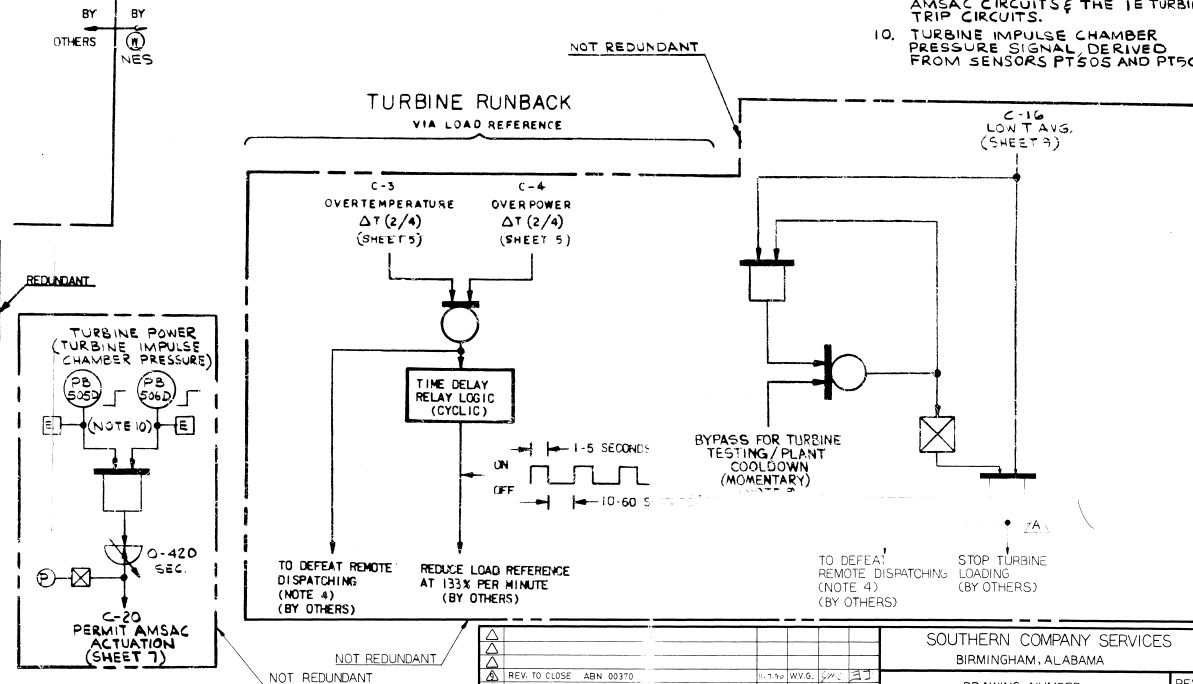


1. THESE SIGNALS INDICATE THE CLOSING OF THE STOP VALVES. POSITION DETECTION IS ACCOMPLISHED BY TWO CONTACTS PER STOP VALVE, ONE FOR EACH TRAIN. THE LOGIC SHOWN IS FOR FOUR STOP VALVES.
2. REDUNDANCY IS INDICATED IN REGARDS TO (H) REQUIREMENTS ONLY.
3. OPEN/SHUT INDICATION IN CONTROL ROOM FOR EACH STOP VALVE.
4. THE REMOTE DISPATCHING IS TYPICAL. ACTUAL IDENTIFICATION MAY NOT INCLUDE REMOTE DISPATCHING.
5. GENERATOR MOTORING PROTECTION SHOULD NOT DEFEAT THE THIRTY SECOND DELAY.
6. THE REACTOR COOLANT PUMP BUS TRANSFER SHOULD BE COMPLETED WITHIN SIX CYCLES IN ORDER TO INSURE COMPATIBILITY WITH THE UNDERFREQUENCY TRIP OF THE REACTOR COOLANT PUMP CIRCUIT BREAKERS. THE TRANSFER TIME LIMIT MAY BE EXTENDED ANOTHER 4 CYCLES TO A TOTAL OF NOT GREATER THAN 10 CYCLES, IF THE SYSTEM DYNAMICS ARE SUCH THAT A ROP TRIP DOES NOT OCCUR. THE 10 CYCLE LIMIT IS FOR PUMP MOTOR PROTECT.
7. ISOLATION IS PROVIDED FOR THIS SIGNAL TO AVOID AN INTERCONNECTION BETWEEN TRAIN A AND TRAIN B.
8. THIS FUNCTION IS USED TO BYPASS THE REDUCED TEMPERATURE RETURN TO ALLOW THE SYSTEM TO CONTINUE TO POWER TURBINE TESTING AND/OR TO DEFEAT THE C-16 ANNUNCIATOR SUCH AS WOULD BE REQUIRED DURING A PLANT COLDOWN.
9. THE AMSAC SIGNAL IS NOT REDUNDANT. ISOLATION DEVICES ARE REQUIRED BETWEEN THE NON-1E AMSAC CIRCUITS & THE 1E TURBINE TRIP CIRCUITS.
10. TURBINE IMPULSE CHAMBER PRESSURE SIGNAL DERIVED FROM SENSORS PT50S AND PT50G.



GEORGIA POWER COMPANY	
PLANT:	VOGTLE ELECTRIC GENERATING PLANT
UNITS: 1 & 2	SPIN: AASFED03
STATUS: APPROVED	
CERTIFICATION LTR. NO. GP-13060	
AUTHORITY: R.S. HOWARD	
ENGR. LTR. NO. EP/SA-53512	

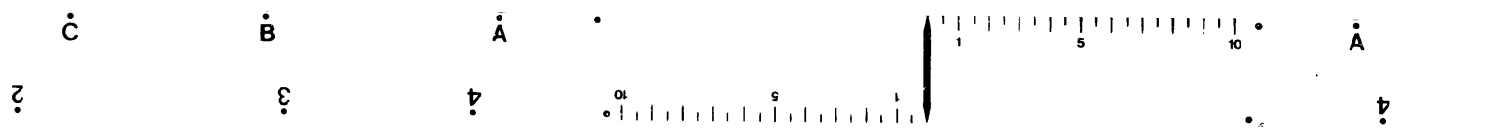
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF THE WESTINGHOUSE ELECTRIC CORPORATION WATER REACTOR DIVISION. IT IS TRANSMITTED TO YOU IN CONFIDENCE AND TRUST, AND IS TO BE RETURNED UPON REQUEST. ITS CONTENTS MAY NOT BE DISCLOSED IN WHOLE OR IN PART TO OTHERS OR USED FOR OTHER THAN THE PURPOSE FOR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

DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
OFFICE	P. HEARN	7-13		Westinghouse Electric Corporation			
CHIEF				NUCLEAR ENERGY SYSTEMS DIVISION, P.O. BOX 1, U.S.A.			
DESA. ENG.	<i>J. J. Gennaro</i>	11-12		ATTN: GEORGIA POWER CO.			
INFO. ENG.		28		ALVIN W. VOGTLI UNIT # 2 FUEL POINT, DIAG			
OFFICE ENG.				TURBINE TRIP, RUNBACKS, AND OTHER SIGNALS			
				(W. REQUIREMENTS)			
APP.	<i>S. B. Patton</i>	7-13					
APP.				SCALE			
APP.				DIMENSIONS IN INCHES			
OFFICE SUPV.	<i>D. M. J.</i>	7-13		DO NOT SCALE			
				SHEET -16			
				ELEN 11-12-58-2			

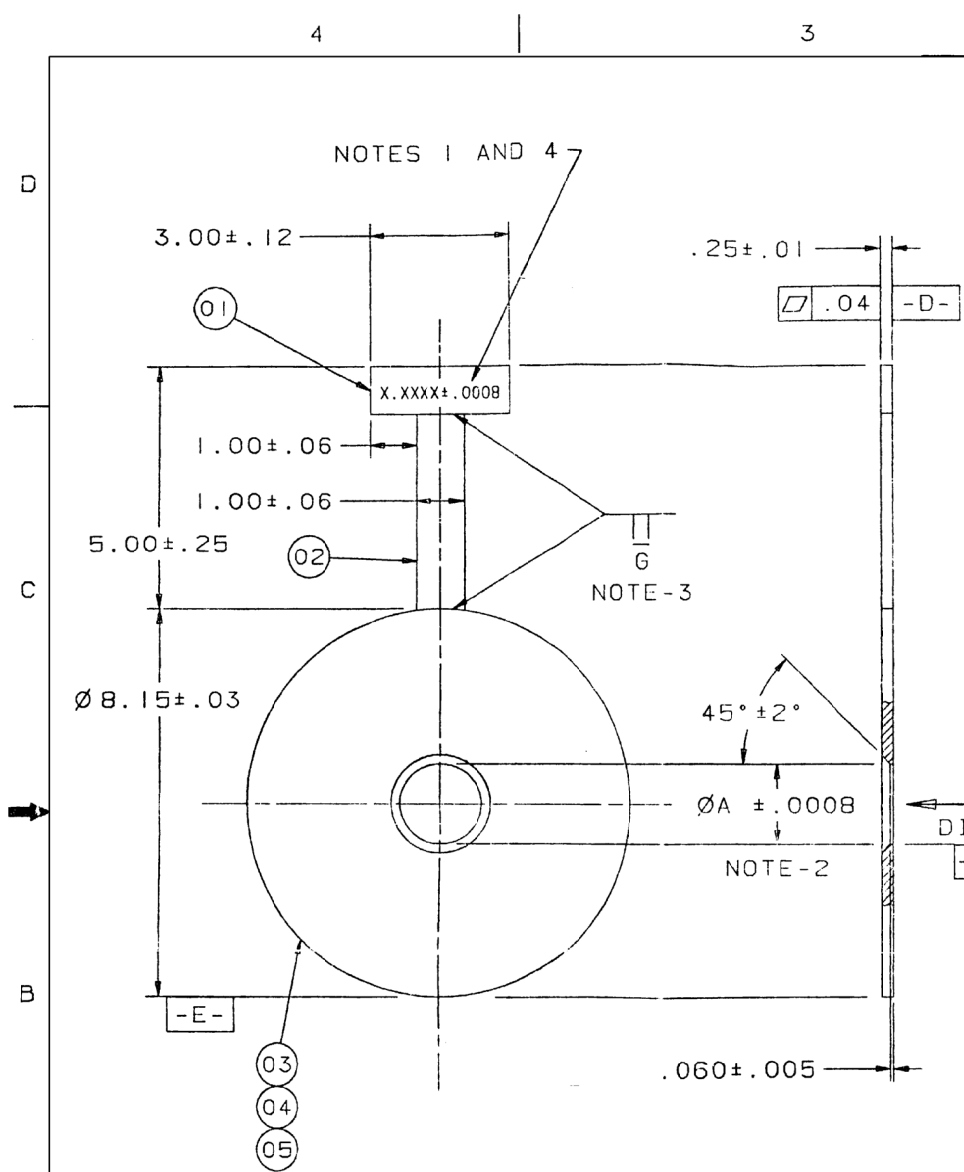
[illegible]

GPC PLANT VOGT E CONSTR MICROGRAPHICS

Wickley Hobbs
SECTION SUPERVISOR



2.



IDENT CLASS		GROUP NOTE		BILL OF MATERIAL	
REGD	ITEM	U	Q	PART NAME	(SIZE) REFERENCE INFORMATION
03	02	01		NAME PLATE	ASME SA 240 304-316 SST.
1	1	1		HANDLE	ASME SA 240 304-316 SST.
1	1	1		DISK	ASME SA 240 304-316 SST.
1	1	1		DISK	ASME SA 240 304-316 SST.
1	1	1		DISK	ASME SA 240 304-316 SST.

- NOTES:
1. IDENTIFICATION CHARACTERS MAY BE STAMPED OR ETCHED APPROX. .25 HIGH.
 2. INLET EDGE AT DIAMETER "A" MUST BE SQUARE, SHARP, AND FREE FROM DURRS, NICKS OR ROUNDING.
 3. OTHER MEANS OF ATTACHMENT MAY BE USED PROVIDED PRIOR W APPROVAL IS GIVEN.
 4. NAMEPLATE SHALL IDENTIFY ORIFICE SIZE, GRADE, SERIAL NUMBER, AND HEAT NUMBER.
 5. WESTINGHOUSE SPIN NO. - CSORCP (GAE).
 6. FOR GROUP B1,B2 AND B3 USE ITEMS 1,2 AND 5. THESE GROUPS MANUFACTURED ON SITE.
 7. ORIFICE PLATE BORE DIAMETERS MUST BE CONSIDERED IN ORDER TO MEET PUMP PERFORMANCE REQUIREMENTS AND SYSTEM RESISTANCE CRITERIA PER TRM 13.5.1.

GROUP	A
01	1.5834
02	1.4995
03	1.7048
04	1.1456
05	1.1206
06	1.1738
B1	1.4136
B2	1.4435
B3	1.4770
B4	3.4380 W/O TAPER

INSTRUMENT TAG NUMBER	GROUP
FO 10118	B4
FO 10122	B1

SO. GAE-205
D. 305090-01
IT. REVISION

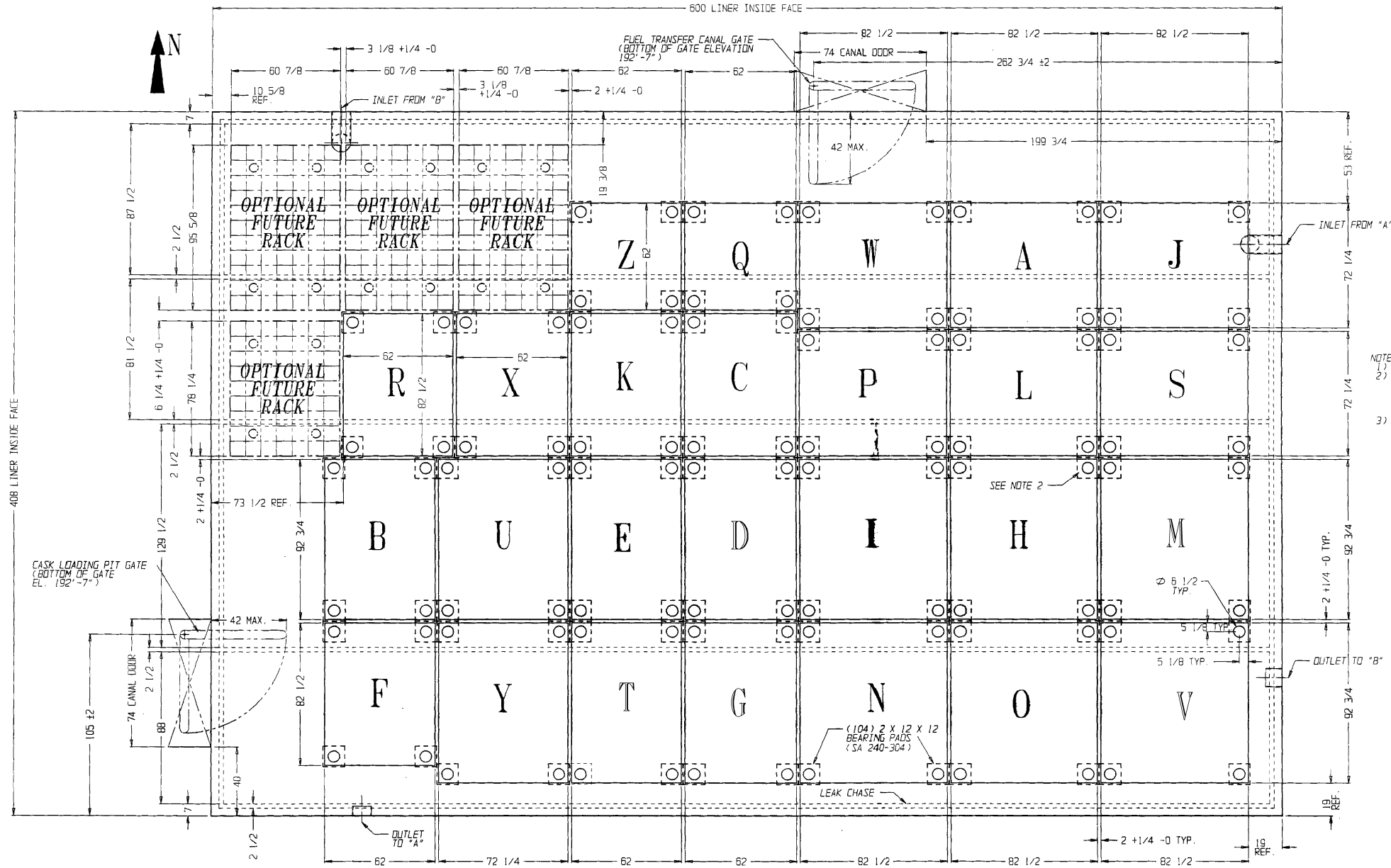
TOLERANCE & MACHINE NOTES
(UNLESS OTHERWISE SPECIFIED)
DRAWING PRACTICES, GEOMETRIC SYMBOLS, DIMENSIONING, TOLERANCING & INTERPRETATION BASED ON ANSI Y14 SERIES STANDARD & PS 80400HA.
DIMENSIONS IN INCHES BASED ON 68°F (20°C)
RADIUS OR CHAMFER ALL EDGES-----0.05-0.030
FILLET RADIUS-----0.03-0.01
ANGULARITY: CHAMFERS-----2°
MAXIMUM SURFACE ROUGHNESS-250μIN. (√AA)
DWG. REF.
NEXT ASSY.

WESTINGHOUSE PROPRIETARY DATA
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF THE WESTINGHOUSE ELECTRIC CORPORATION WATER REACTOR DIVISION. 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: 01/13/14
SCALE: 1:1
SHEET: 1 OF 1
REV. 5

THIS DWG. IS REFERENCED IN VENDOR MANUAL: N/A
TAB/SECT. N/A
PAGE N/A
FIGURE N/A
VERSION 7.0 DATE 01/13/14
REVISED BY SNC PER ABN-V03188, VER 1.0
SEE MICROFILM FOR PREVIOUS REV. SIGNATURES.
BY: DCP CHK'D: ELC APPR. 1: JMR APPR. 2: [Signature]
DRAWING NO. 1X6AH02-30000

CAD MICROSTATION DCP/02
1X6AH02-30000.DGN
Southern Nuclear Operating Company, Inc.
FOR
VOGTLE ELECTRIC GENERATING PLANT
UNIT NO. 1
TITLE:
GAE CHARGING PUMP
FLAT PLATE ORIFICES
ORIFICE ASSEMBLY
VENDOR: WESTINGHOUSE P.O.: PAV-2



CONFIGURATION CHART			
MODULE LETTER	MODULE SERIAL NUMBER	WEIGHT LBS. DRY	SIZE
Z	AD-32129-D-01	12,700	6 X 6
Q	AD-32129-D-02	12,700	6 X 6
W	AD-32132-D-01	17,550	7 X 8
A	AD-32132-D-02	17,550	7 X 8
J	AD-32132-D-03	17,550	7 X 8
R	AD-32130-D-01	16,900	6 X 8
X	AD-32130-D-02	16,900	6 X 8
K	AD-32130-D-03	16,900	6 X 8
C	AD-32130-D-04	16,900	6 X 8
P	AD-32132-D-04	17,550	7 X 8
L	AD-32132-D-05	19,600	7 X 8
S	AD-32132-D-06	19,600	7 X 8
B	AD-32131-D-01	17,100	6 X 9
U	AD-32133-D-01	19,750	7 X 9
E	AD-32131-D-02	17,100	6 X 9
T	AD-32131-D-03	19,050	6 X 9
I	AD-32134-D-01	22,400	8 X 9
H	AD-32134-D-02	22,400	8 X 9
V	AD-32134-D-03	22,400	8 X 9
F	AD-32130-D-05	16,900	6 X 8
Y	AD-32133-D-02	22,050	7 X 9
G	AD-32131-D-04	19,050	6 X 9
O	AD-32131-D-05	19,050	6 X 9
N	AD-32134-D-04	22,400	8 X 9
D	AD-32134-D-05	22,400	8 X 9
M	AD-32134-D-06	25,075	8 X 9

- NOTES:
- 1) ALL DIMENSIONS ARE IN INCHES, UNLESS NOTED.
 - 2) INSTALLER MAY USE SINGLE LARGE BEARING PAD AT A TWO, THREE OR FOUR RACK PEDESTAL INTERSECTION AS OPPOSED TO SEPARATE 12" SQUARE BEARING PADS AS LONG AS THE DISTANCE FROM THE EDGE OF A RACK PEDESTAL TO THE EDGE OF THE BEARING PAD IS A MINIMUM OF 2 1/2".
 - 3) RACK MODULE LOCATION IS SIZE DEPENDENT. RACKS OF THE SAME SIZE CAN BE SUBSTITUTED EVEN THOUGH THEY HAVE DIFFERENT WEIGHTS AS LONG AS THE WEIGHT DIFFERENCE DOES NOT EXCEED 3% OF THE WEIGHT OF THE LIGHTEST RACK WITH ALL LOCATIONS FILLED WITH FUEL. FOR EXAMPLE, ALTHOUGH RACK "M" IS SHOWN ON THE SOUTHEAST CORNER, ANY OF THE 8X9 RACKS (T, H, V, N, D, OR M) MAY BE PLACED IN THIS CORNER POSITION.

REVISIONS					
REV	DESCRIPTION	PREP	CHECKED	ENGINEERING	I.A.
0	ISSUED FOR APPROVAL	2-29-99	2-29-99	2-29-99	2-29-99
1	REV'D AS SHOWN	2-29-99	2-29-99	2-29-99	2-29-99
2	ADD TOLERANCE & CHANGE RACK T.O.	2-29-99	2-29-99	2-29-99	2-29-99

THIS DRAWING IS AN INTELLECTUAL PROPERTY OF HOLTEC INTERNATIONAL. IT IS PROVIDED TO THE RECIPIENT UNDER THE EXPLICIT CONDITION THAT IT WILL NOT BE DUPLICATED IN WHOLE, IN PART, OR GIVEN TO OTHERS WITHOUT WRITTEN CONSENT OF HOLTEC INTERNATIONAL.



EQUIPMENT DESIGN

ANALYSIS

CONSULTING

DESCRIPTION:
**UNIT #1 SPENT FUEL POOL-
SPENT FUEL RACK LAYOUT**

CLIENT:
**SOUTHERN NUCLEAR
ALVIN W. VOGTLE NUCLEAR PLANT**

COMPANION DRAWINGS:
NONE

SHEET NO.:
SHEET 1 OF 1

PROJECT No.:
70241

SCALE:
1/32" = 1'

DRAWING No.:
1945

REV.:
6

P.O. No.:
70290170000

SIZE D

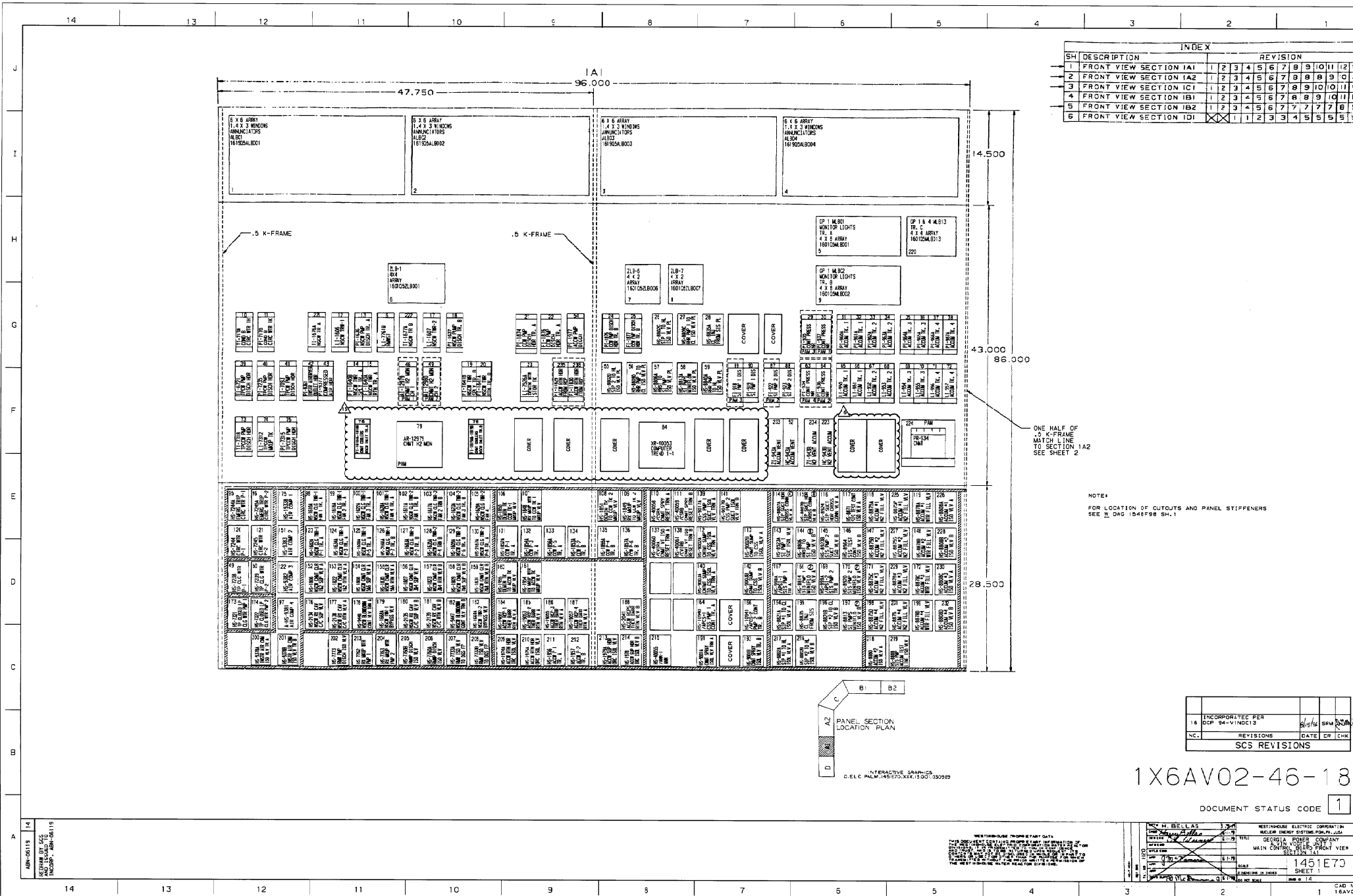
CAD NAME
16N10B66

SCS REVISIONS					
6	INCORPORATED PER DCP 97-VIN0001 (CHANGE STATUS FROM P TO I)	2-16-99	ELC	EOG	GLB
NO.	REVISIONS	DATE	DR	CHK	APPV

1X6AN10B-00066-3

DOCUMENT STATUS CODE

1



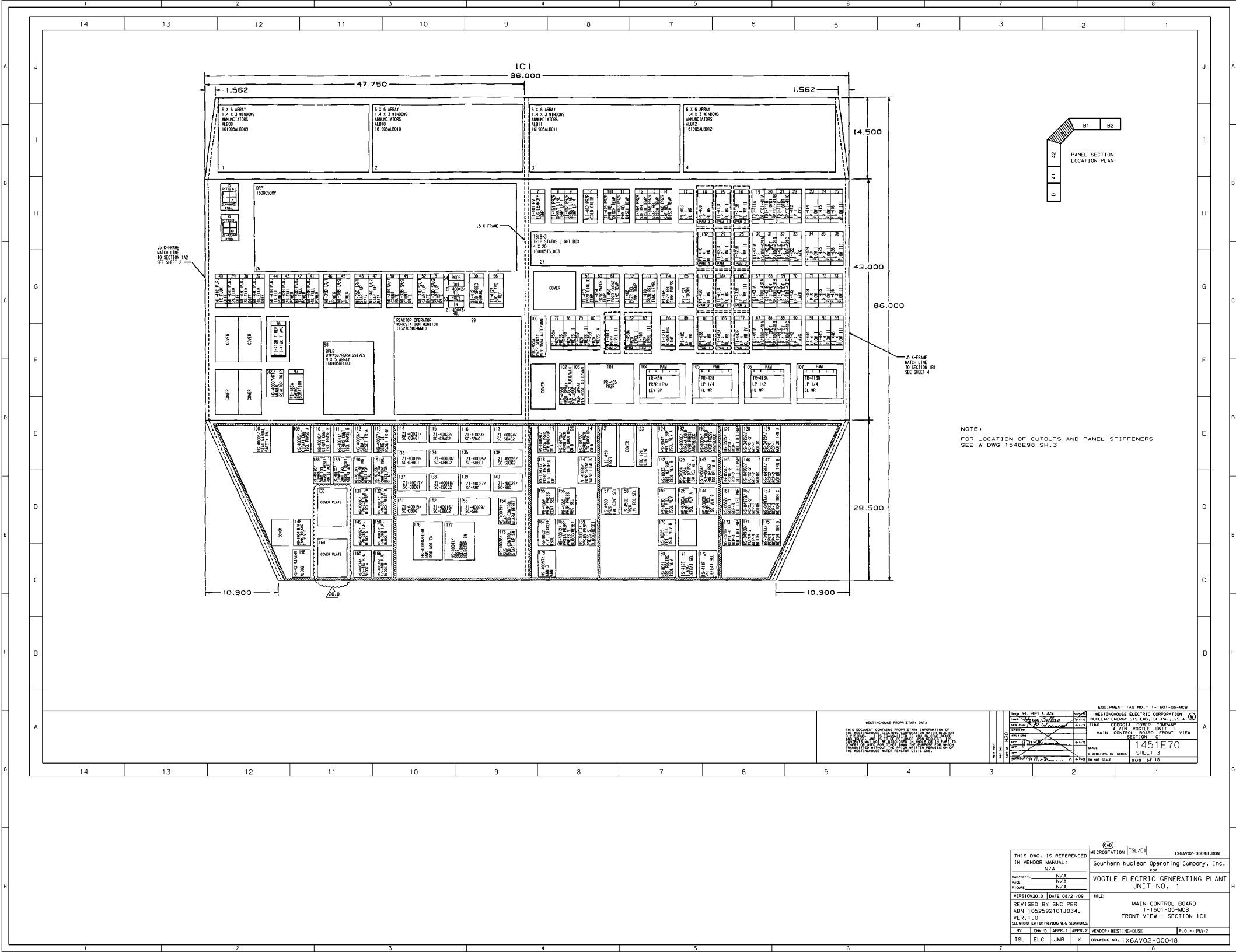


WESTINGHOUSE PROPRIETARY DATA

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF THE WESTINGHOUSE ELECTRIC CORPORATION WATER REACTOR DIVISION. 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 DIVISION.

WESTINGHOUSE ELECTRIC CORPORATION NUCLEAR ENERGY SYSTEMS, P.O. BOX 1, U.S.A. FIVE GEORGIA POWER COMPANY ALVIN VOGLT UNIT 1 MAIN CONTROL BOARD FRONT VIEW SECTION 1A2	
SCALE	1451E70
REVISIONS (DRAWN BY) (DATE)	SHEET 2
DESIGNER (NAME)	SUB 57

THIS DMC IS REFERENCED IN VENDOR MANUAL: N/A		MICROSTATION TSL/D1		1386602--00376 DON
TAR/SET: N/A		Southern Nuclear Operating Company, Inc. FSM		
PAGE: N/A		VOGTLE ELECTRIC GENERATING PLANT		
PI/ISS: N/A		UNIT NO. 1		
VERSION 1.0.1 DATE 02/15/09		TITLE:		
REVISED BY SNC PER ABN 1062047701E003, VER. 1.0		MAIN CONTROL BOARD FRONT VIEW SECTION 1A2		
SEE RECORD FOR PREVIOUS REV. ISSUES.				
BY	Drawn by	1. APPROV	DRAWN BY: WESTINGHOUSE ELEC	
TSL	RBH	JMR	ORATING NO. 1X6AV02-00047	



EQUIPMENT TAG NO. 1 1-1601-05-MCB	
DRG. H. BELLAS	WESTINGHOUSE ELECTRIC CORPORATION
COMP. 10/1/79	NUCLEAR ENERGY SYSTEMS GROUP, INC.
DES. 10/1/79	FOR
SYSTEM	VOGTLE ELECTRIC GENERATING PLANT
SECTION	MAIN CONTROL BOARD - FRONT VIEW
SECTION	SECTION 1C1
SCALE	1:451E70
DIMENSIONS IN INCHES	SHEET 3
DO NOT SCALE	SLIP 18

THIS DWG. IS REFERENCED IN VENDOR MANUAL:		MICROSTATION [TSL/01]		1X6AV02-00048.DWG	
FABRICATED BY:		SOUTHERN NUCLEAR OPERATING COMPANY, INC.		FOR	
PAGE		VOGTLE ELECTRIC GENERATING PLANT		UNIT NO. 1	
TITLE		MAIN CONTROL BOARD		1-1601-05-MCB	
REVISIONS		FRONT VIEW - SECTION 1C1			
BY: CHC ID APPR. 1 APPR. 2		VENDOR: WESTINGHOUSE		P. 0.11 PAV-2	
TSL ELC JMR X		DRAWING NO. 1X6AV02-00048			

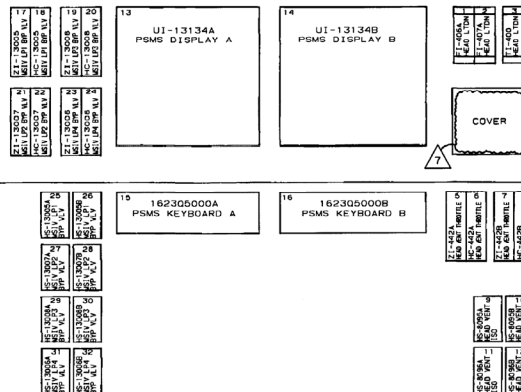
IDI

14.500

43.000

28.500

65.38

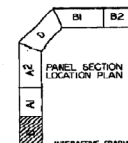


NOTE:
FOR LOCATION OF CUTOUTS AND PANEL STIFFENERS
SEE W DWS 1548598 SH.5

SCS REVISIONS			
NO.	REVISIONS	DATE	DR CHK
7	INCORPORATED PER DCP 94-VIND013	8/14/94	JCM SBY

DOCUMENT STATUS CODE 1

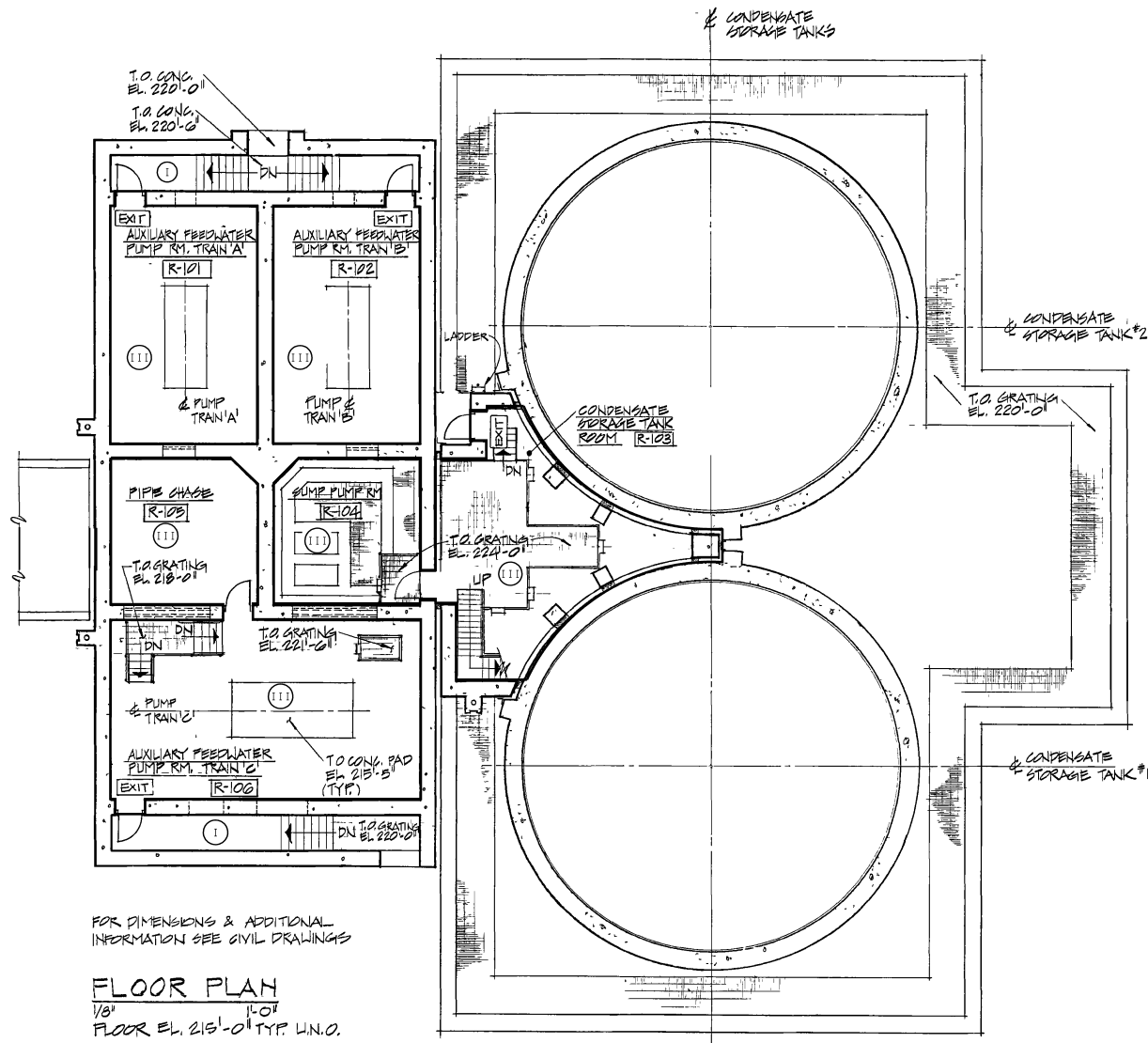
1X6AV02-60-8



SOUTHERN COMPANY SERVICES BIRMINGHAM, ALABAMA		REV
DRAWING NUMBER 1X6AV02-60		7
REV. TO CLAR. BENT LINES & H.D. LINES (2/10/94)		2
REV. TO CLAR. CHAIR MOUNT		3
REV. TO CLAR. FOR PROVIDER REVS.		4
NO. SOUTHERN COMPANY SERVICES REVISIONS		DATE DR. CHK. OF
1X6AV02-60 MAIN CONTROL ROOM, FRONT VIEW SHEET 16 1451E70 SHEET 8		WESTINGHOUSE ELECTRIC CORPORATION POWER SYSTEMS DIVISION BIRMINGHAM, ALABAMA 35202

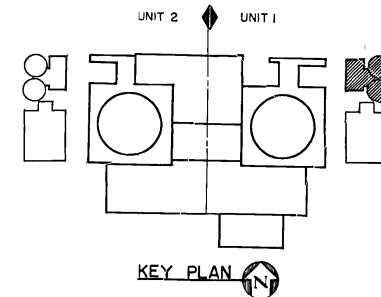
14 13 12 11 10 9 8 7 6 5 4 3 2 1

CAO NAME
16AV0260



FOR DIMENSIONS & ADDITIONAL
INFORMATION SEE CIVIL DRAWINGS

FLOOR PLAN
1/8" = 1'-0"
FLOOR EL. 215'-0" TYP. U.N.O.



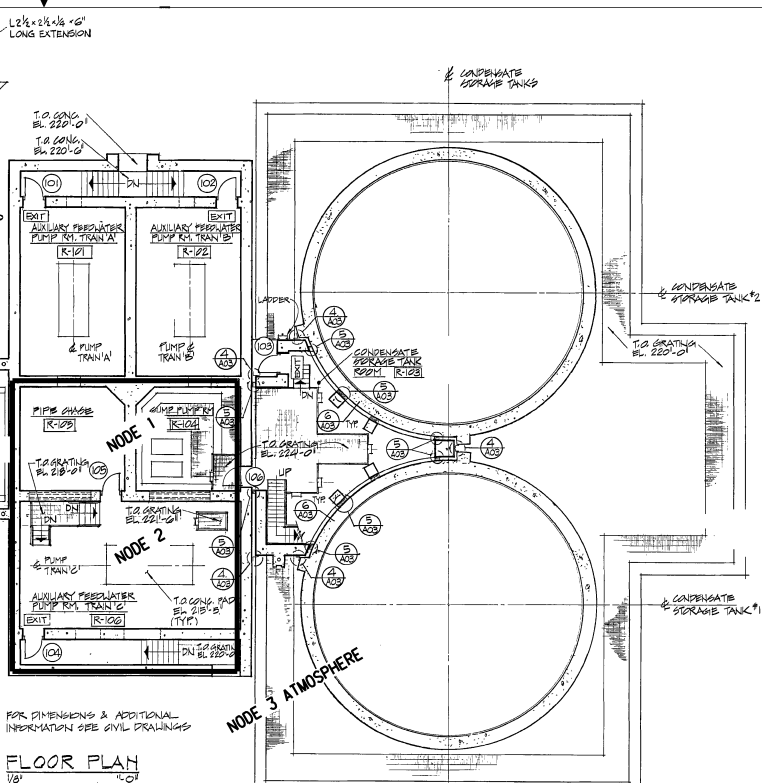
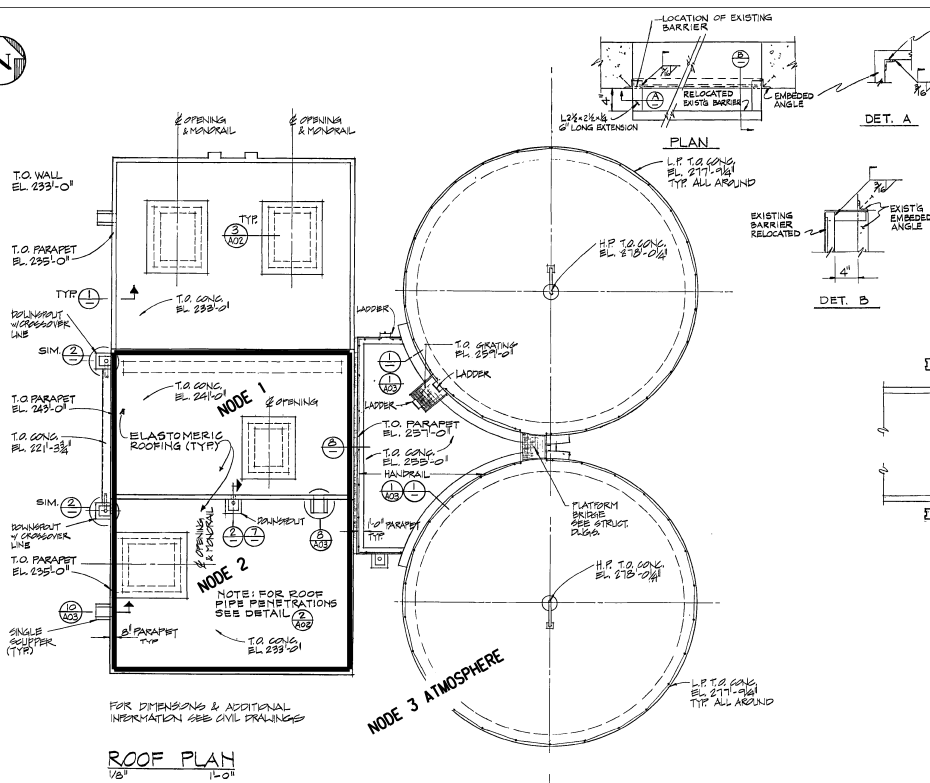
RAD ZONE MAP POST TMI 24 HOURS	
ZONE	REM/H
(I)	< 0.0025
(II)	0.0025-0.1
(III)	0.1-1.0
(IV)	1.0-10.0
(V)	10.0-100
(VI)	100-1000
(VII)	1000-10000
(VIII)	>10000
—	ZONE BOUNDARY

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
RAD ZONE MAP POST TMI 24 HOURS
AUXILIARY FEEDWATER
PUMP HOUSE FLOOR PLAN

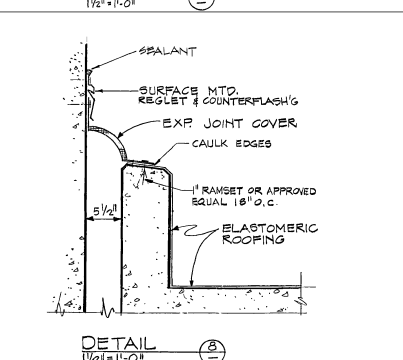
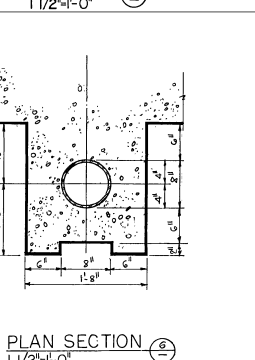
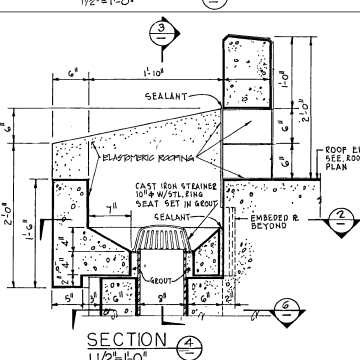
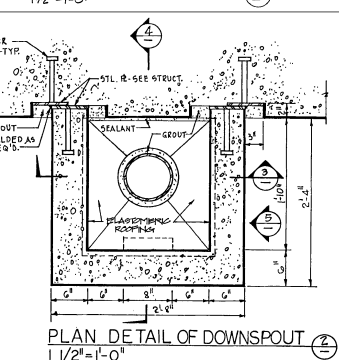
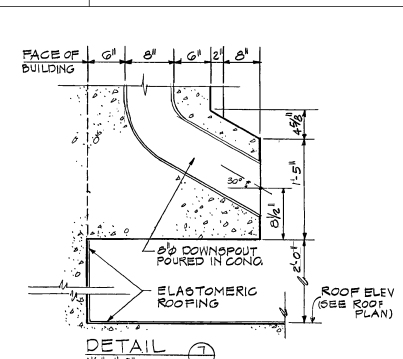
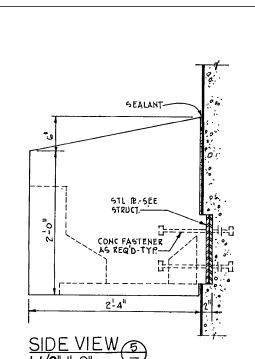
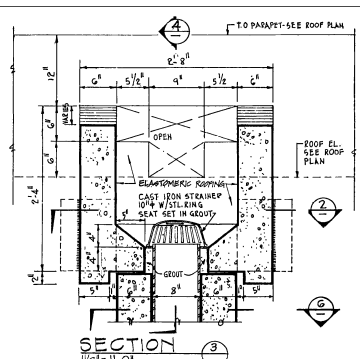
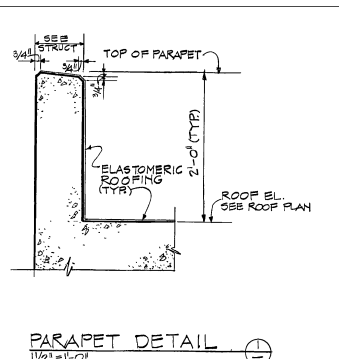
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION,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

ISSUED PER REA 96-VA0064
REVISIONS
DATE DR CHK [APPV] DTL
SIZE E 34x44

SCALE: NONE
DRAWING NO. 1X6DD101
REV. 0
JOB NO. 10604



- ### GENERAL NOTES
- DIMENSIONS:
 - REFER TO STRUCTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN IN ARCHITECTURAL DRAWINGS.
 - ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE.
 - ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE PROCEEDING WITH THE WORK.
 - PROVIDE ALL NECESSARY BLOCKING, BRACING, FRAMING FOR HOSE CABINETS, WALL MOUNTED AND RECESSED CABINETS, FITTINGS, ELECTRICAL CABINETS AND ALL OTHER ITEMS REQUIRING SAME.
 - ALL CONSTRUCTION SHALL COMPLY WITH THE "NATIONAL FIRE CODES", 1977 EDITION.
 - BUILDING STRUCTURE FIRE PROTECTION:
 - A. ALL BEARING WALLS OR BEARING PORTIONS OF WALLS SHALL HAVE 2 HOUR FIRE RESISTIVE CONSTRUCTION.
 - B. ALL PRINCIPAL SUPPORTING MEMBERS INCLUDING COLUMNS, TRUSSES, GIRDERS AND BEAMS SHALL HAVE FIRE RESISTANCE RATING AS FOLLOWS:
 - 2 HOUR FOR ONE FLOOR OR ROOF ONLY
 - 1 HOUR FOR MORE THAN ONE FLOOR OR ROOF
 - C. ALL SECONDARY FLOOR SUPPORTING MEMBERS - BEAMS, PLATS, JOIST, NOT AFFECTING THE STABILITY OF THE BUILDING SHALL HAVE 1 HOUR FIRE RESISTANCE RATING.
 - D. ALL SECONDARY ROOF SUPPORTING MEMBERS - BEAMS, JOISTS, SLABS NOT AFFECTING THE STABILITY OF THE BUILDING SHALL HAVE 1-1/2 HOUR FIRE RESISTANCE RATING.
 - E. FOR TYPE AND MATERIAL REFER TO DETAIL DRAWINGS AND SPECIFICATION.
 - FIRE RESISTIVE CONSTRUCTION:
 - A. INSTALL FIRE BARRIERS ON DUCTS PASSING THROUGH FIRE RATED WALLS.
 - B. ALL FIRE RATED WALLS SHALL EXTEND TO THE UNDERSIDE OF THE STRUCTURE ABOVE, UNLESS NOTED OTHERWISE.
 - ALL LOCAL COSTS SHALL BE OPERABLE FOR THE TANKER WITHOUT THE USE OF KEY, SPECIAL EFFORT OR KNOWLEDGE. EXIT SHALL BE PROVIDED WITH ILLUMINATED EXIT SIGNS - SEE FLOOR PLANS FOR LOCATION.
 - ALL CABINETS, ELECTRICAL PANELS, ETC. RECESSED INTO FIRE RATED WALLS SHALL BE BACKED WITH FIRE RATED CONSTRUCTION TO MATCH THE WALL FIRE RATING.
 - CROSS CHECK ALL DETAILS AND DIMENSIONS SHOWN IN THE ARCHITECTURAL DRAWINGS WITH RELATED REQUIREMENTS ON THE STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL AND/OR CONTROL DRAWINGS.
 - FLOOR AND WALL OPENINGS, SLEEVES, VARIATIONS IN THE STRUCTURAL SLAB ELEVATIONS, COMPRESSED AREAS, AND ALL OTHER CONTROL, MECHANICAL, ELECTRICAL AND/OR STRUCTURAL REQUIREMENTS, MUST BE COORDINATED BEFORE PROCEEDING WITH CONSTRUCTION.
 - DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL SIMILAR CASES UNLESS SPECIFICALLY INDICATED OTHERWISE.
 - WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION.
 - THE PRECISE DIMENSIONS AND LOCATIONS OF ALL LADDERS, EQUIPMENT AND ACCESS HATCHES, SHOPS, EQUIPMENT AND FLOOR DRAINS SHALL BE DETERMINED FROM THE STRUCTURAL, MECHANICAL, ELECTRICAL, AND CONTROL DRAWINGS, AND BE VERIFIED FROM VENDOR SHOP DRAWINGS, EQUIPMENT DATA, ETC. AS REQUIRED.
 - SIZES OF MECHANICAL EQUIPMENT ROOM PADS, AND BASES ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL CONCRETE PADS AND BASES WITH EQUIPMENT MANUFACTURER'S SHOP DRAWINGS.
 - ALL BEARING WALLS OR BEARING PORTIONS OF WALLS SHALL HAVE 2 OR 3 HOUR FIRE RESISTIVE CONSTRUCTION. SEE FIRE PROTECTION DWGS.
 - ALL CONCRETE ROOF SURFACES SHALL RECEIVE ELASTOMERIC ROOFING MATERIAL.
 - EXPOSED CONCRETE SURFACES OF THE TANK CEILING ARE TO RECEIVE FC-13 COATING SYSTEM.



LEGEND

— NODAL BOUNDARY

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

NODAL BOUNDARY
AUXILIARY FEEDWATER PUMP HOUSE AREA

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

DRAWING NO. 1X60D300

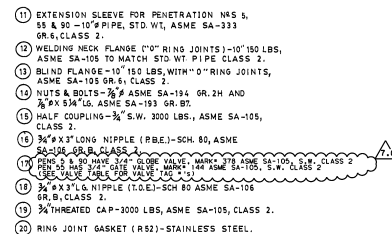
REV. 1

NO.	REVISIONS	DATE	BY	CHK	APPV	DTL
1	REVISED PER REA 96-VA0004	10-1-98	GS	RBH	CBH	
2	ISSUED PER REA 96-VA0004					

SIZE E 34x44

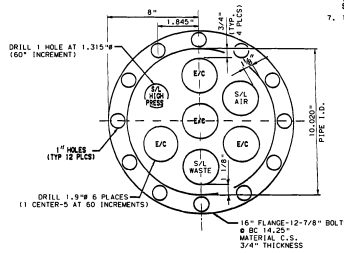
JOB NO. 10604

CAD NAME 1X60D300

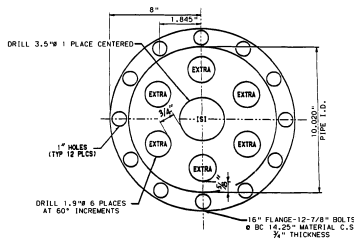


~ VALVE TABLE ~	
RETENTION N°	VALVE TAG N°
5	2-1222-X4-017
55	2-1222-X4-018
90	2-1222-X4-019

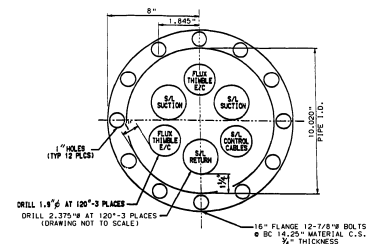
3. 1. NELD ALL PIPE TO 3/4" FLIET BOTH SIDES OF 10"-100" FLANGE (MACHINE TO 3/8" FLAT FACE 1A-105).
4. 2. TRUE FLANGE SEATING SURFACE AFTER WELDING (IF REQUIRED) WATE TO EXISTING FLANGE.
5. 3. PROCESS IS GTAW EXTOS-X OR SMAW E7018.
6. 4. ALL PIPE IS TO BE THREADED ON BOTH ENDS. 1/2 1/2 TPI FOR 1.0", 1.5" & 2.0" & 8 TPI - FOR 3.0".
7. 5. PIPE SLEEVES USED FOR CABLEING TO BE SEALED WITH P-90 TO WITHIN 1/2" OF EACH END.
8. 6. 1.5" PIPE OPENINGS NOT USED TO BE COUPLED WITH 1.5 COUPLED WELDED TO 1.5" OR 2.0" PIPE. 2.0" PIPE SLEEVES PARTS TO BE COUPLED WITH STANDARD PIPE CAP WHEN NOT IN USE.
9. 7. 1.5", 2" & 3" PIPE SCH. 40, 1" SCH. 80 A-106.



OUTAGE "FIXTURE" ELEVATION
(1.5" & 1" PIPE)
5 55 OR 90



OUTAGE "FIXTURE" ELEVATION
(3" & 1.5" PIPE)
(5) (55) OR (90)



OUTAGE "FIXTURE" ELEVATION
(2" & 1.5" PIPE)
(5) (55) OR (90)

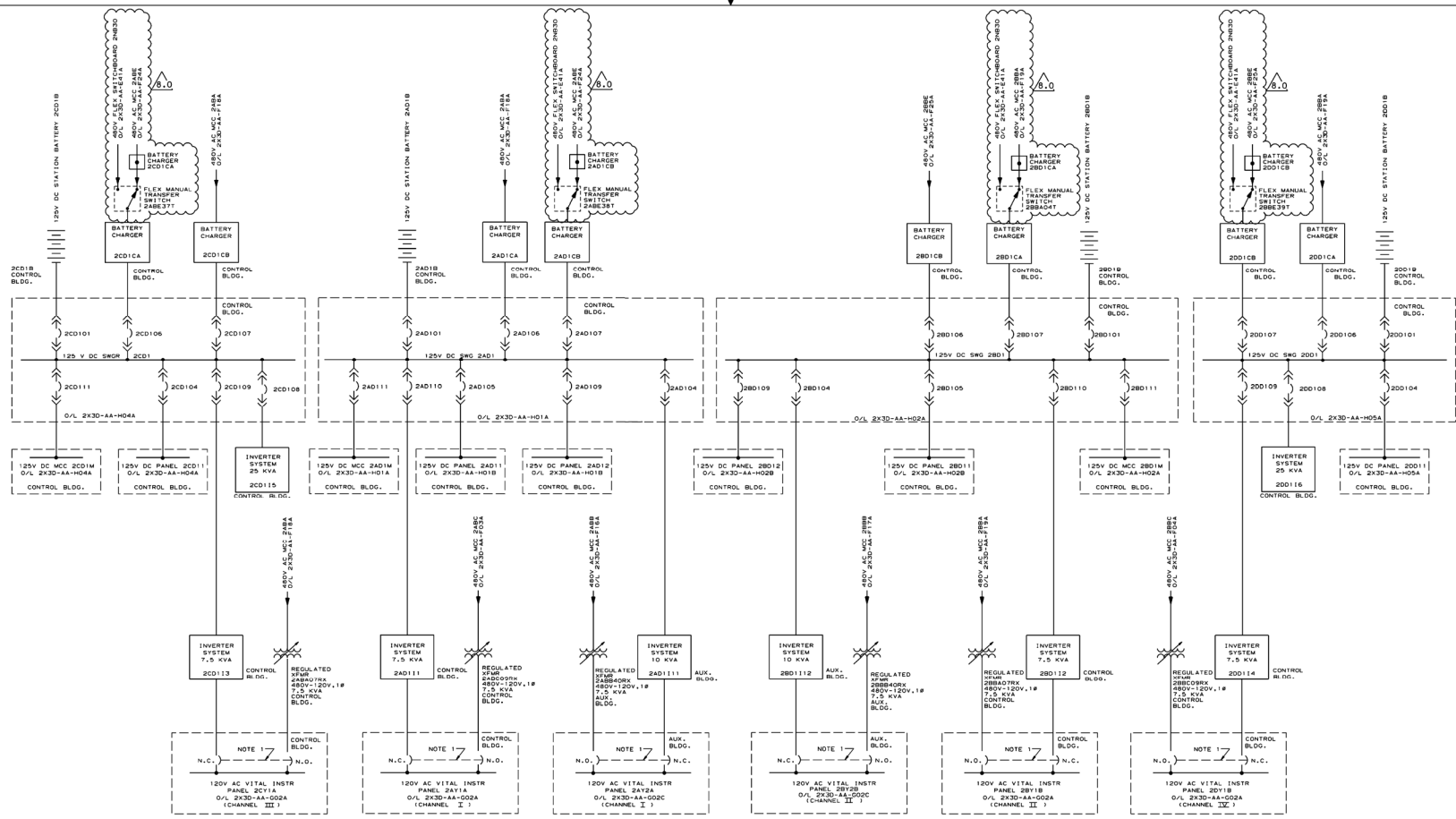
 SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTE NUCLEAR PLANT

CONTAINMENT
WALL LINER PLATE
PENETRATIONS DETAILS SHT. 1

7.0	REVISED PER ABN 2100540301M003, VER 1.0	05/25/10	ELC	MWD	JMR	
NO.	VERSIONS	DATE	BY	CHK	APP	

SCALE: AS NOTED	DRAWING NO.	VER.
JOB NO. 10604	2X2D01J019-2 ^{7.0}	7.0



NOTE:
1. MECHANICAL INTERLOCKS SHALL BE PROVIDED SUCH THAT ONLY ONE BREAKER OF THE TWO INTERLOCKED IS CLOSED.

NUCLEAR SAFETY RELATED

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
MAIN ONE LINE
CLASS 1E 125V DC AND
120V VITAL AC SYSTEMS

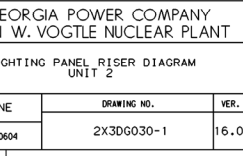
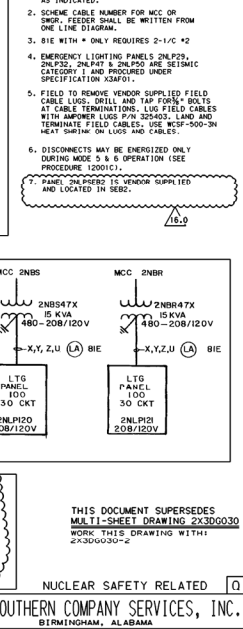
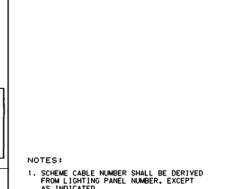
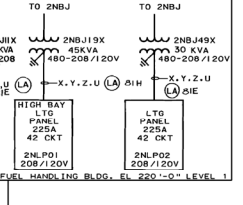
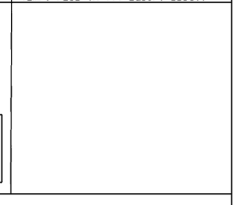
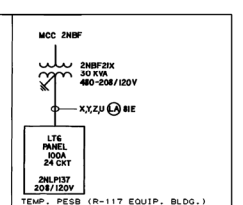
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF THE SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTORS OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION,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

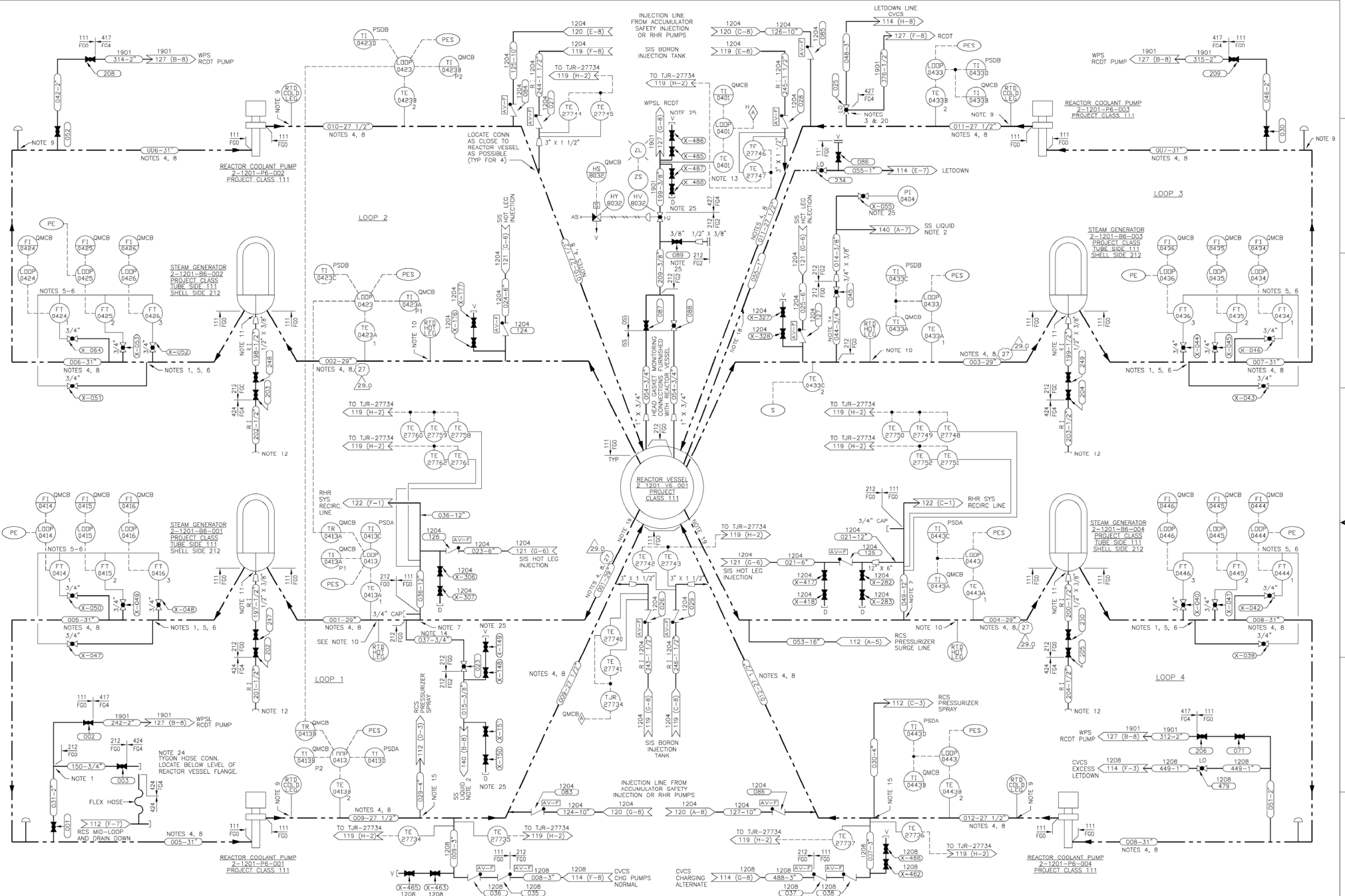
1.0	REVISED PER AIN 504278/00010, VER. 1.0	3/1/78	LEH	SD	MLN	NO.	DATE	DR	CHK	APPV	SCALE: NONE	DRAWING NO. 2X30-AA-G01A	VER. 8.0
SIZE E 34644												1	DWG CATEGORY: CRITICAL

EQUIPMENT TAG NUMBER	EQUIPMENT DESCRIPTION	PROJECT CLASSIFICATION (ELECTRICAL SYSTEM)	PROCESSING SPECIFICATION	BUS NUMBER	BUS VOLTAGE	NOMINATE RATING (OR KVA)	REFERENCE DWG.	LOSS OF COOLANT ACCIDENT (S1), PREFERRED OFFSITE SOURCE AVAILABLE				LOSS OF OFFSITE POWER & SUBSEQUENT S1				LOSS OF OFFSITE POWER				
								MANUAL PROCESSING START (SEE TABLE 1)	TIME (SECONDS) TO START AFTER START (NOTE 2)	RUNNING TIME AFTER START (NOTE 2)	MANUAL PROCESSING START (SEE TABLE 1)	TIME (SECONDS) TO START AFTER START (NOTE 2)	RUNNING TIME AFTER START (NOTE 2)	MANUAL PROCESSING START (SEE TABLE 1)	TIME (SECONDS) TO START AFTER START (NOTE 2)	RUNNING TIME AFTER START (NOTE 2)				
PNL 2AYD1	120/240 DISTRIBUTION PANEL	11E	X3	2ABD	480V	15.0KVA	AA-F11A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	
21555A7013M01	CHARGING PUMP ROOM COOLER	11E	X4	2ABD	480V	5.0	BG-D05N	L	L	0	C	L	0.5	C	L	0.5	C	L	0.5	C
21555A7015M01	SIS PUMP ROOM COOLER	11E	X4	2ABD	480V	3.0	BG-D05R	L	L	0	C	L	0.5	C	L	0.5	C	L	0.5	C
21555A7001M01	MCC ROOM COOLER	11E	X4	2ABD	480V	5.0	BG-D05A	L	0	C	L	0.5	C	L	0.5	C	L	0.5	C	C
21555A7003M01	SWGR & MCC ROOM COOLER	11E	X4	2ABD	480V	2.0	BG-D05C	L	0	C	L	0.5	C	L	0.5	C	L	0.5	C	C
2120BP6006M01	BORIC ACID TRANSFER PUMP	11E	X6	2ABD	480V	20.8	BD-C01F	I	0	C	I	0.5	C	I	0.5	C	I	0.5	C	C
21555A7009M01	CTMT SPRAY PUMP COOLER	11E	X4	2ABD	480V	3.0	BG-D05J	L	L	0	C	L	0.5	C	L	0.5	C	L	0.5	C
21555A7007M01	RHR PUMP ROOM COOLER	11E	X4	2ABD	480V	5.0	BG-D05G	L	L	0	C	L	0.5	C	L	0.5	C	L	0.5	C
21513P5HMAF01	CTMT H2 MONITORING PANEL	11E	X5	2ABD	480V	1.7KVA	AA-F11A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
2HV-2138	RC COOLING COIL OUT ISO	11E	X5	2ABD	480V	.13	BD-K04M	L	0	40SEC	L	0.5	40SEC	M	>30.5	40SEC	M	>30.5	40SEC	C
2HV-1830	CTMT AIR COOLER CW OUT	11E	X5	2ABD	480V	.13	BD-K04V	L	0	30SEC	L	0.5	30SEC	M	>30.5	30SEC	M	>30.5	30SEC	C
2LV-0112D	REFUEL WTR TK TO CHG PUMP	11E	X6	2ABD	480V	1.6	BD-C02H	L	0	15SEC	L	0.5	15SEC	K	0.5	15SEC	M	>30.5	15SEC	C
2HV-8812A	RHR PUMP INLET	11E	X6	2ABD	480V	7.8	BD-E02E	M	>30.5	20SEC	M	>30.5	20SEC	M	>30.5	20SEC	M	>30.5	20SEC	C
2HV-8110	CHG PUMP TO MINIFLO ISO	11E	X6	2ABD	480V	.7	BD-C03J	L	0	10SEC	L	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8920	SI INLET B MINIFLO ISO	11E	X6	2ABD	480V	.7	BD-D02B	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8821A	RCS HT LEG LP 1/4HRD BYP	11E	X6	2ABD	480V	1.0	BD-D03D	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-8802A	RCS HT LEG LP 1/4HRD ISO	11E	X6	2ABD	480V	1.0	BD-D02G	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8923A	SI PUMP INLET	11E	X6	2ABD	480V	1.0	BD-D03F	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-8716A	RHR NO. 1 COLO LEG ISO	11E	X6	2ABD	480V	1.6	BD-E02N	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-8807A	SI PUMP SUCTION HDR	11E	X6	2ABD	480V	.7	BD-D02B	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-1806	CTMT AIR COOLER CW INLET	11E	X5	2ABD	480V	.13	BD-K04N	L	0	30SEC	L	0.5	30SEC	M	>30.5	30SEC	M	>30.5	30SEC	C
2HV-8811A	CTMT SLUMP ISO	11E	X6	2ABD	480V	7.8	BD-E03F	K,L	0	20SEC	K,L	0.5	20SEC	M	>30.5	20SEC	M	>30.5	20SEC	C
2HV-9003A	CTMT SPRAY PUMP SUCTION	11E	X6	2ABD	480V	2.0	BD-J02J	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-8814	SI PUMP MINIFLO ISO	11E	X6	2ABD	480V	.7	BD-D03C	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8801A	BORON INJ TK DISC ISO	11E	X6	2ABD	480V	3.2	BD-D02E	L	0	10SEC	L	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2FV-0610	RHR PUMP 1 MINIFLO	11E	X6	2ABD	480V	.7	BD-E02C	K	0	10SEC	K	0.5	10SEC	K	0.5	10SEC	M	>30.5	10SEC	C
2HV-9017A	CSP RFL WTR STOR TK IN	11E	X6	2ABD	480V	1.9	BD-J02G	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-8924	CHG PUMP HDR TO FR SIS PA	11E	X6	2ABD	480V	1.0	BD-C04V	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-9002A	CSP SUCTION	11E	X6	2ABD	480V	2.0	BD-J02F	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-1808	CTMT AIR COOL CW INLET	11E	X5	2ABD	480V	.13	BD-K04J	L	0	30SEC	L	0.5	30SEC	M	>30.5	30SEC	M	>30.5	30SEC	C
2HV-9001A	CTMT SPRAY HDR ISO	11E	X6	2ABD	480V	1.6	BD-J02C	L	0	15SEC	L	0.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-1822	CTMT AIR COOL CW OUTLET	11E	X5	2ABD	480V	.13	BD-K04P	L	0	30SEC	L	0.5	30SEC	M	>30.5	30SEC	M	>30.5	30SEC	C
2HV-2134	REACTOR CAVITY CC INLET ISO	11E	X5	2ABD	480V	.13	BD-K04L	L	0	40SEC	L	0.5	40SEC	M	>30.5	40SEC	M	>30.5	40SEC	C
2HV-8485A	CHARGING PUMP A DISCH	11E	X6	2ABD	480V	1.0	BD-C05A	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8471A	CHARGING PUMP A SUCTION	11E	X6	2ABD	480V	.7	BD-C05C	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
PNL 2AYE1(NOTE 20)	120/240V DISTRIBUTION PANEL	11E	X3	2ABE	480V	15KVA	AA-F24A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
21516B7001M01	CTB POST LOCA CAV PURGE UNIT	11E	X4	2ABE	480V	5	BD-B02X	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
21606B3CAB	BATTERY CHARGER 2401CB	11E	X3	2ABE	480V	100KVA	AA-H01A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
21606B3CCA (NOTE 20)	BATTERY CHARGER 2C01CA	11E	X3	2ABE	480V	75KVA	AA-H04A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
2HV-2624A	CTB POST LOCA PURGE EXH ISO	11E	X5	2ABE	480V	0.13	BD-B04A	L	0	20SEC	L	0.5	20SEC	M	>30.5	20SEC	M	>30.5	20SEC	C
2HV-8701A	RHR LOOP 1 INLET ISO	11E	X6	2ABE	480V	2.6	BD-E02G	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8112	RCP SEAL WATER ISO	11E	X6	2ABE	480V	0.70	BD-C03L	L	0	15SEC	L	0.5	15SEC	M	>30.5	15SEC	M	>30.5	15SEC	C
2HV-9380A	CTMT ATMOS UNIT SERV AIR	11E	X4	2ABE	480V	0.33	BH-R01D	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8808A	ACCUM LOOP 1 ISO	11E	X6	2ABE	480V	10.3	BD-D02R	L	0	10SEC	L	0.5	10SEC	K	0.5	10SEC	M	>30.5	10SEC	C
2180B6B3CDA (NOTE 20)	BATTERY CHARGER 2D01CA	11E	X3	2BBA	480V	50KVA	AA-G01A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
2180B6B3CDB (NOTE 20)	DISTR PNL 2EY1A	11E	X3	2BBA	480V	10KVA	AA-F19A	N	0	C	N	0.5	C	N	0.5	C	N	0.5	C	C
2HV-8640	RHR HOT LEG INJECT CROSSOVER	11E	X6	2BBB	480V	10.3	BD-D03J	M	>30.5	20SEC	M	>30.5	20SEC	M	>30.5	20SEC	M	>30.5	20SEC	C
2HV-8118	CHG PMP MINI FLOW ISO	11E	X6	2BBB	480V	.7	BD-C03L	L	0	10SEC	L	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-2626A	CTB NORM PURGE SPL Y ISO	11E	X5	2ABE	480V	1.33	BD-B04E	L	0	10SEC	L	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-2582A	CTB CLR A7001 UNIT (DAMPER)	11E	X4	2ABE	480V	.13	BD-B03V	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-2582B	CTB CLR A7002 UNIT (DAMPER)	11E	X4	2ABE	480V	.13	BD-B03V	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-19051	THERM BARR CW RCP 001	11E	X4	2ABE	480V	0.70	BH-L03K	K	0	10SEC	K	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-19053	THERM BARR CW RCP 002	11E	X4	2ABE	480V	0.70	BH-L03L	K	0	10SEC	K	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2HV-8000A	PRESSURIZER POWER RELIEF ISO	11E	X6	2ABE	480V	2.0	BD-B02A	K	0	10SEC	K	0.5	10SEC	M	>30.5	10SEC	M	>30.5	10SEC	C
2180B13003	LTG. TRANSFORMER 2NB11X	62E	X3	2NBR	480V	30KVA	AA-F27A	SEE NOTE 30	>30.5	15SEC										

FOR NOTES & TABLES SEE SHEET 1 DRAWING NO 2X3D-AA-K02A.

NUCLEAR SAFETY RELATED A B C D E F G H





- NOTES:
1. PROVIDE 0.375 ID FLOW RESTRICTION AS SHOWN ON BPC DWG CX400001.
 2. GROSS FAILED FUEL DETECTOR SYSTEM INSTALLED ON THIS LINE OUTSIDE REACTOR CONTAINMENT. (SEE BPC DWG 2X4DB140)
 3. PROVIDE 12" REMOVAL SPOOL.
 4. INSIDE DIAMETER.
 5. LOCATE FLOWMETER IN 90° ELBOW DOWNSTREAM OF STEAM GENERATORS.
 6. ELBOW FLOWMETERS.
 7. LOCATE CONNECTION IN BOTTOM HALF OF REACTOR COOLANT PIPING ON 45° ANGLE TO VERTICAL.
 8. REACTOR COOLANT LOOP PIPING AND ALL EQUIPMENT FURNISHED BY WESTINGHOUSE. ALL OTHER PIPING AND MANUAL VALVES 2" AND SMALLER FURNISHED BY BECHTEL.

9. FOR CONNECTION DETAILS OF RTD COLD LEG, SEE DETAIL "A" ON BPC DWG 2X4DB113.
10. FOR CONNECTION DETAILS OF RTD HOT LEG, SEE DETAIL "A" ON BPC DWG 2X4DB113.
11. 3/8 INCH ID FLOW RESTRICTION SUPPLIED WITH STEAM GENERATOR FOR CLASS 1 TO CLASS 2 TRANSITION. FOR CLASS 1-CLASS 2 TRANSITION, PROVIDE A 3/8 INCH PIPE TO TUBING TRANSITION PIECE.
12. TYGON HOSE TO BE INSTALLED AT THIS CONNECTION FOR DRAINING. BOTTOM OF CHANNEL HEAD TO CONTAINMENT SUMP AFTER REACTOR COOLANT SYSTEM HAS BEEN DRAINED BELOW STEAM GENERATOR NOZZLE.
13. SURFACE MOUNTED TEMPERATURE DETECTOR. LOCATE AT BOTTOM OF PIPE.

14. 0.234 I.D. PIPING.
15. SPRAY LINE SCOOP.
16. FOR REACTOR COOLANT PUMP LUBE OIL SPILL PROTECTION ARRANGEMENT SEE DRAWING 2X4DB112.
17. PORTION OF THE SYSTEM IS SUSPECTED TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAWING AND PIPING MATERIAL CLASSIFICATIONS FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
18. VENT PIPE FURNISHED WITH REACTOR VESSEL HEAD; REMAINDER OF PIPING AND VALVES TO THE FIRST SPOOL. PRICE & FLANGE ALSO PROVIDED BY WESTINGHOUSE, EXCEPT VALVES 234 AND 086.

19. FOR REACTOR VESSEL WATER LEVEL INSTRUMENTATION (RWLS) SEE P&ID 2X4DB113.
20. FOR TYPICAL DETAIL, SEE STD. DWG. AX400000.
21. ALL LINES CLASSIFIED RZ UNLESS OTHERWISE NOTED.
22. DELETED.
23. DELETED.
24. REMOVE TYGON HOSE, CONN., CABLE/CLIP/OPERATIONAL ONLY DURING RCS MIDLOOP AND DRAIN DOWN LEVEL OPERATION. THESE ARE KEROTEST VALVES AND MAY NOT ALLOW REVERSE FLOW.
26. THESE VALVES HAVE A SEAL WELDED BONNET PER NRC COMMITMENT SN473861.

27. MSIP HAS BEEN APPLIED TO LINE 001, 002, 003, AND 004 NEAR THE REACTOR VESSEL NOZZLE.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTE NUCLEAR PLANT

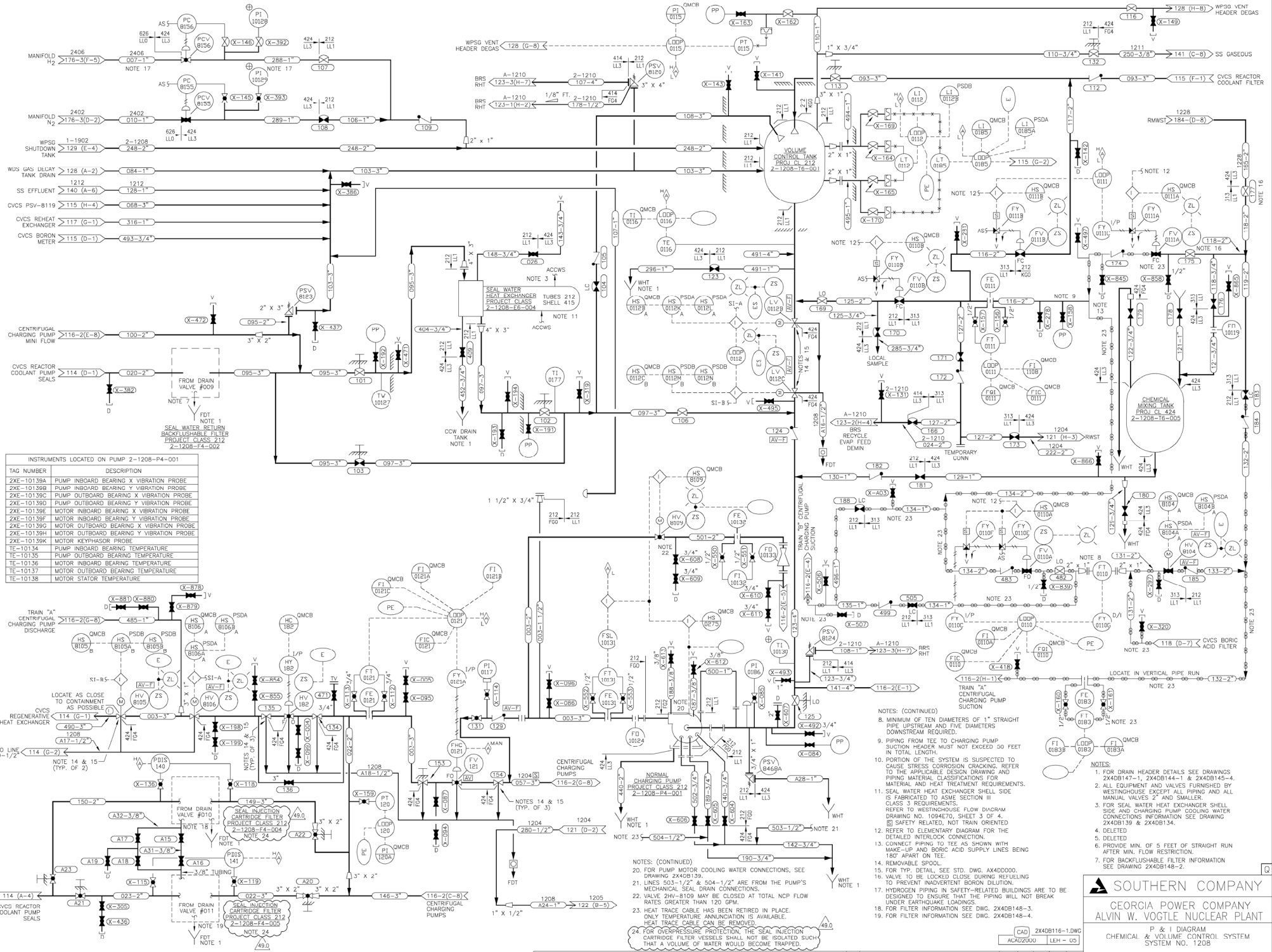
P & I DIAGRAM
 REACTOR COOLANT SYSTEM
 SYSTEM NO. 1201

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.

REVISIONS
 29.0 REVISED PER AEN SN526823M002, VER. 1.0
 DATE 08/20/04
 BY LHM
 CHECKED BY DTL

SCALE: NONE
 DRAWING NO. 2X4DB111
 VER. 29.0
 JOB NO. 10604
 SIZE E 34X44





INSTRUMENTS LOCATED ON PUMP 2-1208-P4-001

TAG NUMBER	DESCRIPTION
2KE-10139A	PUMP INBOARD BEARING X VIBRATION PROBE
2KE-10139B	PUMP INBOARD BEARING Y VIBRATION PROBE
2KE-10139C	PUMP OUTBOARD BEARING X VIBRATION PROBE
2KE-10139D	PUMP OUTBOARD BEARING Y VIBRATION PROBE
2KE-10139E	MOTOR INBOARD BEARING X VIBRATION PROBE
2KE-10139F	MOTOR INBOARD BEARING Y VIBRATION PROBE
2KE-10139G	MOTOR OUTBOARD BEARING X VIBRATION PROBE
2KE-10139H	MOTOR OUTBOARD BEARING Y VIBRATION PROBE
2KE-10139I	MOTOR KEYPHASOR PROBE
TE-10134	PUMP INBOARD BEARING TEMPERATURE
TE-10135	PUMP OUTBOARD BEARING TEMPERATURE
TE-10136	MOTOR INBOARD BEARING TEMPERATURE
TE-10137	MOTOR OUTBOARD BEARING TEMPERATURE
TE-10138	MOTOR STATOR TEMPERATURE

- NOTES: (CONTINUED)
- MINIMUM OF TEN DIAMETERS OF 1" STRAIGHT PIPE UPSTREAM AND FIVE DIAMETERS DOWNSTREAM REQUIRED.
 - PIPING FROM TEE TO CHARGING PUMP SUCTION HEADERS MUST NOT EXCEED 50 FEET IN TOTAL LENGTH.
 - PORTION OF THE SYSTEM IS SUSPECTED TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAWING AND PIPING MATERIAL CLASSIFICATIONS FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
 - SEAL WATER HEAT EXCHANGER SHELL SIDE IS FABRICATED TO ASME SECTION III CLASS 3 REQUIREMENTS.
 - REFER TO WESTINGHOUSE FLOW DIAGRAM DRAWING NO. 1094670, SHEET 3 OF 3 FOR SEAL WATER HEAT EXCHANGER SHELL SIDE AND CHARGING PUMP COOLING WATER CONNECTIONS INFORMATION SEE DRAWING 2X4DB116-1 & 2X4DB116-2.
 - DELETED.
 - DELETED.
 - PROVIDE MIN. OF 5 FEET OF STRAIGHT RUN AFTER MIN. FLOW RESTRICTION.
 - FOR BACKFLUSHABLE FILTER INFORMATION SEE DRAWING 2X4DB116-2.

SOUTHERN COMPANY
 GEORGIA POWER COMPANY
 ALVIN W. VOGLT NUCLEAR PLANT

P & I DIAGRAM
 CHEMICAL & VOLUME CONTROL SYSTEM
 SYSTEM NO. 1208

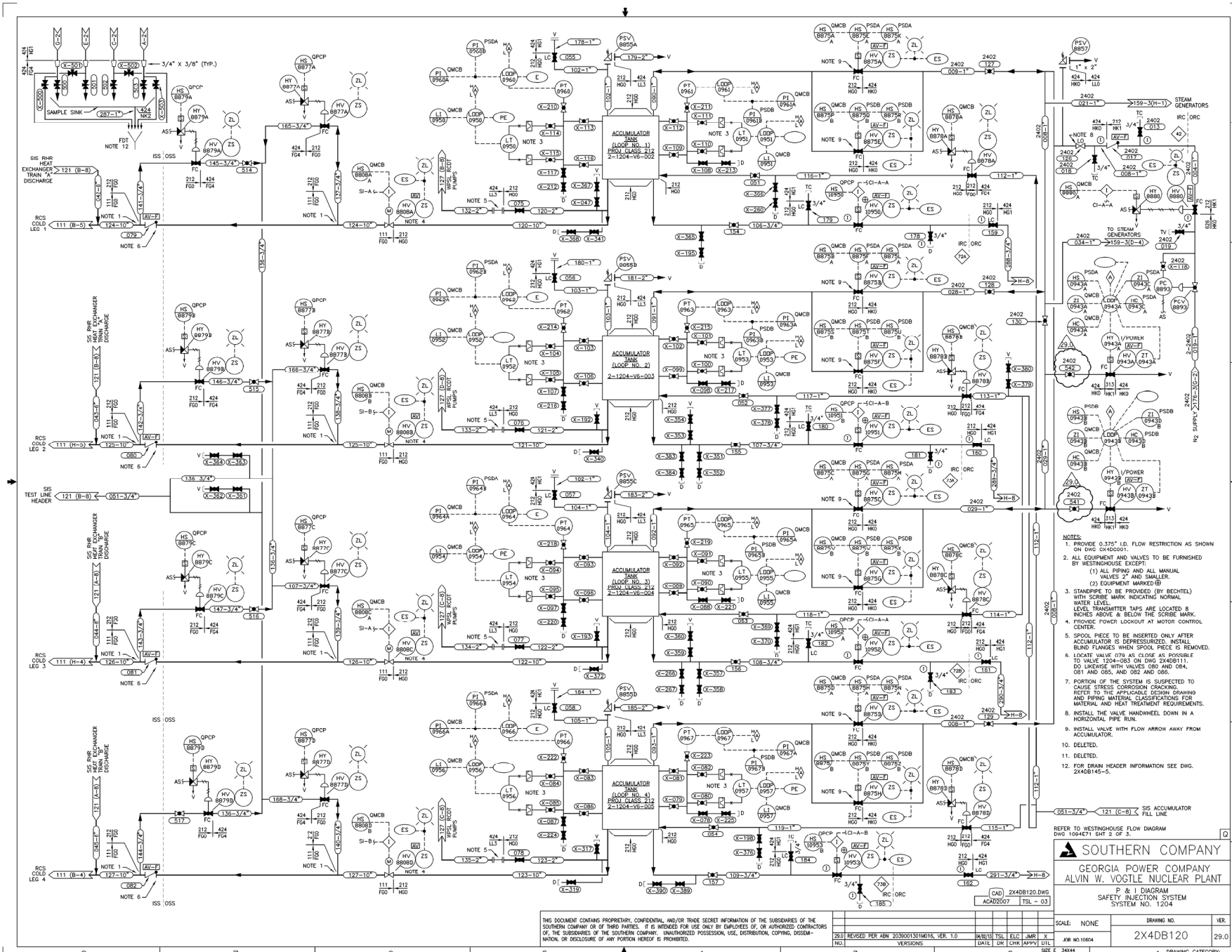
CAD 2X4DB116-1-DWG
 ACAD2000 LEH - US

SCALE: NONE

JOB NO. 10604

DRAWING NO. 2X4DB116-1

VER. 49.0



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.

- NOTES:
1. PROVIDE 0.375" I.D. FLOW RESTRICTION AS SHOWN ON DWG. 2X40B110.
 2. ALL EQUIPMENT AND VALVES TO BE FURNISHED BY WESTINGHOUSE EXCEPT:
(1) ALL PIPING AND ALL MANUAL VALVES 2" AND SMALLER.
(2) EQUIPMENT MARKED (B).
 3. STANDPIPE TO BE PROVIDED (BY BECHTEL) WITH SCRIBE MARK INDICATING NORMAL WATER LEVEL. TRANSMITTER TAPS ARE LOCATED 8 INCHES ABOVE & BELOW THE SCRIBE MARK.
 4. PROVIDE POWER LOCKOUT AT MOTOR CONTROL CENTER.
 5. SPOOL PIECE TO BE INSERTED ONLY AFTER ACCUMULATOR IS DEPRESSURIZED. INSTALL BLIND FLANGES WHEN SPOOL PIECE IS REMOVED.
 6. LOCATE VALVE 079 AS CLOSE AS POSSIBLE TO VALVE 120A-081 ON DWG. 2X40B111. DO OTHERWISE WITH VALVES 080 AND 084, 081 AND 085, AND 082 AND 086.
 7. PORTION OF THE SYSTEM IS SUSCEPTIBLE TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAWING AND PIPING MATERIAL CLASSIFICATIONS FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
 8. INSTALL THE VALVE HANDWHEEL DOWN IN A HORIZONTAL PIPE RUN.
 9. INSTALL VALVE WITH FLOW ARROW AWAY FROM ACCUMULATOR.
 10. DELETED.
 11. DELETED.
 12. FOR DRAIN HEADER INFORMATION SEE DWG. 2X40B145-5.

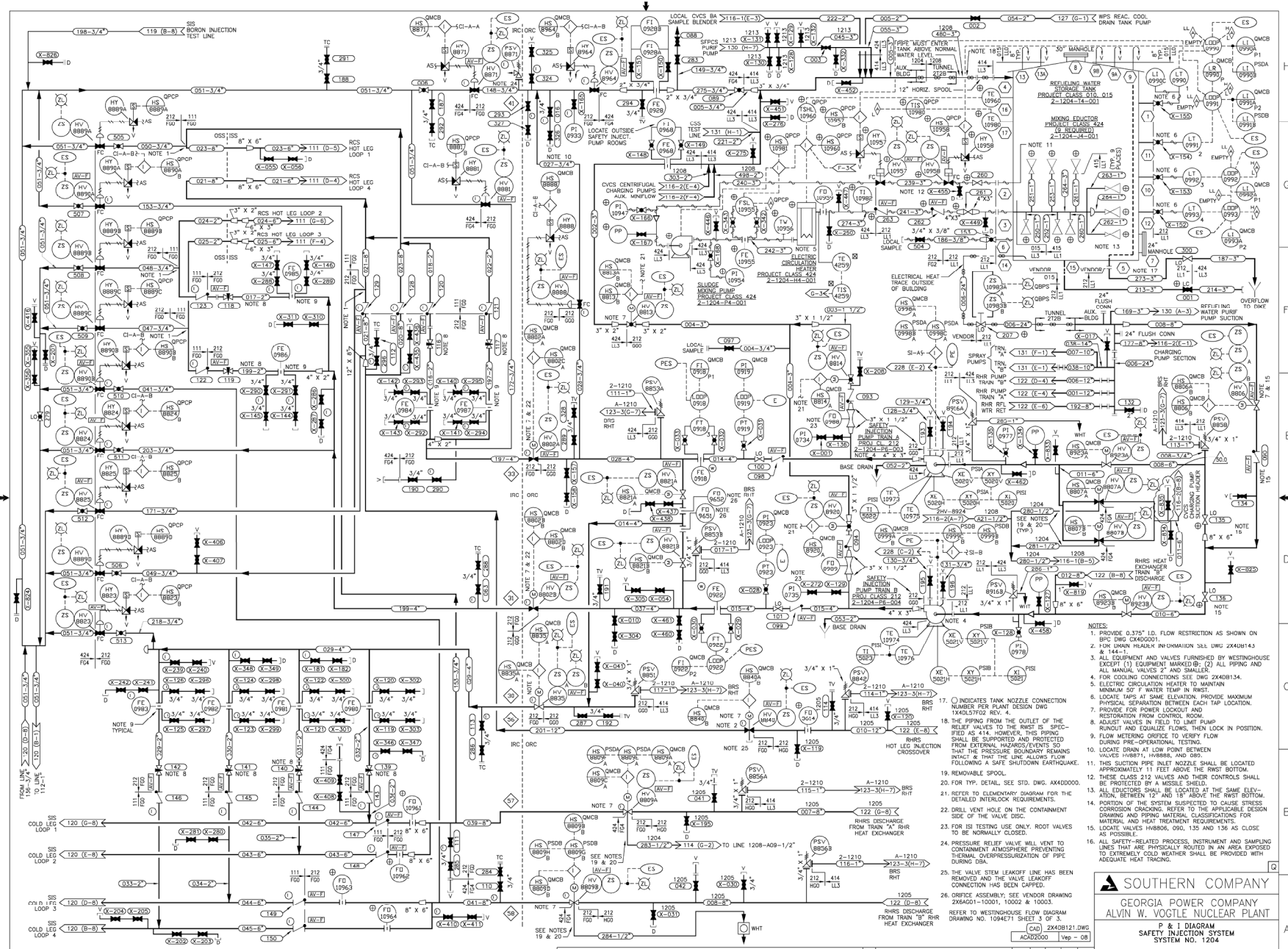
REFER TO WESTINGHOUSE FLOW DIAGRAM
DWG. 1004E71 DHT 2 OF 3.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTE NUCLEAR PLANT

P & I DIAGRAM
SAFETY INJECTION SYSTEM
SYSTEM NO. 1204

(CAD) 2X40B120.DWG
ACAD2007 TSL - 03

SCALE: NONE	DRAWING NO.	VER.
2X40B120	2X40B120	29.0
SCALE: NONE	DRAWING NO.	VER.
2X40B120	2X40B120	29.0

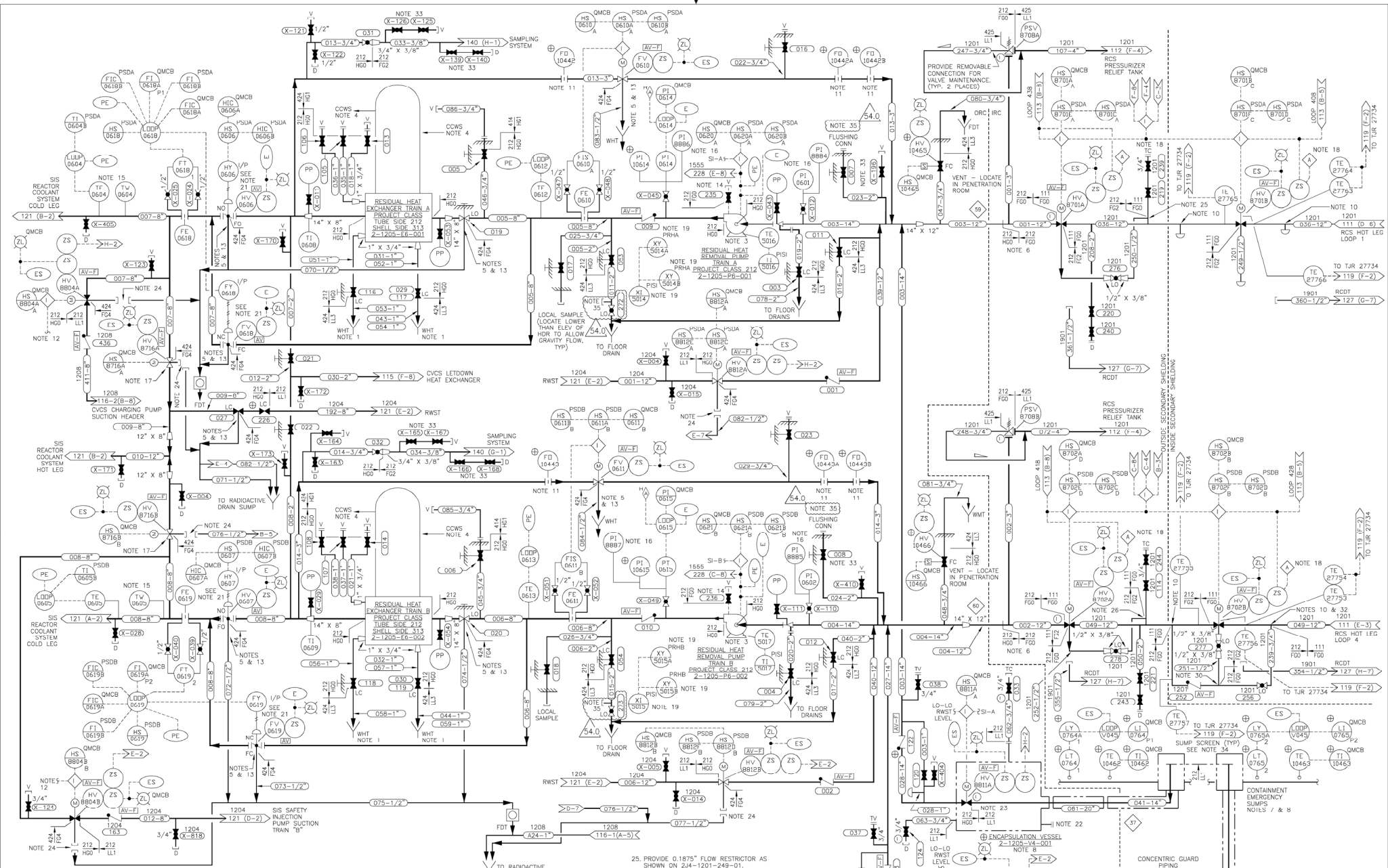


- NOTES:
1. PROVIDE 0.375" I.D. FLOW RESTRICTION AS SHOWN ON BPC DWG XK40001.
 2. FOR BORON HEADLAMP INFORMATION SEE DWG XK40014.3.
 3. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT (1) EQUIPMENT MARKED (2) ALL PIPING AND ALL MANUAL VALVES 2" AND SMALLER.
 4. FOR COOLING CONNECTIONS SEE DWG XK400134.
 5. ELECTRIC CIRCULATION HEATER TO MAINTAIN MINIMUM 50° F WATER TEMP IN RWST.
 6. LOCATE TAPS AT SAME ELEVATION, PROVIDE MAXIMUM PHYSICAL SEPARATION BETWEEN EACH TAP LOCATION.
 7. PROVIDE FOR POWER LOCALIZATION TO MAINTAIN RESTORATION FROM CONTROL ROOM.
 8. ADJUST VALVES IN FIELD TO LIMIT FLOW, RUNOUT AND EQUALIZE FLOWS, THEN LOCK IN POSITION.
 9. FLOW METERING ORIFICE TO VERIFY FLOW DURING PRE-OPERATIONAL TESTING.
 10. LOCATE DRAIN AT LOW POINT BETWEEN VALVES HVBST, HVBBS, AND GHS.
 11. THIS SUCTION PIPE INLET NOZZLE SHALL BE LOCATED APPROXIMATELY 11 FEET ABOVE THE RWST BOTTOM.
 12. THESE CLASS 212 VALVES AND THEIR CONTROLS SHALL BE PROTECTED BY A MISSILE SHIELD.
 13. ALL EQUIPMENT SHALL BE LOCATED AT THE SAME ELEVATION, BETWEEN 12" AND 18" ABOVE THE RWST BOTTOM.
 14. PORTION OF THE SYSTEM SUSCEPTIBLE TO CAUSE STRESS-CORROSION CRACKING, REFER TO THE APPLICABLE DESIGN DRAWING AND PIPING MATERIAL CLASSIFICATION FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
 15. LOCATE VALVES HVBBS, HVBST, AND HVBBS AS CLOSE AS POSSIBLE.
 16. ALL SAFETY-RELATED PROCESS, INSTRUMENT AND SAMPLING LINES THAT ARE PHYSICALLY ROUTED IN AN AREA EXPOSED TO EXTREMELY COLD WEATHER SHALL BE PROVIDED WITH ADEQUATE HEAT TRACING.
 17. INDICATES TANK NOZZLE CONNECTION NUMBER PER PLANT DESIGN DWG 1X4035702 REV. 4.
 18. THE PIPING FROM THE OUTLET OF THE RELIEF VALVES TO THE RWST IS PROTECTED BY A MISSILE SHIELD. THIS PIPE SHALL BE SUPPORTED AND SPECIFIED FROM EXTERIOR VALVES/PIPES TO THE TANK. THE PRESSURE BOUNDARY REMAINS BELOW 8" THAT THE LINE ALLOWS FLOW FOLLOWING A SAFE SHUTDOWN EARTHQUAKE.
 19. REMOVABLE SPOOL.
 20. FOR TYP. DETAIL, SEE STD. DWG. XK400000.
 21. REFER TO ELEMENTARY DIAGRAM FOR THE DETAILED INTERLOCK REQUIREMENTS.
 22. DRILL VENT HOLE ON THE CONTAINMENT FROM TRAIN "A" RWST HEAT EXCHANGER.
 23. FOR ITS TESTING USE ONLY: ROOT VALVES TO BE NORMALLY CLOSED.
 24. PRESSURE RELIEF VALVE WILL VENT TO CONTAINMENT ATMOSPHERE PREVENTING THERMAL OVERPRESSURIZATION OF PIPE DURING DCM.
 25. THE VALVE STEM LEAKOFF LINE HAS BEEN REMOVED AND THE VALVE LEAKOFF CONNECTION HAS BEEN CAPPED.

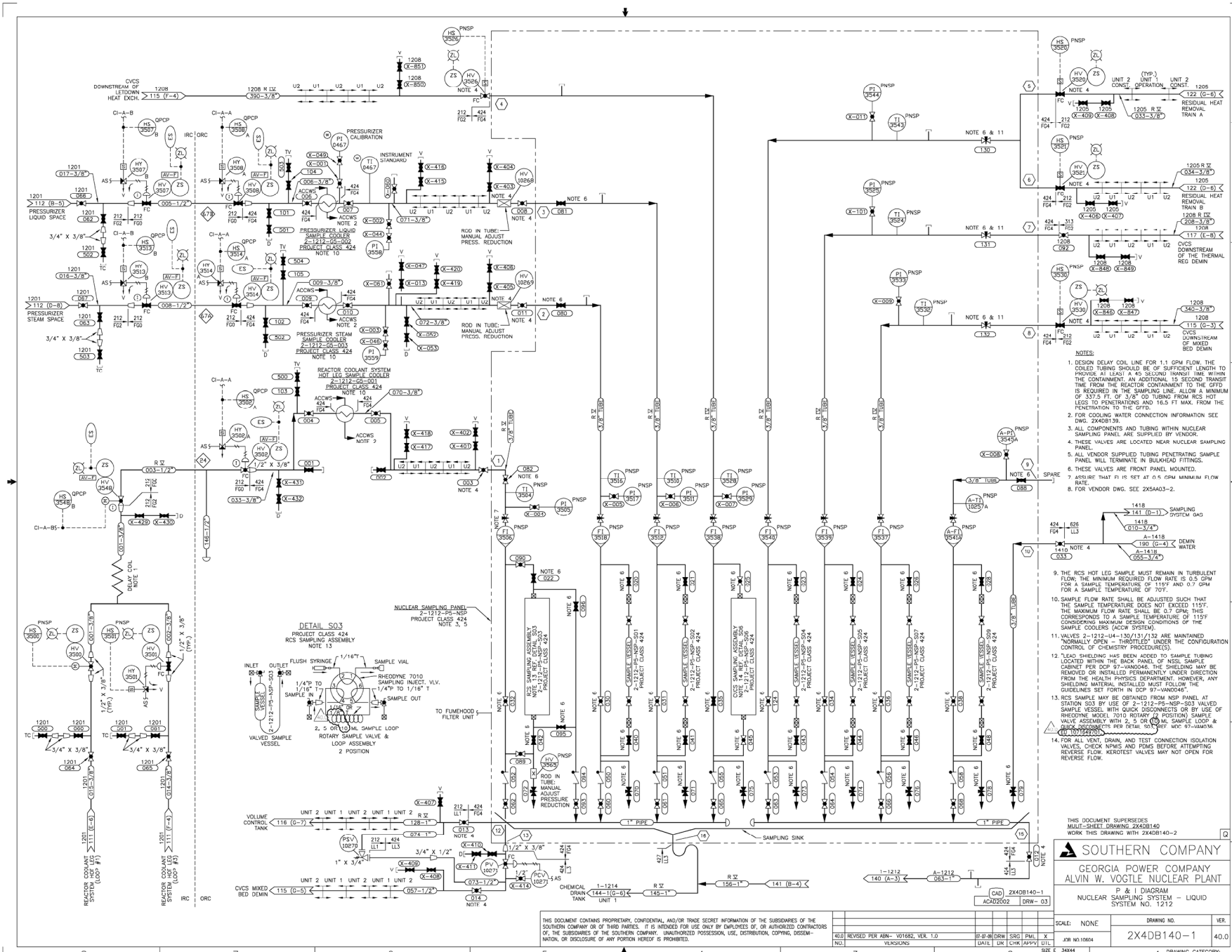
SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN V. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
SAFETY INJECTION SYSTEM
SYSTEM NO. 1204

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.

50.0	REVISED PER AEN 21005479010003, VER. 1.0	3-28-90 Vsp. GDM JMR	DATE	1/11/91	1	DRAWING CATEGORY: CRITICAL
NO.	VERSION	DATE	1/11/91	1	DRAWING CATEGORY: CRITICAL	



- NOTES:**
- FOR DRAIN HEAD INFORMATION SEE DWGS 2X4DB143, 144-1.
 - ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT: (1) ALL PIPING AND INSULATION 2\"/>



- NOTES:
- DESIGN DELAY COIL LINE FOR 1.1 GPM FLOW. THE COILED TUBING SHOULD BE OF SUFFICIENT LENGTH TO PROVIDE AT LEAST A 45 SECOND TRANSIT TIME WITHIN THE CONTAINMENT. AN ADDITIONAL 15 SECOND TRANSIT TIME FROM THE REACTOR CONTAINMENT TO THE GFTD IS REQUIRED IN THE SAMPLING LINE. A MINIMUM OF 337.5 FT. OF 3/8" OD TUBING FROM RCS HOT LEGS TO PENETRATIONS AND 16.5 FT. FROM THE PENETRATIONS TO THE GFTD.
 - FOR COOLING WATER CONNECTION INFORMATION SEE DWG. 2X4DB139.
 - ALL COMPONENTS AND TUBING WITHIN NUCLEAR SAMPLING PANEL ARE SUPPLIED BY VENDOR.
 - THESE VALVES ARE LOCATED NEAR NUCLEAR SAMPLING PANEL.
 - ALL VENDOR SUPPLIED TUBING PENETRATING SAMPLE PANEL WILL TERMINATE IN BULGED FITTINGS.
 - THESE VALVES ARE FRONT PANEL MOUNTED.
 7. ASSURE THAT PI IS SET AT 0.5 GPM MINIMUM FLOW RATE.
 - FOR VENDOR DWG. SEE 2X5A003-2.
9. THE RCS HOT LEG SAMPLE MUST REMAIN IN TURBULENT FLOW. THE MINIMUM REQUIRED FLOW RATE IS 0.5 GPM FOR A SAMPLE TEMPERATURE OF 115°F AND 0.7 GPM FOR A SAMPLE TEMPERATURE OF 70°F.
10. SAMPLE FLOW RATE SHALL BE ADJUSTED SUCH THAT THE SAMPLE TEMPERATURE DOES NOT EXCEED 115°F. THE MAXIMUM FLOW RATE SHALL BE 0.7 GPM. THIS CORRESPONDS TO A SAMPLE TEMPERATURE OF 115°F CONSIDERING MAXIMUM DESIGN CONDITIONS OF THE SAMPLE COOLERS (ACOW SYSTEM).
11. VALVES 2-1212-14-130/131/132 ARE MAINTAINED NORMALLY OPEN - THROTTLED UNDER THE CONFIGURATION CONTROL OF CHEMISTRY PROCEDURES.
12. LEAD SHIELDING HAS BEEN ADDED TO SAMPLE TUBING LOCATED WITHIN THE BACK PANEL OF NSS. SAMPLE CABINET PER DCP 97-VAND048. THE SHIELDING MAY BE REMOVED OR INSTALLED PERMANENTLY UNDER DIRECTION FROM THE HEALTH PHYSICS DEPARTMENT. HOWEVER, ANY SHIELDING MATERIAL INSTALLED MUST FOLLOW THE GUIDELINES SET FORTH IN DCP 97-VAND048.
13. RCS SAMPLE MAY BE OBTAINED FROM NSS PANEL AT STATION 503 BY USE OF 2-1212-PSS-NSS-503 VALVED SAMPLE VESSEL WITH QUICK DISCONNECTS OR BY USE OF SHIELDING MODEL 7010 ROTARY 1/2" POSITION SAMPLE VALVE ASSEMBLY WITH 2, 5 OR 10" SAMPLE COOLERS & DISCONNECTS (ACOW SYSTEM).
14. FOR ALL VENT, DRAIN AND TEST CONNECTION ISOLATION VALVES, CHECK NIPUS AND PIPES BEFORE ATTEMPTING REVERSE FLOW. KEROTEST VALVES MAY NOT OPEN FOR REVERSE FLOW.

THIS DOCUMENT SUPERSEDES
MULTI-SHEET DRAWING 2X4DB140
WORK THIS DRAWING WITH 2X4DB140-2

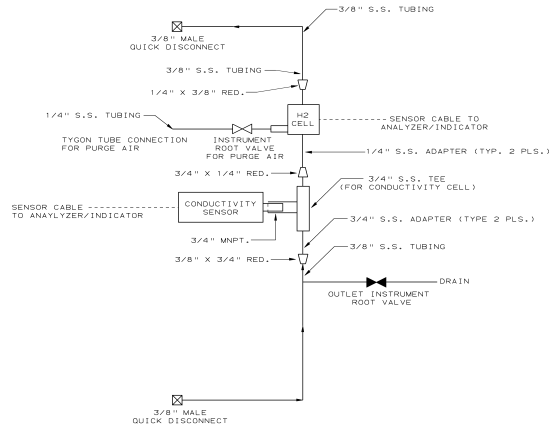
SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGLE NUCLEAR PLANT
P & ID DIAGRAM
NUCLEAR SAMPLING SYSTEM - LIQUID
SYSTEM NO. 1212

SCALE: NONE
DRAWING NO. 2X4DB140-1
VER. 40.0
DATE 10/1/84
BY JLN / CHK APPV
SITE 2 34044
1 DRAWING CATEGORY: CRITICAL

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.

DETAIL S06

PROJECT CLASS 424
CVCS SAMPLING ASSEMBLY



CONTINUATION OF NOTES:

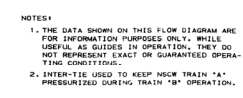
14. IN-LINE HYDROGEN ANALYZERS AND CONDUCTIVITY ELEMENTS HAVE REPLACED THE "SAMPLE BOMB" AND WILL PROVIDE CONTINUOUS SAMPLE CAPABILITY. REFERENCE MOC 88-VAM045.

THIS DOCUMENT SUPERSEDES
MULTI-SHEET DRAWING 2X4DB140
WORK THIS DRAWING WITH:
2X4DB140-1


SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA	
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT	
P & I DIAGRAM NUCLEAR SAMPLING SYSTEM-LIQUID SYSTEM NO. 1212	
SCALE: NONE	DRAWING NO. 2X4DB140-2
JOB NO.10604	REV. 32

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.	INCORPORATED PER REA 01-VAA037	8/8/80	JGM	JRP	PDG	JLM	ISSUED FOR CONSTRUCTION	SEE WORKFLOW FOR SIGNATURES	
	REVISIONS	DATE	DR	CHK	APPY	DTL			

SIZE E 34x44



FLOW DIAGRAM
COOLING WATER SYSTEM
SYSTEMS 1202,1203,1217

	SCALE: NONE	DRAWING NO.	VER.
	JOB NO. 10604	2X4DB149-2	4.0

SIZE E 34x44

DWG CATEGORY: CRITICAL

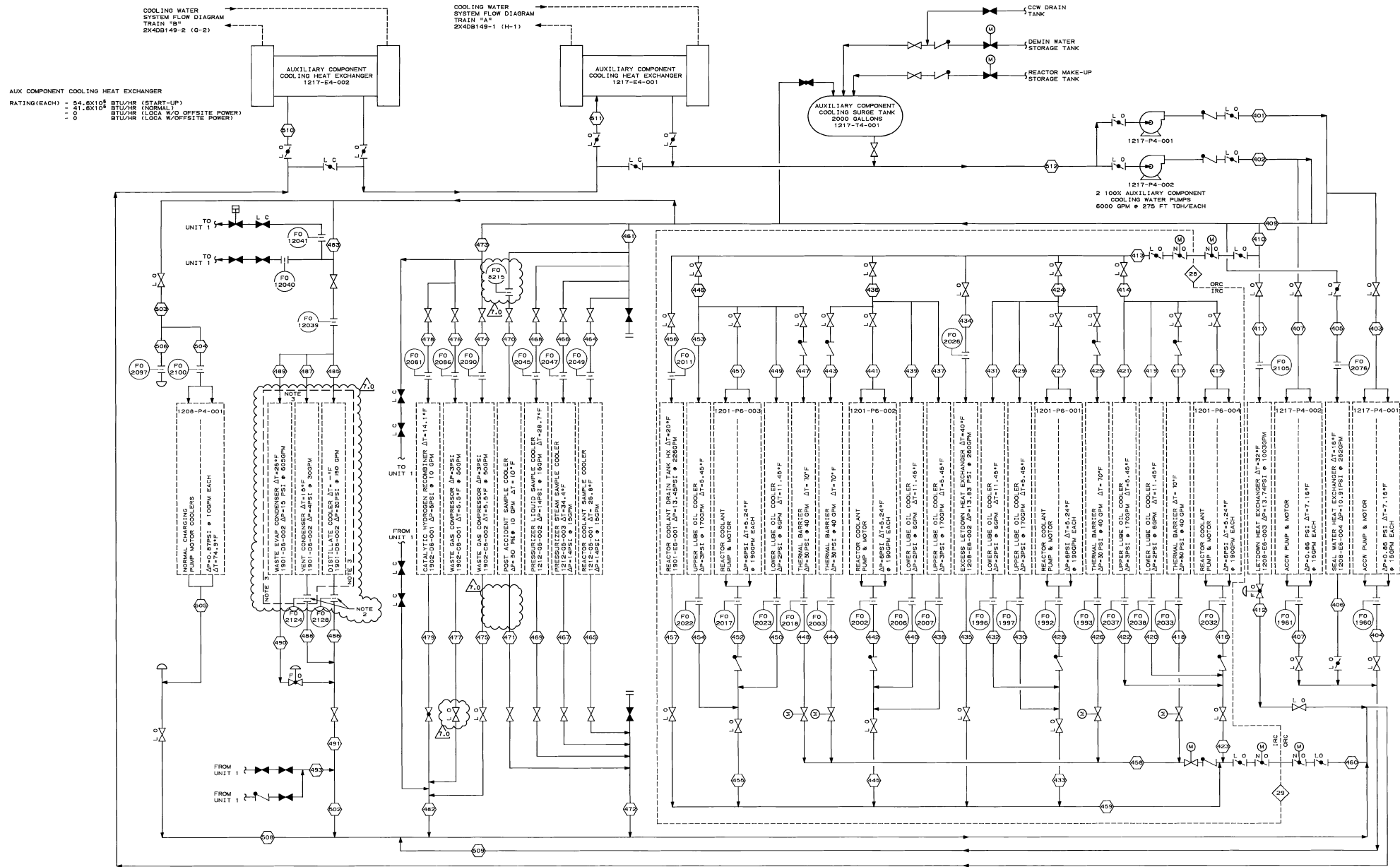
THIS DOCUMENT CONTAINS PROPRIETARY, CONFIDENTIAL, AND/OR TRADE SECRET INFORMATION OF THE SUBSIDIARIES OF A SOUTHERN COMPANY OR OF THIRD PARTIES. IT IS INTENDED FOR USE ONLY BY EMPLOYEES OF, OR AUTHORIZED CONTRACTOR OF, THE SUBSIDIARIES OF THE SOUTHERN COMPANY. UNAUTHORIZED POSSESSION, USE, DISTRIBUTION,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

4.0	REVISED PER ABN-VOZ460, VER. 1.0	3-15-11	BGT	CHK	AAN	
NO.	VERS IONS	DATE	UR	CHK	APPV	
3			2			\$

SCALE: NONE	DRAWING NO.	VER.
JOB NO. 10604	2X4DB149-2	4.0

SIZE E 34x44

DWG CATEGORY: CRITICAL



AUXILIARY COMPONENT COOLING WATER SYSTEM

NOTE

- THE DATA SHOWN ON THIS FLOW DIAGRAM ARE FOR INFORMATION PURPOSES ONLY, & WHILE USEFUL AS GUIDES IN OPERATION, DO NOT REPRESENT EXACT OR GUARANTEED OPERATING CONDITIONS.
- BLANK NOTE
- RETIRED IN PLACE

SOUTHERN COMPANY SERVICES, INC.
 BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
 ALVIN W. VOGTLE NUCLEAR PLANT

FLOW DIAGRAM
 COOLING WATER SYSTEM
 SYSTEMS 1202, 1203, 1217

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.

SCALE: NONE
 DRAWING NO. 2X4DB149-3
 VER. 7.0

SIZE E 34x44
 DWG CATEGORY: CRITICAL

