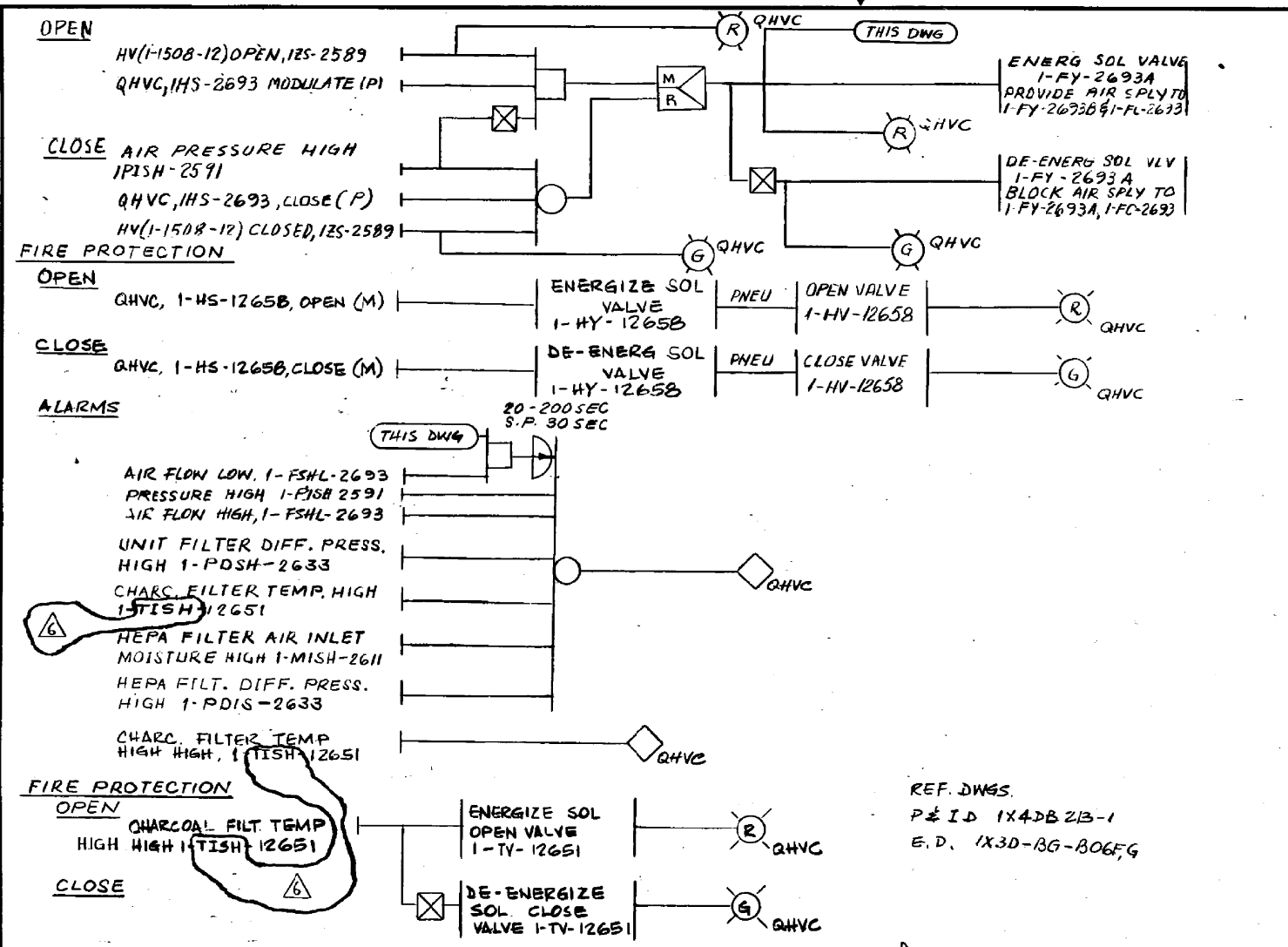
BM 9510 PLD REV 3

SIZE B 11x17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS
5/19/85
DATE
CAMERA OPERATOR
SECTION SUPERVISOR

8 7 6 5 4 3 2 1

This drawing and the design it covers are the property of BECHTEL. They are loaned to the borrower's express agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.



REF. DWGS.
P&ID 1X4DB2B-1
E.D. 1X3D-BG-806FG

ISOLATION VALVE &
FILTER UNIT FIRE PROTECTION

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM CONTAINMENT POST LOCA PURGE EXHAUST DUCT ISOLATION VALVES		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN019-1	6

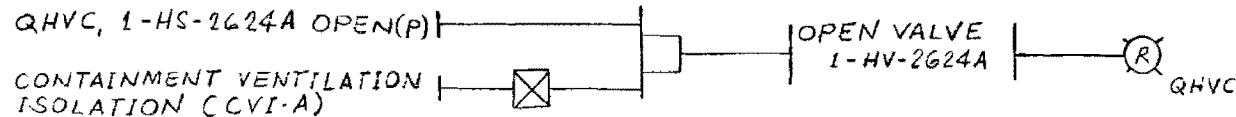
NO.	REVISIONS	DATE	DR	CHK	ELEC	EG	EGS	CHF. E	P. E	Q. A. E	ENG. MGR.
1	CORRECTED TAG NO. 1-TISH-12651	3/6/85	AS	ALV							
2	CORRECTED SW POS. AND GATE	7-7-85	ALV	ALV							
3	REVISED PER P&ID DCM11	9/13/84	ETL	ALV							
4	ISSUED FOR CONSTRUCTION	1-4-74	HL	FAL	AKK						

P&ID REV

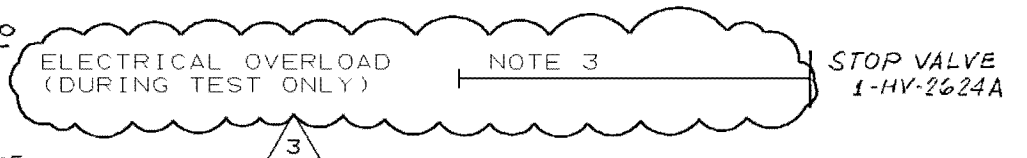
SCANNED DATE: 11/19/91

SIZE B 11x17

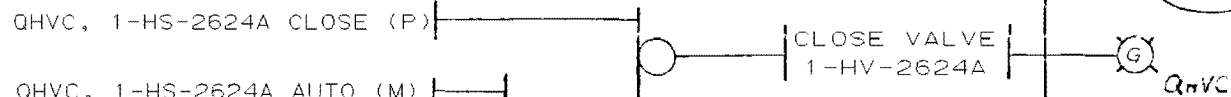
OPEN



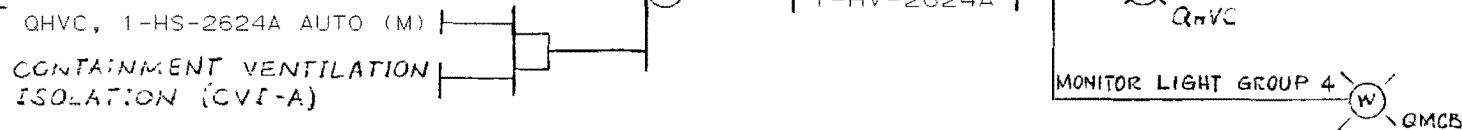
STOP



CLOSE



AUTO



AUTO
CLOSE OPEN

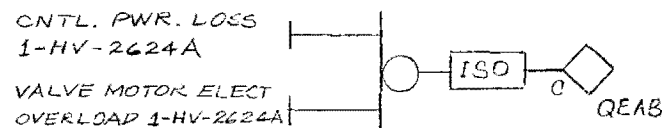


1-HS-2624A (TYP.)
SPRING RETURN
TO AUTO

NOTE

1. VALVE 1-HV-2624A SHOWN. 1-HV-2624B SIMILAR.
2. VALVES LISTED IN TABLE 1 ARE BUTTERFLY VALVES.
OPEN - LIMIT STOPPED
CLOSE - LIMIT STOPPED
3. REFER TO SPECIAL NOTE 2 ON DWG 1X5DN002-2

VALVE NO.	TRAIN	SAFETY SIGNAL	SWITCH
1-HV-2624A	A	CVI-A	1-HS-2624A
↓ -2624B	B	CVI-B	↓ -2624B



REF. DWGS.
P & ID 1X4DB213-1
E.D. 1X3D-BG-B04A,4B

NUCLEAR SAFETY RELATED "Q"

INSIDE CONTAINMENT ISOL VALVES

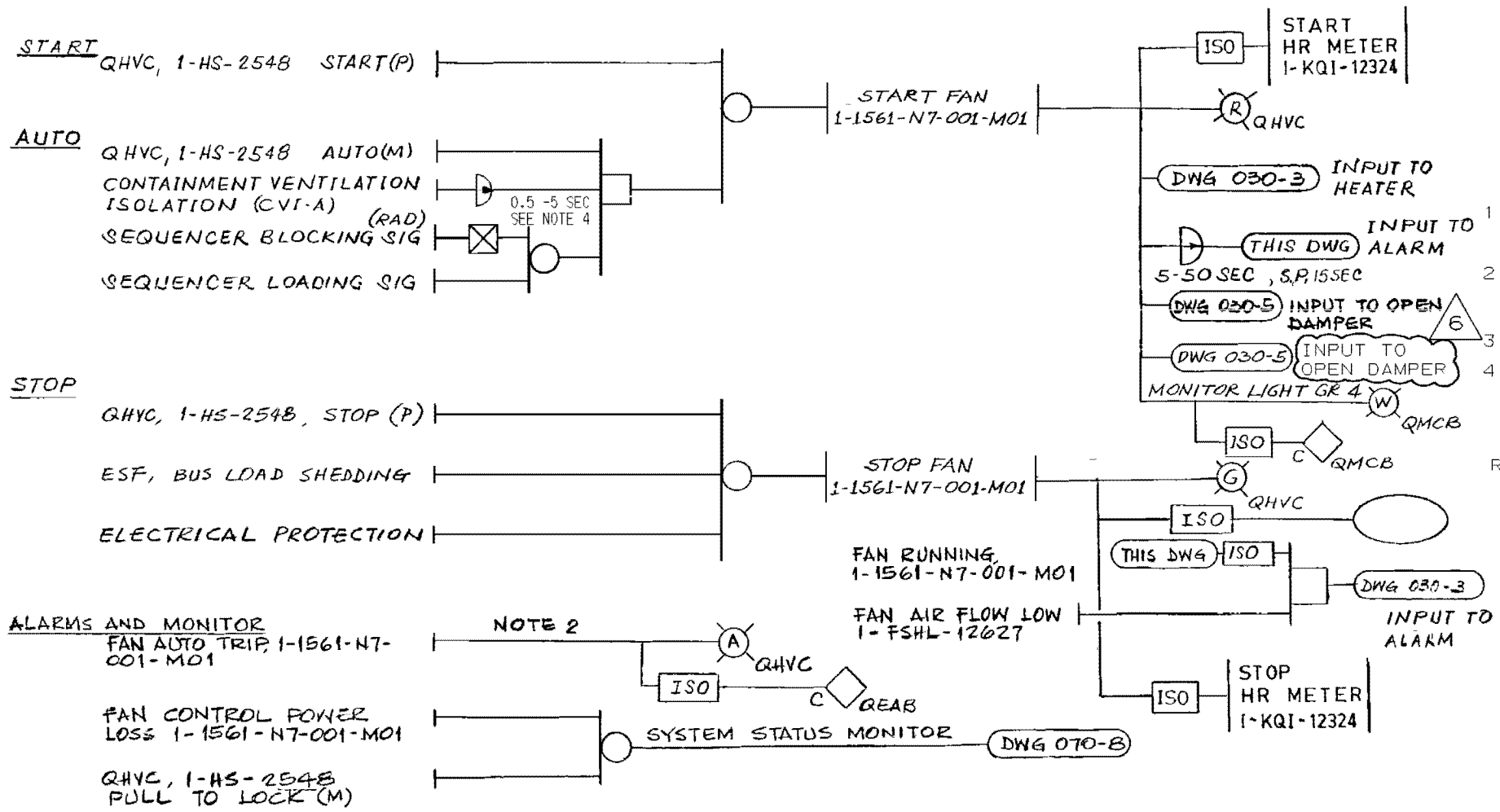
 SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
CONTAINMENT POST LOCA
PURGE EXHAUST DUCT
ISOLATION VALVES

△							
△							
△	INCORPORATED PER DCP 95-V1N0035	12/5/97	CD	GLB	WFP	✗	
△	ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR	SIGNATURES				
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL	

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN019-2	3



NOTE:

1. FAN 1-1561-N7-001-M01 SHOWN FAN 1-1561-N7-002-M01 SIMILAR
2. TYPICAL AUTO TRIP LOGIC FUNCTION SHOWN ON DWG. 1X5DN002-3
3. 480V SWGR CIRCUIT BREAKER
4. THE PREFERRED SETPOINT IS 0.5 SECONDS. ANY SETTING WITHIN THE OPERATING RANGE (0.5-5 SEC.) IS ACCEPTABLE

REF. DWGS P&ID 1X4DB205-1
E/D 1X3D-BG-D01D
1X3D-BG-D01F

NUCLEAR SAFETY RELATED
FILTER & EXHAUST FANS "Q"

TRAIN	FAN No	SWITCH	SFTY SIG	FLOW SW	HR METER
A	1-1561-N7-001-M01	1-HS-2548	CVI-A	1-FSHL-12627	1-KQI-12324
B	1-1561-N7-002-M01	1-HS-2548	CVI-B	1-FSHL-12627	1-KQI-12325

NO.	REVISIONS	DATE	DR	CHK	APPV	DTL
1	INCORPORATED PER DCP 95-VAN0056	12-31-97	CD	WMW	EOG	
2	ISSUED FOR CONSTRUCTION					

SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM PIPING PENETRATION ROOM FILTER AND EXHAUST UNITS		
SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN030-1	6

This drawing and the design it covers are the property of BECHTEL. They are loaned and on the borrower's express agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

ON

OFF

FIRE PROTECTION
OPEN

CLOSE

OPEN

CLOSE

TABLE 1

FILT UNIT NO.	SOL VLV	TEMP SW	SOL VLV (NOTE 4)	HAND SW (NOTE 4)	MOIST SW	FLOW SW	UNIT ΔP SW	HEPA ΔP SW
1-1561-N7-001-000	1-TV-12625	1-TSH-12625	1-HV-12591	1-HS-12591	1-MISH-2682	1-FSHL-12627	1-PDSH-2546	1-PDIS-2546
002	4	4	0	0	3	8	7	7

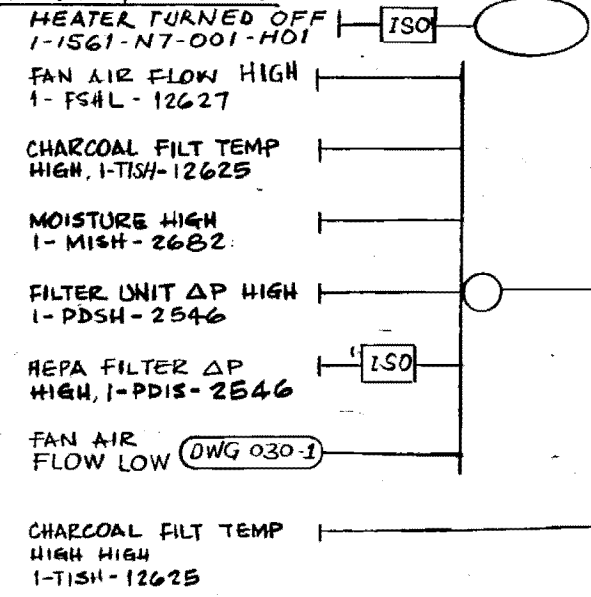
TABLE 2

TRAIN	HEATER NO	FAN RUNNING	MOIST. CNTL
A	1-1561-N7-001-H01	1-1561-N7-001-M01	1-MC-2682
B	-002-H01	002-M01	3

DELETED FLOW SW. INPUT PER VIP AX44J01-400-G	2/2/87	ALV	ACG							ENG. MGR.
ADDED HTR LIGHT PER DGN #22 ON P&ID	5-2-85	ZEP	ALV							
CORRECTED TAG NO AND PRESENTATION OF HTR ACTUATION	10/6/84	ALV	PJW							
ISSUED FOR CONSTRUCTION	3/7/79	HE	FAL	MXK						
NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EGL	EGS	CHF. E	P. E.	Q. A. E.

BM 9510 P&ID 205-1 REV.

ALARMS & MONITOR



NOTES

1. HEATER 1-1561-N7-001-H01 SHOWN HEATER 1-1561-N7-002-H01 SIMILAR. REFER TO TABLE 2.
 2. FIRE PROTECTION WATER SYSTEM SOL VALVE 1-TV-12625 AND 1-HV-12591 SHOWN. OTHER SOLENOID VALVE LISTED IN TABLE 1 SIMILAR.
 3. HEATER SHALL TURN ON PROVIDED BUILT-IN PERMISSIVE IS SATISFIED AS SHOWN
 4. NON-IE EQUIPMENT
- REF DWGS
P & ID 1X4DB 205-1
E. D. 1X3D-BG-DOIC, 1E, 4G, 4H

NUCLEAR SAFETY-RELATED!
ELECTRIC HEATING COIL

BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
PIPING PENETRATION ROOM
FILTER AND EXHAUST UNITS

SCALE: NONE

JOB NO. 9510

DRAWING NO.
(1X5DN030-3)

REV.
6

SIZE B 11x17

This drawing and the design it covers are the property of BECHTEL. They are loaned and on the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

OPEN

QHVC, 1-HS-12604 OPEN (P)

NOTE 2

AUTO

CONTAINMENT VENT ISOLATION
(CVI-A)

CLOSE

QHVC, 1-HS-12604 CLOSE (P)

ENERGIZE
SOL VALVE
1-HY-12604

OPEN VALVE
1-HV-12604

DE-ENERGIZE
SOL VALVE
1-HY-12604

CLOSE VALVE
1-HV-12604

NOTE 4

MONITOR LIGHT GR. 4

QMCB

ENERGIZE
SOL VALVE
1-HY-12604A

DEFLATE
SEAL

DEENERGIZE
SOL VALVE
1-HY-12604A

ENERGIZE
SOL VALVE
1-HY-12604B

DEENERGIZE
SOL VALVE
1-HY-12604B

INFLATE
SEAL

LOSS OF CONTROL POWER

AUTO

L, 1-HS-12624, AUTO (M)

FILTER UNIT TEMP LOW
1-TIS-12624

TURN ON
INFRARED HEATER
1-1561-07-001

L, 1-HS-12624, OFF (M)

TURN OFF
INFRARED HEATER
1-1561-07-001

ELECTRICAL PROTECTION

TABLE 1

INFRARED HEATER	HAND SW	TEMP SW
1-1561-07-001	1-HS-12624	1-TIS-12624
1-1561-07-002	↓	↓

TABLE 2

TRN	VALVE	SOL VALVE	CNTL SW	SAFETY SIG	SEAL CNTL	DMPR. PROT
A	1-HV-12604	1-HY-12604	1-HS-12604	CVI-A	1-HY-12604A	1-HY-12604B
↓	↓	↓	↓	↓	↓	↓
B	↓	↓	↓	↓	↓	↓
↓	↓	↓	↓	↓	↓	↓

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF.E	P.L	Q.A.E
3	ADDED COMPUTER INPUT PER J10 LIST REV 4	10-16-84	ALU	W	W					ENG. MGR.
2	ADDED CONTROL FOR QAD BUBBLE TIGHT DAMPER PER DCN 6	5-11-84	ALU	W	W					
1	REVISED AS INDICATED	3-17-80	HL	FAL						
0	ISSUED FOR CONSTRUCTION	3-15-79	HL	FAL	MKK					

OFF AUTO CLOSE OPEN



1-HS-12624



1-HS-12604 (TYP.)

MAINTAINED
BY HTR VENDOR

SPRING RETURN
TO AUTO

NOTE:

1. VALVE 1-HV-12604 SHOWN.
OTHER VALVES LISTED IN
TABLE 1 SIMILAR.

2. TO OPEN VALVE, CONTROL
SWITCH SHALL BE HELD ON
OPEN POSITION UNTIL DAMPER
IS FULLY OPEN TO ALLOW
THE CIRCUIT TO SEAL IN
THROUGH VALVE POSITION
SWITCH.

3. ELECTRIC INFRARED HEATER
1-1561-07-001 SHOWN
1-1561-07-002 IS SIMILAR.

4. POSITION SWITCH CONTACT 33ac
VALVE NOT FULLY CLOSED.

REF. DWGS.

P&ID 1X4DB 205-2

E.D. 1X3D-86-003X, Y, D04A &

NUCLEAR SAFETY RELATED

ISOLATION VALVE & INFRARED HEATER

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
[CONTROL LOGIC DIAGRAM]		
PIPING PENETRATION ROOM FILTER AND EXHAUST UNITS		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN030-4	3

SIZE B 11x17

BM 9510 P&ID REV 5

OPEN
FAN RUNNING
1-1561-N7-001-M01

CLOSE

OPEN
FAN RUNNING
1-1561-N7-001-M01

CLOSE

OPEN
FAN RUNNING
1-1561-N7-001-M01

CLOSE

MONITOR

CONTROL PWR LOSS
1-PV-2550A

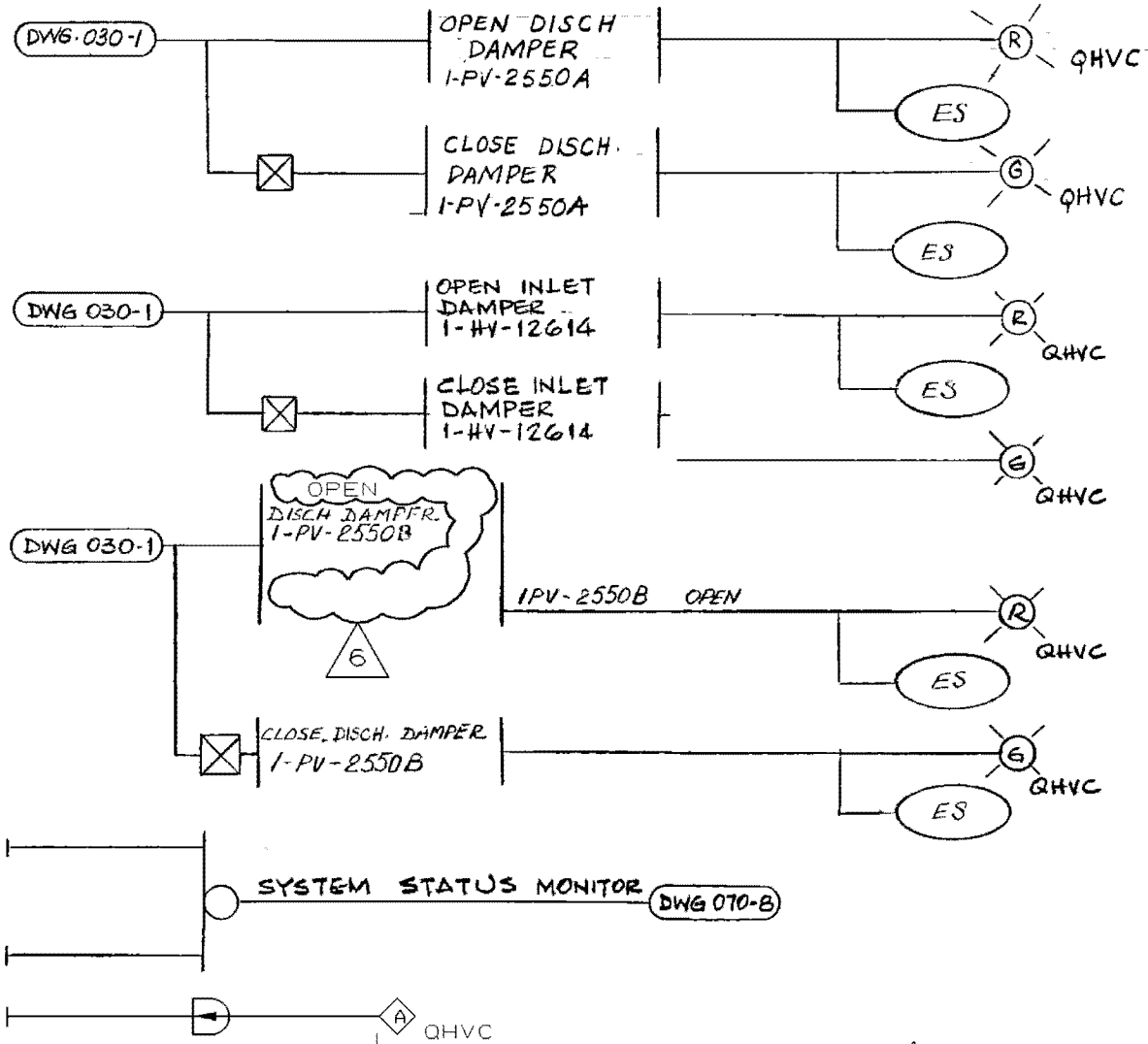
CONTROL PWR LOSS, 1-HV-12614

ALARM PIPING PENETRATION ROOM
DIFF PRESSURE LOW
1-PDIS-2550

TABLE 1

TRAIN	FAN RUNNING	DISCH DAMPER	DISCH. DAMPER	INLET DAMPER	FILTER UNIT	ΔP SWITCH
A	1-1561-N7-001-M01	1-PV-2550A	1-PV-2550B	1-HV-12614	1-1561-N7-001-000	1-PDIS-2550
B	002	1A	1B	6	002	1-PDIS-2551

△						
△						
△	INCORPORATED PER DCP 95-VAN0056	12-31-97	CD	WMW	EOG	✗
△	ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR	SIGNATURES			
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL



NOTE: 1 DAMPER FOR FILTER UNIT
1-1561-N7-001-000
SHOWN, DAMPER LISTED
IN TABLE 1 SIMILAR.

REF. DWGS. PE1D 1X4DB205-1
E.D. 1X3D-B4-D04J
-D01J, D01K
-D01L, D01M

NUCLEAR SAFETY RELATED
FAN INLET & OUTLET DAMPERS

"Q"

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM

PIPING PENETRATION ROOM
FILTER AND EXHAUST UNITS

SCALE: NONE

DRAWING NO.

REV

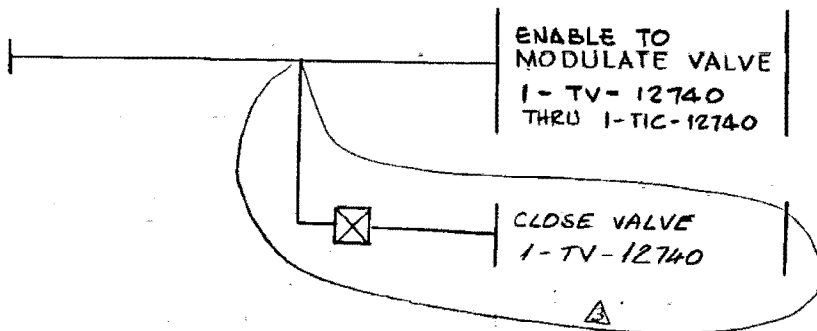
JOB NO. 10604

1X5DN030-5

6

19

SAFETY INJECTION (SI-A)



VALVE	SFTY SIG.	TEMP CNTL
1-TV-12740	SI - A	1-TIC-12740
↓ ↓ 725	↓ B	↓ ↓ 725


1. VALVE 1-TV-12740 SHOWN
OTHER VALVES LISTED IN TABLE 1
SIMILAR AS TABULATED

P# ID 1X4DB207-1

VIP 1X4AJ20-(356, 357

ESF CHILLED WATER VALVE

A	ADDED VALVE CLOSING SIGN AND REF DWGS.	6-25-84	ALV	WJL								ENG. MGR.
B	REVISED REF. DWGS.	12-8-81	AV	FAL								
C	REVISED AS INDICATED.	3-28-80	HL	FAL								
D	ISSUED FOR CONSTRUCTION	5-31-79	HL	FAL	MKK							DATE
NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EGL	EGS	CHF. E.	P. E.	Q. A. E.		

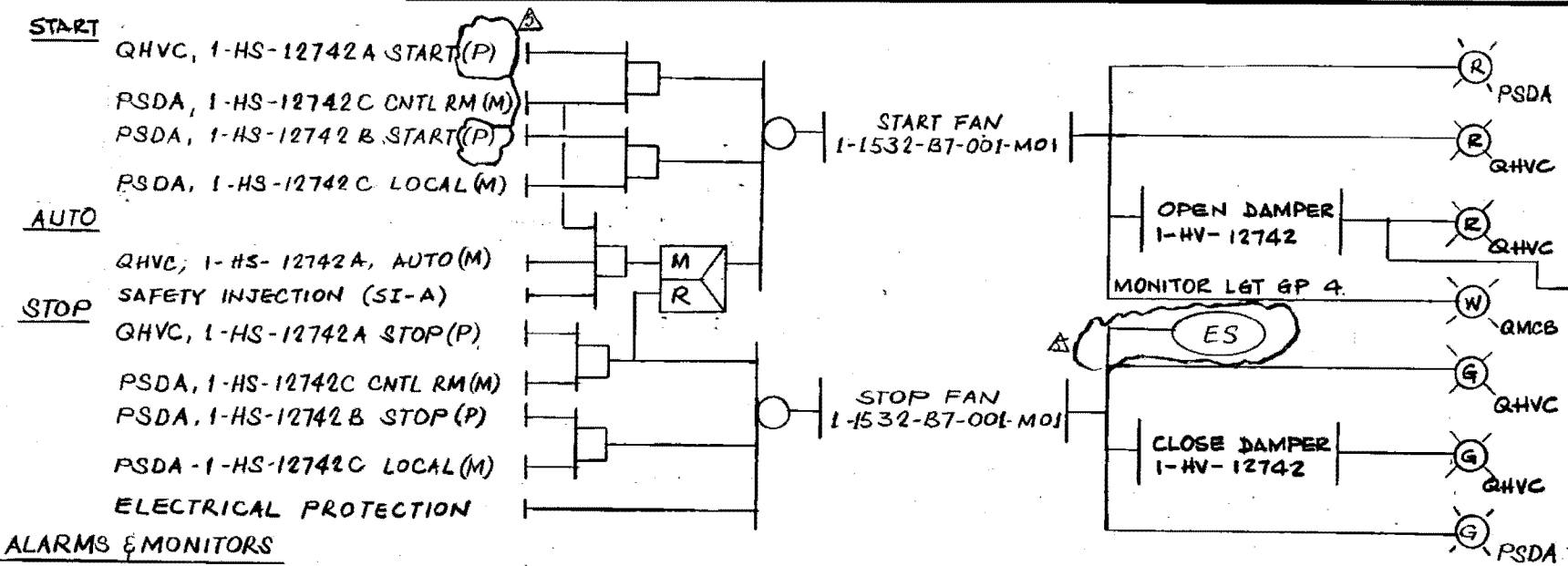
 <h1 style="text-align: center;">BECHTEL</h1> <p style="text-align: center;">LOS ANGELES</p>		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM CONTROL BUILDING SAFETY FEATURES ELECTRICAL EQUIPMENT ROOM HVAC		
SCALE: <i>NONE</i>	DRAWING NO.	REV
JOB NO. 9510	1X5DN044-2	3

PEID 207-1 REV. 3

SIZE B 11 x 17

5214
6-14-7

This drawing and the design it covers are the property of BECHTEL. They are loaned to the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.



- NOTE:**
1. FAN 1-1532-B7-001-MOI SHOWN OTHER FANS LISTED IN TABLE 1 ARE SIMILAR AS TABULATED.
 2. DAMPERS SHALL FAIL AS IS
 3. TYPICAL AUTO TRIP LOGIC FUNCTION SHOWN ON DWS 1X5DN002-3.
 4. 480V MOTOR STARTER

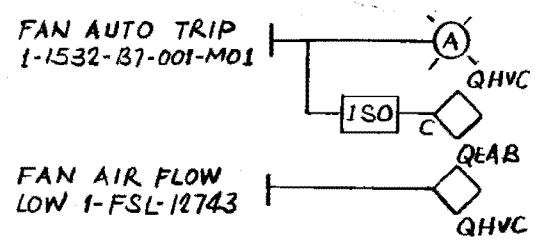


TABLE 1

TRAIN	EQUIP. TAG NOS.	HAND SWITCH	FLOW SW.	DAMPER	ROOM TEMP	HAND SWITCH	SFTY SIG
A	1-1532-B7-001-MOI	1-HS-12742A	1-FSL-12743	1-HV-12742	1-TSLH-12990	1-HS-12742B	SI-A
B	002-	12727A	12728	12727	2	12727B	SI-B
A	003	12748A	12743	12748	1	12748B	SI-A
B	004	12749A	12728	12749	3	12749B	SI-B

REF. DWGS.

P&ID 1X4DB 207-1
E.D. 1X3D-BG-C04N, P, Q, R, S, T, U, V

NO.	REVISIONS	DATE	DR	CHK.	SUPV.	E&L	EGS	CHF. E.	P. E.	Q. A. E.	ENG. MGR.
1	REVISED REF DWGS & TAG NO	12-8-81	AV	FAL							
2	ADDED COMPUTER INPUT AND CLARIFY SW ACTION	1-7-85	ALW	Wfu							
3	CORRECTED NOTE 2 PER P&ID, REV 7, ADDED COMP INPUT	6-25-84	ALV	11/10							
4	ISSUED FOR CONSTRUCTION	12/15/78	HL	FAL	MKK						

P&ID 207-1 REV 9

NUCLEAR SAFETY RELATED "Q"

SEP 1, 1984

BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
CONTROL BUILDING
SAFETY FEATURES BATTERY
ROOM EXHAUST FAN

SCALE: NONE

JOB NO. 9510

DRAWING NO. 1X5DN045-1

REV. 5

SIZE B 11x17

5/11/84

This drawing and the design it covers are the property of BECHTEL. They are loaned, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

START

QHVC, 1-HS-12050A, START (P)
PSDA, 1-HS-12050C, CNTL RM (M)
PSDA, 1-HS-12050B, START (P)
PSDA, 1-HS-12050C, LOCAL (M)

AUTO

QHVC, 1-HS-12050A, AUTO (M)
PSDA, 1-HS-12050C, CNTL RM (M)
PSDA, 1-HS-12050B, AUTO (M)
PSDA, 1-HS-12050C, LOCAL (M)
ESF SEQ. BLOCKING
ROOM TEMP. HIGH 1-TISH-12051
DIESEL GEN. RUNNING

STOP

ROOM TEMP NOT HIGH 1-TISH-12051
QHVC, 1-HS-12050A, STOP (P)
PSDA, 1-HS-12050C, CNTL RM (M)
PSDA, 1-HS-12050B, STOP (P)
PSDA, 1-HS-12050C, LOCAL (M)
ESF BUS LOAD SHEDDING
ELECTRICAL PROTECTION

ALARMS

FAN DISCH DAMPER CNTL
PWR LOSS 1-HV-12050
BREAKER INOPERABLE POS
1-1566-B7-001-M01
QHVC 1-HS-12050A
PULL TO LOCK (M)
CONTROL POWER LOSS
1-1566-B7-001-M01
PSDA, 1-HS-12050C LOCAL (M)

TABLE 1

TRAIN	FAN	HAND SW	HAND SW	TEMP SW	ESF SEQ	DISCH DAMPER
A	1-1566-B7-001-M01	1-HS-12050A	1-HS-12050B	1-TISH-12051	TRAIN A	1-HV-12050
	003	1A	1		A	51
B	002	3A	3		B	53
	004	4A	4	1-TISH-12054	B	54

START FAN
1-1566-B7-001-M01

STOP FAN
1-1566-B7-001-M01

DWG 070-12
INPUT TO SYS
STATUS MONITOR

OPEN FAN'S
DISCH DAMPER
1-HV-12050

CLOSE FAN'S
DISCH DAMPER
1-HV-12050

INPUT TO NORM
FAN DISCH DAMPER
INPUT TO
WALL DAMPERS
ENABLE TO
MODULATE DAMPER

INPUT TO NORM
FAN DISCH DAMPER

CONTROL ROOM LOCAL STOP AUTO START

1-HS-12050C
MAINTAINED
(TRANSF SW)
1-HS-12050A & B
SPRING RETURN
TO AUTO

NOTE:

1. FAN 1-1566-B7-001-M01 SHOWN. FANS LISTED IN TABLE 1 ARE SIMILAR.
2. TYPICAL AUTOS TRIP LOGIC FUNCTION SHOWN ON DWG 1X5DN002-3
3. 480V SWGR. CIRCUIT BREAKER.
4. APPLICABLE WHEN SIGNAL IS FROM TEMPERATURE SWITCH.
5. APPLICABLE ONLY FOR FANS 1-1566-B7-003 & 004.

REF. DWGS.

PEID 1X4DB217, V/P X4AK01-46
EQ 1X30-B4-FO1B, C, E, F, M, N

QEA8 NUCLEAR SAFETY RELATED
EMERGENCY VENTILATION FAN "Q"



BECHTEL

LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
DIESEL GENERATOR BUILDING
HVAC SYSTEM

SCALE: NONE

DRAWING NO.

REV.

JOB NO. 9510

1X5DN058-1

8

BM 9510

PEID REV.

SCANNED DATE: 11/19/91

SIZE B 11x17

This drawing and the design it covers are the property of BECHTEL. They are loaned and on the borrower's express agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

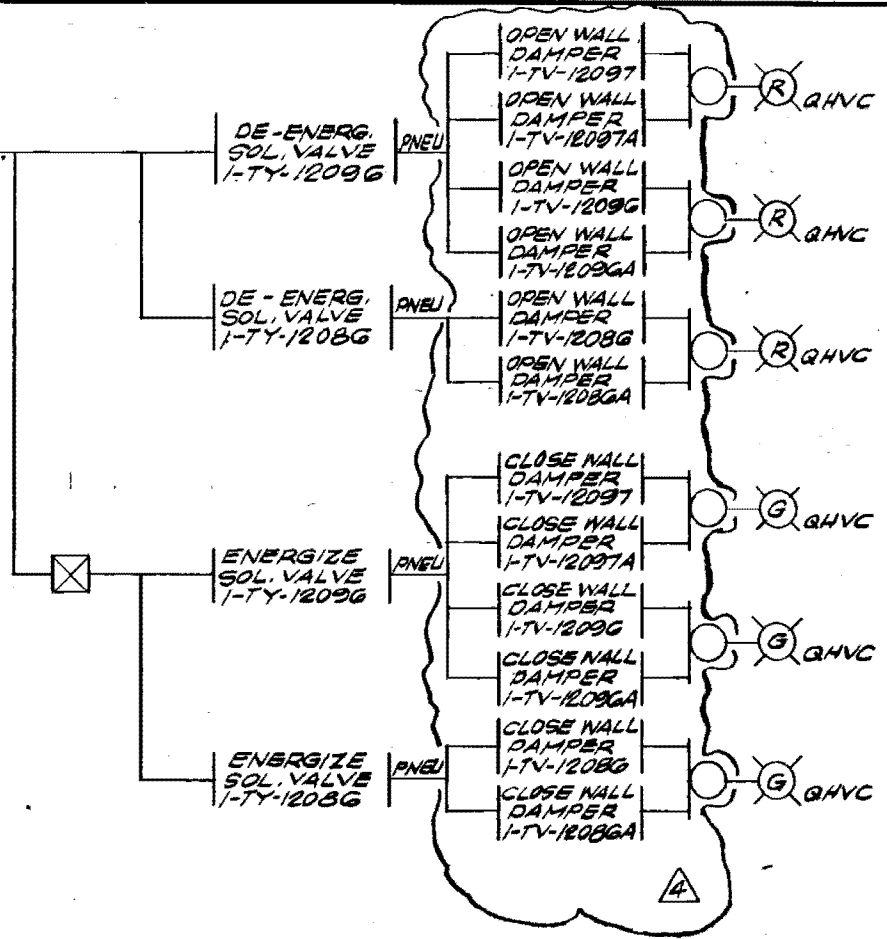
OPEN

FAN RUNNING, 1-1566-B7-001-MOI (DWG 058-1)

FAN RUNNING, 1-1566-B7-003-MOI (DWG 058-1)

NORMAL FAN AIR FLOW HIGH
1-FS-12087

CLOSE



NOTE:

1. WALL DAMPER FOR TRAIN A AS SHOWN. TRAIN B SHALL BE SIMILAR AS TABULATED IN TABLE 1

REF. DWG.

P & ID 1X4DB217

E. D. 1X3D-B4-F01H, J


TABLE 1

SERVICE	TRAIN	SOL VALVE	WALL DAMPER	FAN RUNNING SIGNAL	FLOW SW
WALL DAMPER, 1-TV-12097	A	1-TY-12096	1-TV-12096	1-1566-B7-001-MOI	1-FS-12087
1-TV-12096			1-TV-12096A	1-1566-B7-003-MOI	
1-TV-12086	B	12086	1-TV-12086	1-1566-B7-002-MOI	1-FS-12088
1-TV-12098			1-TV-12098	1-1566-B7-004-MOI	
1-TV-12085			1-TV-12085		
1-TV-12099			1-TV-12099		

NUCLEAR SAFETY RELATED

WALL DAMPERS

"Q"

**BECHTEL**
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
DIESEL GENERATOR BUILDING

HVAC SYSTEM

SCALE: NONE

JOB NO. 9510

DRAWING NO. 1X5DN058-3

REV. 4

3	CHANGED DAMPER TO PNEUMATIC FROM MOTOR OPERATED	7-14-81	AV	FAL		PC	04	1/17		ENG. MGR.
2	REVISED TAG NO	12-9-81	AV	FAL		PC	04	1/17		
1	ADDED DOUBLE DMPR. PER DCH#10 ON P&ID 1X4DB217 & AS SHOWN	2-12-85	ZEP	ALU						
0	ISSUED FOR CONSTRUCTION	4-27-79	HL	FAL	MKK					
NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF. E	P. E	Q. A. E.

THIS DRAWING AND THE DESIGN IT COVERS ARE THE PROPERTY OF SCS. THEY ARE NOT TO BE REPRODUCED, COPIED, LOANED, EXHIBITED, OR USED EXCEPT IN THE LIMITED WAY AND

START

AUTO

D-G ROOM TEMP HIGH
1-TISH-12052

STOP

QHVC, 1-HS-12052, START (M)

QHVC, 1-HS-12052, AUTO (M)

OPEN DISCH. DAMPER
1ZS012052A

QHVC, 1-HS-12052, STOP (M)

ELECTRICAL PROTECTION

ALARM

D.G. BLDG. TRN. A TEMP HI-HI
1-TISHL-12036
D.G. BLDG. TRN. A TEMP LOW
1-TISHL-12056

D.G. BLDG. RM. TRN A TEMP HI-HI
1-TISHL-12056A

NOTE 4

FAN	CNTL SW	TEMP SW	LIMIT SWITCH	TEMP SW
1-1566-B7-003-MOI	1-HS-12052	1-TISH-12052	1ZS012052A	1-TISHL-12036
006	B	5	1ZS012055A	1-TISHL-12056

START FAN
1-1566-B7-003-MOI

QHVC

THIS DWG. 1
INPUT TO
STOP FAN

STOP FAN
1-1566-B7-003-MOI

QHVC

THIS DWG. 1
INPUT TO
STOP FAN

OPEN FAN STOPPED
1-1566-B7-001-MOI

FAN STOPPED
1-1566-B7-003-MOI

CLOSE FAN RUNNING
1-1566-B7-001-MOI

FAN RUNNING
1-1566-B7-003-MOI

OPEN DISCH
DAMPER
1-HV-12052

QHVC

CLOSE DISCH
DAMPER
1-HV-12052

QHVC

NOTE:

1. FAN 1-1500-B7-005-MOI SHOWN FOR DIESEL GENERATOR BLDG. TRAIN A, FAN 1-1566-B7-006-MOI SIMILAR FOR DIESEL GENERATOR BUILDING TRAIN B.
2. 480V MOTOR STARTER.
3. NORMAL EXHAUST FAN DISCHARGE DAMPER 1-HV-12052 SHOWN OTHER DISCHARGE DAMPER LISTED IN TABLE 2 SIMILAR EXCEPT AS TABULATED.
4. THE "LOW" SETPOINT SWITCH IS SPARE.

REF DWG
P & I D 1X4DB217
E.D 1X3D-BG-F01D,P,Q

NUCLEAR SAFETY RELATED

NORMAL VENTILATION

TABLE 2

FAN	DAMPER
1-1566-B7-001-MOI	1-HV-12054 (TRAIN A)
1-1566-B7-003-MOI	1-HV-12055 (TRAIN B)
1-1566-B7-002-MOI	1-HV-12053 (TRAIN B)
1-1566-B7-004-MOI	

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
CONTROL LOGIC DIAGRAM
DIESEL GENERATION BUILDING
HVAC SYSTEM

INC. ABN-22216.	DATE	CD	DR	CHK	APPV	DTL	ENG MGR
REVISIONS	DATE	DR	CHK	APPV	DTL		
ISSUED FOR CONSTRUCTION	DATE	DR					
NO.	DATE	DR					

SEE MICROFILM FOR SIGNATURES

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN058-4	9

SIZE B 11x17

This drawing and the design it covers are the property of BECHTEL. They are produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

START

QHVC, 1-HS-12200A, START (M)

PSDA, 1-HS-12200C, CNTL RM (M)

PSDA, 1-HS-12200B, START (M)

AUTO

PSDA, 1-HS-12200C, LOCAL (M)

QHVC, 1-HS-12200A, AUTO (M)

PSDA, 1-HS-12200C, CNTL RM (M)

PSDA, 1-HS-12200B, AUTO (M)

PSDA, 1-HS-12200C, LOCAL (M)

ROOM TEMP HIGH 1-TISH-12200

SAFETY SIGNAL, SAFETY INJ. (SI-A)

STOP

QHVC, 1-HS-12200A, STOP (P)

PSDA, 1-HS-12200C, CNTL RM (M)

PSDA, 1-HS-12200B, STOP (P)

PSDA, 1-HS-12200C, LOCAL (M)

ELECTRICAL PROTECTION

TABLE 1

ITEM	LOCATION	TEMP SW	TRAIN	FAN 1-1555-A7	HAND SWITCHES	SAFETY SIGNAL
1		1-TISH-12200	A	001 - MOI	1-HS-12200A, B & C	SI-A
2		-12201	B	002 -	-12201A, B & C	B
3	ELELT SWGR	-12202	A	003 -	-12202A, B & C	A
4	& MCC RM	-12203	B	004 -	-12203A, B & C	B
5		-12204	A	005 -	-12204A, B & C	A
6		-12205	B	006 -	-12205A, B & C	B
7	RHR PUMP	1-TISH-12206	A	007 -	-12206A, B & C	1-1205-PG-001
8	ROOM	-12212	B	008 -	-12212A, B & C	-002
9	CNMT SPRAY	1-TISH-12207	A	009 -	-12207A	1-1206-PG-001
10	PUMP ROOM	-12213	B	010 -	-12213A	-002
11	CCW PUMP	-12208	A	011 -	-12208A, B & C	SI-A
12	ROOM	-12214	B	012 -	-12214A, B & C	B
13	CHARG PUMP	1-TISH-12209	A	013 -	-12209A, B & C	1-1208-PG-002
14	ROOM	1-TISH-12215	B	014 -	-12215A, B & C	-003
15	SI PUMP	-12210	A	015 -	-12210A	1-1204-PG-003
16	ROOM	-12216	B	016 -	-12216A	-004
17	SFP HE &	1-TISH-12211	A	017 -	-12211A	SI-A
18	PUMP ROOM	1-TISH-12217	B	018 -	-12217A	B

ADDED COMPUTER INPUT PER 110 LIST REV. 4

REVISED AS SHOWN & ADDED NOTE G

CORRECTED TAG NOS PER DCN 9

ISSUED FOR CONSTRUCTION

NO. REVISIONS

10-16-84

ALV

1/1/84

ALV

1-17-85

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

1-12-84

ALV

DATE

DR

CHK

EG

EG

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

CH

BM 9510

P&ID REV. 6

START FAN
1-1555-A7-
001-MOI

CONTROL
ROOM LOCAL

AUTO
STOP START

QHVC
PSDA
MON LGT
GP 4
QMCB

1-HS-12200A & B
SPRING RETURN
TO AUTO

NOTE 4

NOTE 5

STOP FAN
1-1555-A7-
001-MOI

ALARMS & MONITOR

FAN AUTO TRIP
1-1555-A7-001-MOI

NOTE 2

CNTL PWR LOSS
1-1555-A7-001-MOI
PSDA, 1-HS-12200C
LOCAL (M)

ISO
C
QEAB
DWG 070-5
SYS. STATUS MON.

ROOM TEMP HI-
1-TISH-12200
(SW.2)
PSDA, 1-HS-12200C
LOCAL (M)

ISO
C
QHVC
ES
QHVC

REF DWGS

P&ID 1X4DB22B

E.D 1X3D-BG-DOSA, B, C, D,
E, F, G, H, J, K, N, P,
Q, R, S, T, U, V

NUCLEAR SAFETY RELATED
COOLER FANS



BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM

SAFETY FEATURE ROOM COOLERS

SCALE: NONE

DRAWING NO.

REV.

JOB NO. 9510

1X5DN065-1

1

SIZE B 11x17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

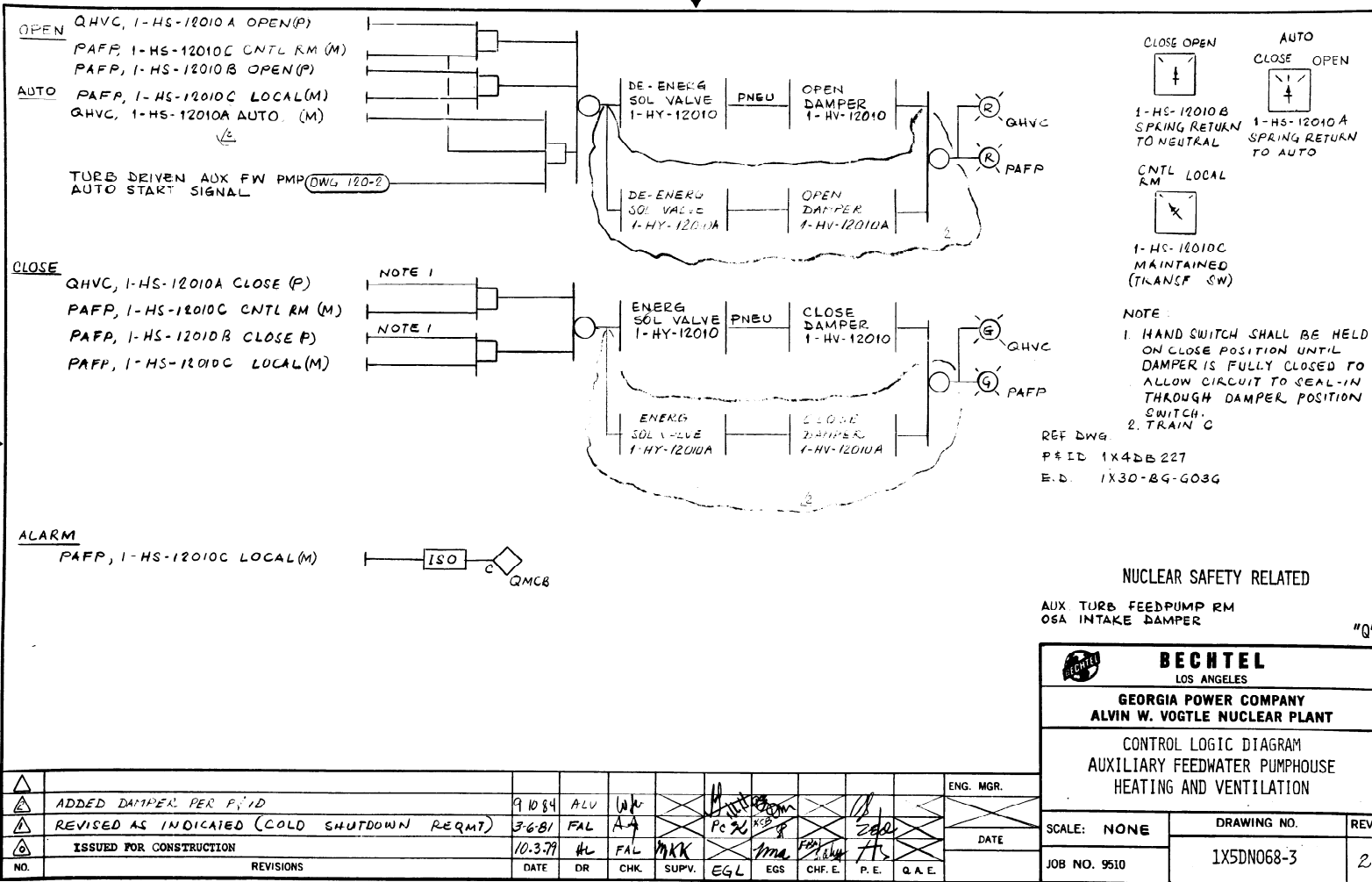
2-8-65 M. Carroll M. Adams
DATE CAMERA OPERATOR SECTION SUPERVISOR

THIS DRAWING WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 9-10-84

SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are loaned and on the borrower's express agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and provide.



I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 9-10-84

CAMERA OPERATOR

SECTION SUPERVISOR

THIS DRAWING AND THE DESIGN IT COVERS ARE THE PROPERTY OF SCS. THEY ARE LOANED TO YOU BY THE BORROWER'S EXPRESS AGREEMENT THAT THEY WILL NOT BE REPRODUCED, COPIED, LOANED, EXHIBITED, OR USED EXCEPT IN THE LIMITED WAY AND PRIVATE USE PERMITTED BY THE LENDER TO THE BORROWER.

START
QHVC, 1-HS-22502, START (M)

AUTO

QHVC, 1-HS-22502, AUTO (M)

TUNNEL TEMP HIGH
1-TISH-22501

STOP

FAN AIR FLOW LOW, APPLICABLE TO ITEM #7

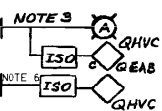
QHVC, 1-HS-22502 STOP (M)

ELECTRICAL PROTECTION

ALARMS

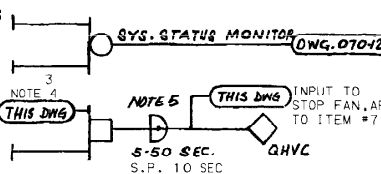
FAN AUTO TRIP
1-1540-B7-001-M01
(APPLICABLE TO #1
TO #7 ITEM)

TUNNEL TEMP. HI
1-TISH-22501



FAN CNTL. PWR. LOSS
1-1540-B7-001-M01
QHVC, 1-HS-22502
STOP (M)

FAN RUNNING
1-1540-B7-001-M01
FAN AIR FLOW LOW
1-FSL-22524



NOTE

1. FAN 1-1540-B7-001-M01 SHOWN OTHER FANS LISTED IN TABLE 1 ARE SIMILAR AS TABULATED.
2. 480V MOTOR STARTER
3. TYPICAL LOGIC FUNCTION SHOWN ON DRAWING 1X5DN002-3.
4. FOR ITEM 6 SEE FAN RUNNING INPUT ON DWG. 1X5DN063-4
5. FOR ITEM 6 TIME DELAY RELAY IS 1-10 MIN, S.P. 4 MIN
6. SET POINT FOR ALARM IS HIGHER THAN THE SET POINT FOR FAN ACTUATION.

REF. DWG.

P & ID 1X4DB238
E.D. 1X3D-BG-K01C.1D.1G

NUCLEAR SAFETY RELATED "Q"
ELECTRICAL TUNNEL VENT FAN

ITEM	FUNCTION	TRAIN	FAN	CNTL. SW.	TEMP. SW.	FLOW SW.
1	DIESEL GEN. PWR. CABLE TUN.	A	1-1540-B7-001-M01	1-HS-22502	1-TISH-22501	
2	DIESEL GEN. PWR. CABLE TUN.	B	-002	-22506	-22505	
3	NSCW TOWER PWR. CABLE TUN.	A	-003	-22517	-22516	
4	NSCW TOWER PWR. CABLE TUN.	B	-004	-22520	-22519	
5						
6	TUNNEL VENT FAN		1-1540-B7-006-M01		1-TISH-22513	1-FSL-22512
7	TURB. BLDG. CHASE TO CNTL. BLDG.		1-1540-B7-007-M01	1-HS-22523	-22522	1-FSL-22524

INCORP. ABN-12461.	DATE	DR	CHK	RE	DM	DM	DM	PDM	ENG MGR
ISSUED FOR CONSTRUCTION	3/17/79								DATE
NO.	DATE	DR	CHK	ELECT	EGL	EGS	CHF	PE	QAE

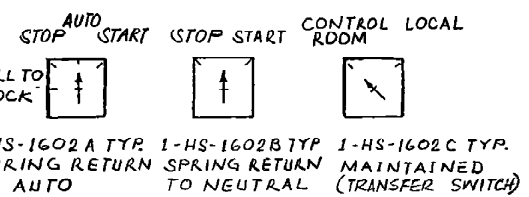
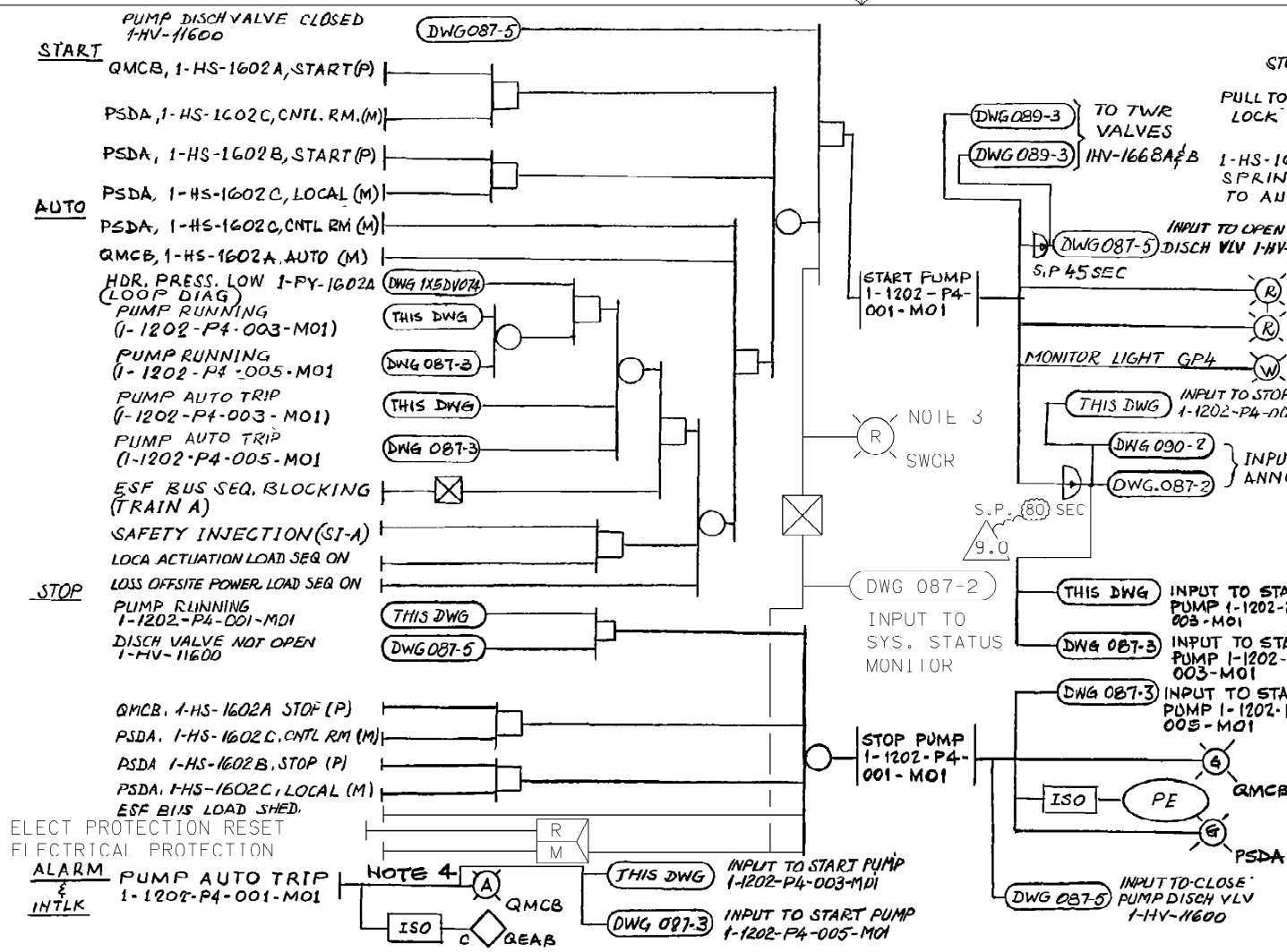
SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOOTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
TUNNEL VENTILATION SYSTEM

SCALE: NONE
DRAWING NO. 1X5DN069-1
REV 7

SIZE B 11x17

③	ADDED HIGH ALARM TO REFLECT THE ACTUAL DESIGN	3/11/85	ZEP	ALV							ENG. MGR.
②	ADDED TIME DELAY SET POINT & REVISED AS INDICATED	3-6-81	FAL	AA			PCZ	W.B.S.			
①	REVISED AS INDICATED	2-15-79	HL	FAL			DOU	W.B.S.			
④	ISSUED FOR CONSTRUCTION	2/15/77	HL	FAL	MKK				SK	W.B.S.	DATE
NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF. E.	P. E.	Q. A. E.	



NOTE:
1. PUMP 1-1202-P4-001-M01 SHOWN.
PUMP 1-1202-P4-002-M01,
P4-003-M01, P4-004-M01 SIMILAR
AS LISTED IN TABLE 1 ON DWG
1X5DN087-2.
2. REFER TO SPECIAL NOTE 1, ON DWG
1X5DN002-2.

3. RED LIGHT INDICATES CONTINUITY OF
LOCKOUT RELAY COIL. IT WILL CONTINUE
TO GLOW DIMLY AFTER OPERATION OF THE
LOCKOUT RELAY DUE TO THE PRESENCE OF
A THERMISTOR IN THE LOCKOUT RELAY
CIRCUIT.

4. TYPICAL AUTO TRIP LOGIC FUNCTION
SHOWN ON DWG 1X5DN002-3.
5. 4160V SWITCHGEAR CIRCUIT BRKR.

REF. DWGS.
P&ID 1X408133-1, 133-2
E.I.D. 1X3D-B0-K04A, B, C, D,
LOGIC 1X5DN087-4
LOOP DIAG 1X5DN074, 075, 076, 078
NUCLEAR SAFETY RELATED
NSCW PUMPS (1-1202-P4-001-M01
P4-002-M01, P4-003-M01, P4-004-M01
PREFERRED PUMP "Q"

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
NUCLEAR SERVICE
COOLING WATER PUMPS

SCALE: NONE	DRAWING NO.	VER.
JOB NO. 10604	1X5DN087-1	9.0

NO.	VERSIONS	DATE	DR	CHK	APPV
9.0	REVISED PER ABN-V00180, VER. 1.0	1/29/07	JLO	ELC	JMR

THIS DRAWING AND THE DESIGN IT COVERS ARE THE PROPERTY OF SCS. THEY ARE LOANED TO YOU AND ON THE BORROWER'S EXPRESS AGREEMENT THAT THEY ARE NOT TO BE REPRODUCED, COPIED, LOANED, EXHIBITED, OR USED EXCEPT IN THE LIMITED WAY AND PRIVATE USE PERMITTED BY ANY WRITTEN CONSENT GIVEN BY THE LENDER TO THE BORROWER.

DNG 087-1

DNG 1K5DY074

150


c GMCB

DWG IX5DV074

SYS. STATUS MONITOR Dwg 070-1

4

DWG 087-1

ISO —  C MCB


LOOP DNG IXSDY-	TRAIN	PUMP N2	SAF. SIG.	SWITCHES			PRESS SV LOOP DIAG	PUMP RUNNING, ELEC OLVD	
-074	A	1-1202-P4-001-M01	SI-A	1-HS-1602A	1-HS-1602B	1-HS-1602C	1-PY-1602A-B	1-1202-P4-003-M01	1-1202-P4-005-M01
-075	B	- 002	B	03A	03B	03C	03	004	006
-025	A	003	A	34A	34B	34C	36	001	005
-078	B	004	B	35A	35B	35C	37	002	006

LOOP DWG 1X5DV	TRAIN	PUMP NO.	SAF. SIG	SNITCHES			PRESS SW LOOP DIAG	PUMP RUNNING, ELEC OLVD	
-076	A	1-1202-P4-005-M01	SI - A	1-HS-1608A	1-HS-1608B	1-HS-1608C	1-PY-1608MS	1-1202-P4-001-M01	1-1202-P4-003-M01
-077	B	006	B	09A	09B	09C	09	002	004

[illegible]

1. TRAIN A ALARMS & MONITORS SHOWN, OTHER ALARMS & MONITORS, SIMILAR AS LISTED IN TABLE 1 & 2
2. OTHER LOGIC FUNCTION SHOWN ON DWG K5DNOB7-1, K5DNOB7-3.

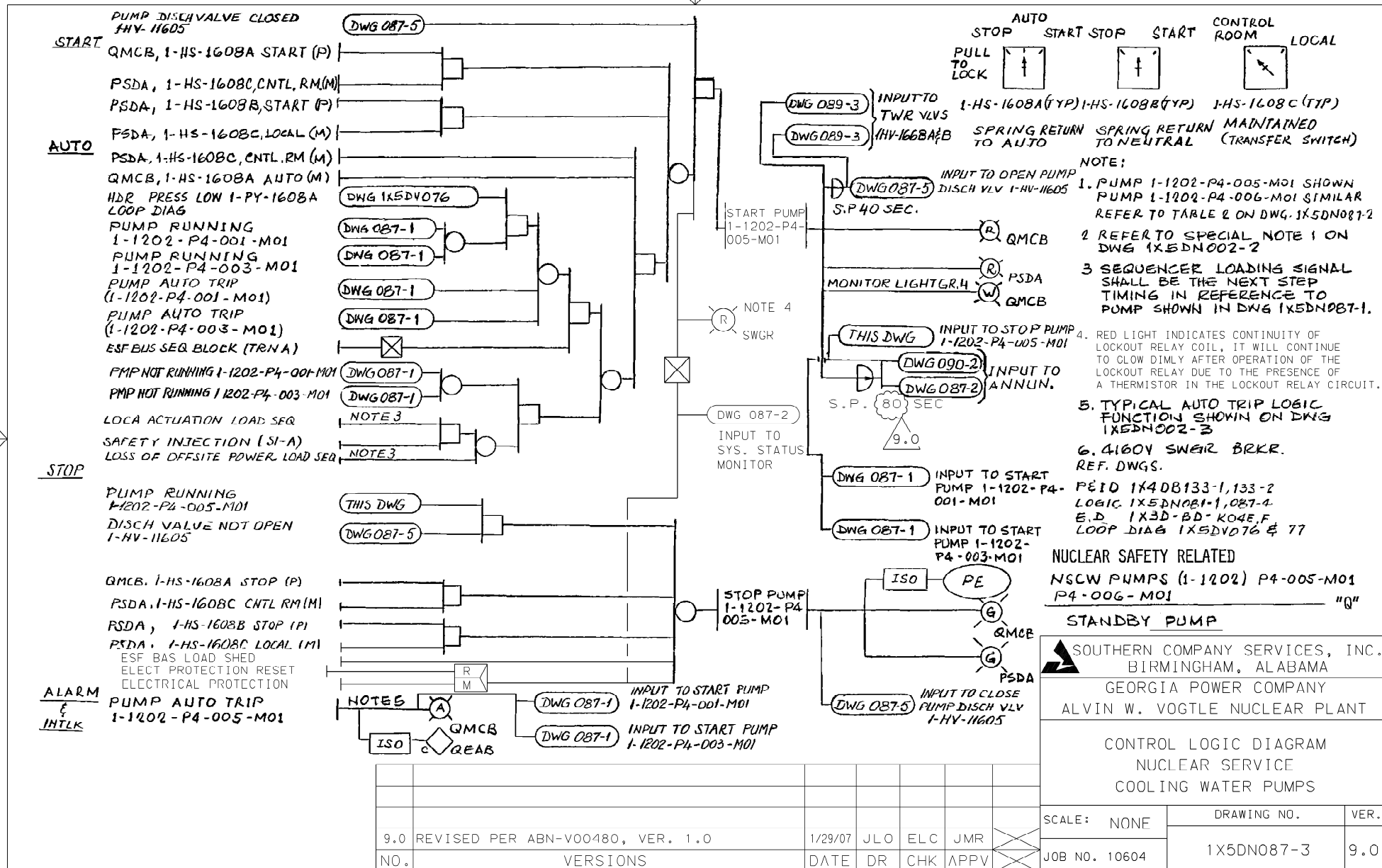
REF DWGS
PEID 1X4DB133-1 , 133-2
ED 1X30-BD-K04A,B,C,D,E,F
LOOP DIAGRAM 1K5DV074.075,025,07B,07G,07T
; NUCLEAR SAFETY RELATED ; "Q"
ALARMS, MONITORS & EQUIP. LIST.

 SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM NUCLEAR SERVICE COOLING WATER PUMPS

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN087-2	4



THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

SIZE B 11x17

115X

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 7-25-84 D. C. COLLINS SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are provided, copied, based, exhibited, or used except in the limited way and extent as permitted by any written consent given by the holder to the borrower.

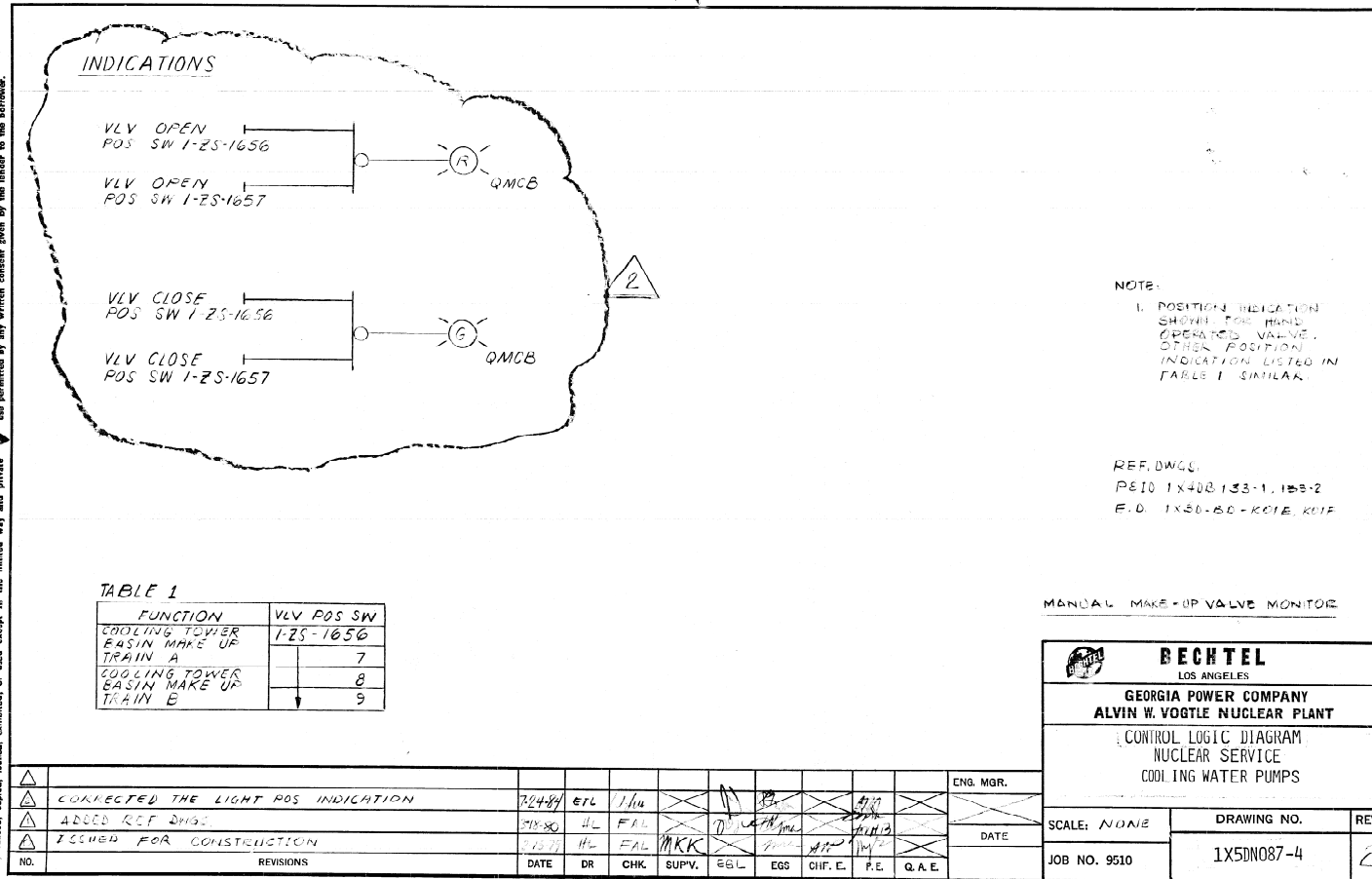


TABLE 1

FUNCTION	VLV POS SW
COOLING TOWER BASIN MAKE UP TRAIN A	1-ZS-1656
COOLING TOWER BASIN MAKE UP TRAIN B	7
	8
	9

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EBL	EGS	CHF. E.	P.E.	Q.A.E.	ENG. MGR.
1	CORRECTED THE LIGHT POS INDICATION	7-24-84	ETL	1/104							
2	ADDED REF DWG.	7-18-80	HL	FAL							
3	ISSUED FOR CONSTRUCTION	7-15-79	HL	FAL	MKK						

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 7-25-84 D. C. COLLINS SECTION SUPERVISOR

OPEN

NSCW PUMP RUNNING
1-1202-P4-001-M01

DWG 087-1

OPEN VALVE
1-HV-11600

DWG 90-6

INPUT TO CLOSE
BLOWDOWN VLV



QMCB (NOTE 4)

STOP

ELECTRICAL OVERLOAD
(ONLY DURING PERIODIC TEST)

NOTE 3

STOP VALVE
1-HV-11600



CLOSE

NSCW PUMP STOPPED
1-1202-P4-001-M01

DWG 087-1

CLOSE VALVE
1-HV-11600



QMCB (NOTE 4)

DWG 087-1

PERMISSIVE INPUT
TO NSCW TO START

DWG 087-1

INPUT TO STOP
NSCW PUMP

MONITOR & ALARM

VALVE 1-HV-11600
CONTROL POWER LOSS

SYSTEMS STATUS MONITOR

DWG 070-2

NOTE:

1. VALVE 1-HV-11600 SHOWN, OTHER VALVES LISTED IN TABLE 1 SIMILAR.
2. VALVES LISTED IN TABLE 1 ARE BUTTERFLY VALVES.
OPEN - LIMIT STOPPED
CLOSE - LIMIT STOPPED
3. SPECIAL NOTE 2 ON DWG 1X5DN002-2,
4. INPUT FROM STEM MOUNTED POSITION SWITCH

REF. DWGS:

P&ID 1X4DB133-1, 133-2

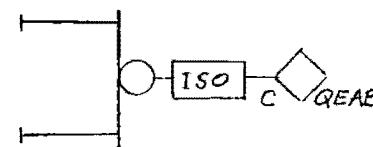
E.D. 1X3D-BD-K04Y, -K04Z

TABLE 1

TRAIN	VALVE	PUMP	DWG
A	1-HV-11600	1-1202-P4-001-M01	087-1
B	11607	2	
A	11606	3	
B	11613	4	
A	11605	5	087-3
B	11612	6	

VALVE CNTL POWER
LOSS 1-HV-11600

VALVE MOTOR ELECT
OVERLOAD 1-HV-11600



NUCLEAR SAFETY RELATED

PUMP DISCHARGE VALVES

"Q"



SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
NUCLEAR SERVICE
COOLING WATER PUMPS

△						
△						
△	INCORPORATED PER DCP 95-V1N0035	12-5-97	CD	GLB	WFP	✗
△	ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR	SIGNATURES			
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL

SCALE: NONE

DRAWING NO.

REV

JOB NO. 10604

1X5DN087-5

3

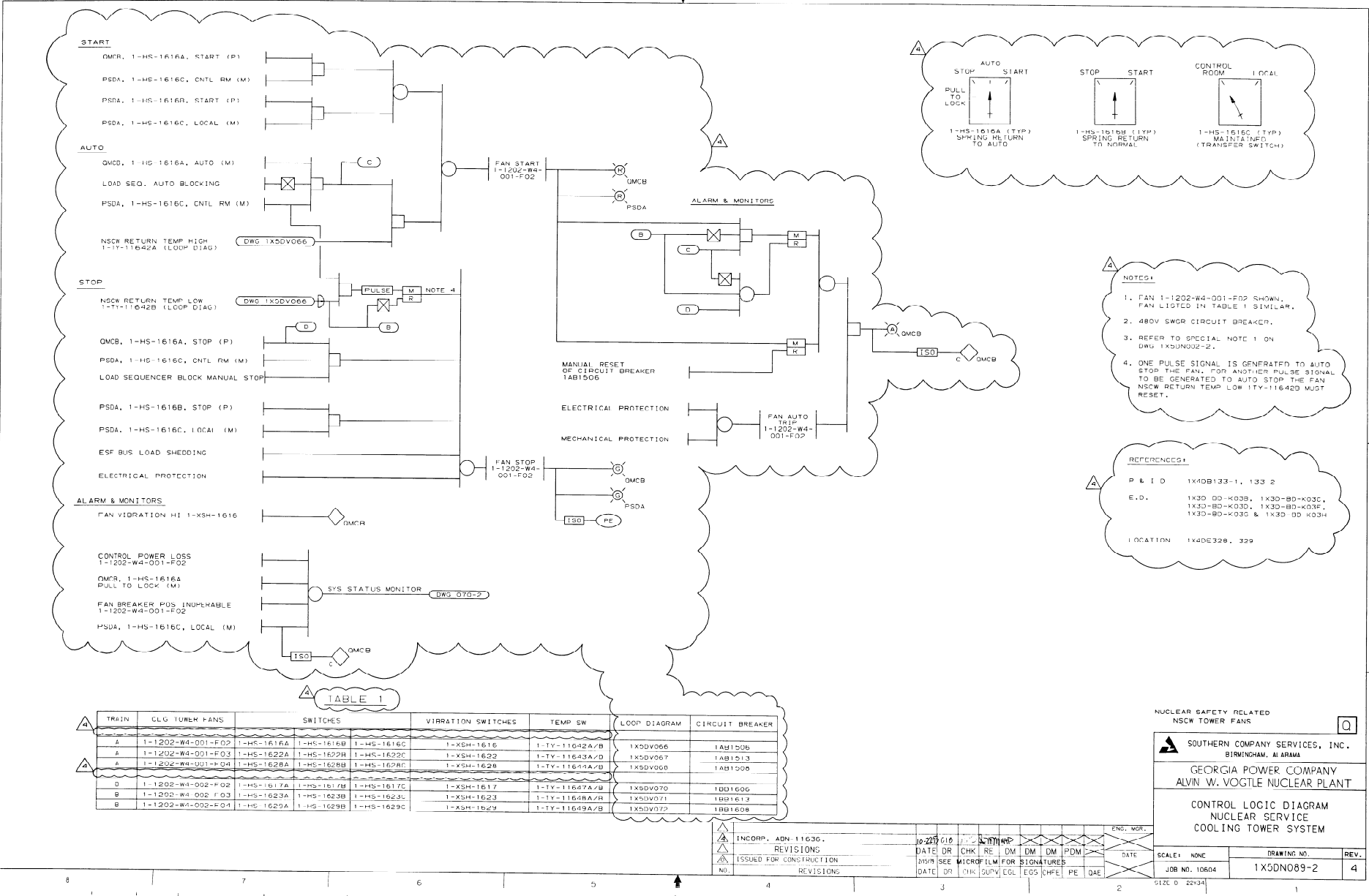


TABLE 1	
Year	Number of cases
1950	10
1951	15
1952	20
1953	25
1954	30
1955	35
1956	40
1957	45
1958	50
1959	55
1960	60
1961	65
1962	70
1963	75
1964	80
1965	85
1966	90
1967	95
1968	100
1969	105
1970	110
1971	115
1972	120
1973	125
1974	130
1975	135
1976	140
1977	145
1978	150
1979	155
1980	160
1981	165
1982	170
1983	175
1984	180
1985	185
1986	190
1987	195
1988	200
1989	205
1990	210
1991	215
1992	220
1993	225
1994	230
1995	235
1996	240
1997	245
1998	250
1999	255
2000	260
2001	265
2002	270
2003	275
2004	280
2005	285
2006	290
2007	295
2008	300
2009	305
2010	310
2011	315
2012	320
2013	325
2014	330
2015	335
2016	340
2017	345
2018	350
2019	355
2020	360
2021	365
2022	370
2023	375
2024	380
2025	385
2026	390
2027	395
2028	400
2029	405
2030	410
2031	415
2032	420
2033	425
2034	430
2035	435
2036	440
2037	445
2038	450
2039	455
2040	460
2041	465
2042	470
2043	475
2044	480
2045	485
2046	490
2047	495
2048	500
2049	505
2050	510
2051	515
2052	520
2053	525
2054	530
2055	535
2056	540
2057	545
2058	550
2059	555
2060	560
2061	565
2062	570
2063	575
2064	580
2065	585
2066	590
2067	595
2068	600
2069	605
2070	610
2071	615
2072	620
2073	625
2074	630
2075	635
2076	640
2077	645
2078	650
2079	655
2080	660
2081	665
2082	670
2083	675
2084	680
2085	685
2086	690
2087	695
2088	700
2089	705
2090	710
2091	715
2092	720
2093	725
2094	730
2095	735
2096	740
2097	745
2098	750
2099	755
2100	760

TRAIN	CLG TUNER FANS	SWITCHES			VIRRATION SWITCHES	TEMP SW	LOOP DIAGRAM	CIRCUIT BREAKER
A	1-1202-W4-001-F02	1-HS-1616A	1-HS-1616B	1-HS-1616C	1-XSH-1616	1-TY-11642A/B	1XSDV066	1AB1506
A	1-1202-W4-001-F03	1-HS-1622A	1-HS-1622B	1-HS-1622C	1-XSH-1623	1-TY-11643A/B	1XSDV067	1AB1507
A	1-1202-W4-001-F04	1-HS-1628A	1-HS-1628B	1-HS-1628C	1-XSH-1629	1-TY-11644A/B	1XSDV068	1AB1508
B	1-1202-W4-002-F02	1-HS-1617A	1-HS-1617B	1-HS-1617C	1-XSH-1617	1-TY-11647A/B	1XSDV070	1AB1606
B	1-1202-W4-002-F03	1-HS-1623A	1-HS-1623B	1-HS-1623C	1-XSH-1623	1-TY-11648A/B	1XSDV071	1AB1607
B	1-1202-W4-002-F04	1-HS-1629A	1-HS-1629B	1-HS-1629C	1-XSH-1629	1-TY-11649A/B	1XSDV072	1AB1608

- NOTES:
1. FAN 1-1202-W4-001-FRP SHOWN.
FAN LISTED IN TABLE 1 SIMILAR.
 2. 480V SWGR (CIRCUIT BREAKER).
 3. REFER TO SPECIAL NOTE 1 ON
DRG 1XDUNG02-2.
 4. ONE PULSE SIGNAL IS GENERATED TO AUTO
STOP THE FAN. FOR ANOTHER PULSE SIGNAL
TO BE GENERATED TO AUTO STOP THE FAN
NSCW RETURN TEMP LOW ITY-116420 MUST
RESET.
- REFERENCES:
- P & I D 1XD01B33-1, 133 2
- E.O. 1K3D DD-K03B, 1K3D-BD-K03C,
1K3D-BD-K03D, 1K3D-BD-K03F,
1K3D-BD-K03G & 1K3D DD K03H
- LOCATION 1XD0E32B, 329

NUCLEAR SAFETY RELATED
NSCW TOWER FANS

 SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
NUCLEAR SERVICE
COOLING TOWER SYSTEM

INCORP. ADN 11636.										10-22-010										SCHEMATIC										ENG. WORK										COOLING TOWER SYSTEM																																							
REVISIONS										DATE										CHK. REC. DM										DM DM PDM										DATE										SCALE: NONE										DRAWING NO.										REV.									
ISSUED FOR CONSTRUCTION										DATE										SEE MICROFILM FOR										SIGNATURES										DATE										JOB NO. 10604										1X5DN089-2										4									
NO. REVISIONS										DATE										CHK. SUPV. ECL										EGS. CHPE. PE DAE										DATE										JOB NO. 10604										1X5DN089-2										4									

OPEN

PSDA, 1-HS-1668B, OPEN NORM VLV (M)
 PSDA, 1-HS-1668C, LOCAL (M)
 QMCB, 1-HS-1668A, OPEN NORM VLV (M)
 PSDA, 1-HS-1668C, CNTL RM (M)

AUTO

QMCB, 1-HS-1668A, AUTO (M)
 NSCW RETURN WTR TEMP HIGH
 1-TY-1668B
 NSCW PMP RUNNING 1-1202-P4-001-M01
 NSCW PMP RUNNING 1-1202-P4-003-M01
 NSCW PMP RUNNING 1-1202-P4-005-M01
 NSCW PMP-1 RUNNING (WITH TD)
 NSCW PMP-3 RUNNING (WITH TD)
 NSCW PMP-5 RUNNING (WITH TD)
 VALVE 1HV-1668A OPEN LESS THAN
 MID POSITION

CLOSE

PSDA, 1-HS-1668C, CNTL RM (M)
 BYPASS VLV FULLY OPEN
 1-HV-1668B
 PSDA, 1-HS-1668C, LOCAL (M)

STOP

ELECTRIC OVERLOAD (ONLY
 DURING PERIODIC TEST)

ALARM & MONITOR

VALVE CONTROL PWR LOSS
 1-HV-1668A
 VALVE MOTOR OVLD
 1-HV-1668A
 VALVE CNTL PWR LOSS
 1-HV-1668A
 PSDA, 1-HS-1668C, LOCAL (M)

TABLE 1

LOOPS DIAGRAM	TRAIN	VALVE	VALVE FUNCTION	TEMP SW LOOP DIAG	HAND SW	NSCW COOLING TOWER FAN START PERMISSIVE
1XSDV112 1XSDV288	A	1-HV-1668A	SPRAY	1-TY-1668B	1-HS-1668A, B & C	1-1202-W4-001-FO1
1XSDV113 1XSDV289	W	1-HV-1668A	SPRAY	1-TY-1668B	1-HS-1668A, B & C	1-1202-W4-001-FO1

NOTES:

1. VALVE 1-HV-1668A SHOWN, OTHER VALVES LISTED IN TABLE 1 SIMILAR EXCEPT AS TABULATED.
2. VALVES LISTED IN TABLE 1 ARE BUTTERFLY VALVES.
 OPEN - LIMIT STOPPED
 CLOSE - LIMIT STOPPED
3. REFER TO SPECIAL NOTE NO. 2 ON DWG 1XSDN002-2.
4. VALVE MID POSITION ANGLE 15°:
 10° FOR 1HV-1668A
 7.5° FOR 1HV-1668A

OPEN

PSDA, 1-HS-1668B, OPEN BYPASS VLV (M)
 PSDA, 1-HS-1668C, LOCAL (M)
 QMCB, 1-HS-1668A, OPEN BYPASS VLV (M)
 PSDA, 1-HS-1668C, CNTL RM (M)

AUTO

QMCB, 1-HS-1668A, AUTO (M)

CLOSE

PSDA, 1-HS-1668C, CNTL RM (M)
 SPRAY VLV FULLY OPEN
 1-HV-1668A
 PSDA, 1-HS-1668C, LOCAL (M)

STOP

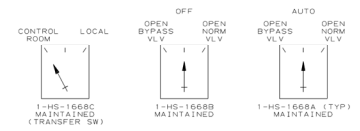
ELECTRIC OVERLOAD (ONLY
 DURING PERIODIC TEST)

ALARM & MONITOR

VALVE CONTROL PWR LOSS
 1-HV-1668B
 VALVE MOTOR OVLD
 1-HV-1668B
 VALVE CNTL PWR LOSS
 1-HV-1668B

TABLE 2

LOOPS DIAGRAM	TRAIN	VALVE	VALVE FUNCTION	TEMP SW LOOP DIAG	HAND SW
1XSDV112 1XSDV288	A	1-HV-1668B	BYPASS	1-TY-1668B	1-HS-1668A, B & C
1XSDV113 1XSDV289	W	1-HV-1668B	BYPASS	1-TY-1668B	1-HS-1668A, B & C



NOTES:

5. VALVE 1-HV-1668B SHOWN, OTHER VALVES LISTED IN TABLE 2 SIMILAR EXCEPT AS TABULATED.
6. VALVES LISTED IN TABLE 2 ARE BUTTERFLY VALVES.
 OPEN - LIMIT STOPPED
 CLOSE - LIMIT STOPPED
7. REFER TO SPECIAL NOTE NO. 2 ON DWG 1XSDN002-2.
8. VALVE MID POSITION ANGLE 15°:
 12.5° FOR 1HV-1668B
 12.5° FOR 1HV-1668B

REFERENCES:

P & I D 1X40B133-1, 133-8
 E.D. 1X3D-BD-K05U, 1X3D-BD-K05V,
 1X3D-BD-K05W, 1X3D-BD-K05X,
 1X3D-BD-K05A & 1X3D-BD-K05E
 LOOP DIAG. 1XSDV112, 113
 LOCATION 1X40E328, 329

COOLING TOWER SPRAY HEADER VALVES
 NUCLEAR SAFETY RELATED

SOUTHERN COMPANY SERVICES, INC.
 BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
 CONTROL LOGIC DIAGRAM
 NUCLEAR SERVICE
 COOLING TOWER SYSTEM

SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X5DN089-3	11.0

THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

NO.	REVISED PER	ABN	DATE	CHK	APPV	VER.
11.0	REVISED PER	ABN-V01148	VER. 1.0	7-1-88	WEP ELC JMR	

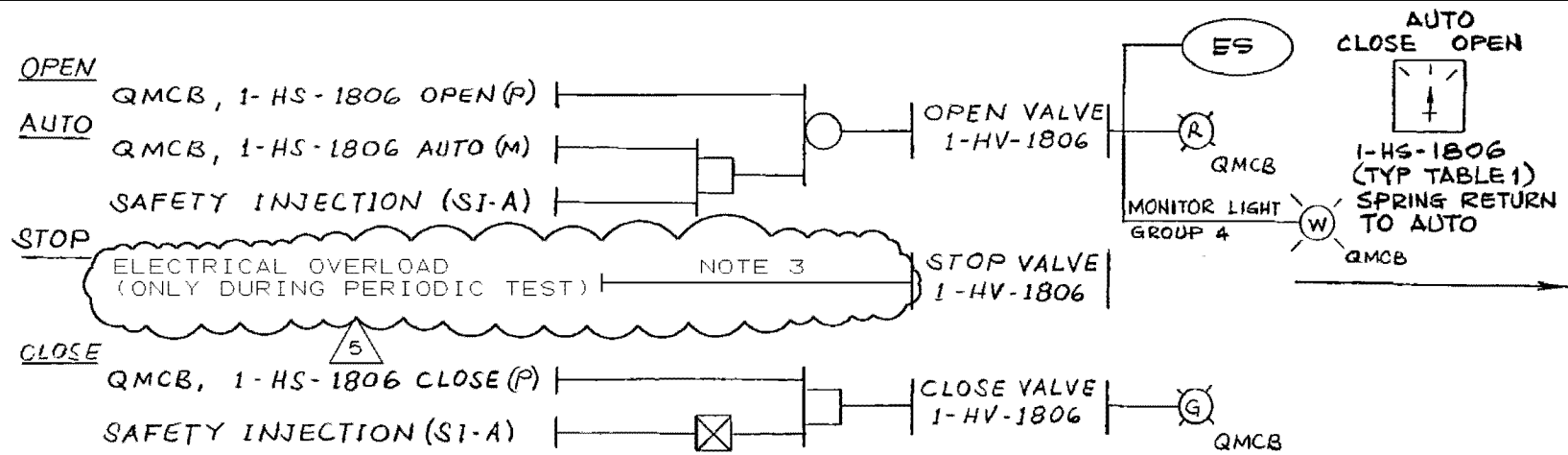
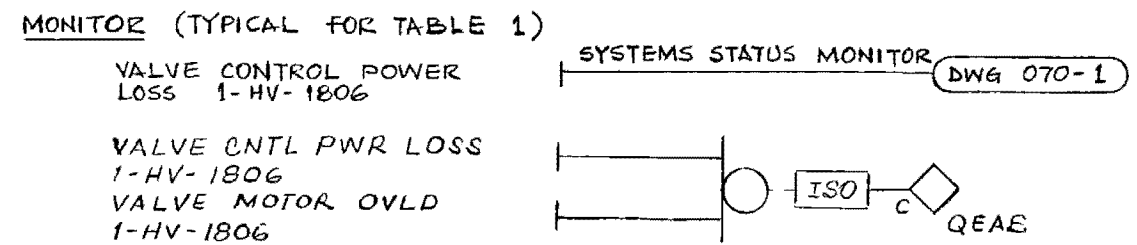


TABLE 1			
TRAIN	EQUIPMENT TAG NOS.		SAFETY SIG.
A	1-HS-1806	1-HV-1806	SI-A
B	-1807	-1807	SI-B
A	-1808	-1808	SI-A
B	-1809	-1809	SI-B
A	-1822	-1822	SI-A
B	-1823	-1823	SI-B
A	-1830	-1830	SI-A
B	-1831	-1831	SI-B



NOTE:

1. VALVES LISTED IN TABLE 1 ARE BUTTERFLY TYPE VALVES

OPEN - LIMIT STOPPED

CLOSE - LIMIT STOPPED

NUCLEAR SAFETY RELATED

CONTAINMENT COOLER ISOLATION VALVE


REF. DWGS

P&ID 1X4DB135-1, -2

E.D. 1X3D-BD-K04J,K,N,P,S,T,U,V,W & X

3. REFER TO SPECIAL NOTE 2 ON DWG 1X5DN002-2.

NO.	REVISIONS	DATE	DR	CHK	APPV	DTL
1	INCORPORATED PER DCP 95-V1N0035	12/5/97	CD	GLB	WFP	
2	ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR SIGNATURES				

 SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
NUCLEAR SERVICE
COOLING WATER SYSTEM
AUXILIARIES AND ALARMS

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN090-1	5

14.5X

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 12/13/84 OPERATOR: [Signature] SECTION SUPERVISOR: [Signature]

This drawing and the design it contains are the property of BECHTEL. They are loaned to the borrower for use in the limited way and for the limited purpose stated on the borrower's request agreement that they will not be reproduced, stored, loaned, copied, or used except in the limited way and for the limited purpose stated on the borrower's request agreement given by the lender to the borrower.

ALARMS

NSCW DIESEL GEN G4-001
OUTLET FLOW LOW (1-FY-1650B)

NSCW WATER PUMP
RUNNING (1-1202-P4-001)
NSCW WATER PUMP
RUNNING (1-1202-P4-003)
NSCW WATER PUMP
RUNNING (1-1202-P4-005)

DWG 087-1
DNG 087-1
DNG 087-3

ISO

(TYP TABLE 2)
QMCB

DWG 060-1 TO ANNUN [INPUT
APPLICABLE TO
ITEMS 9 & 10

REF DNGS:

P&ID 1X40B133-2, 134, 135-142
E.D. 1X3D-BD-K04A #
1X3D-BD-K04F

ITEM NO.	ANNUN WINDOW LOCATION	TABLE 2						
		SERVICE	FLOW SW	LOOP DIAG	NSCW PUMP 1-1202-			
1	QMCB	NSCW DIESEL GEN G4-001	1-FY-1650B	1XEDV082	P4-001	P4-003	P4-005	
2			2	1651B	33	2	4	6
3		CONTMT AIR CLR A7-011/012	1318E	15	1	3	5	
4		-003/004	1819B	16	2	4	6	
5		-005/006	1810B	17	1	3	5	
6		-001/008	1801B	18	2	4	6	
7		RX CAYTCLG COIL -001	2132B	19	1	3	5	
8		002	2133B	20	2	4	6	
9	QHVC	ESF CHLR COND C7-001	1-FIS-1802	185	1	3	5	
10		2	1802	186	2	4	6	
11	QMCB	RHR PMP & MTR COOLER	1-FS-1746		1	3	5	
12			1747		2	4	6	

ALARMS



BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
NUCLEAR SERVICE COOLING WATER
SYSTEM AUXILIARIES AND ALARMS

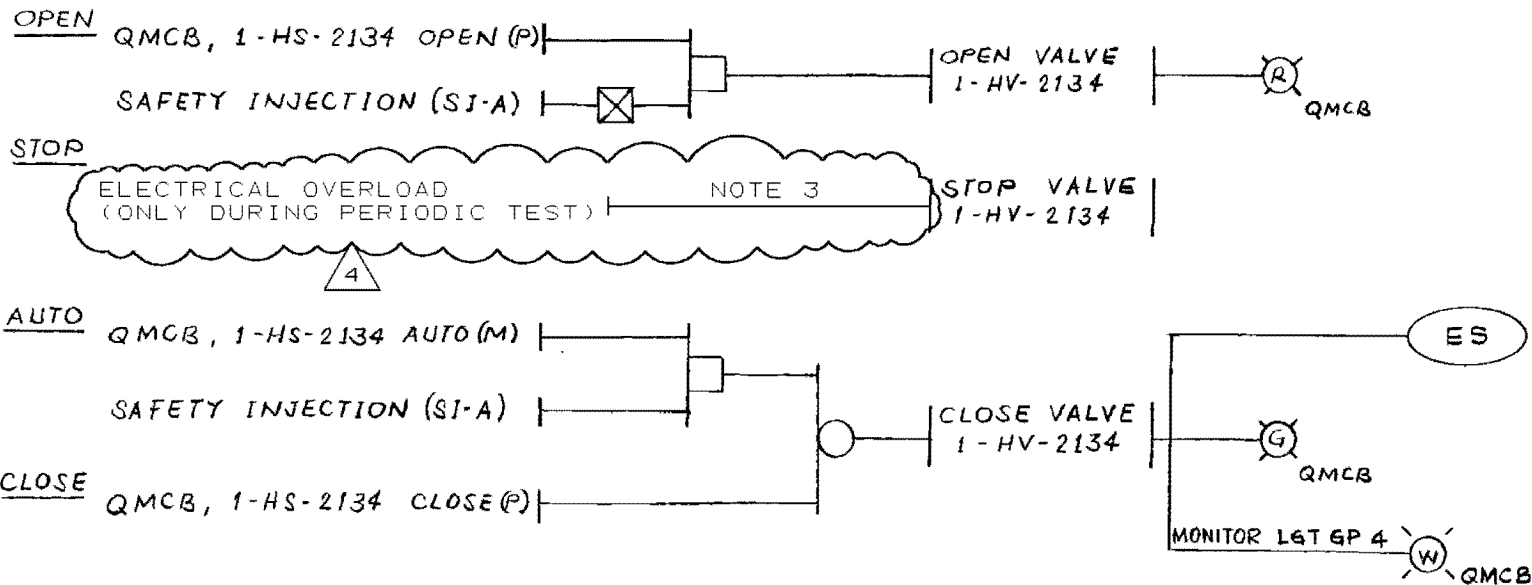
NO.	REVISIONS	DATE	DR	CHK	SUPV	EGL	EGS	CHF. E	P. E.	Q. A. E.	ENG. MGR.
1	CORRECTED TAG NOS	12-13-84	ACU	[Signature]							
2	CORRECTED TAG NOS PER DCN 25 ON P&ID 134	9-11-84	EJL	ACU							
3	INCORPORATED ZIN #1	10/1/84	ACU	[Signature]							
4	ISSUED FOR CONSTRUCTION	12/3/84	ACU	FAL	AKK						

SIZE B 11x17

SCALE: NONE	DRAWING NO. 1X5DN090-2	REV. 7
JOB NO. 9510		

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 12/13/84 OPERATOR: [Signature] SECTION SUPERVISOR: [Signature]



CLOSE AUTO OPEN

1-HS-2134 TYP.

SPRING RETURN TO AUTO

- NOTE:
1. VALVE 1-HV-2134 SHOWN, OTHER VALVES LISTED IN TABLE 1 SIMILAR.
 2. VALVES LISTED IN TABLE 1 ARE BUTTERFLY VALVES.
OPEN- LIMIT STOPPED
CLOSE- LIMIT STOPPED
 3. SPECIAL NOTE 2 ON DWG 1X5DN002-2

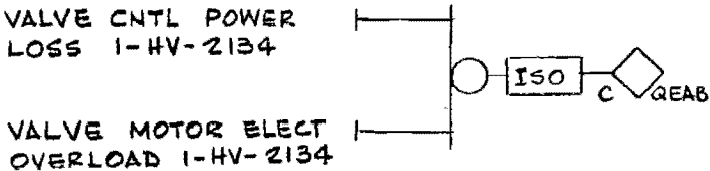
MONITOR & ALARM

VALVE 1-HV-2134
CONTROL POWER LOSS

SYSTEMS STATUS MONITOR DWG 070-1

TABLE 1

TRAIN	VALVE	SWITCH	SAFETY SIG
A	1-HV-2134	1-HS-2134	SI-A
B	-2135	-2135	SI-B
A	-2138	-2138	SI-A
B	-2139	-2139	SI-B



REF. DWGS.

PEID 1X4DB135-1,2

E.D. 1X3D-BD-K04Q, K04R, K04L & K04M

NUCLEAR SAFETY RELATED

REACTOR CAVITY AND CRDM

COOLING COIL ISOLATION VALVES

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
NUCLEAR SERVICE
COOLING WATER SYSTEM
AUXILIARIES AND ALARMS

SCALE: NONE

DRAWING NO. 1X5DN090-3

REV 4

JOB NO. 10604

NO.	REVISIONS	DATE	DR	CHK	APPV	DTL
1	INCORPORATED PER DCP 95-V1N0035	12/5/97	CD	GLB	WFP	
2	ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR SIGNATURES				

ALARMS

PUMP RUNNING
1-1203-P4-001-M01 (DWG 091-1)

HEADER PRESS LOW
1-PY-1852 B (LOOP DIAG) (DWG 1X5DN085)

CCW SURGE TANK LEVEL
LOW LOW (1-LSLL-1852)

PSDA, 1-HS-1852C LOCAL (M)

MONITORS

ELECT. PROT. BRKR. LOCKOUT
1-1203-P4-001-M01 (DWG 091-1)

PSDA, 1-HS-1852C, LOCAL (M)

CONTROL POWER LOSS
1-1203-P4-001-M01

QMCB, 1-HS-1852A
PULL TO LOCK (M)
PUMP BREAKER INOPERABLE
POSITION 1-1203-P4-001-M01

TABLE 1

TRAIN	PUMP NO. (1-1203-)	SAFETY ACT. SIG.	SWITCHES			PRESS SW LOOP DIAG	LEVEL SW	PUMP START/OVLD. (1-1203-)	
A	P4-001-M01	SI-A	1-HS-1852A	1-HS-1852B	1-HS-1852C	1-PY-1852A/B	1-LSLL-1852	P4-003-M01	P4-005-M01
B	P4-002-M01	SI-B	1853A	1853B	1853C	1853A/B	1853	P4-004-M01	P4-006-M01
A	P4-003-M01	SI-A	1854A	1854B	1854C	1854A/B	1854	P4-001-M01	P4-005-M01
B	P4-004-M01	SI-B	1855A	1855B	1855C	1855A/B	1855	P4-002-M01	P4-006-M01

TABLE 2

TRAIN	PUMP NO. (1-1203-)	SAFETY ACT. SIG.	SWITCHES			PRESS SW LOOP DIAG	LEVEL SW	PUMP START/OVLD. (1-1203-)	
A	P4-005-M01	SI-A	1-HS-1856A	1-HS-1856B	1-HS-1856C	1-PY-1856A/B	1-LSLL-1856	P4-001-M01	P4-003-M01
B	P4-006-M01	SI-B	1857A	1857B	1857C	1857A/B	1857	P4-002-M01	P4-004-M01

NOTE:

1. TYPICAL ALARMS AND MONITORS SHOWN. OTHER DEVICES LISTED IN TABLE 1 AND 2 SIMILAR.
2. TABLE 1 LOGIC SHOWN ON DWG. 1X5DN091-1 AND TABLE 2 LOGIC SHOWN ON DWG. 1X5DN091-3.

REF. DWGS

P&ID 1X4DB136
LOGIC 1X5DN091-1, 091-3
E.D. 1X3D-80-LO1A,B,C,D,E,F
LOOP DIAG 1X5DN085, 086, 087, 088, 089, 090

NUCLEAR SAFETY RELATED

ALARMS, MONITOR AND EQPT. LIST "Q"

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM COMPONENT COOLING WATER PUMPS

SCALE: NONE

DRAWING NO.

REV

JOB NO. 10604

1X5DN091-2

3

ENG MGR

DATE

INCORP. ABN-21052

REVISIONS

ISSUED FOR CONSTRUCTION

REVISIONS

DATE

DR

MWD

WLM

EB/2

CHK

APPV

DTL

SEE

MICROFILM

FOR

SIGNATURES

This drawing and the design it covers are the property of BECHTEL. They are loaned, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

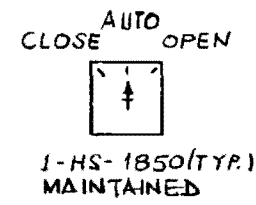
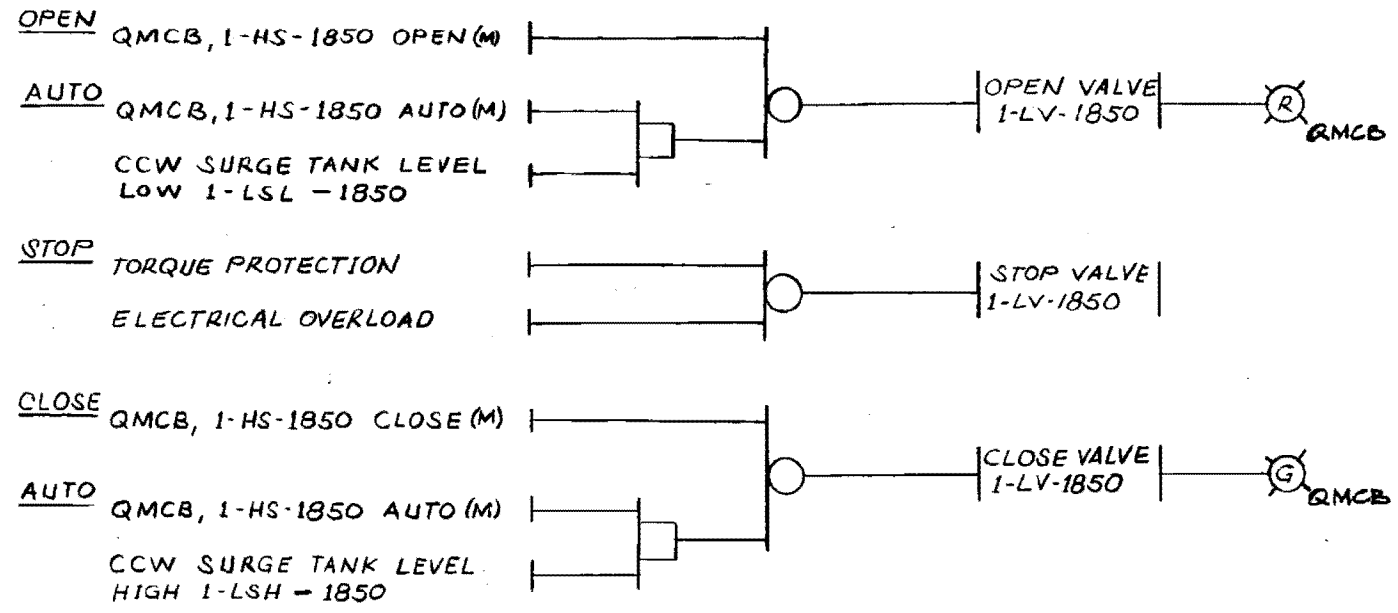
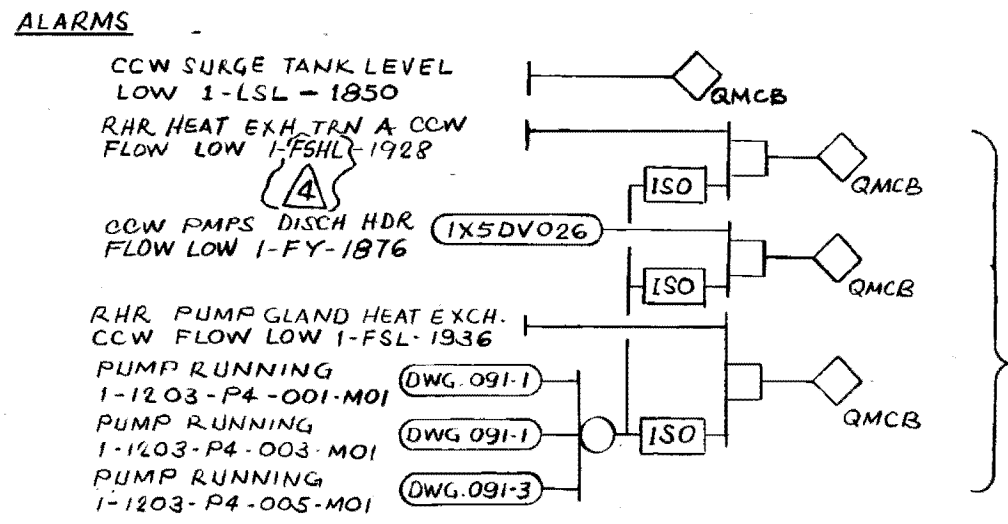


TABLE 1

VALVE	SWITCH	LEVEL SW	
1-LV-1850	1-HS-1850	1-LSH-1850	1-LSL-1850
↓ 1851	↓ 1851	↓ 1851	↓ 1851

NOTE:

1. VALVE 1-LV-1850 SHOWN. 1-LV-1851 SIMILAR.
2. VALVE LISTED IN TABLE 1 ARE GATE VALVES
OPEN - LIMIT STOPPED
CLOSE - TORQUE STOPPED



FLOW SW	PUMP	FLOW SW
1-FSHL-1928	1-1203-P4-001-M01	
1-FSL-1936	-003	1-FY-1876 (LOOP DIAG 026)
	-005	
1-FSHL-1929	-002	
1-FSL-1937	-004	1-FY-1877 (LOOP DIAG 027)
	-006	

REF. DWG.
PEID 1X4DB136 & 137
E.D. 1X3D-BD-LO16, LO1K, LO1A, LO1E
LOOP DIAG 1X5DN026, 027

NORMAL-MAKE-UP VALVE

BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
COMPONENT COOLING SYSTEM
AUXILIARIES AND ALARMS

SCALE: NONE

DRAWING NO. 1X5DN092-1

REV. 4

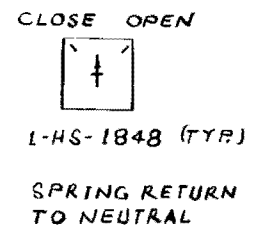
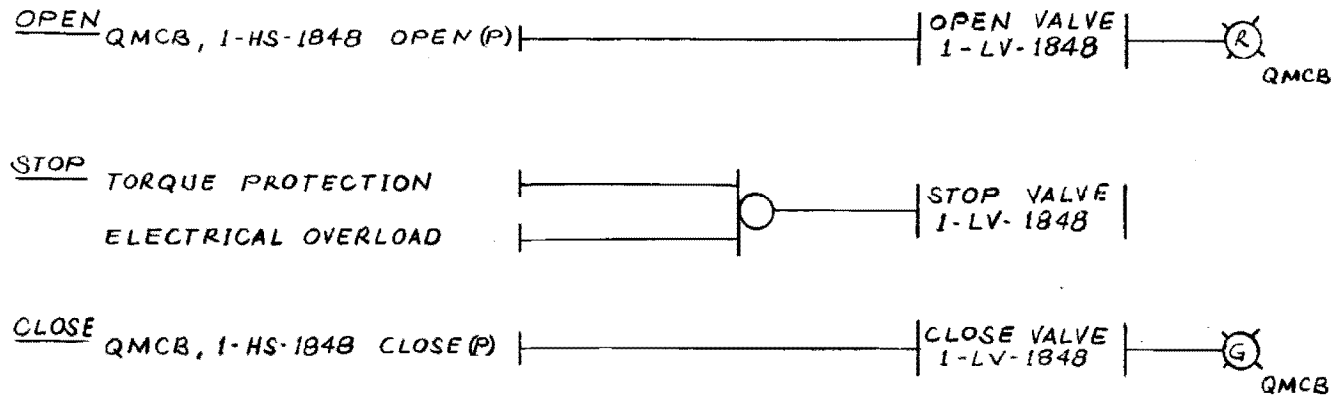
JOB NO. 9510

NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EGL	EGS	CHF. E.	R. E.	Q. A. E.	ENG. MGR.
1	ADDED ALARM INPUT FOR PEID 137 DCN #1	8-28-80	AD	FAL							
2	ADDED ALARM INPUT AND REVISED AS INDICATED	7-9-81	FAL	V.V.							
3	INCORPORATED DCN #1	2-20-86	RBR	ALV							
4	ISSUED FOR CONSTRUCTION	1-12-87	HL	FAL	MKK						

PEID 136 REV. 2
137 REV. 7 DCN #1

SIZE B 11x17

This drawing and the design it covers are the property of BECHTEL. They are produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.



NOTE:

1. VALVE 1-LV-1848 SHOWN. 1-LV-1849 SIMILAR.

2. VALVES LISTED IN TABLE 1 ARE GATE VALVES.
OPEN - LIMIT STOPPED
CLOSE - TORQUE STOPPED

TABLE 1

VALVE	SWITCH
1-LV-1848	1-HS-1848
↓ 1849	↓ 1849

REF. DWGS
PEID 1X4DB136
E.D. 1X3D-BD-L01H, LOIM

DATE
BACK-UP MAKE-UP VALVE

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF. E.	P. E.	Q. A. E.	ENG. MGR.
1	ADDED REF DWGS.	3-18-80	HL	FAL							
2	ISSUED FOR CONSTRUCTION	1-12-79	HL	FAL	AKK						

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM COMPONENT COOLING SYSTEM AUXILIARIES AND ALARMS		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN092-2	1

MWD

OPEN

QMCB, 1-HS-2041 OPEN (P)

OPEN VALVE
1-HV-2041



STOP

ELECTRICAL OVERLOAD
(ONLY DURING PERIODIC TEST)

NOTE 1

STOP VALVE
1-HV-2041

3

CLOSE

QMCB 1-HS-2041 CLOSE (P)

AUTO

QMCB, 1-HS-2041 AUTO (M)

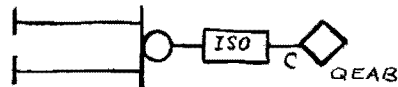
RECTOR COOLANT PUMPS
THERMAL BARRIER OUTLET
HEADER PRESSURE HIGH
1-PY-2041A
(LOOP DIAG)
REACTOR COOLANT PUMPS
THERMAL BARRIER OUTLET
HEADER FLOW HIGH
1-FY-2043
(LOOP DIAG)

DWG 1X5DV060

DWG 1X5DV060

ALARM AND MONITOR

CNTL PWR. LOSS
1-HV-2041
ELECT. OVERLOAD
1-HV-2041



VALVE CNTL PWR
LOSS 1-HV-2041

SYS. STATUS MONITOR

DWG 070-3

AUTO
CLOSE OPEN



1-HS-2041

SPRING RETURN
TO AUTO

NOTE:

1. REFER TO SPECIAL NOTE 2
ON DWG 1X5DN002-2
2. VALVE IS A GATE VALVE
OPEN - LIMIT STOPPED
CLOSE - LIMIT STOPPED
3. VALVE 1-HV-2041 POWERED
FROM TRAIN B

3

REF DWGS

P&ID 1X4DB138-2

E.D. 1X3D-BD-LOSP

LOOP DIAG 1X5DV060

NUCLEAR SAFETY RELATED "Q"

REACTOR COOLANT PUMPS THERMAL
BARRIER ACCWS OUTLET HEADER
VALVE

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
AUXILIARY COMPONENT
COOLING WATER AUXILIARIES

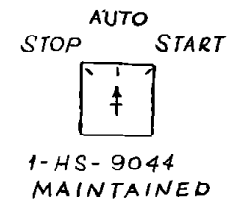
△									
△									
3	INCORP. PER DCP 95-V1N0022.	9/23/96	GD	WJM	SM				
0	ISSUED FOR CONSTRUCTION								
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL			

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN094-3	3

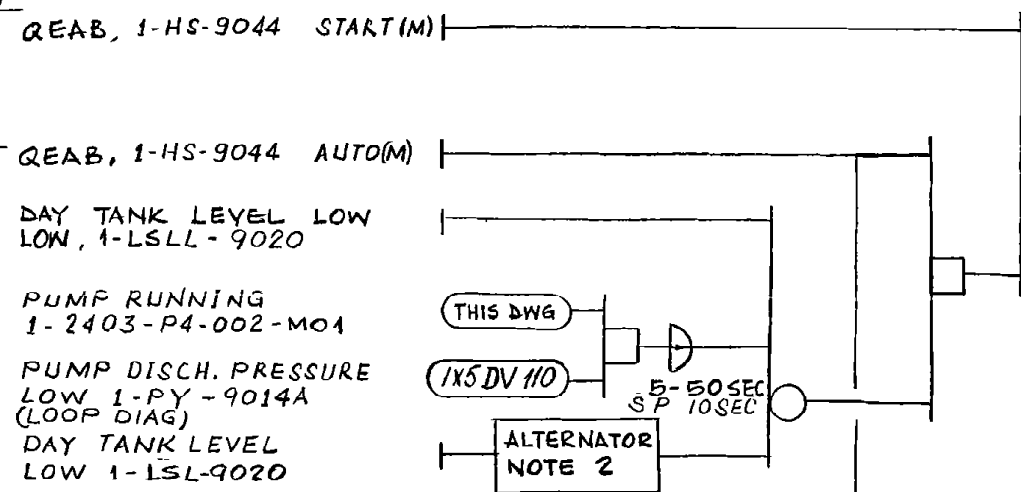
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION, COPYING, DISSEMINATION, OR DISCLOSURE OF ANY PORTION HEREOF IS PROHIBITED.

15DN0943

START



AUTO



START PUMP
1-2403-P4-001-M01

NOTE 6

7

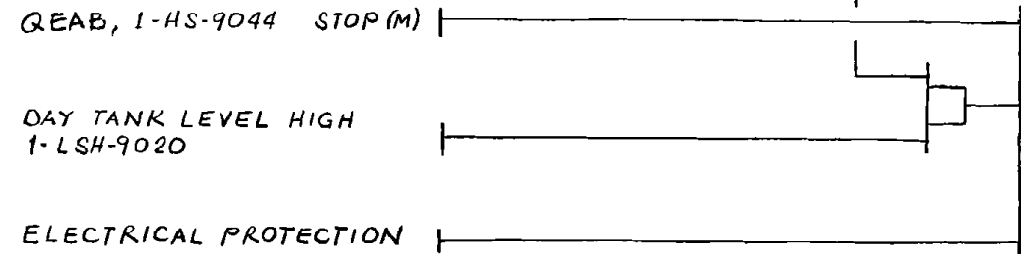
THIS DWG

INPUT TO START
PUMP 1-2403-P4-002-M01

NOTE:

1. PUMP 1-2403-P4-001 OF TRAIN A SHOWN OTHER PUMP LISTED IN TABLE 1 SIMILAR.
2. ALTERNATOR SWITCH SHALL ALTERNATELY START EACH PUMP OF THE DUPLEX.
3. 480V MOTOR STARTER
4. TYPICAL AUTO TRIP LOGIC SHOWN ON DWG 1X5DN002-3
5. ANNUN INPUT TO QEAB WILL BE FROM A RETRANSMITTING CONTACT ON PANEL PDG1 OR PDG2

STOP



STOP PUMP
1-2403-P4-001-M01

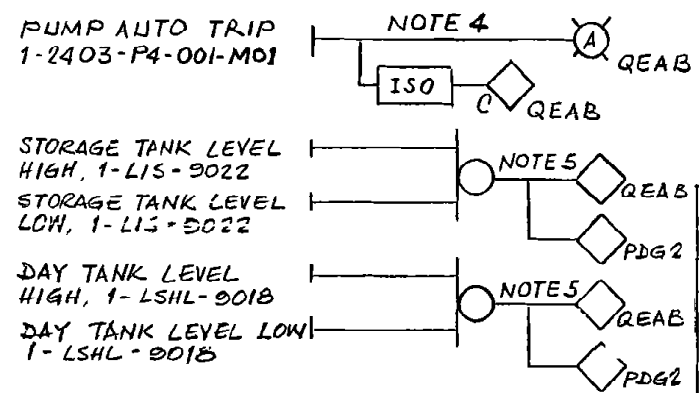
NOTE 6

7



6. THE CONTROL POWER TO THE TRAIN A (B) PUMP (LISTED) MAY BE PLUGGED INTO A TRAIN B (A) PUMP. THIS ARRANGEMENT SHOULD ONLY EXIST DURING PLANT EMERGENCIES OR FOR TESTING.

ALARMS



CONTROL POWER LOSS
1-2403-P4-001-M01

QEAB, 1-HS-9044 STOP(M)

SYS STATUS
MONITOR

DWG 070-12

REF. DWGS.

PEID 1X40B170-1,170-2
ED 1X3D-BH-601X, 601Z,
602B & 602D
LOOP DIAG. 1X5DV110, 111, 106 & 107

NUCLEAR SAFETY RELATED

FUEL OIL STORAGE TK PUMP "Q"

TABLE 1

TRN	PANEL	PUMP	SWITCH	DAY TK. LEVEL SW.	STOR. TK. LEVEL SW.	PRESS. SW. (LOOP DIAG)
A	PDG2	1-2403-P4-001-M01	1-HS-9044	1-LSHL-9018	1-LIS-9022	1-PY-9014A
		-002	-9046	1-LSH-9020		9014B
B	PDG4	003	9045	1-LSHL-9019	1-LIS-9023	9015A
		004	9047	1-LSL-9021		9015B

△							
△							
△							
△	INCORP. PER DCP 99-V1N0058	12/22/03	JCM	TSL	DEW	X	
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL	

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
DIESEL GENERATOR
FUEL OIL SYSTEM

SCALE: NONE	DRAWING NO.	REV
	1X5DN107-1	7
JOB NO. 10604		

OPEN

QPCP, 1-HS-10957, OPEN, (P)

NOTE 2

ENERGIZE
SOL VLV
1-HY-10957

PNEU

OPEN VALVE
1-HY-10957



QPCP

AUTO

REFUELING WATER STOR TK
LEVEL LOW 1-LY-991
(LOOP DIAG)

DWG 1/2X6AU01-201

DE ENERG.
SOL VLV
1-HY-10957

PNEU

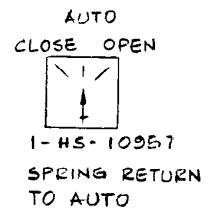
CLOSE VALVE
1-HY-10957



QPCP

CLOSE

QPCP, 1-HS-10957, CLOSE, (P)



NOTE:

1. VALVE 1-HY-10957 SHOWN
VALVES LISTED IN TABLE 1
SIMILAR EXCEPT AS TABULATE
2. HAND SWITCH SHALL BE HELD
IN OPEN POSITION UNTIL
VALVE IS FULLY OPEN TO
ALLOW CIRCUIT TO SEAL IN
THROUGH VALVE POSITION
SWITCH

REF. DWGS.

PE ID 1X4JB121

E.D. 1X3D-BD-D05B

LOOP DIAG 1/2X6AU01-201

TABLE 1.

TRAIN	VALVE	HAND SWITCH	LEVEL SWITCH (LOOP DIAG)	SOLENOID VALVE
B	1-HY-10957	1-HS-10957	1-LY-991	1-HY-10957
A	10958	10958	990	10958

NUCLEAR SAFETY RELATED

ISOLATION VALVES

"Q"

BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
REFUELING WATER SYSTEM

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF. E.	P.E.	Q.A.E.	ENG. MGR.
1	ADDED SOLENOID VALVES TO TABLE 1	2-8-85	AS	ALV							
2	ADDED REF. DWG	7-9-81	FAL	V.V							
3	ISSUED FOR CONSTRUCTION	12-6-77	HL	FAL							

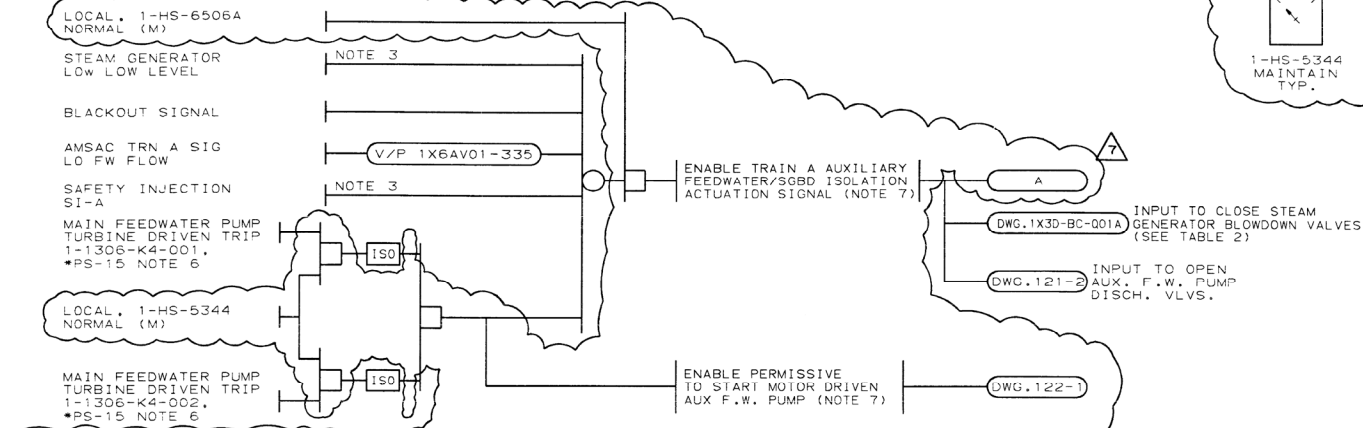
BM 9510

SIZE B 11x17

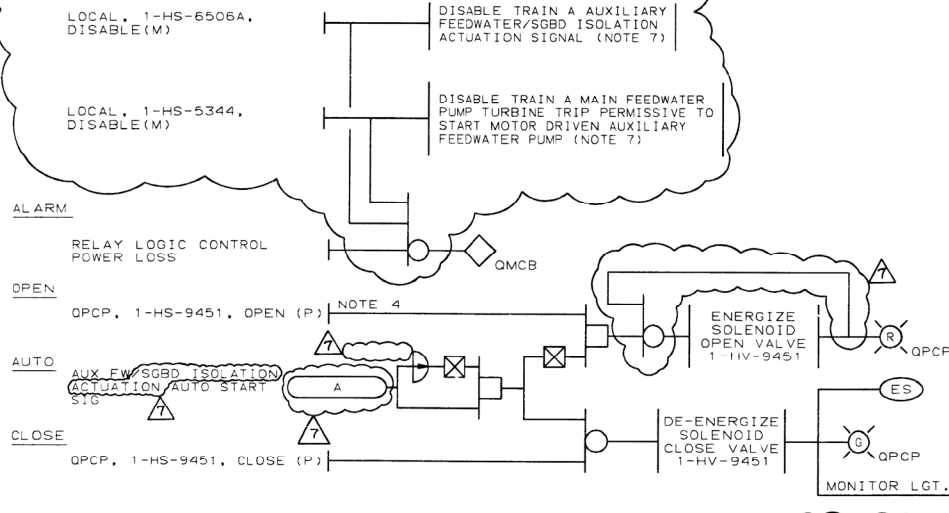
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN114-4	2

THIS DRAWING AND THE DESIGN IT COVERS ARE THE PROPERTY OF SOUTHERN COMPANY SERVICES, INC. THEY ARE MERELY LOANED AND ON THE BORROWER'S EXPRESS AGREEMENT THAT THEY WILL NOT BE REPRODUCED, COPIED, LOANED, EXHIBITED, OR USED EXCEPT IN THE LIMITED WAY AND PRIVATE USE PERMITTED BY THE LENDER TO THE BORROWER.

AUX FW AUTO START SIG



AUX F.W. STOP ACTUATION SIGNAL



NOTE:

1. AUX FW AUTO START SIGNAL TRAIN "A" SHOWN. TRAIN "B" SIMILAR
2. SAMPLE ISOLATION VALVE 1-HV-9451 SHOWN. OTHER VALVES LISTED IN TABLE 1 SIMILAR AS TABULATED.
3. INPUT SIGNAL FROM WESTINGHOUSE SOLID STATE PROTECTION.
4. HAND SWITCH SHALL BE HELD ON OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW CIRCUIT TO SEAL-IN THROUGH VALVE LIMIT SWITCH.
5. VALVE LISTED IN TABLE 1 ARE DIRECT PROCESS SOLENOID VLV.

6. * DENOTES VENDOR TAG NO.

7. ENABLE = SIGNAL OUTPUT OF 1
DISABLE = SIGNAL OUTPUT OF 0

REFERENCE DWGS.

P & ID 1X4DB159-1 & 159-3
E.D. 1X3D-BC-Q07E, 7F
1X3D-BC-Q04B, 4C
1X3D-BC-F04A, F05A
1X3D-BC-Q01A, Q01B, Q01C, Q01D
V/P 1X4A12-166 & 177

TABLE 1

TRAIN	VALVE	HAND SW.
A	1-HV-9451	1-HS-9451
B	9452	9452
B	9453	9453
A	9454	9454

TABLE 2

SOL VLV TRAIN A	SOL VLV TRAIN B	SG. BLOW DOWN VALVES	E/D
1-HY-7603E	1-HY-7603J	1-HV-7603A	1X3D-BC-Q01A
F	K	B	-Q01B
G	L	C	-Q01C
H	M	D	-Q01D

TABLE 3

TRAIN	SAFETY RELATED HAND SWITCH	NON-SAFETY RELATED HAND SWITCH
A	1-HS-6506A	1-HS-5344
B	1-HS-6506B	1-HS-5345

AUX FW AUTO SIG & STM GEN SAMPLE ISO VLV

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
STEAM GENERATOR BLOWDOWN
AND SAMPLE SYSTEM

NUCLEAR SAFETY RELATED										ENG. MGR.
INCORP. ABN-11574.	02243	GIB	MID	SM	WFO					
REVISIONS	DATE	DR	CHK	RE	DM	DM	DM	PDM		DATE
ISSUED FOR CONSTRUCTION	3/9/79	SEE	MICROFILM FOR	SIGNATURES						
REVISIONS	DATE	DR	CHK	SUPV	EGL	EGS	CHFE	PE	QAE	

SCALE: NONE	DRAWING NO.	REV.
JOB NO. 10604	1X5DN117-1	7

SIZE C 17X22

This drawing and the design it covers are the property of BECHTEL. They are loaned to you on the borrower's express agreement that they will not be reproduced, copied, altered, exhibited, or used except in the limited way and for the purpose intended by the lender to the borrower.

OPEN

PRP, 1-HS-9553A OPEN(M)

ENERGIZE
SOLENOID
OPEN VALVE
1-HV-9553A

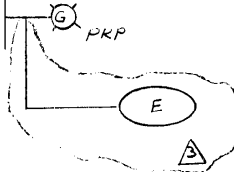
PRP

CLOSE

PRP, 1-HS-9553A CLOSE(M)

DE-ENERGIZE
SOLENOID
CLOSE VALVE
1-HV-9553A

PRP



CLOSE OPEN



1-HS-9553A(TYP)
MAINTAINED

NOTE:

1. PROCESS SOLENOID VALVE 1-HV-9553A
SHOWN. OTHER SOLENOID VALVES LISTED
IN TABLE 1 ARE SIMILAR.

TABLE 1

VALVE	CNTL. SW.
1-HV-9553A	1-HS-9553A
9553B	9553B
9554A	9554A
9554B	9554B
9555A	9555A
9555B	9555B
9556A	9556A
9556B	9556B

REF. DWGS

PEID 1X4DB159-1 & 159-2
E.D. 1X3D-BC-2035, T

SAMPLING VALVES

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF. E.	P. E.	Q. A. E.	ENG. MGR.
1	SHOWN COMP INPUT PER TID LIST REV'S (NO PHYSICAL IMPACT)	3/27/85	ZEP	ALV							
2	REVISED REF. DWGS	12-8-81	AL	FAL							
3	CHANGED REF DWGS	1-10-80	HL	FAL							
4	ISSUED FOR CONSTRUCTION	3-9-79	NED	FAL	MRK.						

BECHTEL LOS ANGELES GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM STEAM GENERATOR BLOWDOWN AND SAMPLE SYSTEM		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN117-2	3

BM 9510 PEID 159-1 REV

SIZE B 11x17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL
AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS
AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS
3/27/85 Ben Mays SECTION SUPERVISOR

9 8 7 6 5 4 3 2 1

This drawing and the design it covers are the property of BECHTEL. They are loaned to the borrower's agency agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and private

OPEN

QPCP, 1-HS-5194, OPEN. (P)

NOTE 2

ENERGIZE
SOL VALVE
1-HY-5194

PNEU

OPEN
VALVE
1-HV-5194



QPCP

CLOSE OPEN



1-HS-5194 (TYP)
SPRINGS RETURN
TO NEUTRAL

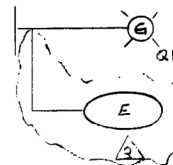
CLOSE

QPCP, 1-HS-5194, CLOSE (P)

DE-ENERGIZE
SOL VALVE
1-HY-5194

PNEU

CLOSE
VALVE
1-HV-5194



NOTE:

1. VALVE 1-HV-5194 SHOWN. OTHER VALVES LISTED IN TABLE 1 ARE SIMILAR.
2. HAND SWITCH SHALL BE HELD IN OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW CIRCUIT TO SEAL IN THROUGH VALVE LIMIT SWITCH.

TABLE 1

SERVICE	HAND SWITCH	SOL VALVE	VALVE
CHEMICAL FEED	1-HS-5194	1-HY-5194	1-HV-5194
	5	5	5
	6	6	6
	7	7	7
WET LAYUP	1-HS-5278	1-HY-5278	1-HV-5278
	79	79	79
	80	80	80
	81	81	81

REF:

P & I D 1X4DB159-1, 159-3 & 168-3
E. D. 1X3D-80-C04N, Q04A

STM GEN CHEM FEED & WET LAYUP VALVE

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM STEAM GENERATOR BLOWDOWN AND SAMPLE SYSTEM		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN117-3	3

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF.E	P.E.	Q.A.E.	ENG. MGR.
1	SHOWN COMP INPUT PER 10 LIST REVS (NO PHYSICAL IMPACT)	3/27/85	ZEP	ALV							
2	ADDED REF DWG	12/8/81	ALV	FAL							
3	ADDED REF DWGS	1-10-80	ALV	FAL							
4	ISSUED FOR CONSTRUCTION	9/17/79	ALV	FAL	MLK						

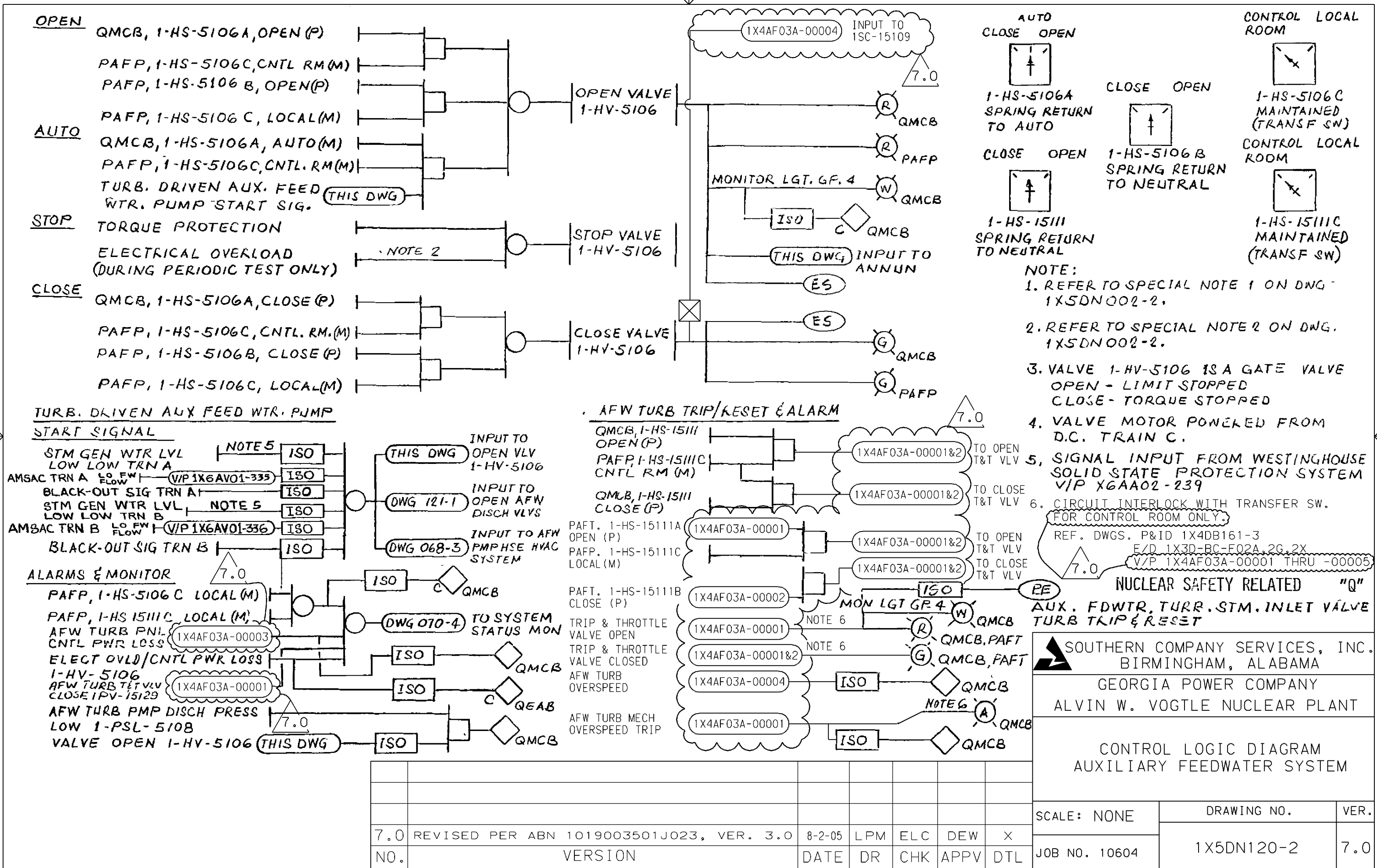
BM 9510 P&ID 159-1 REV. P&ID 168-3 REV.

SIZE B 11x17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE: 5/27/85 CAMERA OPERATOR: SECTION SUPERVISOR:

9 8 7 6 5 4 3 2 1



14.5X

This drawing and all data it contains are the property of BECHTEL. They are loaned to the borrower's express agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and extent permitted by my written consent given by the lender to the borrower.

OPEN

QPCP, 1-HS-5162 OPEN (M)

AUTO

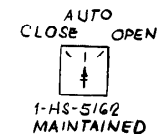
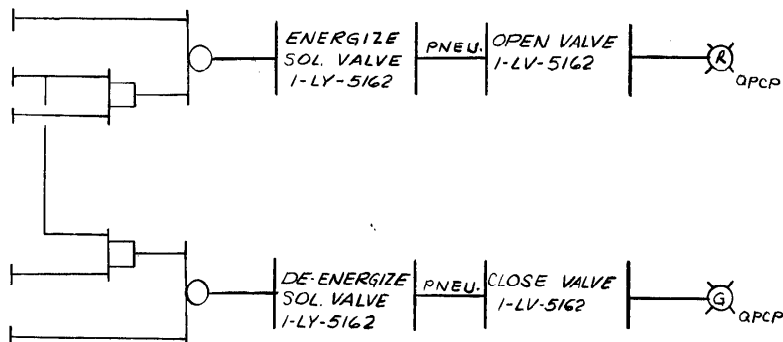
QPCP, 1-HS-5162 AUTO (M)

CONDENSATE STORAGE TK.
LEVEL LOW 1-LSL-5162

CONDENSATE STORAGE TK.
LEVEL HIGH 1-LSH-5162

CLOSE

QPCP 1-HS-5162 CLOSE (M)



NOTE:
1. VALVE 1-LV-5162 SHOWN
1-LV-5158 SIMILAR

REF DWGS:

PCID 1X40B161-1
ED 1X3D-BC-F02E,F

COND. STOR. TANK	VALVE	SOL. VALVE	LEVEL SW.	LEVEL SW.	HAND SW.
1-1302-V4-002	1-LV-5162	1-LV-5162	1-LSH-5162	1-LSL-5162	1-HS-5164
↓ -001	↓ -5158	↓ -5158	↓ -5158	↓ -5158	↓ 5158

CONDENSATE TANK MAKE-UP VALVE

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM AUXILIARY FEEDWATER SYSTEM		
SCALE:	DRAWING NO.	REV.
JOB NO. 9510	1X5DN120-3	1

NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EG1	EGS	CHF.E.	P.E.	G.A.E.	ENG. MGR.
1	ADDED REF DWGS.	1-10-80	HL	FAL							
2	ISSUED FOR CONSTRUCTION	3-15-79	NBD	FAL	MKK.						

BM 9510

SIZE B 11x17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.
DATE: 1-10-80 CAMERA OPERATOR: [Signature] SECTION SUPERVISOR: [Signature]

14.3X

SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are loaned to the borrower's express agreement that they will not be re-produced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

OPEN

QMCB, 1-HS-5178 OPEN (P)

AUTO

QMCB, 1-HS-5178 AUTO (M)

STAND PIPE DRAIN LEVEL
HIGH 1-LSH-5178

STOP

TORQUE PROTECTION
ELECTRICAL PROTECTION

CLOSE

QMCB, 1-HS-5178 CLOSE (P)

ALARM

VALVE OPEN, 1-HV-5178

STAND PIPE DRAIN LEVEL
HIGH 1-LSH-5178

TABLE 1		
VALVE	HAND SW	LEVEL SW
1-HV-5178	1-HS-5178	1-LSH-5178
1-HV-5179	1-HS-5179	1-LSH-5179

NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EGS	CHF. E.	P. E.	Q. A. E.	ENG. MGR.
1	REVISED AS SHOWN PER P&ID 1X4DB161-3, DCN No 25	11-14-84	SA	W. J.						
2	CHANGED VALVE HV-5181 FROM MCV TO SOLENOID VALVE.	7-9-81	FAL	V. V.						
3	REVISED 1-HV-5178 CLOSE INPUT & ANNUN INPUT	1-10-80	HL	FAL						
4	ISSUED FOR CONSTRUCTION	4-17-79	NBD	FAL	MKK					

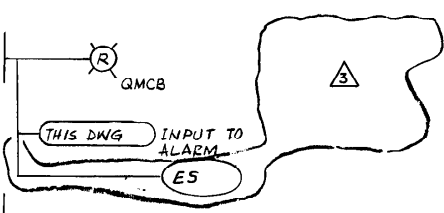
BM 9510

OPEN VALVE
1-HV-5178

STOP VALVE
1-HV-5178

CLOSE VALVE
1-HV-5178

20-200 SEC
S.P. 30 SEC



CLOSE AUTO OPEN
1-HS-5178
SPRING RETURN
TO AUTO

NOTE:

1. VALVE 1-HV-5178 IS A GLOBE VALVE TYPE
OPEN - LIMIT STOPPED
CLOSE - TORQUE STOPPED
2. VALVE 1HV-5178 SHOWN. OTHERS SHOWN IN TABLE 1, SIMILAR EXCEPT AS TABULATED.

REF. DWGS.

P&ID 1X4DB 161-3
E. P. 1X3D-8C-F02#J

AUX. FW TURB. STM. DRN. TO CONDENSER

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM AUXILIARY FEEDWATER SYSTEM		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN120-5	3

SIZE B 11x17

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

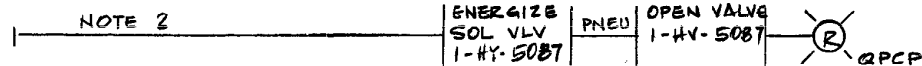
DATE: 11-14-84
CAMERA OPERATOR
SECTION SUPERVISOR

9 8 7 6 5 4 3 2 1



OPEN

QPCP, 1-HS-5087, OPEN, (P)



AUTO
CLOSE OPEN

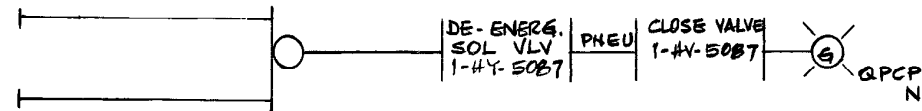


1-HS-5087

SPRING RETURN
TO AUTO

AUTO

PUMP SUCTION PRESS. LOW
1-PSL-5087



CLOSE

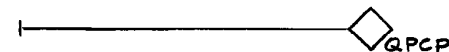
QPCP, 1-HS-5087 CLOSE (P)

NOTE:

1. VALVE 1-HY-5087 SHOWN, 1-HY-5088 IS SIMILAR.
2. TO OPEN VALVE, CONTROL SWITCH SHALL BE HELD ON OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW THE CIRCUIT TO SEAL-IN THROUGH VALVE POSITION SWITCH. AND TO RESET PRESSURE SWITCH AFTER LINE IS DEPRESSURIZED.

ALARM

PUMP SUCTION PRESS. LOW
1-PSL-5087



REF DWG

P&ID 1X4DB161-1
E.D. 1X3D-BC-F02M



TABLE 1

VALVE	SWITCH	SOL VLV	PRESS SW
1-HY-5087	1-HS-5087	1-HY-5087	1-PSL-5087
B	B	B	B

VACUUM DEGASIFIER ISOL. VALVE



BECHTEL

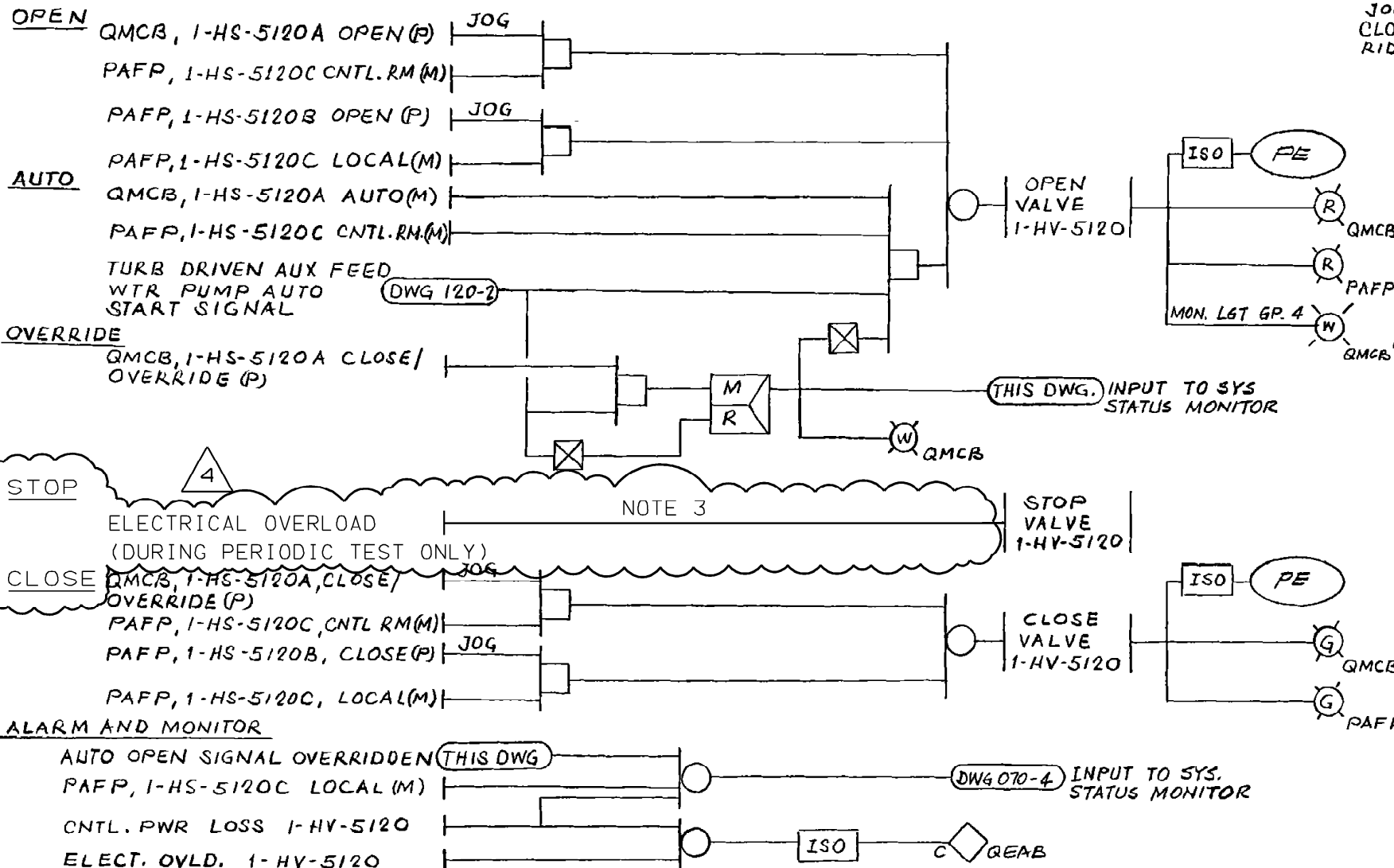
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
AUXILIARY FEEDWATER SYSTEM

NO.	REVISIONS	DATE	DR	CHK	SUPV.	EGL	EGS	CHF. E.	P. E.	Q. A. E.	ENG. MGR.
1	CORRECTED REF. DWG.	2-15-83	ZEP	ALV							
2	REVISED OPEN INPUT, NOTE 2 AND ADDED REF DWGS	1-10-80	HL	FAL							
3	ISSUED FOR CONSTRUCTION	4-6-79	HL	FAL	MKK						

SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN120-6	2



- NOTE:
1. VALVE 1-HV-5120 SHOWN OTHER VALVES LISTED IN TABLE 1 ARE SIMILAR.
 2. REFER TO SPECIAL NOTE 1 ON DWG. 1X5DN002-2
 3. REFER TO SPECIAL NOTE 2 ON DWG. 1X5DN002-2
 4. VALVES LISTED IN TABLE 1 ARE GLOBE VALVES
OPEN - LIMIT STOPPED
CLOSE - LIMIT STOPPED
 5. VALVE MOTORS LISTED IN TABLE 1 ARE D.C.

TABLE 1

TRAIN	PUMP NO	VALVE	SWITCHES			
C	1-1302-P4-001-000	1-HV-5120	1-HS-5120A	1-HS-5120B	1-HS-5120C	
		5122	5122A	5122B	5122C	
		5125	5125A	5125B	5125C	
		5127	5127A	5127B	5127C	

PAFP, 1-HS-5120C LOCAL (M)

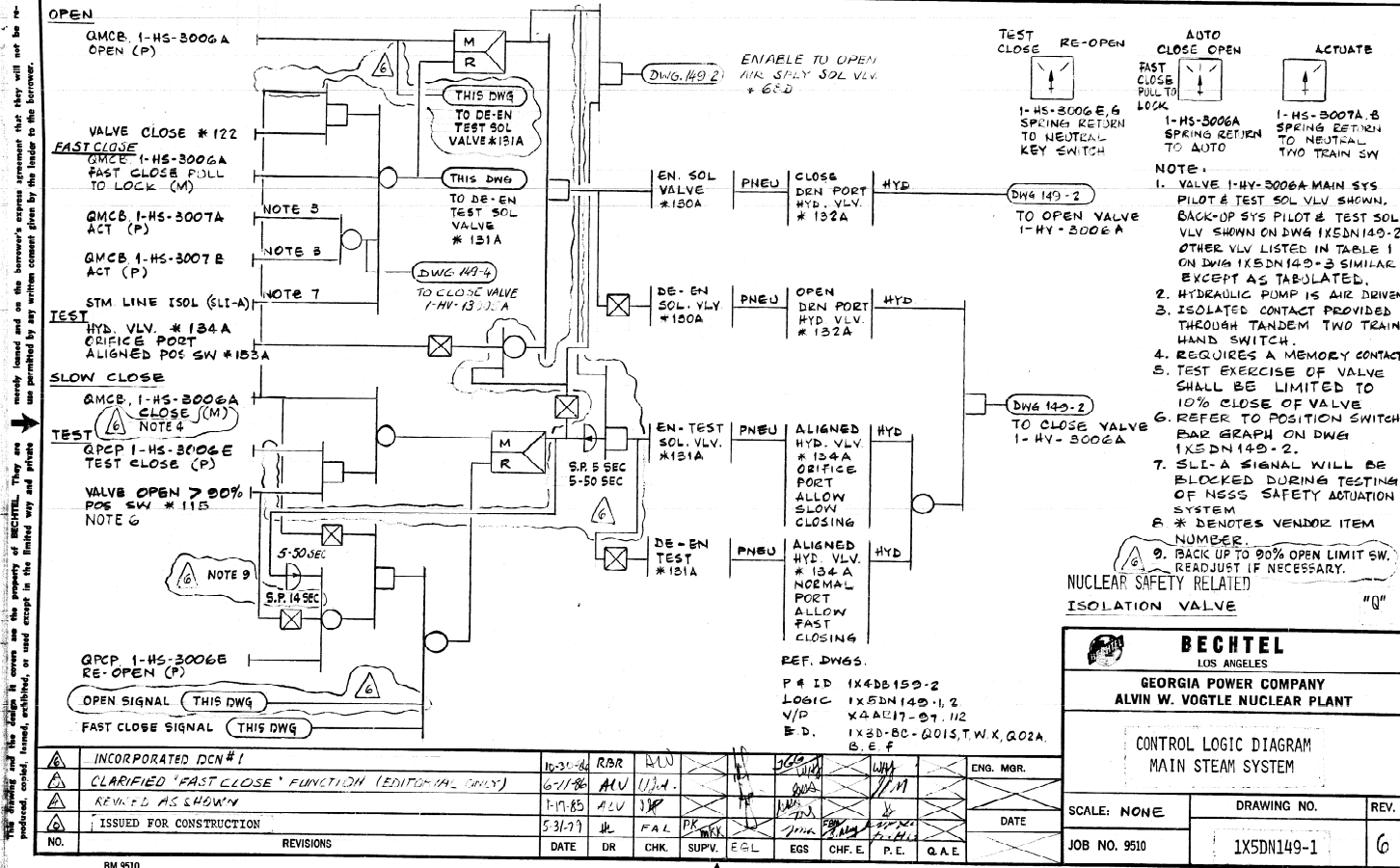
ISO C QMCB

△							
△							
△							
△	INCORP. PER DCP 98-V1N0025	04/16/02	PM	TSL	RBH		
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL	

SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM		
AUXILIARY FEEDWATER VALVES TO STEAM GENERATOR		
SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN121-1	4

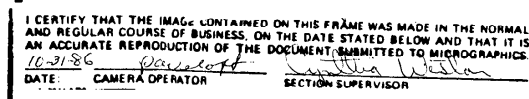
14.5X

CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS
 DATE: 10/21/86
 CAMERA OPERATOR: [Signature]
 SECTION SUPERVISOR: [Signature]



I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS
 DATE: 10/21/86
 CAMERA OPERATOR: [Signature]
 SECTION SUPERVISOR: [Signature]

YCI



ALARMS AND MONITORS

* 115
VALVE POS. SW.
BAR GRAPH

FULLY
CLOSEFULLY
OPEN

10%

HYD. RESERVOIR LEVEL
LOW * 48 (NOTE 5)

ACCUMULATOR GAS PRESS.
HIGH * 137C

HYDRAULIC PRESSURE
LOW * 131B (NOTE 5)

CONTROL POWER LOSS

REF DWGS

P & ID 1X4DB159-2
LOGIC 1X5DN149-1,2
V/P X4AR17-97,101
E.D. 1X3D-BG-Q01S,T,W,X
Q02A,B,E,F

QMC5

ACCUMULATOR GAS PRESS
LOW * 137A

150

QMC6

TABLE 1

TRAIN	SFTY SIG.	VALVE	HAND SW MAIN AND BACK-UP SYSTEM	HAND SW. MANUAL ISOL. ACTUATION	TEST SW MAIN SYS.	TEST SW. BACK-UP	SOL VALVE MAIN SYS.	SOL. VALVE BACK-UP SYS.	HYD. VALVE MAIN SYS.	HYD VALVE BACK-UP SYS	SOL.VLV TEST EXERC. MAIN SYS.	SOL.VLV. TEST EXERC. BACK UP SYS.	HYD ORIFICE VALVE MAIN SYS.	HYD. ORIFICE VALVE BACK-UP SYS	HYD. ORIFICE VLV POS. SW MAIN SYS	HYD ORIFICE VLV POS. SW BACK UP SYS.	TEST EXERC POS SW.	VALVE POS SW	HYD RSVR LEVEL SWITCH	HYD PRESS SWITCH	ACCUM GAS PRESS SWITCH	AIR SUPPLY SHUT OFF SOL VLV
A	SLI-A	1-HV-2006A	1-HS-3006A	1-HS 3007A 1-HS-3007B	1-HS-3006E	1-HS-3006G	*130A	*130B	*132A	*132B	*131A	*131B	*134A	*134B	*153A	*153B	*115	*122	*48	*137B	*137A	*68D
B	-B	-3006B	-3006B		-3006F	-3006H																
A	-A	-3016A	-3016A		-3016E	-3016G																
B	-B	-3016B	-3016B		-3016F	-3016H																
A	-A	-3026A	-3026A		-3026E	-3026G																
B	-B	-3026B	-3026B		-3026F	-3026H																
A	-A	-3036A	-3036A		-3036E	-3036G																
B	-B	-3036B	-3036B		-3036F	-3036H																

NOTE.

- LOGIC SHOWN ON DWG. 1X5DN149-1 & 2
- * DENOTES VENDOR ITEM NUMBER.
- VALVE BAR GRAPH POSITION SWITCH SOLID LINE DENOTES CONTACT CLOSED.
- REFER TO DWG 1X5DN149-1 FOR OTHER NOTES

5. THE HYD RESV LEVEL LOW SWITCH AND HYD PRESSURE LOW SWITCH ARE NOT SAFETY RELATED. SEE CALC. XSCFEMA1816.

5

VALVE	OPEN POSITION SWITCH		TEST POSITION SWITCH		CLOSE POSITION SWITCH	
	VENDOR	BECHTEL	VENDOR	BECHTEL	VENDOR	BECHTEL
1HV-3006A	* 111	1ZSO-3006A	* 115	1ZSOT-3006A	* 122	1ZSC-3006A
1HV-3006B		1ZSO-3006B		1ZSOT-3006B		1ZSC-3006B
1HV-3016A		1ZSO-3016A		1ZSOT-3016A		1ZSC-3016A
1HV-3016B		1ZSO-3016B		1ZSOT-3016B		1ZSC-3016B
1HV-3026A		1ZSO-3026A		1ZSOT-3026A		1ZSC-3026A
1HV-3026B		1ZSO-3026B		1ZSOT-3026B		1ZSC-3026B
1HV-3036A		1ZSO-3036A		1ZSOT-3036A		1ZSC-3036A
1HV-3036B		1ZSO-3036B		1ZSOT-3036B		1ZSC-3036B

△						
△						
△	INCORP. PER ABN-50579	7-16-98	ELC	EOG	MWD	✗
△	ISSUED FOR CONSTRUCTION	SEE MICROFILM FOR SIGNATURES				
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL

NUCLEAR SAFETY RELATED

EQUIPMENT LIST AND ALARM

Q

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
MAIN STEAM SYSTEM

SCALE: NONE	DRAWING NO.	REV
JOB NO. 10604	1X5DN149-3	5

This drawing and the design it covers are the property of BECHTEL. They are loaned to the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

OPEN

QMCB, I-HS-13005A, OPEN (PI)

NOTE 2

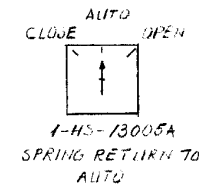
ENERGIZE
SOL VALVE
I-HY-13005A

PNEU

OPEN VALVE
I-HV-13005A

QMCB

ES



AUTO

QMCB, I-HS-13005A, AUTO (PI)

QMCB, I-HS-3007A
I-HS-3007B

DWG 149-1

STM LINE ISOL (SLI-A)

DE ENERGIZE
SOL VALVE
I-HY-13005A

PNEU

CLOSE VALVE
I-HV-13005A

QMCB

ES

MON LIGHT GR. 4

4

NOTES:

1. VALVE I-HV-13005A SHOWN. OTHER VALVES LISTED IN TABLE 1 SIMILAR EXCEPT AS TABULATED.
2. HAND SWITCH SHALL BE HELD ON OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW CIRCUIT TO SEAL IN THROUGH VALVE POSITION SWITCH.

REF DWGS

P&ID 1X4DA153-2
E-D 1X3D-BC-Q02H, J

TABLE 1

HAND VALVE	HAND SWITCH	SAFETY SIGNAL	SOLENOID VALVE
I-HV-13005A	I-HS-13005A	SLI-A	I-HY-13005A
↓ B	↓ B	↓ -B	↓ B
I-HV-13006A	I-HS-13006A	-A	I-HY-13006A
↓ B	↓ B	↓ -B	↓ B
I-HV-13007A	I-HS-13007A	-A	I-HY-13007A
↓ B	↓ B	↓ -B	↓ B
I-HV-13008A	I-HS-13008A	-A	I-HY-13008A
↓ B	↓ B	↓ -B	↓ B

MSIV BYPASS VALVES

NUCLEAR SAFETY RELATED



BECHTEL

LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
MAIN STEAM SYSTEM

NO.	REV. TO INC. DCN 1	DATE	DR	CHK.	RPE	DM	ODPM	DPM	DPM	ENG. MGR.
1	CLARIFY HS INPUT	5-25-84	ALV	WJH						
2	ISSUED FOR CONSTRUCTION									

DATE	DATE
------	------

SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN149-4	4

BM 9510

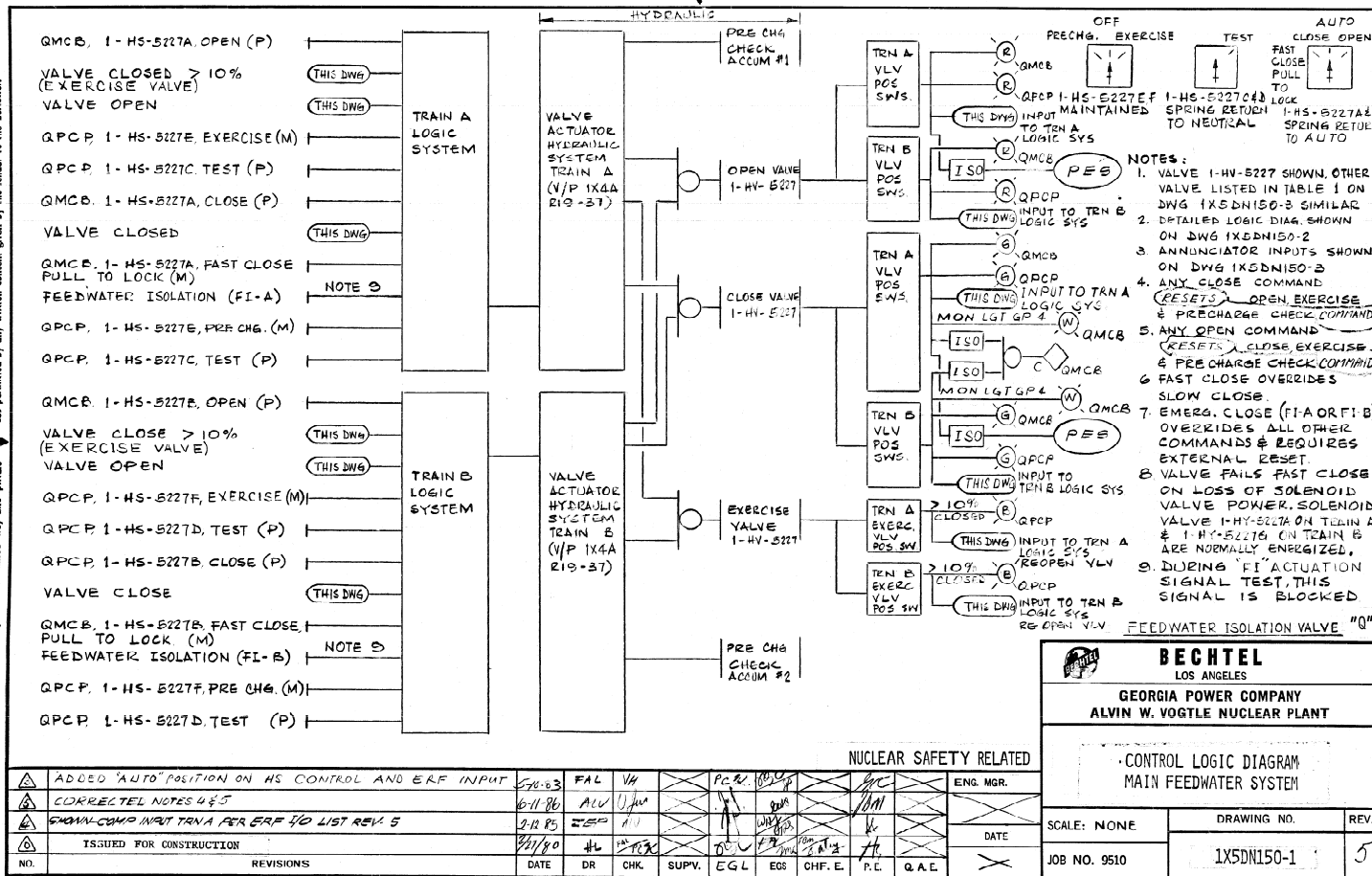
SIZE B 11x17

14.5X

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE 6-12-86 BY [Signature] CAMERA OPERATOR SECTION SUPERVISOR

This drawing and the design & content are the property of BECHTEL. They are loaned and on the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, or used except in the limited way and for the purpose for which they are loaned.



I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.

DATE 6-12-86 BY [Signature] CAMERA OPERATOR SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are loaned and on the borrower's express agreement that they will not be re-used, modified, or used except in the limited way and within the limitations set forth in the loan agreement. Any unauthorized use is prohibited by any written or oral agreement between the parties.

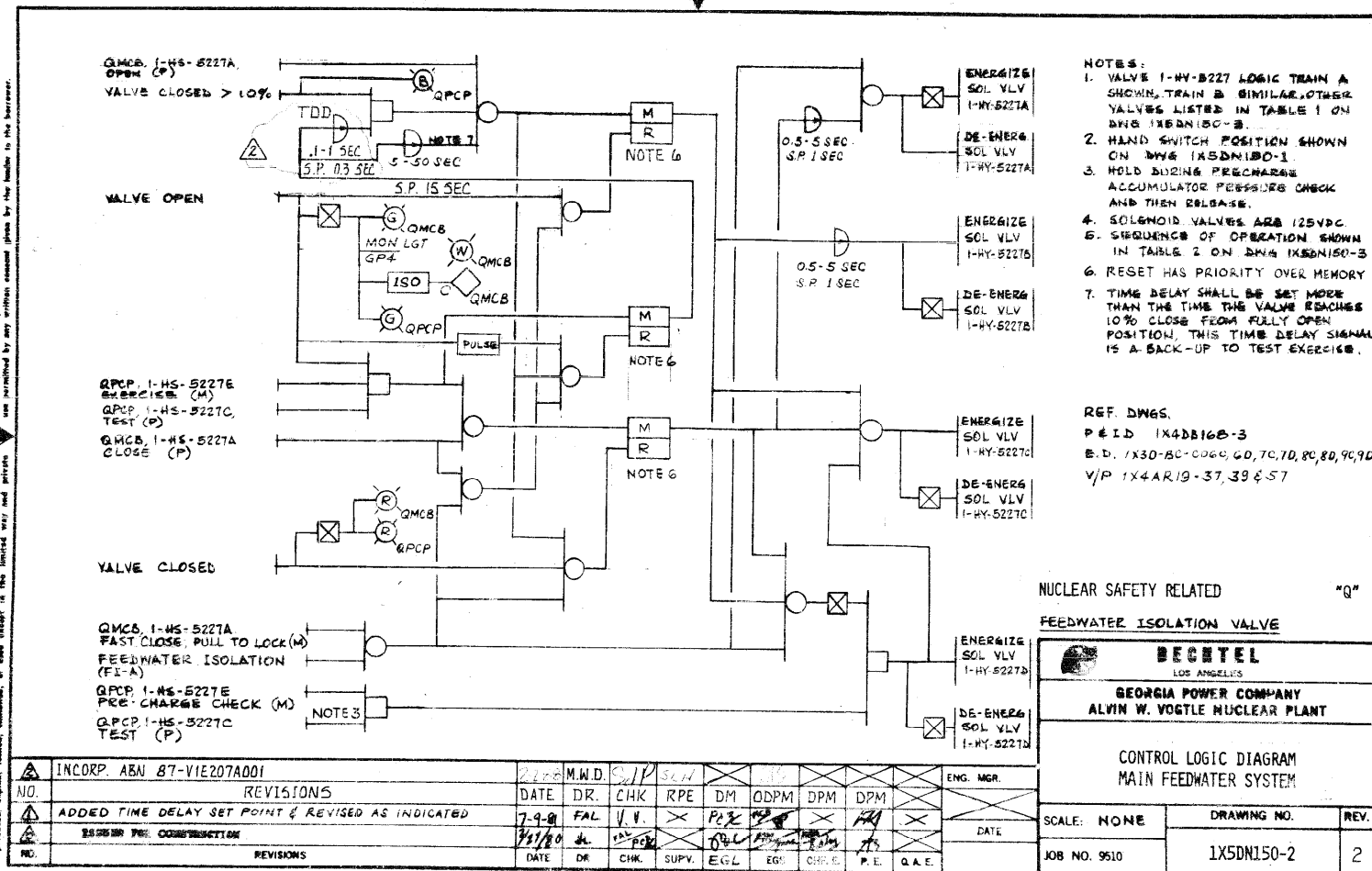


TABLE 1 (EQUIPMENT LIST)

VALVE	HAND SWITCHES			SOLENOID VALVES				SFTY ACT	TRAIN	HYDRAULIC PRESS SW	AIR RESERV. PRESS SW	HYD. TK LVL SW	HYD. PRESS. RELIEF VLV.
1-HV-5227	1-HS-5227A	1-HS-5227C	1-HS-5227E	1-HY-5227A	1-HY-5227B	1-HY-5227C	1-HY-5227D	FI-A	A	1-PS-5227A	1-PS-5227B	1-LS-5227	1PSV-5227C
	27B	27D	27F	27G	27H	27J	27K	B	B		27C		1PSV-5227D
	28A	28C	28E	28A	28B	28C	28D	A	A		28B		1PSV-5228C
28	28B	28D	28F	28G	28H	28J	28K	B	B	28A	28C	28	1PSV-5228D
	29A	29C	29E	29A	29B	29C	29D	A	A		29B		1PSV-5229C
29	29B	29D	29F	29G	29H	29J	29K	B	B	29A	29C	29	1PSV-5229D
	30A	30C	30E	30A	30B	30C	30D	A	A		30B		1PSV-5230C
30	30B	30D	30F	30G	30H	30J	30K	B	B	30A	30C	30	1PSV-5230D

NOTES:

- TABLE 2 SHOWS VALVE 1-HY-5227 SOLENOID VALVE'S SEQUENCE OF OPERATION, OTHER VALVES SIMILAR
- E - ENERGIZE
D - DE-ENERGIZE
TD - TIME DELAY
- LOGIC DIAGRAM SHOWN ON DWG 1X5DN150-1 & 2
- ANNUNCIATOR INPUTS FOR VALVE 1-HV-5227 SHOWN OTHER VALVES ALARM INPUT SIMILAR AS LISTED IN TABLE 1.

TABLE 2 (SEQUENCE OF OPERATION)

CONTROL ACTION	STEP	SOLENOID VALVE STATUS (TRAIN A)				SOLENOID VALVE STATUS (TRAIN B)			
		1-HY-5227A	1-HY-5227B	1-HY-5227C	1-HY-5227D	1-HY-5227E	1-HY-5227H	1-HY-5227J	1-HY-5227K
SLOW OPEN	FULL CLOSE	E	D	D	D	E	D	D	D
	OPENING		TD, E	E			TD, E	E	
	FULL OPEN		D	D			D	D	
SLOW CLOSE	FULL OPEN								
	CLOSING	TD, D		E		TD, D		E	
	FULL CLOSE	E		D		E		D	
FAST OR EMERG CLOSE	FULL OPEN								
	CLOSING	D				D			
	FULL CLOSE								
EXERCISE 10% VALVE STROKE	FULL OPEN	E				E			
	CLOSING	TD, D		E		TD, D		E	
	RE-OPEN	E	TD, E			E	TD, E		
ACCUM INERT GAS PRE CHG CHECK	FULL OPEN		D	D			D	D	
	OPEN OR CLOSE								
	ACCUM HYDR FLUID DRN			E	E			E	E
	RECHG ACCUM HYDR FLUID			D	D			D	D

ALARMS

VALVE HYDRAULIC PRESS HIGH 1-PS-5227A

TRAIN A AIR RESERVOIR PRESS LOW 1-PS-5227B

TRAIN B AIR RESERVOIR PRESS LOW 1-PS-5227C

HYDRAULIC TANK LEVEL LOW 1-LS-5227

REF DWGS:

P&ID 1X4DB16B-3

E.D 1X3D-8C-C06C, 6D, 7C, 7D, 8C, 8D, 9C, 9D

NUCLEAR SAFETY RELATED

"Q"

ALARMS & EQUIPMENT LIST

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMAGEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANTCONTROL LOGIC DIAGRAM
MAIN FEEDWATER SYSTEM

SCALE: NONE

DRAWING NO.

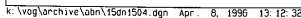
REV

JOB NO. 10604

1X5DN150-3

4

△									
△									
△									
△	INCORP. PER DCP 00-V1N0045	12-12-03	RCR	RBH	DEW	X			
NO.	REVISIONS	DATE	DR	CHK	APPV	DTL			



This drawing and the design it covers are the property of BECHTEL. They are loaned to you and are not to be reproduced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

OPEN

QMCB, 1-HS-15214 OPEN (P)

NOTE 1

AUTO

AB, CVCS LETDOWN HX RM R-A07
HIGH TEMP 1-TY-15214 D (1X5DV202)
AB, CVCS VLV GALLERY RM R-A08
HIGH TEMP 1-TY-15214 F (1X5DV203)
AB, PIPE PENET RM R-A09
HIGH TEMP 1-TY-15214 G (1X5DV204)

CLOSE

QMCB, 1-HS-15214 CLOSE (P)

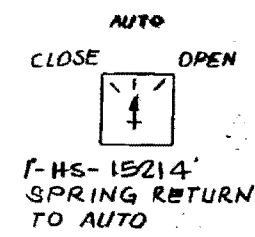
ENERGIZE SOL VALVE
1-HY-15214

PNEU

OPEN VALVE
1-HV-15214



QMCB



DE-ENERG SOL VALVE
1-HY-15214

PNEU

CLOSE VALVE
1-HV-15214



QMCB

NOTES:

1. HANDSWITCH SHALL BE HELD ON OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW CIRCUIT TO SEAL IN THROUGH VALVE POSITION SWITCH.
2. TRAIN B POWER SUPPLY.

ALARM

AB, CVCS LETDOWN HX RM R-A07
HIGH TEMP 1-TY-15214 J (1X5DV202)
AB, CVCS VLV GALLERY RM R-A08
HIGH TEMP 1-TY-15214 K (1X5DV203)
AB, PIPE PENET RM R-A09
HIGH TEMP 1-TY-15214 L (1X5DV204)



QPCP

REF DWGS.

P & ID 1X4DB114

E. D. 1X3D-BD-COIS.

NUCLEAR SAFETY RELATED

"Q"

BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
CONTROL LOGIC DIAGRAM CVCS LETDOWN HX INLET PIPE BREAK ROOM PROTECTION		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9510	1X5DN151-1	5

SCANNED DATE: SEP 14 1991

3	INPUT PARAMETER CHANGED FROM FY-15214A TO PY-15214A PER P&ID	6-13-83	ALV	FAL												ENG. MGR.
2	INCORPORATED DCN #1 (YFCRB-4353)	9-17-86	ALV	NCB												
1	CHANGED SWITCH ACTION PER PROCESS REQUIREMENTS	4-2-84	ALV	FAL												
0	ISSUED FOR CONSTRUCTION	10-24-80	FAL	XCB												
NO.	REVISIONS	DATE	DR	CHK	SUPV.	E&L	EGS	CHF. E.	P. E.	Q. A. E.						

BM 9510 P&ID REV.

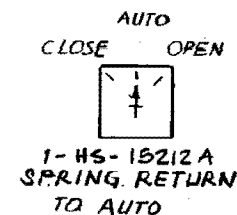
SIZE B 11 x 17

ILL 9-14-91

I CERTIFY THAT THE IMAGE CONTAINED ON THIS FRAME WAS MADE IN THE NORMAL AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRODUCTION OF THE DOCUMENTS SUBMITTED TO MICROGRAPHICS.

9-18-86 James Perales W. T. Jantke
DATE: CAMERA OPERATOR SECTION SUPERVISOR

This drawing and the design it covers are the property of BECHTEL. They are reproduced, copied, loaned, exhibited, or used except in the limited way and private



1. VALVE 1-HV-15212A SHOWN. OTHER VALVES LISTED IN TABLE 1. SIMILAR EXCEPT AS TABULATED

REF. DWGS.

PE ID 1X4DB179-1, 159-1, 159-3

LOOP DIAG. 1X5DV228,230,232,234

E.D. 1X3D-BC-Q01J

SCANNED DATE: SEP 16 1991

NUCLEAR SAFETY RELATED

SIZE B 11 x 17

SERVICE	TRAIN	SOL VALVE	VALVE	HAND SW.	TEMP SW	FLOW SW.
SG 1 BLOWDOWN LINE	A	1-HY-15212A	1-HV-15212A	1-HS-15212A	1-TY-15212E, F, G & H	1-FY-15212A
2	A	-15212B	-15212B	-15212B		-15212B
3	A	-15212C	-15212C	-15212C		-15212C
4	A	-15212D	-15212D	-15212D		-15212D

BM 9510 PE10 179-1 REV.5 159-1 REV.7 159-3 REV.1

REV

This drawing and the design it covers are the property of BECHTEL. They are reproduced, copied, loaned, exhibited, or used except in the limited way and private

OPEN

QACP, 1-HS-15216A OPEN (P)

NOTE 2

AUTO

AB, PIPE PENET RM R-B08
HIGH TEMP 1-TY-15216E

AB, PULL OUT AREA RM R-C106
HIGH TEMP 1-TY-15216F

AB, VESTIBULE AREA RM R-C107
HIGH TEMP 1-TY-15216G

AB, SGB HX RM R-C108
HIGH TEMP 1-TY-15216H

SG1 BLOWDOWN LINE
HIGH FLOW 7-FY-15216A

CLOSE

QPCP, 1-HS-15216A CLOSE (P)

ALARM

AB, PIPE PENETRM R-B08
HIGH TEMP 1-TY-15216J

AB, PULL OUT AREA RM R-C106
HIGH TEMP 1-TY-15216 K

AB, VESTIBULE AREA RM R-C107
HIGH TEMP 1-TY-15216L


AB, SGB HX RM R-C108
HIGH TEMP 1-TY-15216 M

TABLE 1

SERVICE	TRAIN	SOL VALVE	VALVE	HAND SW.	TEMP SW.	FLOW SW.
SG 1 BLOWDOWN LINE	B	I-HY-15216A	I-HV-15216A	I-HS-15216A	I-TY-15216 E, F, G & H	I-FY-15216A
2	B	-15216B	-15216B	-15216B		-15216B
3	B	-15216C	-15216C	-15216C		-15216C
4	B	-15216D	-15216D	-15216D		-15216D

△												ENG. MGR.
△												
①	DELETED MONITORING LIGHTS. VALVES NOT CONSIDERED CNMT. ISOLATION	10-18-82	AV	FAL		PCZC	022					
②	ISSUED FOR CONSTRUCTION	6-25-82	AD	FAL		PCZC	022	215	1A7			DATE
NO.	REVISIONS	DATE	DR	CHK.	SUPV.	EGL	EGS	CHF. E.	P. E.	Q. A. E.		

BM 9510

AUTO
CLOSE OPEN

1-HS-15216A
SPRING RETURN
TO AUTO

NOTES.

1. VALVE 1-HV-15216A SHOWN. OTHER VALVES LISTED IN TABLE 1 SIMILAR EXCEPT AS TABULATED.

2. HANDSWITCH SHALL BE HELD ON OPEN POSITION UNTIL VALVE IS FULLY OPEN TO ALLOW CIRCUIT TO SEAL IN THROUGH VALVE POSITION SWITCH.


REF. DWGS.

P & ID 1X4DB179-1,159-1,159-3
 LOOP DIAG. 1X5DV227,229,231 & 233
 E.D. 1X3D-BC-QOIK

SCANNED DATE: SEP 14 1991

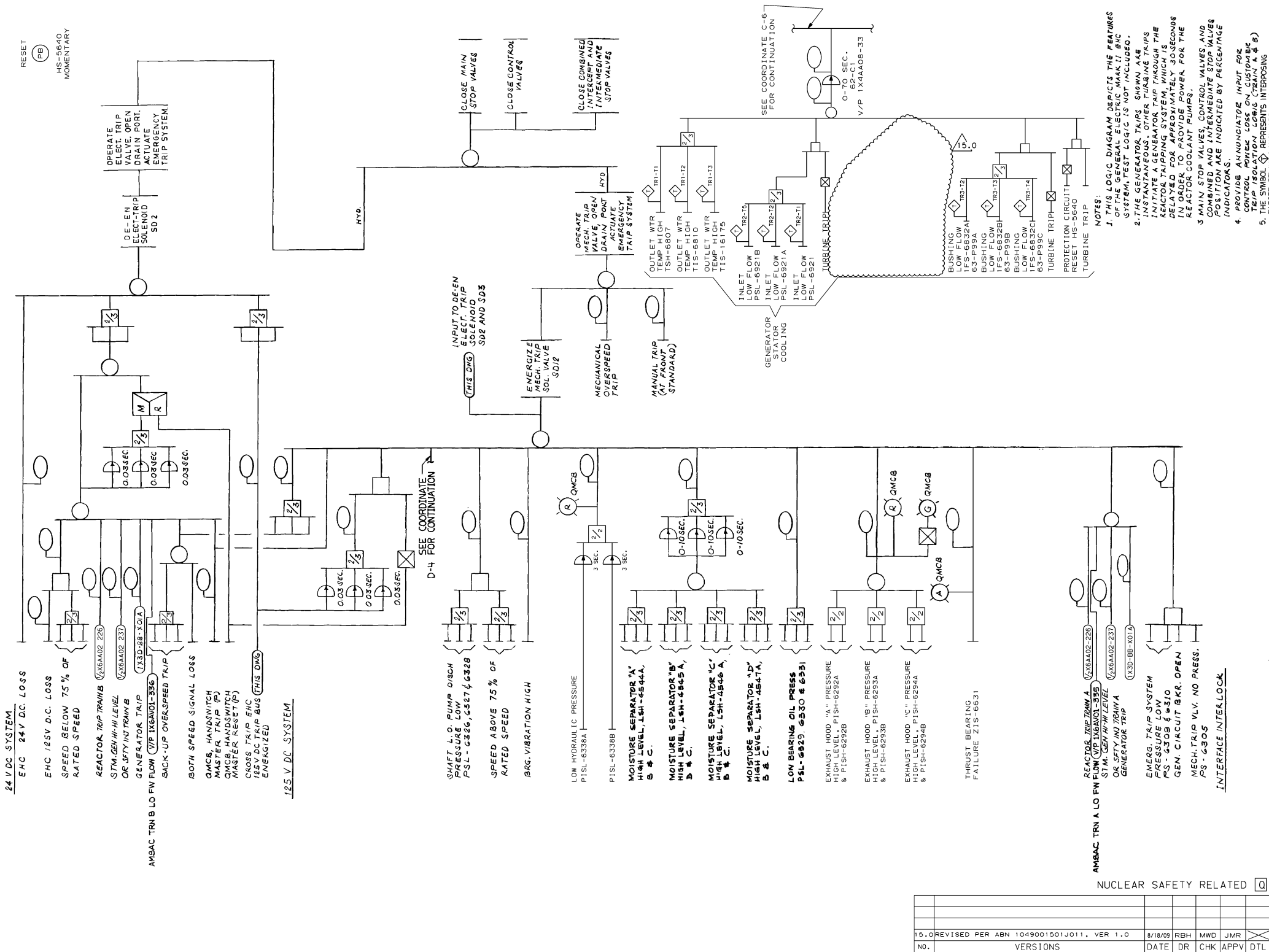
NUCLEAR SAFETY RELATED

10

 <h1 style="text-align: center;">BECHTEL</h1> <p style="text-align: center;">LOS ANGELES</p>		
<p>GEORGIA POWER COMPANY</p> <p>ALVIN W. VOGTLE NUCLEAR PLANT</p>		
<p>CONTROL LOGIC DIAGRAM</p> <p>AB STM GEN BLOWDOWN</p> <p>PIPE BREAK ROOM PROTECTION</p>		
<p>SCALE: NONE</p>	<p>DRAWING NO.</p>	<p>REV</p>
	<p>1X5DM152-2</p>	<p>4</p>
<p>JOB NO. 9510</p>		

SIZE B 11 x 17

SW



SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

CONTROL LOGIC DIAGRAM
MAIN TURBINE TRIPPING SYSTEM

15.0	REVISED PER ABN 1049001501J011, VER 1.0	8/18/09	RBH	MWD	JMR	X
NO.	VERSIONS	DATE	DR	CHK	APPV	DTL

SCALE: NONE	DRAWING NO. 1X5DN203-1	VER. 15.0
JOB NO. 10604		

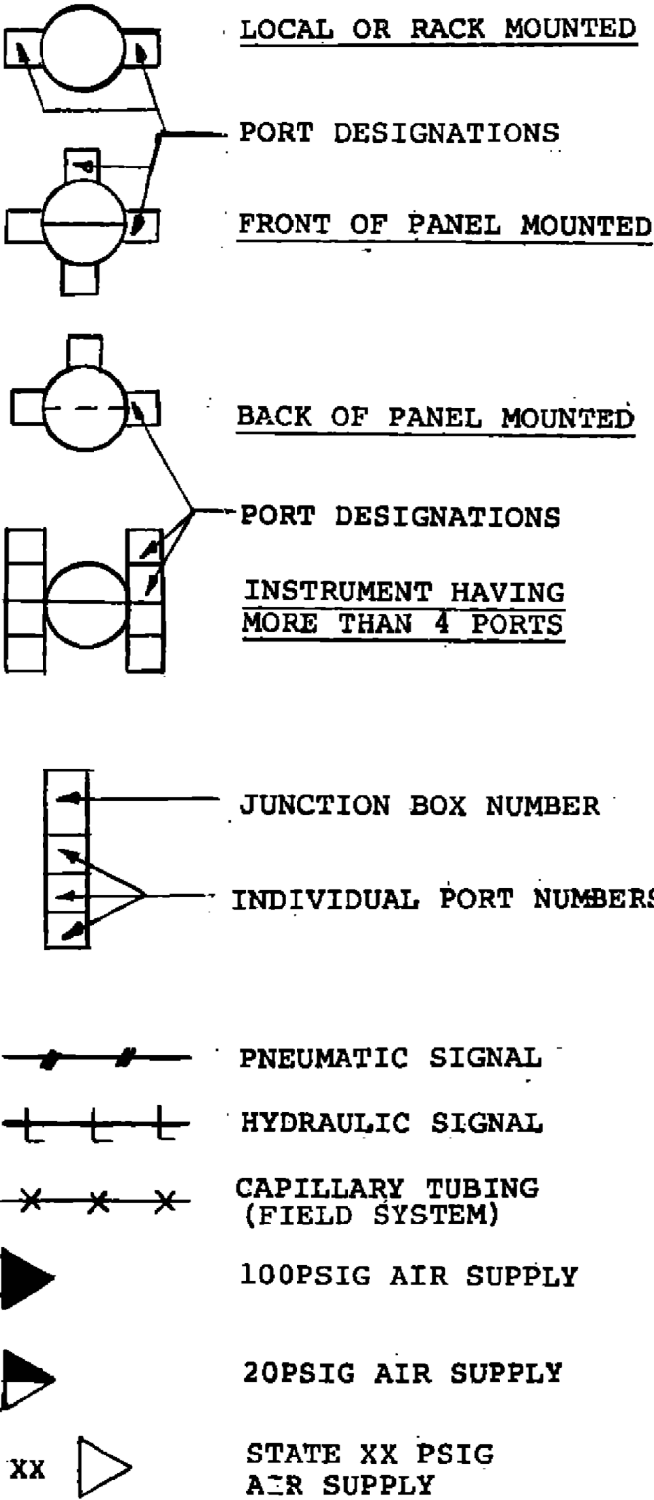
SIZE D 22X34

NOTES:

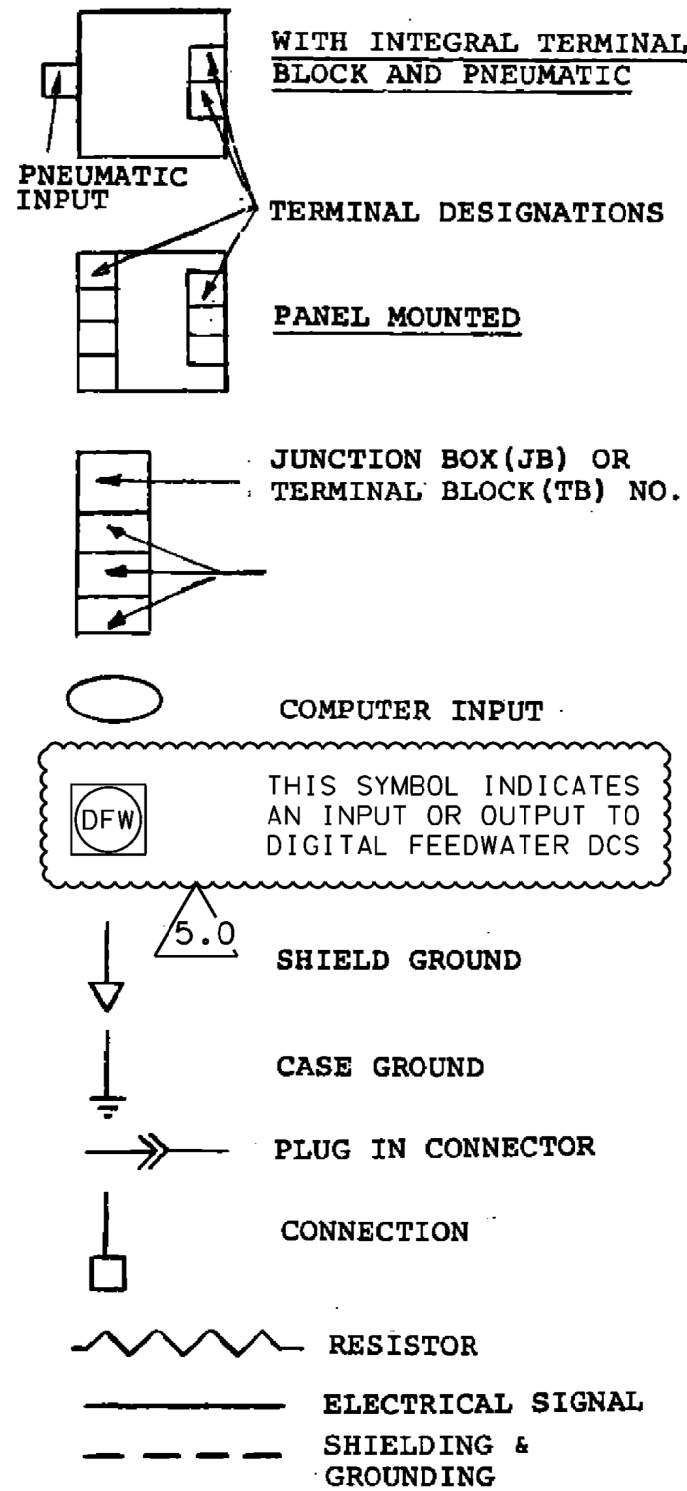
1. THIS LOGIC DIAGRAM DEPICTS THE FEATURES OF THE GENERAL ELECTRIC MARK II EHC SYSTEM. TEST LOGIC IS NOT INCLUDED.
2. THE GENERATOR TRIPS SHOWN ARE INSTANTANEOUS. OTHER TURBINE TRIPS INITIATE A GENERATOR TRIP THROUGH THE REACTOR TRIPPING SYSTEM, WHICH IS DELAYED BY APPROXIMATELY 30 SECONDS IN ORDER TO PROVIDE POWER FOR THE REACTOR COOLANT PUMPS.
3. MAIN STOP VALVES, CONTROL VALVES AND COMBINED AND INTERMEDIATE STOP VALVES POSITION ARE INDICATED BY PERCENTAGE INDICATORS.
4. PROVIDE ANNUNCIATOR INPUT FOR CONTROL POWER LOSS ON CUSTOMER TRIP ISOLATION LOSS (TRAIN A & B).
5. THE SYMBOL REPRESENTS INTERLOCKING RELAYS WHICH ARE LOCATED ON THE HYDROGEN RELAY WATER COOLING SYSTEM CONTROL PANEL (HS-5640).

REF. DNGS
V/P 1X4AA11-445 UP TO 154
INST LOOP DNG
1X5DN094-95-96

PNEUMATIC INSTRUMENTS



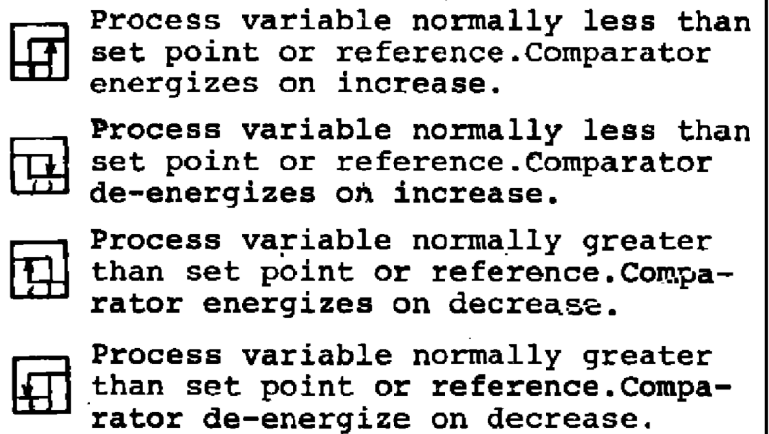
ELECTRONIC INSTRUMENTS



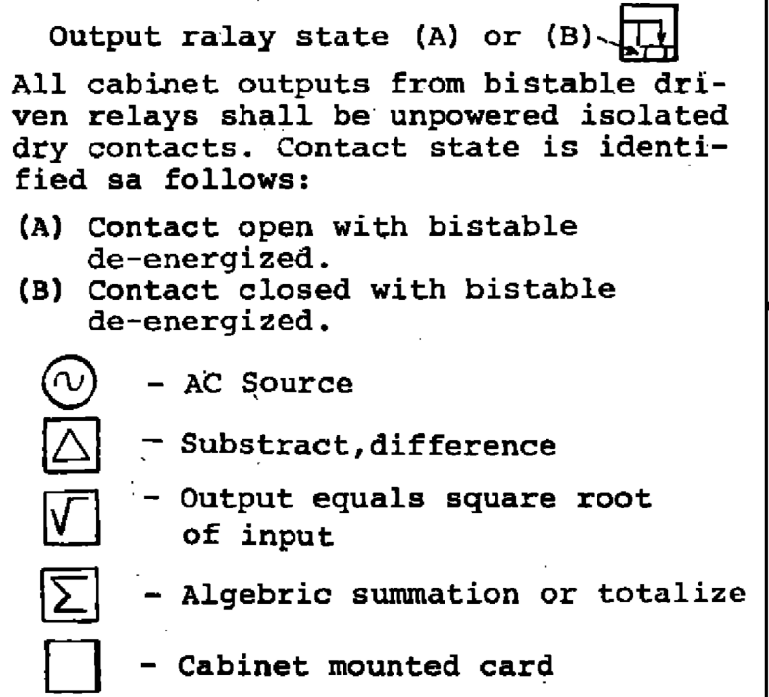
GENERAL NOTES

- For symbols & abbreviations not covered, refer to:
a. P&ID Drawing 1X5DV 101 & 1X5DV102
b. ISA Standard S5.4-1976, Instrument Loop Diagrams.
- All equipment numbers, line numbers, and instrument tag numbers have a Unit 1 prefix, unless otherwise noted.
- All computer output signals are 24 VDC nominal, unless otherwise noted.
- All shield wire to be grounded at the process cabinets, unless otherwise noted.
- All pneumatic signals are 3-15 PSIG, unless otherwise noted.
- All resistors are 100 OHM, one watt, one percent tolerance, unless otherwise noted.
- Information shown on individual loop diagrams includes field instrument, panels/process rack connections, hard-wired indicators/recorders, and transfer switches.
- Applicable secondary loop information (alarms, computer points, and control interlocks) i.e., cabling information termination information, location number information, can be found on the cross reference drawing identified on the individual loop diagrams, or in the EE-580 Data Base.
- All loop instruments are direct acting unless otherwise noted.
- For all OIM stations manual actuation of "RAISE" button opens the valve to increase the process variable, and actuation of "LOWER" button closes the valve to decrease the process variable, unless otherwise noted.

BISTABLE



NOTES ON OUTPUT RELAY ACTION



SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

INSTRUMENT LOOP DIAGRAM
LEGEND

5.0	REVISED PER ABN 1039002501J173, VER 1.0	07/26/13	DCP	MWD	JMR		
NO.	VERSIONS	DATE	DR	CHK	APPV		

SCALE: NONE	DRAWING NO.	VER.
JOB NO. 10604	1X5DV002	5.0

TRAIN A REACTOR SHUNT TRIP SIGNALS

MANUAL REACTOR TRIP SIGNAL (SHEET 3) ~~MANUAL REACTOR TRIP SIGNAL (LOCAL)~~
MANUAL SAFETY INJECTION SIGNAL (SHEET 8) ~~MANUAL REACTOR TRIP SIGNAL (LOCAL)~~
MANUAL REACTOR TRIP SIGNAL (LOCAL)
(SHEET 3)

LOGIC TRAIN A REACTOR TRIP SIGNALS

MANUAL TRIP SIGNAL
(SHEET 3)

NEUTRON FLUX TRIP SIGNALS
(SHEET 3)

PRIMARY COOLANT SYSTEM
TRIP SIGNALS (SHEET 5)

PRESSURIZER TRIP SIGNALS
(SHEET 6)

STEAM GENERATOR TRIP
SIGNALS (SHEET 7)

SAFETY INJECTION SIGNAL
(SHEET 8)
TURBINE TRIP SIGNAL
(SHEET 16)
SOLID STATE PROTECTION
SYSTEM

MANUAL TRIP SIGNAL
(SHEET 3)

NEUTRON FLUX TRIP SIGNALS
(SHEET 3)PRIMARY COOLANT SYSTEM
TRIP SIGNALS (SHEET 5)

PRESSURIZER TRIP SIGNAL

STEAM GENERATOR TRIP
SIGNALS (SHEET 7)SAFETY INJECTION SIGNAL
(SHEET 8)

(SHEET 16)
SOLID STATE PROTECTION
SYSTEM

7	CS O 0511
---	-----------------

114
BY
UED
ABN

DRAWN BY DIS CORP

1	1
---	---

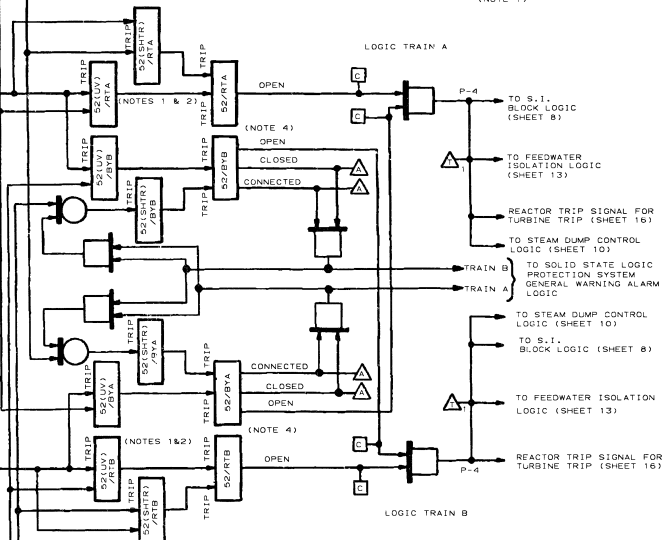
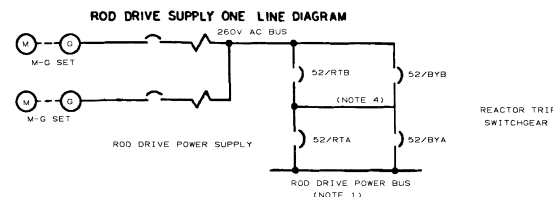
SOURCE RANGE, HIGH FLUX (INTERLOCKED BY P-6 & P-10) _____
INTERMEDIATE RANGE, HIGH FLUX (INTERLOCKED BY P-10) _____
HIGH FLUX, LOW SETPOINT (INTERLOCKED BY P-10) _____
POWER RANGE { HIGH FLUX, HIGH SETPOINT _____
HIGH FLUX RATE _____
OVERTEMPERATURE ΔT _____
OVERPOWER ΔT _____
LOW PRIMARY { LOW REACTOR COOLANT FLOW IN ANY 1 OF 4 LOOPS (INTERLOCKED BY P-8) _____
COOLANT FLOW { LOW REACTOR COOLANT FLOW IN ANY 2 OF 4 LOOPS (INTERLOCKED BY P-7) _____
UNDESVOLTAGE (INTERLOCKED BY P-7) _____
UNDERFREQUENCY (INTERLOCKED BY P-7) _____
HIGH PRESSURE _____
LOW PRESSURE (INTERLOCKED BY P-7) _____
HIGH LEVEL (INTERLOCKED BY P-7) _____
LOW-LOW STEAM GENERATOR WATER LEVEL _____
AUTOMATIC SIGNAL _____
MANUAL SIGNAL _____
LOW TRIP FLUID PRESSURE OR ALL STOP VALVES (NOT TOOK OPEN) (INTERLOCKED BY P-9) _____
GENERAL WARNING ALARM IN BOTH TRAINS _____

LOGIC TRAIN B REACTOR TRIP SIGNALS

SOURCE RANGE, HIGH FLUX (INTERLOCKED BY P-6 & P-10) _____
INTERMEDIATE RANGE, HIGH FLUX (INTERLOCKED BY P-10) _____
POWER RANGE { HIGH FLUX, LOW SETPOINT (INTERLOCKED BY P-10) _____
HIGH FLUX RATE _____
OVERTEMPERATURE AT _____
OVERPOWER AT _____
LOW PRIMARY { LOW REACTOR COOLANT FLOW IN ANY 1 OF 4 LOOPS (INTERLOCKED BY P-8) _____
COOLANT FLOW { LOW REACTOR COOLANT FLOW IN ANY 2 OF 4 LOOPS (INTERLOCKED BY P-7) _____
OVERSLOW (INTERLOCKED BY P-7) _____
UNDERFREQUENCY (INTERLOCKED BY P-7) _____
HIGH PRESSURE _____
LOW PRESSURE (INTERLOCKED BY P-7) _____
HIGH LEVEL (INTERLOCKED BY P-7) _____
LOW-LOW STEAM GENERATOR WATER LEVEL _____
AUTOMATIC SIGNAL _____
MANUAL SIGNAL _____
LOW TRIP FLUID PRESSURE OR ALL STOP VALVES (NOT LOCK OPEN) (INTERLOCKED BY P-9) _____
GENERAL WARNING ALARM IN BOTH TRAINS _____

TRAIN 8 REACTOR SHUNT TRIP SIGNALS

MANUAL REACTOR TRIP SIGNAL (LOCAL) (SHEET 3)
MANUAL REACTOR TRIP SIGNAL (SHEET 3)
MANUAL SAFETY INJECTION SIGNAL (SHEET 8)



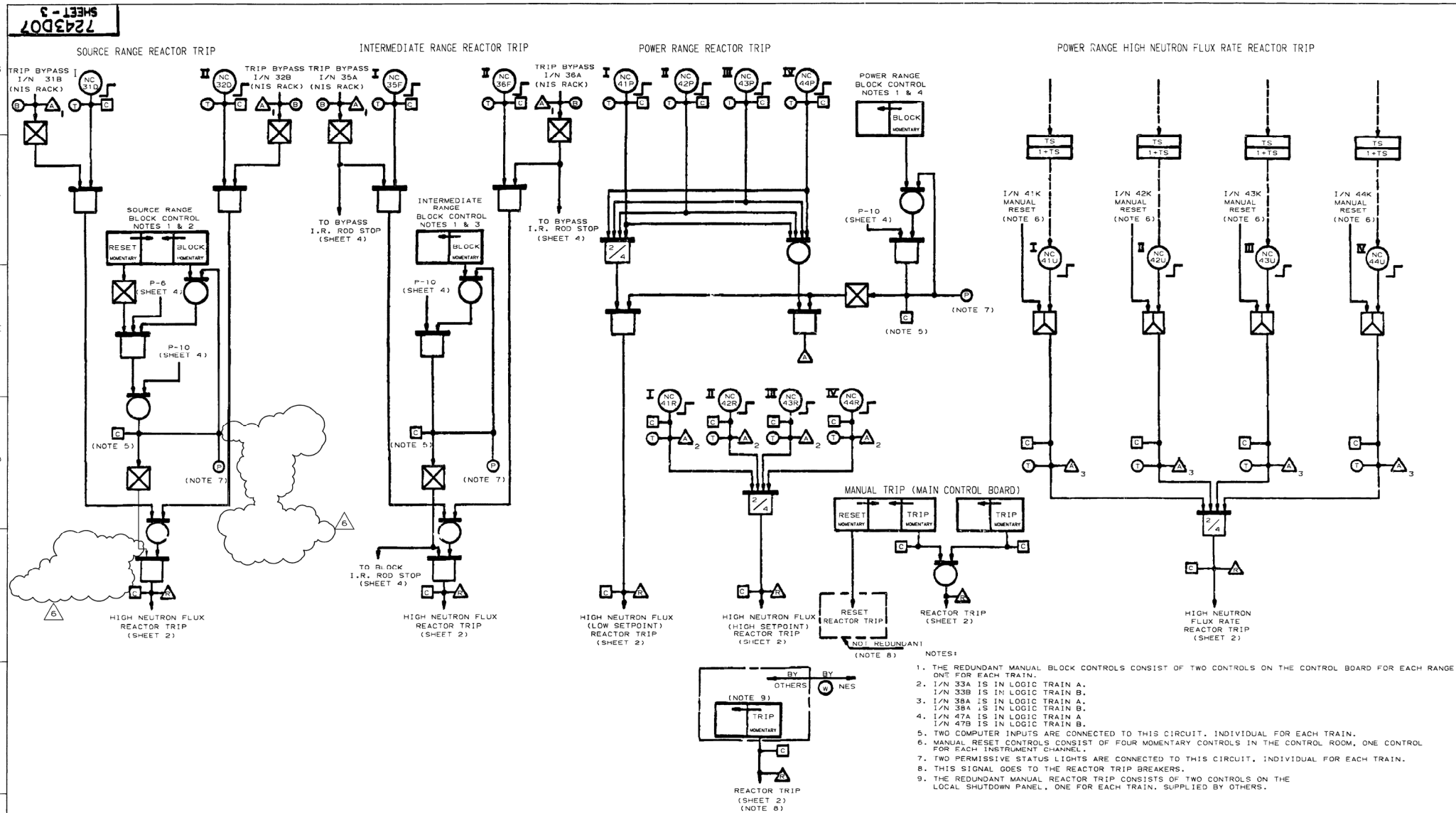
NOTES:

1. TRIPPING THE REACTOR TRIP BREAKERS 52/RTA AND 52/RTB REDUNDANTLY DE-ENERGIZES THE ROD DRIVES ALL FULL LENGTH CONTROL RODS AND SHUTDOWN RODS ARE THEREAFTER RELEASED FOR GRAVITY INSERTION INTO THE REACTOR CORE.
2. NORMAL REACTOR OPERATION IS TO BE WITH REACTOR TRIP BREAKERS 52/RTA AND 52/RTB IN SERVICE AND BY-PASS BREAKERS 52/RTA AND 52/RTB THROTTLED TO 50 PERCENT.
- DURING TEST, ONE BY-PASS BREAKER IS TO BE PUT IN SERVICE AND THEN THE RESPECTIVE REACTOR TRIP BREAKER IS OPERATED USING A SIMULATED REACTOR TRIP SIGNAL IN THE TRAIN UNDER TEST. THE REACTOR WILL NOT BE TRIPPED BY THE SIMULATED SIGNAL SINCE THE BY-PASS BREAKER IS CONTROLLED FROM THE OTHER TRAIN. ONLY ONE REACTOR TRIP BREAKER IS TO BE TESTED AT A TIME.
3. ALL CIRCUITS ON THIS SHEET ARE NOT REDUNDANT BECAUSE BOTH TRAINS ARE SHOWN.
4. OPEN/CLOSED INDICATION FOR EACH TRIP BREAKER AND EACH BYPASS BREAKER IN CONTROL ROOM.

NORTH CORNER WEST END WEST SIDE EAST END EAST SIDE SOUTH SOUTHWEST CORNER		Westinghouse Electric Corporation
		NUCLEAR ELECTRIC SYSTEMS PITTSBURGH PA U.S.A.
		TITLE GEORGIA POWER CO
		AVALON VOST UNIT #2
		FUNCTIONAL DIAGRAMS
		REACTOR TRIP SIGNALS
		SCALE
		DIMENSIONS IN INCHES
		7243D0
		SHEET 2
		SH-67

[illegible]

PLANT	VOGTLE
	1X6A02-226-9
	FUNCTIONAL DIAGRAMS REACTOR TRIP SIGNALS
	(REDRAWN AND REVISED BY SCS TO INCORPORATE ABN-05114)
VENDOR:	P.O.:



6

INCORPORATED PER DCP 96-VIN0044

05/12/99

ELC EOG GLB

NO. REVISIONS DATE DR CHK APPV

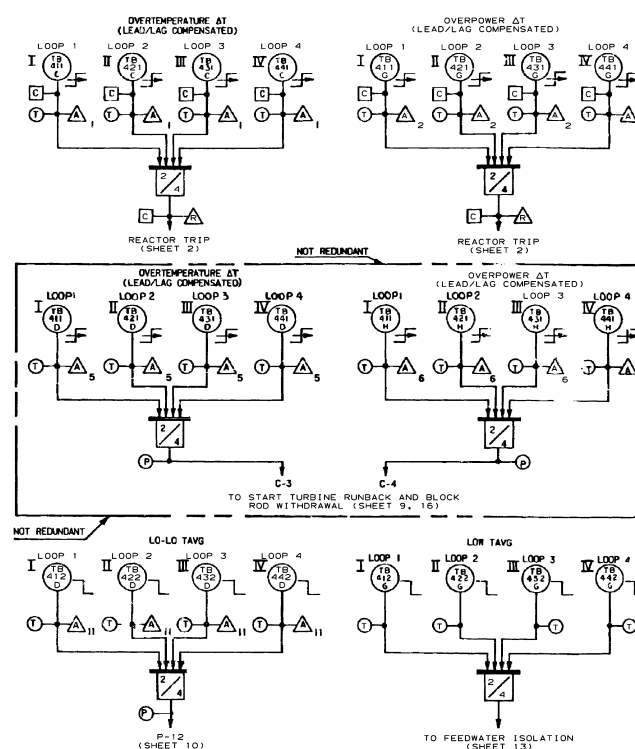
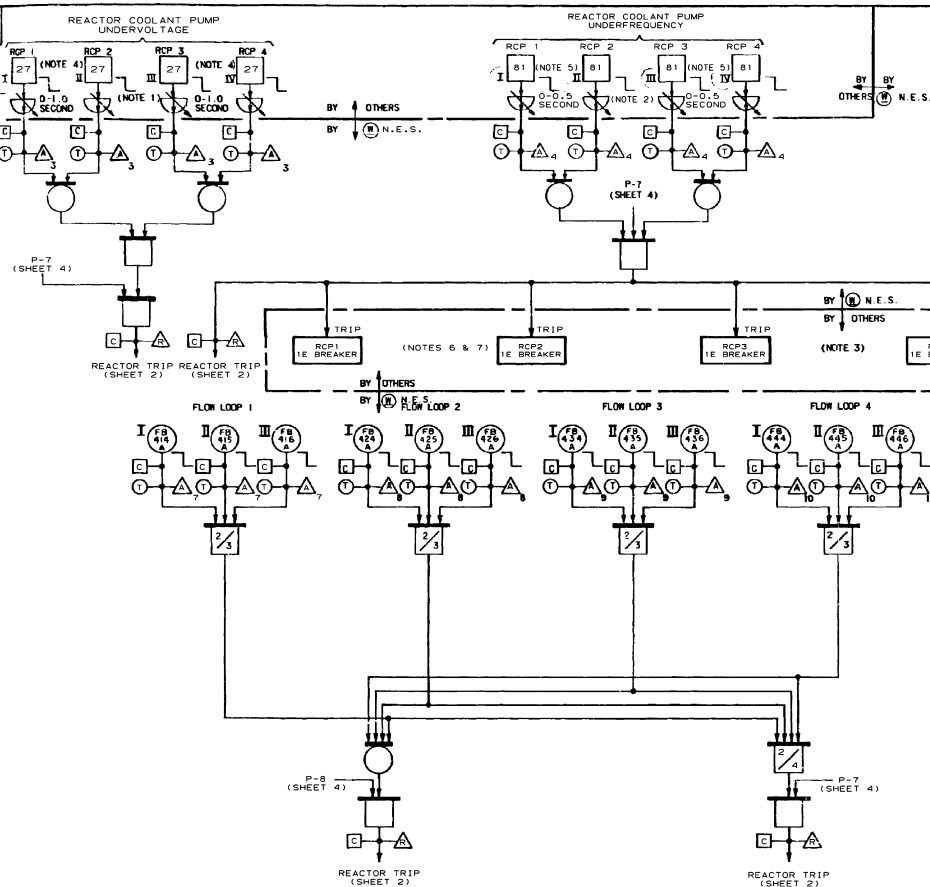
SCS REVISIONS

DOCUMENT STATUS CODE 1

1X6AA02-00227-9

BY: P. HEARN	DATE: 1/1/99	SCALE: 1/2"	NO. OF COPIES: 100
Westinghouse Electric Corporation NUCLEAR ENERGY SYSTEMS, PITTSBURGH, PA., U.S.A.			
TITLE: GEORGIA POWER CO. ALVIN W. VOGLIE UNITS 1 & 2 FUNCTIONAL DIAGRAMS NUCLEAR INSTR. & MANUAL TRIP SIGNALS			
SHEET 3 7243D07			SCALE: 1/2" NO. OF COPIES: 100

7243D07
SHEET-5

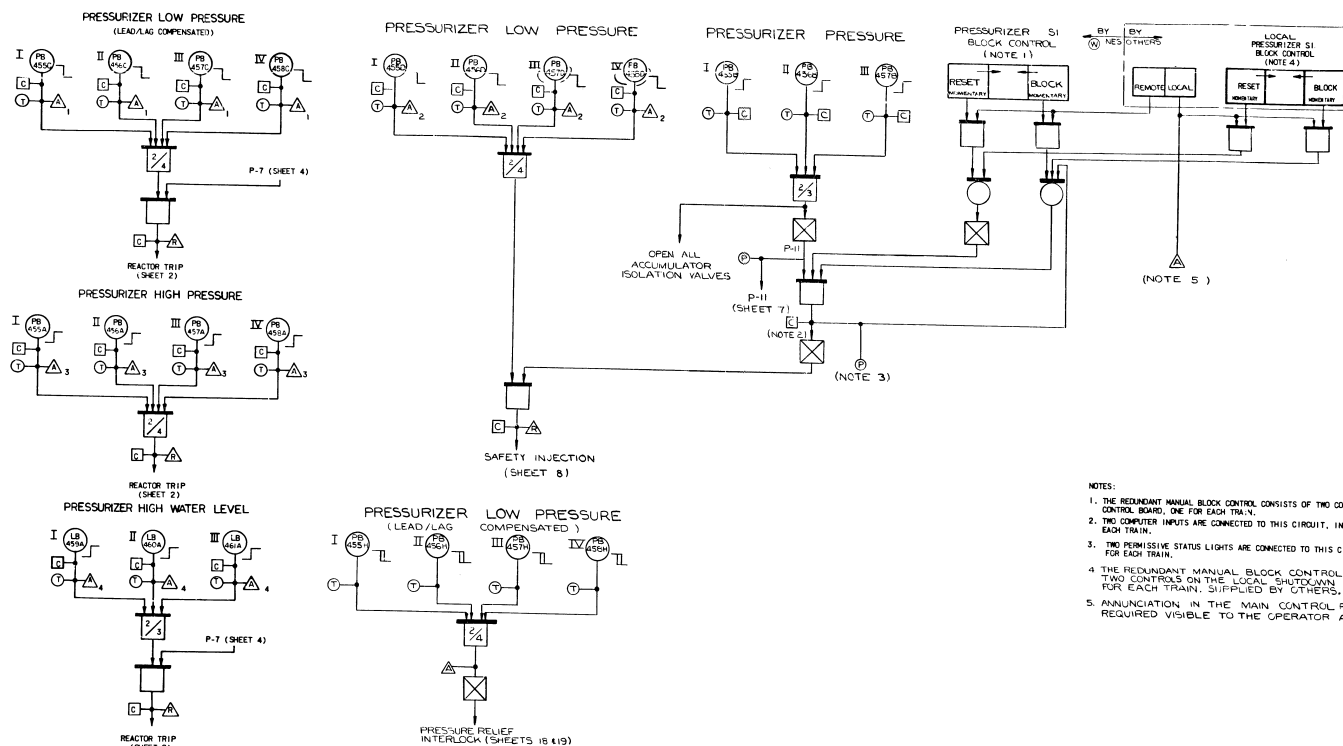


- NOTES
1. THE SETPOINT OF THE UNDERVOLTAGE RELAYS SHOULD BE ADJUSTABLE BETWEEN 60% AND 80% OF NOMINAL VOLTAGE, WITH THE ADJUSTABLE TIME DELAY SET TO ITS MINIMUM VALUE. THE UNDERVOLTAGE DETECTOR SHOULD HAVE A TIME RESPONSE OF LESS THAN 0.2 SECONDS. THE ADJUSTABLE DELAY SHOULD ALLOW AN ADDITIONAL INTENTIONAL DELAY BETWEEN 0 TO 1.0 SECONDS.
 2. THE SETPOINT OF THE UNDERFREQUENCY RELAYS SHOULD BE ADJUSTABLE BETWEEN 54 HZ AND 59 HZ. WITH THE ADJUSTABLE TIME DELAY SET TO ITS MINIMUM VALUE, THE UNDERFREQUENCY DETECTOR SHOULD HAVE A TIME RESPONSE OF LESS THAN 0.1 SECONDS. THE ADJUSTABLE DELAY SHOULD ALLOW AN ADDITIONAL INTENTIONAL DELAY BETWEEN 0 TO 0.5 SECONDS.
 3. THE MAXIMUM ALLOWABLE RCP BREAKER TRIP TIME DELAY IS 0.1 SECONDS.
 4. THE UNDERVOLTAGE SENSORS (POTENTIAL TRANSFORMERS) MUST BE LOCATED ON THE MOTOR SIDE OF THE RCP CIRCUIT BREAKERS TO DETECT THE TRIP OF THE RCP CIRCUIT BREAKERS IN ADDITION TO BUS UNDERVOLTAGE.
 5. THE UNDERFREQUENCY SENSORS MAY BE LOCATED ON THE MOTOR SIDE OF THE RCP CIRCUIT BREAKERS.
 6. REACTOR COOLANT PUMPS NUMBER 1 AND 3 MUST BE ON BUS INAA. REACTOR COOLANT PUMPS NUMBER 2 AND 4 MUST BE ON BUS INAB.
 7. REFER TO BECHTEL DRAWING SK-3-619 FOR DETAILED LOGIC FOR RCP BREAKERS.

DATE: 3-5-00	BY: J. W. H. / J. W. H.	CHK: J. W. H. / J. W. H.	APP: J. W. H. / J. W. H.
REVISION: 1	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 2	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 3	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 4	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 5	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 6	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 7	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 8	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 9	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 10	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 11	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 12	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 13	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 14	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 15	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 16	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 17	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 18	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 19	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.
REVISION: 20	DESCRIPTION: CHANGES	DATE: 3-5-00	BY: J. W. H. / J. W. H.

Westinghouse Electric Corporation	
Nuclear Energy Systems, Pittsburgh, PA, U.S.A.	
TITLE: GEORGIA POWER CO. ALVIN W. VOGTLE UNIT 1 1X6AA02-00229.DGN	
FUNCTIONAL DIAGRAMS	
7243D07	
SHEET-5	
DO NOT SCALE	

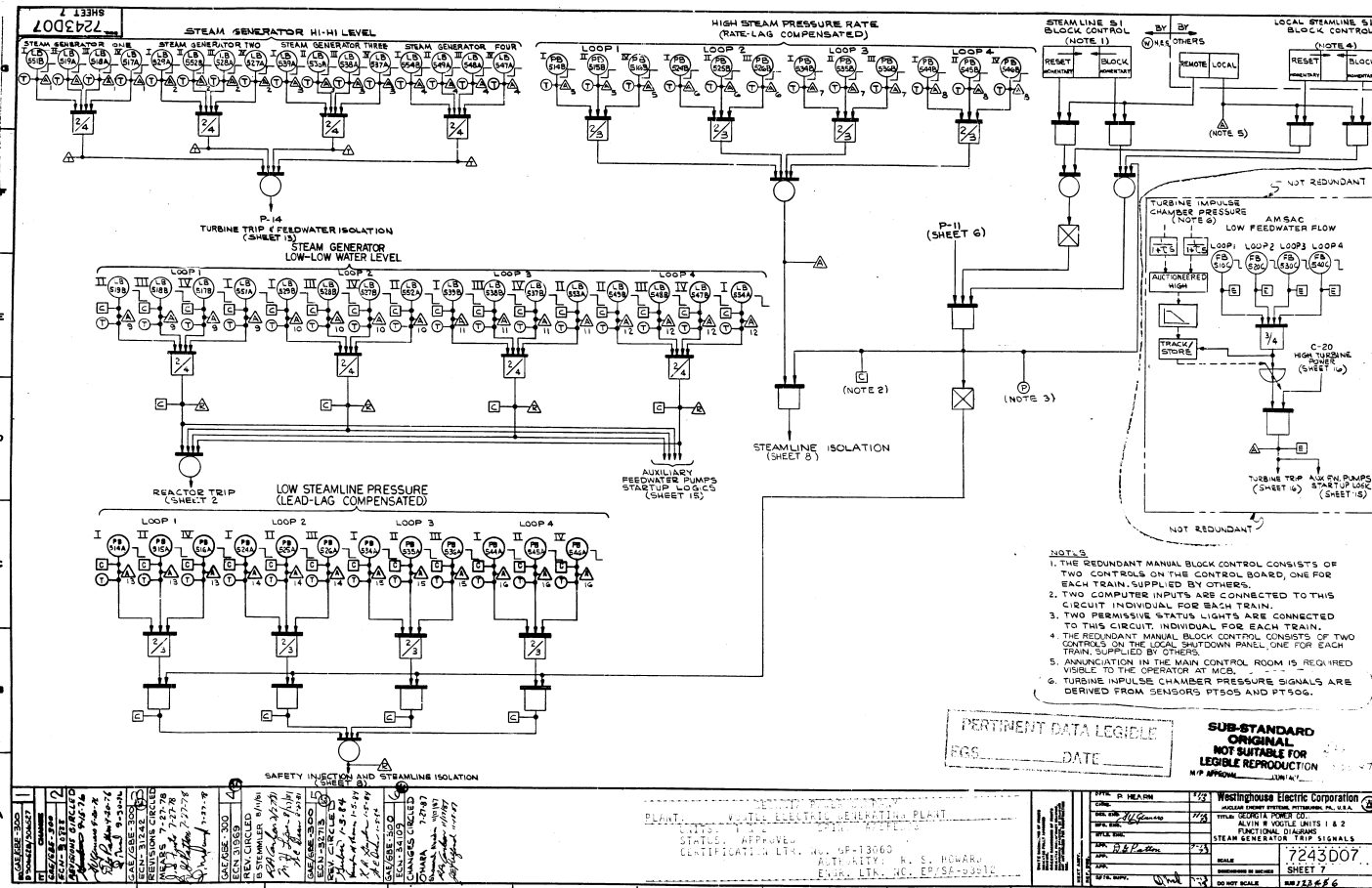
THIS DWG. IS REFERENCED IN VENDOR MANUAL: N/A		Southern Nuclear Operating Company, Inc.	
TAB/SECT.: N/A		VOGTLE ELECTRIC GENERATING PLANT	
PAGE: N/A		UNIT NO. 1	
FIGURE: N/A		TITLE: FUNCTIONAL DIAGRAMS PRIMARY COOLANT SYSTEM TRIP SIGNALS	
VERSION 11.0 DATE 3-4-11		REVISOR: SNC PER ABN-V02456, VER. 1.0	
BY: LPM		CHK: MLH	
APP: AAN		APPR: 1	
VENDOR: WESTINGHOUSE		P.O. #:	
DRAWING NO. 1X6AA02-00229		SIZE D	



1. THE REDUNDANT MANUAL BLOCK CONTROL CONSISTS OF TWO CONTROLS ON THE CONTROL BOARD, ONE FOR EACH TRAIN.
2. TWO COMPUTER INPUTS ARE CONNECTED TO THIS CIRCUIT, INDIVIDUAL FOR EACH TRAIN.
3. TWO PERMISSIVE STATUS LIGHTS ARE CONNECTED TO THIS CIRCUIT, INDIVIDUAL FOR EACH TRAIN.
4. THE REDUNDANT MANUAL BLOCK CONTROL CONSISTS OF TWO CONTROLS ON THE LOCAL SHUTDOWN PANEL, ONE FOR EACH TRAIN, SUPPLIED BY OTHERS.
5. ANNUNCIATION IN THE MAIN CONTROL ROOM IS REQUIRED VISIBLE TO THE OPERATOR AT MCB.

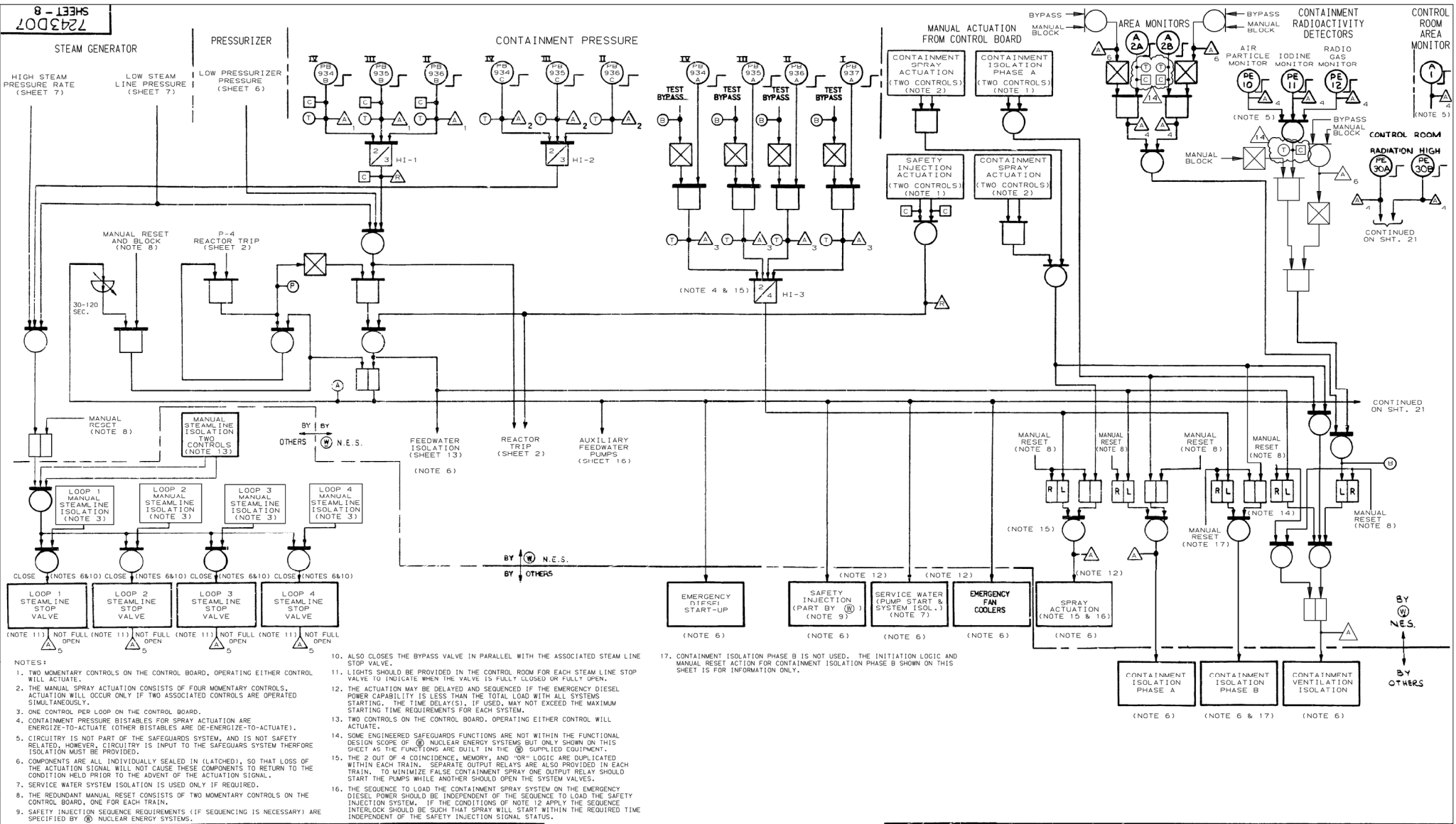
VOGTLE ELECTRIC GENERATING PLANT		JOB NO. 9516
EQUIPMENT TAG NO. <i>Various</i>		
STARTUP DISPOSITION NO. <i>Various</i>		
ACTIVITY NO. <i>Various</i>		
SYSTEM NO. <i>Various</i>		
CATEGORY NO. <i>AP</i>		
RETROFITTING REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
DISTRIBUTION TO: FOR: REVIEW <input type="checkbox"/> INFO <input type="checkbox"/>		
<ul style="list-style-type: none"> * MECHANICAL <input type="checkbox"/> * HVAC <input type="checkbox"/> * NSSS <input type="checkbox"/> * BOP <input type="checkbox"/> * CONTROL SYSTEMS <input checked="" type="checkbox"/> * ELECTRICAL <input checked="" type="checkbox"/> * WIRING <input type="checkbox"/> * CONDUIT <input type="checkbox"/> * HAZARDS <input type="checkbox"/> * CIVIL/STRUCTURAL <input type="checkbox"/> * NUCLEAR <input type="checkbox"/> * STRESS/PLANT DESIGN <input type="checkbox"/> <li style="padding-left: 20px;">CODES AND STANDARDS <input type="checkbox"/> * ARCHITECTURAL <input type="checkbox"/> * STARTUP <input type="checkbox"/> * CONSTRUCTION <input type="checkbox"/> * NOT REQUIRED BY ENGRS <input type="checkbox"/> * CLIENT <input type="checkbox"/> * EQUIP. QUALIFICATION <input type="checkbox"/> * M & OS <input type="checkbox"/> * WESTINGHOUSE <input type="checkbox"/> 		
IDENTIFYING TITLE OF THIS DOCUMENT <i>Functional Diag.</i>		
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Section Log No. 1 X6A002-230-8 </div>		
IMPORTANT		
Permission to proceed does not constitute acceptance or approval of design details, calculations, analyses, test methods or materials developed or selected by the supplier and does not relieve supplier from full compliance with contractual obligations.		
DATE RECEIVED <i>3-14-85</i>	SIGNED <i>[Signature]</i>	
DOCUMENT STATUS		
<input checked="" type="checkbox"/> 1) WORK MAY PROCEED IF 2) CHANGE AND RESUBMIT WORK MAY PROCEED SUB- JECT TO INCORPORATION OF CHANGES INDICATED.		
<input type="checkbox"/> 3) DESIGN AND RESUBMIT WORK MAY NOT BE PRICED		
<input type="checkbox"/> 4) INFORMATION ONLY DISTRIBUTION REQUIRED <input type="checkbox"/> YES		
<input type="checkbox"/> 5) RESUBMIT - NOT ACCEPTABLE FOR MICROFILM. WORK MAY PROCEED.		
DATE <i>5/4/85</i>	PREPARED BY <i>[Signature]</i> CHECKED BY <i>[Signature]</i>	

GPC PLANT VOTGLE CONSTR MICROGRAPHICS
I CERTIFY THAT THE INFORMATION CONTAINED ON THIS DRAWING WAS MADE IN THE NORMAL
AND REGULAR COURSE OF BUSINESS OF THE COMPANY AND THAT THE SAME IS
AN ACCURATE REPRODUCTION OF THE DOCUMENT SUBMITTED TO MICROGRAPHICS.
DATE 10/1/88
104188
SECTOR OPERATOR
CAMERA OPERATOR
10/1/88



VOTGLE ELECTRIC GENERATING PLANT		JOB NO. 8510
EQUIPMENT TAG NO. 101		
STARTUP DESIGNATION NO. 101		
ACTIVITY NO. 101		
SYSTEM NO. 101		
CATEGORY NO. 101		
RETOFITTING REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
DISTRIBUTION TO: FOR REVIEW INFO		
<ul style="list-style-type: none"> MECHANICAL HVAC EQUIPMENT PROCESS CONTROL SYSTEMS 30, 32, 34 WIRING CONDUIT HAZARDS CIVIL/STRUCTURAL NUCLEAR 6.5, 6.6 STRESS/PLANT DESIGN CODES AND STANDARDS ARCHITECTURAL STARTUP CONSTRUCTION NOT REQ'D BY ENGRG CLIENT EQUIP. QUALIFICATION M & OS WESTINGHOUSE 		
IDENTIFYING TITLE OF THIS DOCUMENT		
Reactor Trip Signals		
Reactor Log No. 101		
101-231-6		
IMPORTANT		
Permission to proceed does not constitute acceptance or approval of design details, calculations, analyses, test methods or materials developed or selected by the supplier and does not release supplier from full compliance with contractual obligations.		
DATE RECEIVED 12-9-87	SIGNED [Signature]	DATE 12-27-91
DOCUMENT STATUS		
1. WORK MAY PROCEED		
2. REVIEW AND RESUBMIT		
3. WORK MAY PROCEED		
4. INFORMATION ONLY		
5. DISTRIBUTION REQUIRED		
6. NO RESUBMIT - NOT ACCEPTABLE FOR MICROFILM; WORK MAY PROCEED		
PP-5997 (10/1) 12/83		

CONTAINMENT PRESSURE




- [illegible]

DOCUMENT STATUS CODE

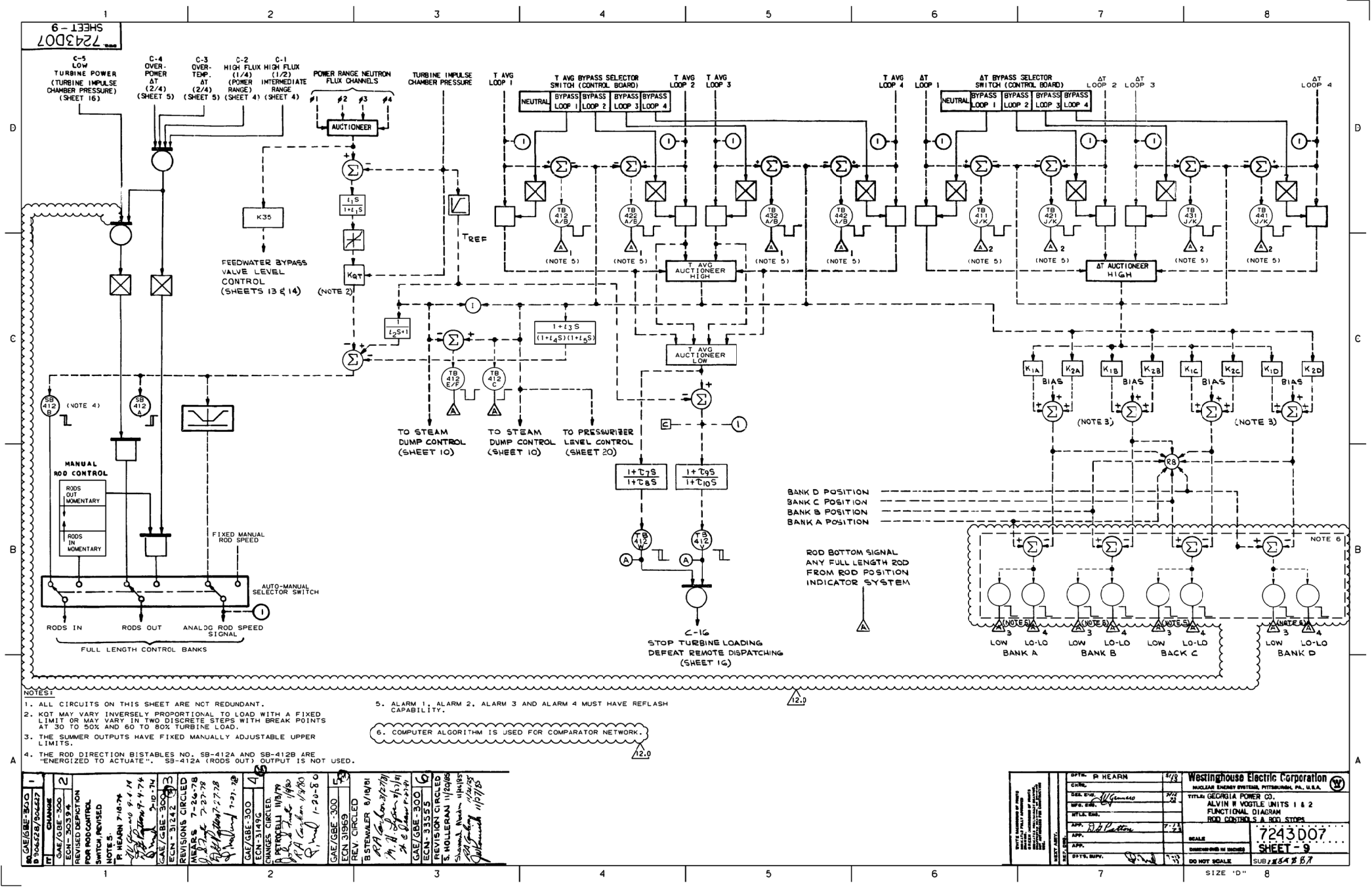
WESTINGHOUSE PROPRIETARY DATA

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF THE WESTINGHOUSE ELECTRIC CORPORATION WATER REACTOR DIVISIONS. IT IS TRANSMITTED TO YOU IN CONFIDENCE AND TRUST, AND IS TO BE RETURNED UPON REQUEST. ITS CONTENTS MAY NOT BE DISCLOSED IN WHOLE OR IN PART TO OTHERS OR USED FOR OTHER THAN THE PURPOSE FOR WHICH TRANSMITTED WITHOUT THE PRIOR WRITTEN PERMISSION OF THE WESTINGHOUSE WATER REACTOR DIVISIONS.

DATE DESIGNED DESIGNED BY DATE CHECKED CHECKED BY DATE APPROVED APPROVED BY	DATE	5/10/78	WESTINGHOUSE Electric Corporation NUCLEAR ENGINE SYSTEM, PITTSBURGH, PA, U.S.A. 	
	CHECKED	5/14/78		
	DESIGNED BY	W. Hancock		TITLE: GEORGIA POWER CO. ALVIN W. VOGTLE UNITS 1 & 2 FUNCTIONAL DIAGRAM SAFEGUARD ACTUATION SYSTEM
	DATE	5/14/78		
	CHECKED	5/14/78		
	DESIGNED BY	W. Hancock		
DATE	5/14/78			
APPROVED	D. B. Patton	7-78	SCALE DIMENSIONS ARE IN INCHES DO NOT SCALE	
APPROVED				
APPROVED BY	B. Hall	7-78		
			7243D07 SHEET - 8 SUB 13	

1X6AA02-00232-17

14	INCORPORATED PER DCP 97-VIN0067	11-16-00	ELC	TSL	GLB
NO.	REVISIONS	DATE	DR	CHK	APPV
SCS REVISIONS					





1. ALL CIRCUITS ON THIS SHEET ARE NOT REDUNDANT.
2. PRESSURE BISTABLES NO. PB-455E, PB-456G, AND PB-456E ARE ENERGIZE TO ACTUATE.
3. A LIGHT SHOULD BE PROVIDED IN THE CONTROL ROOM FOR EACH SPRAY VALVE TO INDICATE WHEN IT IS NOT FULLY CLOSED.
4. CENTER POSITION NORMALLY SELECTED.
5. ADJUSTABLE SETPOINT WITHIN CONTROLLER.
6. ALARM 1 MUST HAVE REFLASH CAPABILITY.
7. ANNUNCIATION IN THE MAIN CONTROL ROOM IS REQUIRED VISIBLE TO THE OPERATOR AT THE MCR.
8. A LIGHT SHOULD BE PROVIDED AT THE LOCAL SHUTDOWN PANEL FOR EACH SPRAY VALVE TO INDICATE WHEN IT IS NOT FULLY CLOSED.

6	INC. PER DCP 98-V1N0061	11-06-00	CD	EOG	MWD
NO.	REVISIONS	DATE	DR	CHK	APPV
SCS REVISIONS					

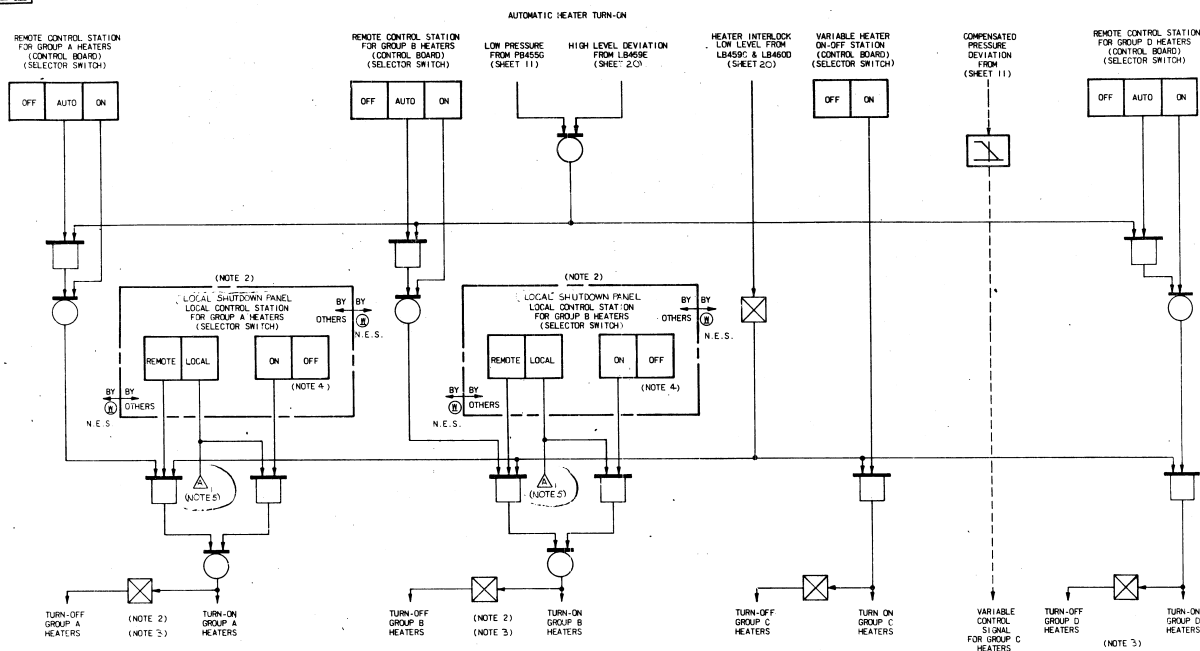
DOCUMENT STATUS CODE	1
----------------------	---

1X6AA02-00235-9

[illegible]

74X

7243D07
SHEET - 12



- NOTES:
1. ALL CIRCUITS ON THIS SHEET ARE NOT REDUNDANT.
 2. GROUP A AND GROUP B HEATERS MUST BE ON SEPARATE VITAL POWER SUPPLIES WITH THE LOCAL CONTROL SEPARATED SO THAT ANY SINGLE FAILURE DOES NOT DEFEAT BOTH.
 3. BACK UP HEATER STATUS INDICATION IN CONTROL ROOM.
 4. PRECAUTIONS SHOULD BE TAKEN TO AVOID MANUAL HEATER OPERATION, WHICH WOULD CAUSE HEATER DAMAGE, IF THE WATER LEVEL UNCOVERS THE HEATERS.
 5. ANNUNCIATOR IN THE MAIN CONTROL ROOM IS REQUIRED TO BE VISIBLE TO THE OPERATOR AT THE MAIN CONTROL BOARD.

GEORGIA POWER COMPANY
PLANT: ALVIN R. VORLIS NUCLEAR PLANT
UNIT: 1 & 2
STATUS: APPROVED
CERTIFICATION LTR. NO. GP-5709 AUTHORITY: J. L. VOTA
RUCR. LTR. NO. GP/2A-35120

MODIFIED
QUALITY
ACCEPTABLE

NO.	DATE	BY	REVISION
1	11/1/74	W. J. G. / J. L. V.	DESIGN
2	11/1/74	W. J. G. / J. L. V.	REVISION
3	11/1/74	W. J. G. / J. L. V.	REVISION
4	11/1/74	W. J. G. / J. L. V.	REVISION
5	11/1/74	W. J. G. / J. L. V.	REVISION

Westinghouse Electric Corporation NUCLEAR ENERGY SYSTEMS, PITTSBURGH, PA., U.S.A. TITLE: GEORGIA POWER CO. ALVIN R. VORLIS UNIT 1 & 2 FUNCTIONAL DIAGRAM PRESURIZED HEATER CONTROL SHEET - 12	
DATE: 11/1/74 BY: W. J. G. / J. L. V. CHECKED: J. L. V. APPROVED: J. L. V. SCALE: 1" = 1'-0" DIMENSIONS IN INCHES DO NOT SCALE	7243D07 SHEET - 12 SUP. 22.0

DISTRIBUTION TO FOR REVIEWING	
MECHANICAL	
BALANCE OF PLANT	
BOILER/HEATERS	
PLANT UTILITIES	
PLANT DESIGN	
CONTROL SYSTEMS	
ELECTRICAL	
INSULATION	
CONDUIT	
WELDING	
PAINTING & COATINGS	
CIVIL/STRUCTURAL	
MECHANICAL	
STRESS	
ARCHITECTURAL	
STARTUP	
CONSTRUCTION	
NOTIFIED BY ENDORSE	
CLIENT	

Resub for micro film quality

Revised Log No. 1

7243D07-7

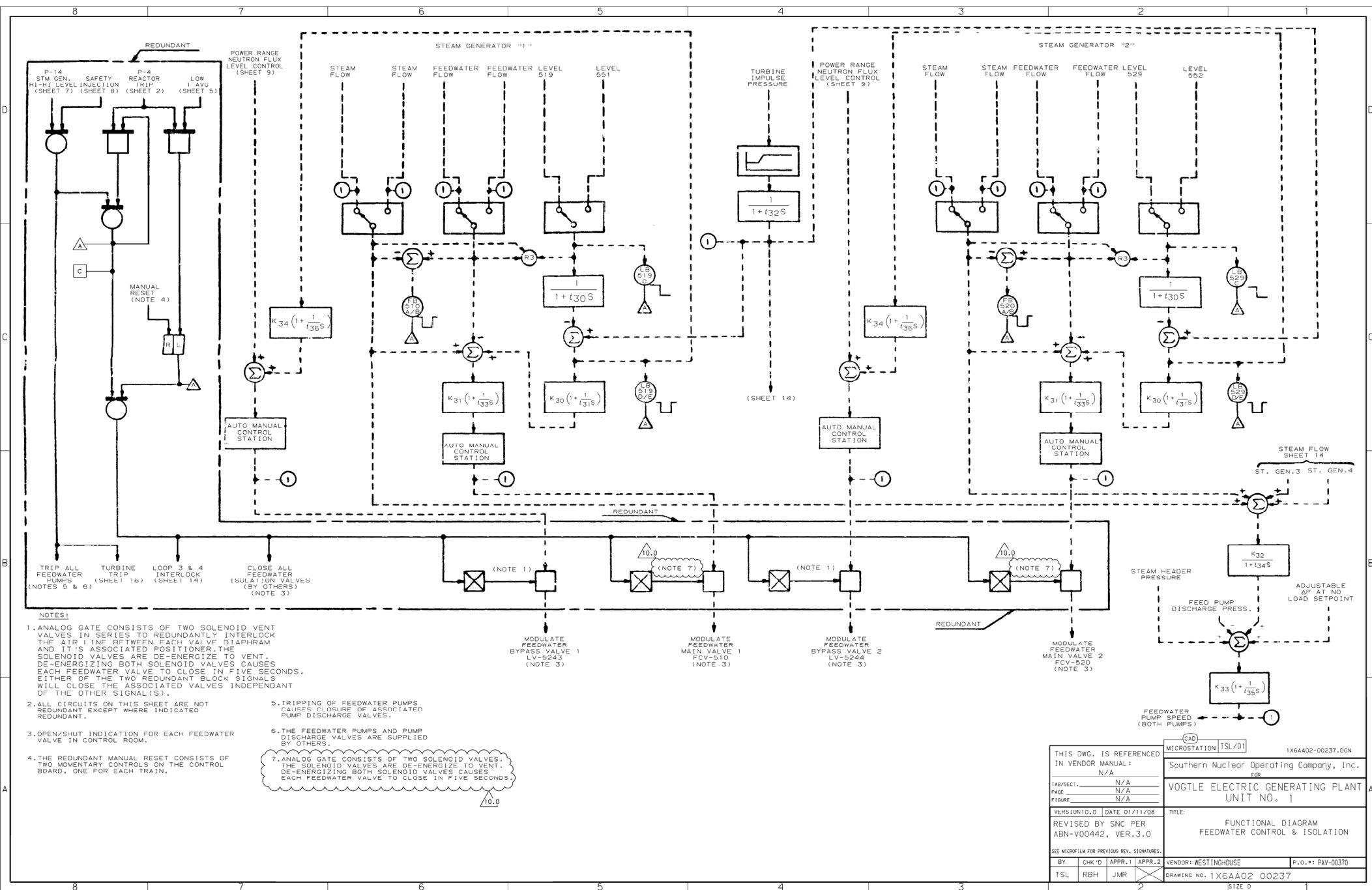
IMPORTANT: Personnel, personnel, and materials must be controlled and approved or rejected of design details, construction, and materials. Materials must be controlled and approved or rejected of design details, construction, and materials. Materials must be controlled and approved or rejected of design details, construction, and materials.

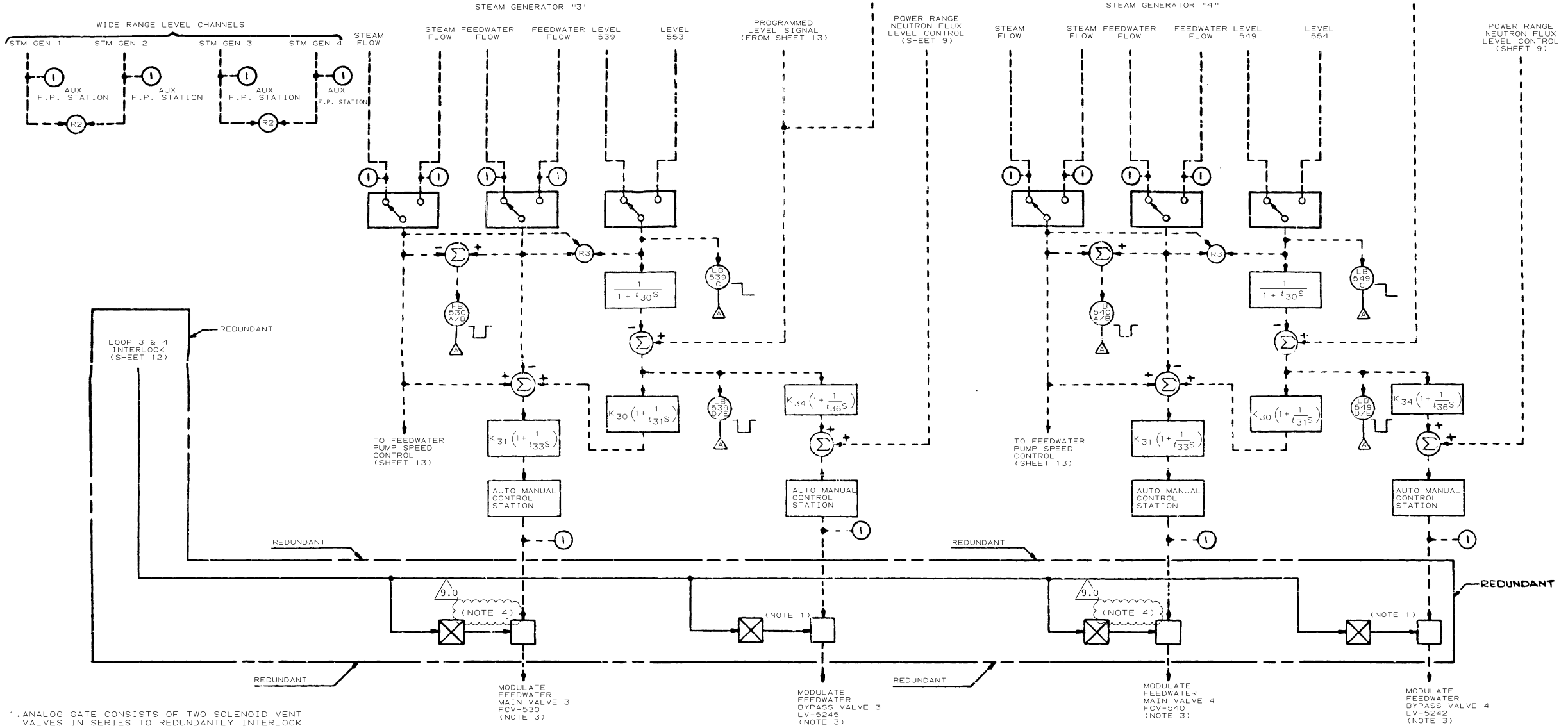
I CERTIFY THAT THE IMAGE CONTAINED ON THE FILM WAS MADE IN THE MANNER AND REGULAR COURSE OF BUSINESS, ON THE DATE STATED BELOW AND THAT IT IS AN ACCURATE REPRESENTATION OF THE DOCUMENT SUBMITTED TO MICROFILMING.

DATE: 11/1/74

BY: J. L. VOTA

SECTION SUPERVISOR





1. ANALOG GATE CONSISTS OF TWO SOLENOID VENT VALVES IN SERIES TO REDUNDANTLY INTERLOCK THE AIR LINE BETWEEN EACH VALVE DIAPHRAM AND IT'S ASSOCIATED POSITIONER. THE SOLENOID VALVES ARE DE-ENERGIZE TO VENT. DE-ENERGIZING BOTH SOLENOID VALVES CAUSES EACH FEEDWATER VALVE TO CLOSE IN FIVE SECONDS. EITHER OF THE TWO REDUNDANT BLOCK SIGNALS WILL CLOSE THE ASSOCIATED VALVES INDEPENDANT OF THE OTHER SIGNAL(S).
2. ALL CIRCUITS ON THIS SHEET ARE NOT REDUNDANT, EXCEPT WHERE INDICATED "REDUNDANT"
3. OPEN/SHUT INDICATION FOR EACH FEEDWATER VAVLE IN CONTROL ROOM
4. ANALOG GATE CONSISTS OF TWO SOLENOID VALVES. THE SOLENOID VALVES ARE DE-ENERGIZE TO VENT. DE-ENERGIZING BOTH SOLENOID VALVES CAUSES EACH FEEDWATER VALVE TO CLOSE IN FIVE SECONDS.

FOR INFORMATION ONLY

THIS DWG. IS REFERENCED IN VENDOR MANUAL: N/A		MICROSTATION TSL/01		1X6AA02-00238.DGN	
TAB/SECT. N/A		PAGE N/A		FIGURE N/A	
VERSION 9.0 DATE 01/11/08		REVISED BY SNC PER ABN-V00442, VER.3.0		TITLE: FUNCTIONAL DIAGRAM FEEDWATER CONTROL & ISOLATION	
BY TSL		CHK'D RBH	APPR.1 JMR	APPR.2	VENDOR: WESTINGHOUSE
DRAWING NO. 1X6AA02-00238		P.O. # PAV-00370		SIZE D 1	