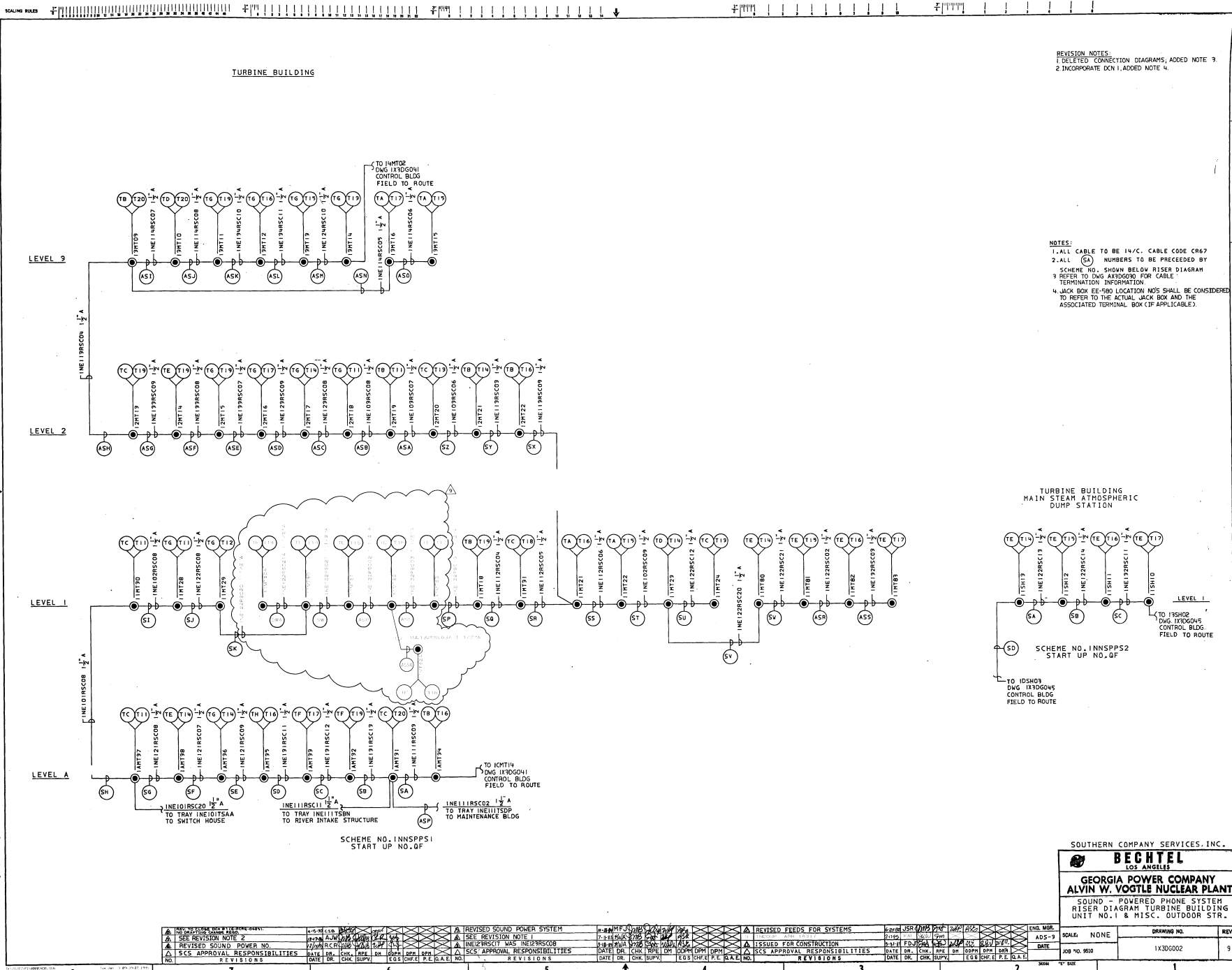


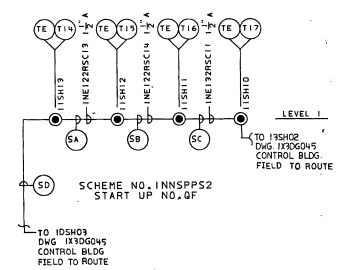
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REVISION NOTES:
1. DELETED CONNECTION DIAGRAMS; ADDED NOTE 3.
2. INCORPORATE DCN 1, ADDED NOTE 4.

NOTES:
1. ALL CABLE TO BE 1/4" C. CABLE CODE CR67
2. ALL (SA) NUMBERS TO BE PRECEDED BY SCHEME NO. SHOWN BELOW RISER DIAGRAM
3. REFER TO DWG. INNSPPS2 FOR CABLE TERMINATION INFORMATION
4. JACK BOX LOCATION NOS SHALL BE CONSIDERED TO REFER TO THE ACTUAL JACK BOX AND THE ASSOCIATED TERMINAL BOX (IF APPLICABLE)

TURBINE BUILDING
MAIN STEAM ATMOSPHERIC
DUMP STATION



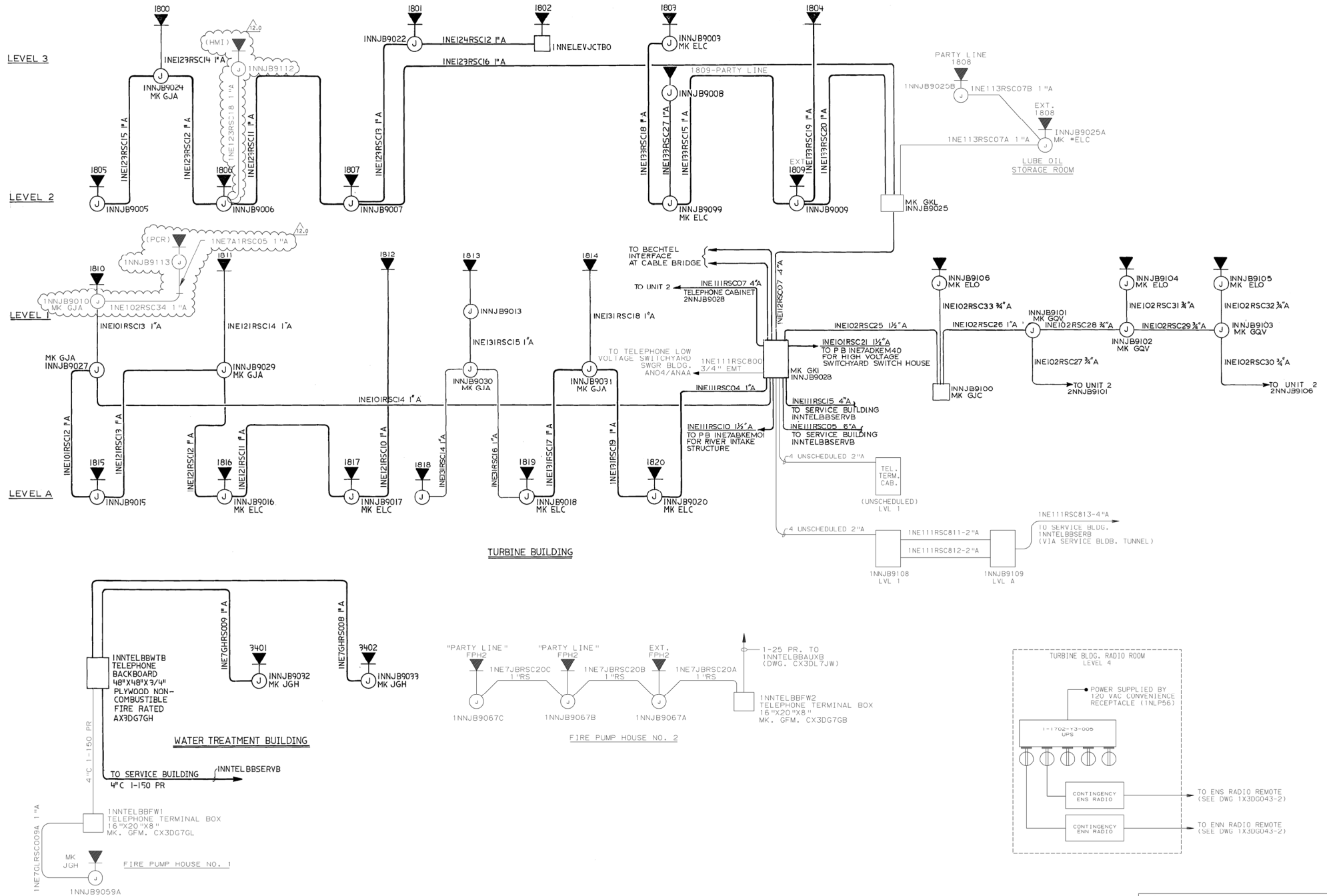
SOUTHERN COMPANY SERVICES, INC.

BECHTEL
LOS ANGELES

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

SOUND - POWERED PHONE SYSTEM
RISER DIAGRAM TURBINE BUILDING
UNIT NO. 1 & MISC. OUTDOOR STR.

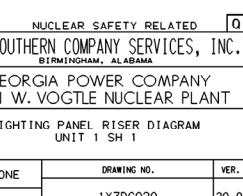
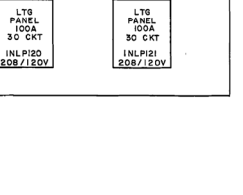
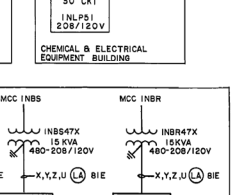
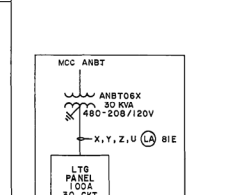
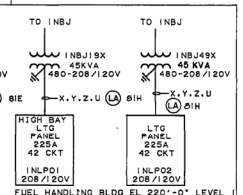
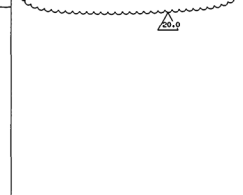
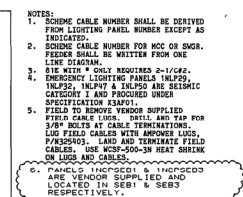
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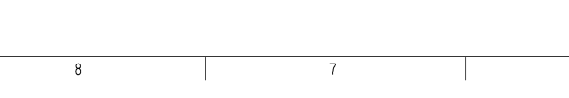
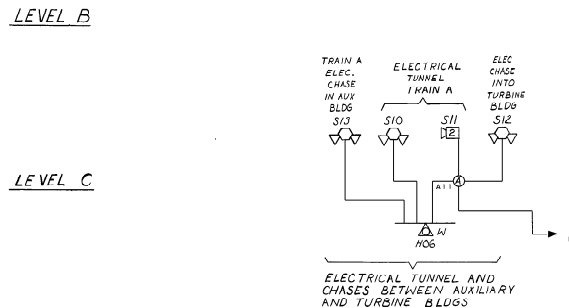
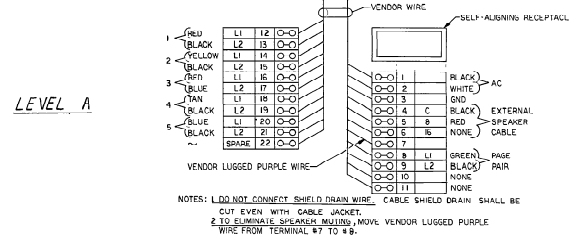
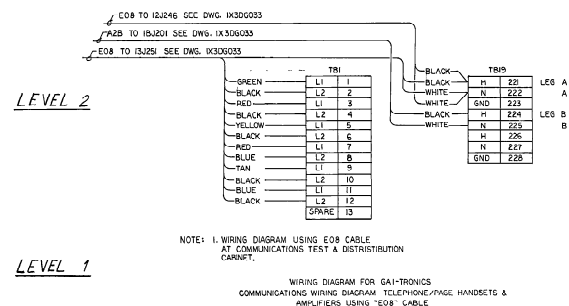
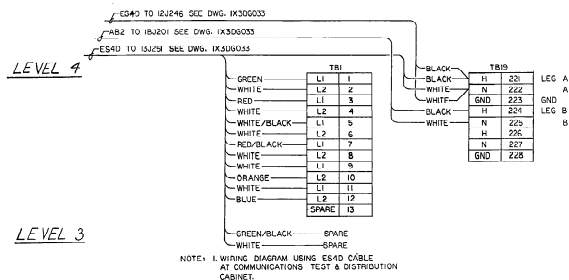


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NO.	REVISION	DATE	BY	CHK	APPV
12.0	REVISED PER AIN 1049001501E141, VER. 2.0	8-27-88	VBP	MWD	JMR
12.0	VERSIONS				

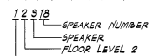
SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT SOUTHERN BELL SYSTEM BLOCK DIAGRAM - TURBINE BUILDING UNIT NO.1 & MISC. OUTDOOR STR		
SCALE: NONE	DRAWING NO.	VER.
	1X3D004	12.0



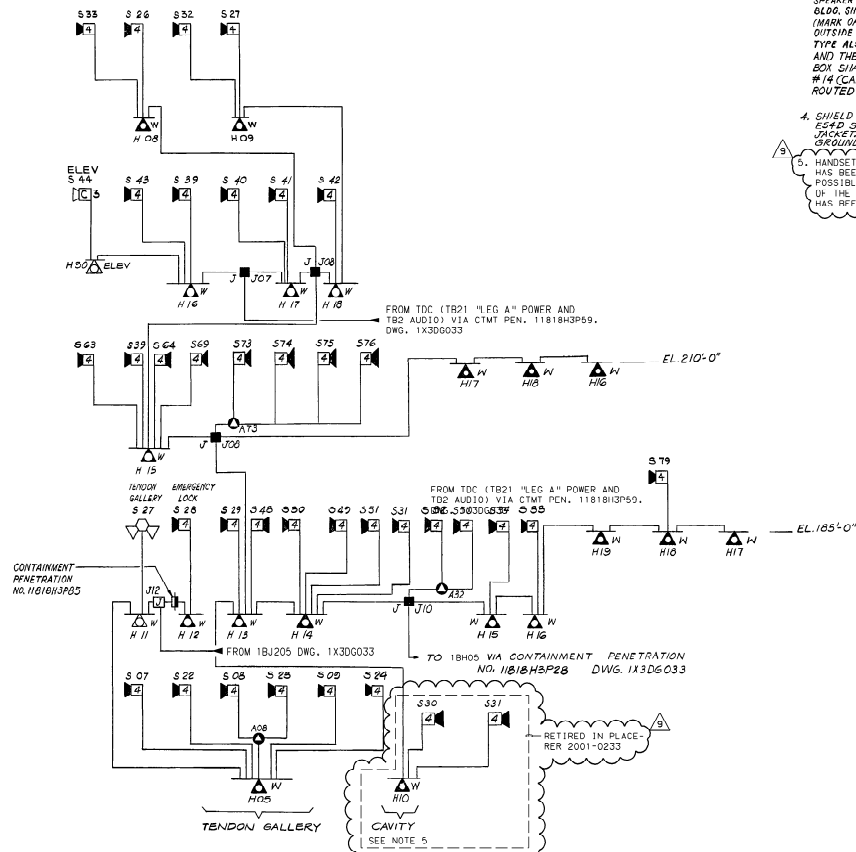


NOTES:

1. TO OBTAIN THE FULL EQUIPMENT NUMBER, PREFIX ALL NUMBERS SHOWN ON RISER DIAGRAMS WITH:
2. THE UNIT
3. FLOOR LEVEL AND
4. DEVICE (SPEAKER, HANDSET OR SPEAKER AMPLIFIER) S, H AND A RESPECTIVELY. THUS, SPEAKER NO. 18 IN FLOOR LEVEL 2 IS:



2. FOR KEY TO SYMBOLS SEE DWG. 1X30G030.
3. ALL INTERCONNECTING CABLE BETWEEN HANDSET STATIONS, SPEAKER AMPLIFIERS, JUNCTION BOXES AND THE TEST AND DISTRIBUTION CABINET ZONE CONNECTIONS SHALL BE 14/C CABLE (10R #14 & 7 OR #16, CABLE CODE E348) AND IS TO BE ROUTED IN 1/2 CONDUIT (HMM/WHY). SPEAKER CABLE FOR SPEAKERS INSIDE CTMT. BLDG. SHALL BE 14/C #16, TYPE GUS (MARK GAV). SPEAKER CABLE FOR SPEAKERS OUTSIDE CTMT BLDG. SHALL BE 14/C #16, TYPE ALS (MARK GAV). THE ZONE WARDEN UNITS AND THE REMOTE PLANT ALARM SWITCH BOX SHALL BE CONNECTED WITH 12/C #14 (CABLE CODE AB7) AND SHALL BE ROUTED IN 1/2 CONDUIT (HMM/WHY).
4. SHIELD DRAIN WIRE PROVIDED IN CABLE ES40 SHALL BE CUT EVEN WITH CABLE JACKET, SHIELD TO BE INSULATED FROM GROUND AT ALL LOCATIONS.
5. HANDSET/AMPLIFIER BENEATH THE VESSEL HAS BEEN REMOVED AS TO ELIMINATE POSSIBLE INTERFERENCE WITH THE REST OF THE PAGE SYSTEM. AMPLIFIER BOX HAS BEEN COVERED BY A PLANK PLATE.



LEVEL 4

LEVEL 3

LEVEL 2

LEVEL 1

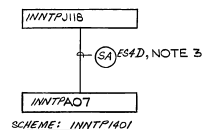
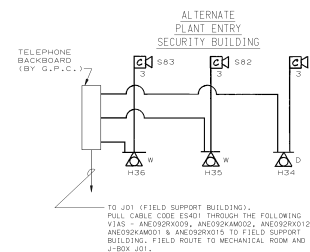
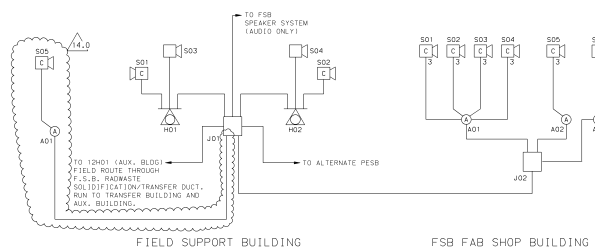
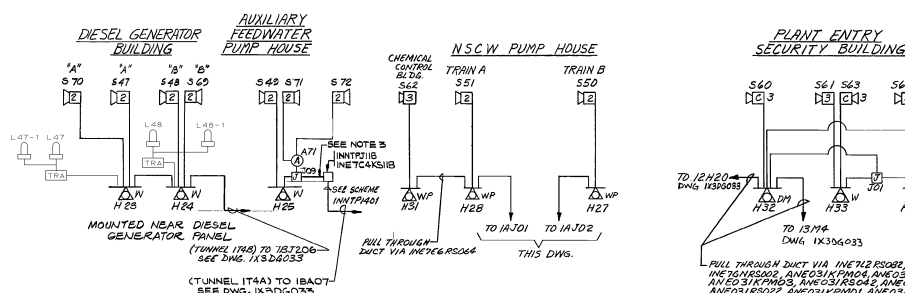
LEVEL A

LEVEL B

LEVEL C

LEVEL D

1. FOR GENERAL NOTES SEE DWG. IX3DGOB1, SHEET 1.
2. TO BE ROUTED IN MECHANICAL TUNNELS.
3. FIELD TO CONTINUE ROUTE OF CABLE IN UNSCHEDULED RACEWAYS FOR COMPLETION OF WIRING REQUIREMENTS PER RISER DIAGRAM.



CONTROL BUILDING

TEST AND DISTRIBUTION / ZONE MERGING UNIT (NOTE 2)

CONTROL BUILDING LEVEL 3

TAG NR A-1701-UB-TDC

LEVEL 4

LEVEL 3

LEVEL 2

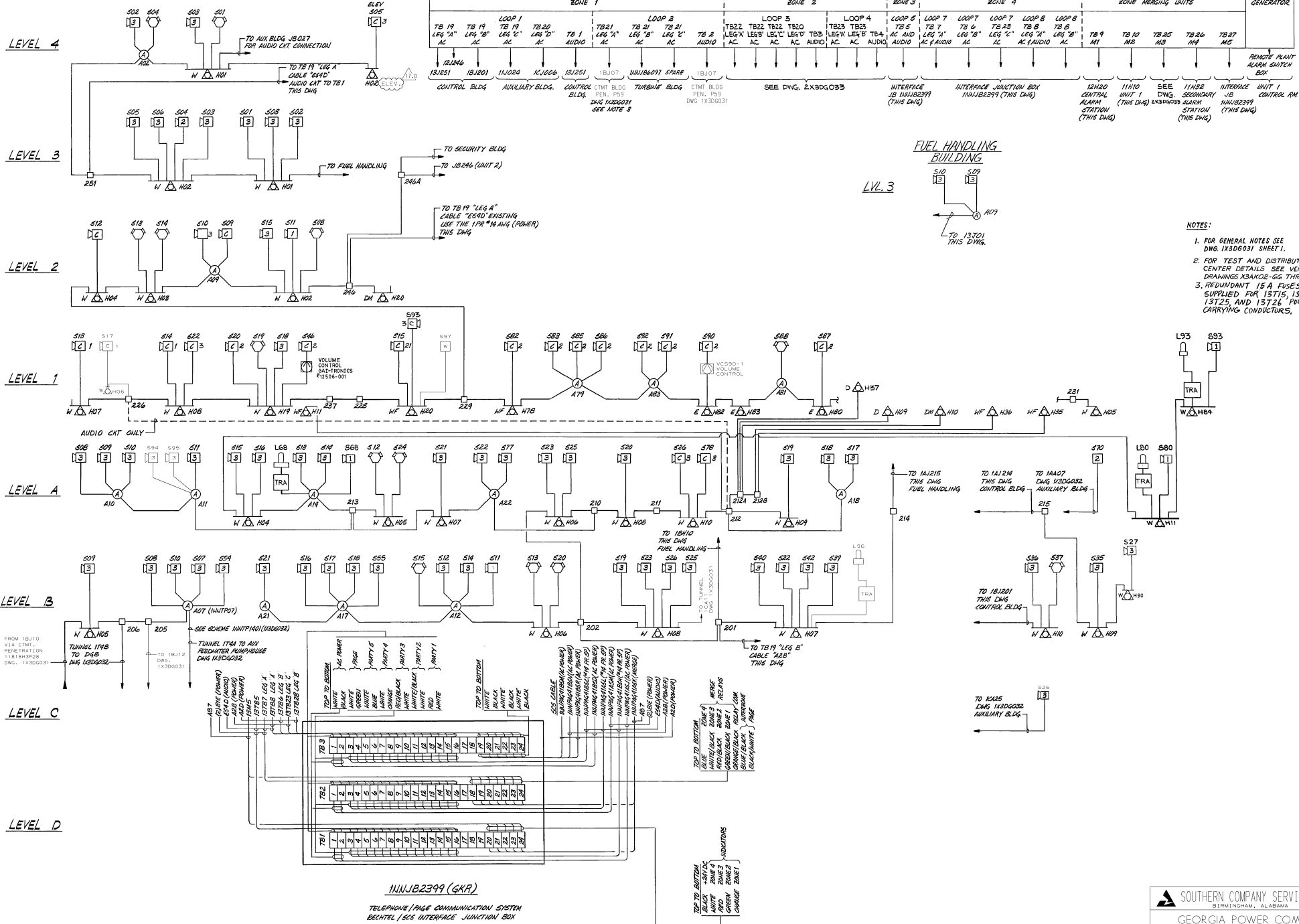
LEVEL 1

LEVEL A

LEVEL B

LEVEL C

LEVEL D



FUEL HANDLING BUILDING

LEVEL 3

NOTES:

1. FOR GENERAL NOTES SEE DWG. 1X3D031 SHEET 1.
2. FOR TEST AND DISTRIBUTION CENTER DETAILS SEE VENDOR DRAWINGS K3AK02-GG THRU 72.
3. REDUNDANT 15A FUSES ARE SUPPLIED FOR 13T15, 13T16, 13T25, AND 13T26 POWER CARRYING CONDUCTORS.

11NJB2399 (GKR)

TELEPHONE/PAGE COMMUNICATION SYSTEM
BENTEL/SES INTERFACE JUNCTION BOX

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SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

TELEPHONE/PAGE SYSTEM
RISER DIAGRAM
UNIT 1 SHEET 3

SCALE: NONE	DRAWING NO.	VER.
JOB NO. 10604	1X3D033	17.0
DATE	CHK	APPV
NO.	VERSIONS	

LEVEL 4

LEVEL 3

LEVEL 2

LEVEL 1

LEVEL A

LEVEL B

LEVEL C

LEVEL D

06 02 07 05 04 03 01 → TO 11MT15
DWG. 1X3DG041
(FUEL BLDG)

72 71 70 01 05 06 69 04 68 02 03 07

01 02 04 03 05 06 07 10 11 13 12 09 08
TO 11MT56
TO 11MT57
DWG. 1X3DG042
(NCCW PUMP HOUSE)

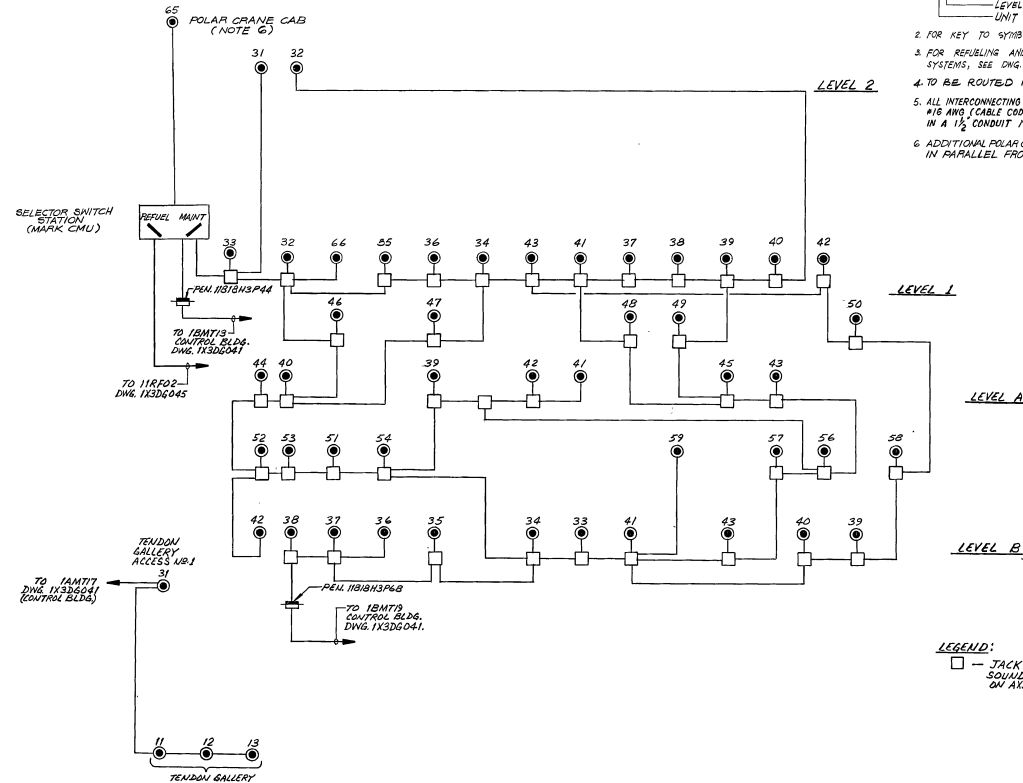
SEE NOTE 11
DWG. AX3DG030

01 02 03 04 05 06 07 08 09 10 11

10 10 01 03 04 05 07 06 08
1CJ018
RC-108
TO 11MT09
DWG. 1X3DG041
(FUEL HANDLING BLDG)

01 02 04 06 07 09 13 12 10 11

TO 11MT59
DWG. 1X3DG042
(DIESEL BLDG)
NOTE 4



NOTES:

1. THE SOUND-POWERED PHONE JACK NUMBER IS FORMED BY PREFIXING THE NUMBERS AS SHOWN ON THE DRAWING WITH THE UNIT NUMBER, FLOOR LEVEL, AND MT (MAINTENANCE TELEPHONE). THUS, A JACK NUMBERED 07 ON LEVEL A WOULD BE NUMBERED:
2. FOR KEY TO SYMBOLS, SEE DWG. AX3DG030.
3. FOR REFUELING AND SHUTDOWN SOUND-POWERED PHONE SYSTEMS, SEE DWG. 1X3DG048, SHEET 1.
4. TO BE ROUTED IN MECHANICAL TUNNELS.
5. ALL INTERCONNECTING CABLE IS TO BE 7 PAIR (1 SPARE) #18 AWG (CABLE CODE OR #1) AND IS TO BE ROUTED IN A 1 1/2" CONDUIT MINIMUM.
6. ADDITIONAL POLAR CRANE JACKS COULD BE WIRED IN PARALLEL FROM THE CAB JACK.

JACK NO.
MAINTENANCE TELEPHONE JACK
LEVEL A
UNIT 1

LEGEND:

□ JACK BOX, SEE MAINTENANCE SOUND-POWER SYSTEM DETAILS ON 1X3DG030 FOR MARK #.

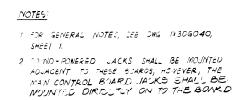
SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
SOUND-POWERED PHONE SYSTEM
RISER DIAGRAM-MAINTENANCE SYSTEM
UNIT 1
SHEET 1


SCALE: NONE DRAWING NO. REV.
JOB NO. 10604 1X3DG040 8


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NO. INCORP. PER DCP 88-VAND055 SURVEIL CDD TEL X DATE OR CHK [APPV] DTL REVISIONS

SIZE E 34444

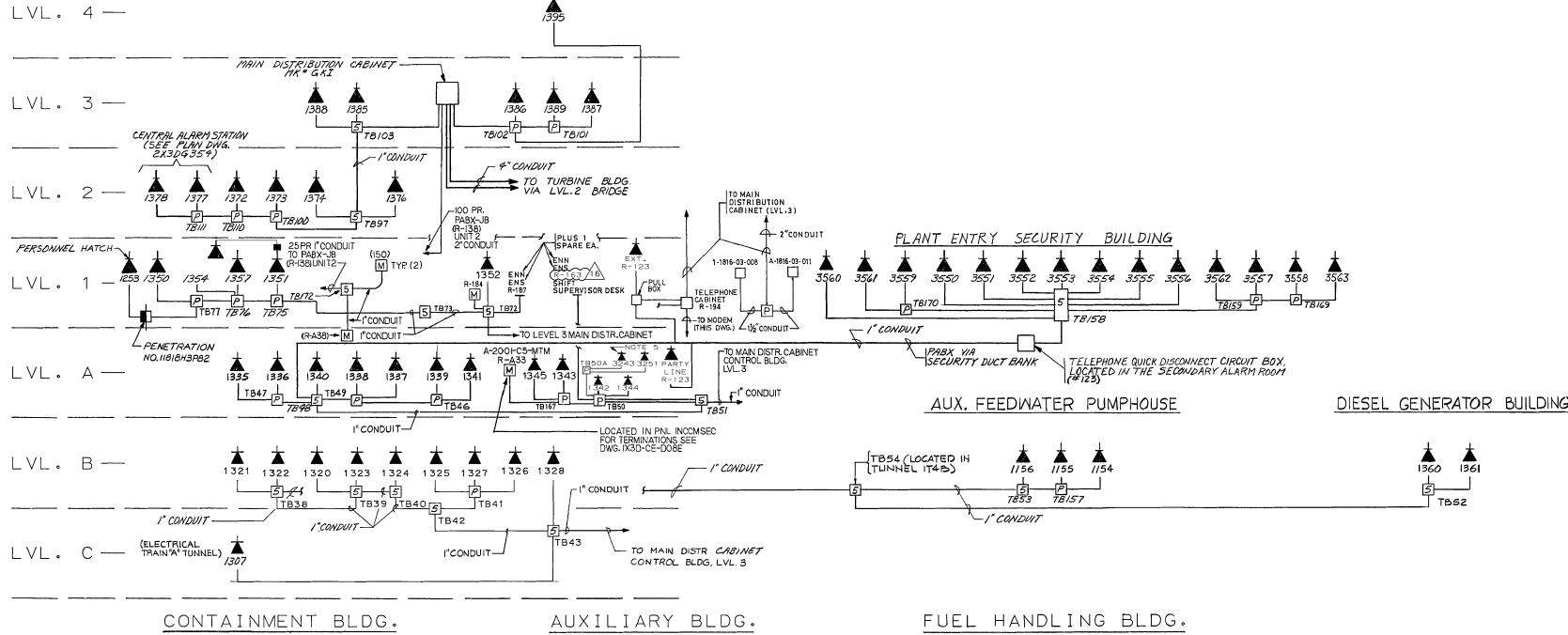
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 BECHTEL LOS ANGELES		
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT		
SOUND-POWERED PHONE SYSTEM RISER DIAGRAM-MAINTENANCE SYSTEM UNIT 1 SHEET 2		
SCALE: NONE	DRAWING NO.	REV.
JOB NO. 9530	IX3DG041	5

	BECHTEL	
	LOS ANGELES	
	GEORGIA POWER COMPANY	
	ALVIN W. VOGTLE NUCLEAR PLANT	
	SOUND-POWERED PHONE SYSTEM	
	RISER DIAGRAM-MAINTENANCE SYSTEM	
	UNIT 1	SHEET 3
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JOB NO. 9610	IX3DG042	4

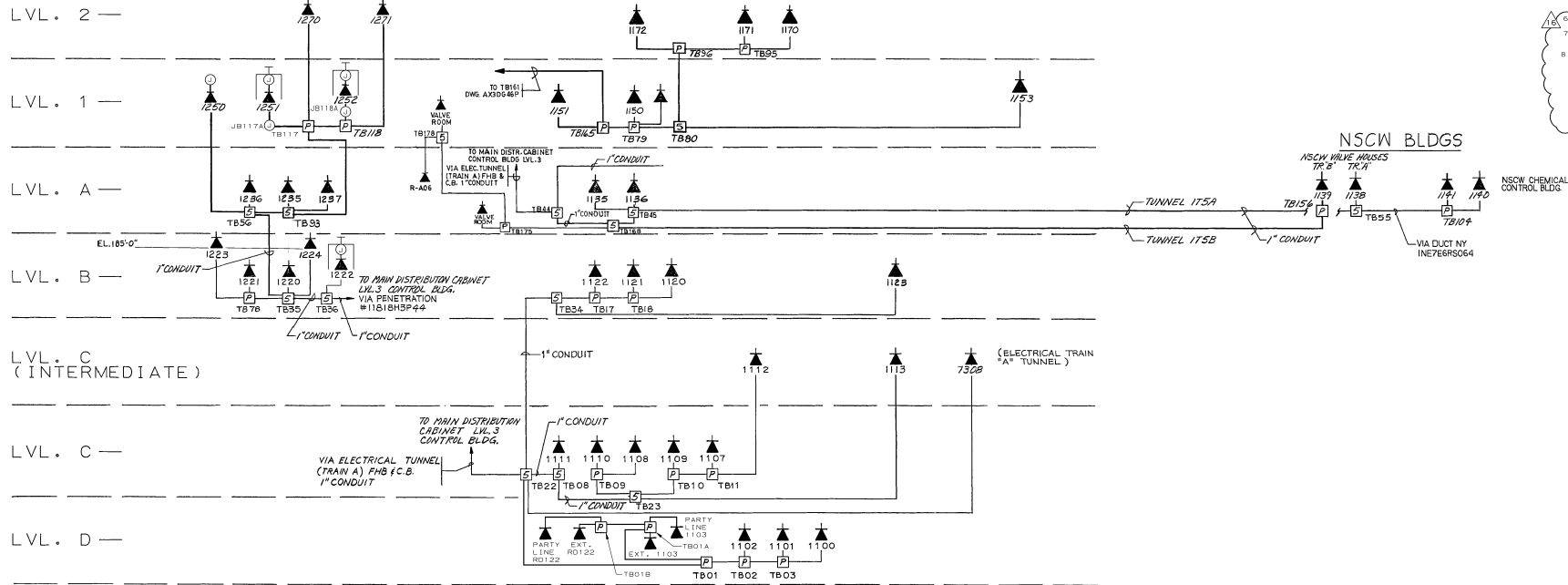
CONTROL BUILDING

FOR DETAILS ON TSC CONTROL BLDG. & CONTROL ROOM TELEPHONE SYSTEM, CONTINGENCY ENN & ENS SEE 1X30G043-2



NOTES:

1. CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.
2. EACH TELEPHONE IS TO BE PROVIDED WITH A MK*G10 ENCLOSURE.
3. INTERCOMP TYPE R062 A/U COAXIAL CABLE TO BE CONNECTED FROM THE CONTROLLER (8 MODEM) TO ROOM BLDG. 176 TO TERMINALS AND WALL CONNECTORS. AFTER CABLE INSTALLATION, A WALL CONNECTOR (UG 290 A/U) WILL BE ATTACHED TO COAXIAL CABLE AND ROUTED TO TERMINALS. CABLES IN ROOM R-107 SHALL BE TERMINATED WITH FEMALE CONNECTORS TO THE (SEE PAGES).
4. THE ACTUAL NUMBER OF TSC TELEPHONES WILL VARY AND THE NUMBER SHOWN MAY NOT BE ACCURATE.
5. LOCATION 3243 IS LOCATED ON THE UNIT 2 SIDE OF THE BULLET PROOF BARRIER. BOX TB50A IS LOCATED BELOW THE OLD OSSE PLATFORM.
6. POWER STRIP MAY BE USED AS REQUIRED.
7. SEE DRAWING 1X30G004 FOR CONTINGENCY ENN AND CONTINGENCY ENS RADIO.
8. THE BASE STATION SHALL NOT BE LOCATED WITHIN 1 FOOT OF ANY PERMANENT ELECTRICAL EQUIPMENT. THE PORTABLE PHONE SHALL NOT BE LOCATED, AT ANY TIME, WITHIN 6.0 INCHES OF ANY PERMANENT ELECTRICAL EQUIPMENT. THE PORTABLE PHONE SHALL NOT BE LOCATED, AT ANY TIME, WITHIN 1 FOOT OF ANY PERMANENT ELECTRICAL PLANT EQUIPMENT LOCATED INSIDE A CABINET WHEN THE CABINET DOORS ARE OPEN.



- REFERENCE DRAWINGS:
- AX300030 LIGHTING & COMMUNICATIONS GENERAL NOTES & SYMBOLS
 - AX300031 LIGHTING FUTURE SCHEDULE
 - AX300032 LIGHTING & COMMUNICATIONS MOUNTING DETAILS
 - AX300033 LIGHTING & COMMUNICATIONS MOUNTING DETAILS
 - AX300034 LIGHTING & COMMUNICATIONS MOUNTING DETAILS
 - AX300035 LIGHTING & COMMUNICATIONS MOUNTING DETAILS
 - AX300040 LIGHTING & COMMUNICATIONS MOUNTING DETAILS

THIS DOCUMENT SUPERSEDES MULTI-SHEET DRAWING 1X30G043-2 WORK THIS DRAWING WITH 1X30G043-2

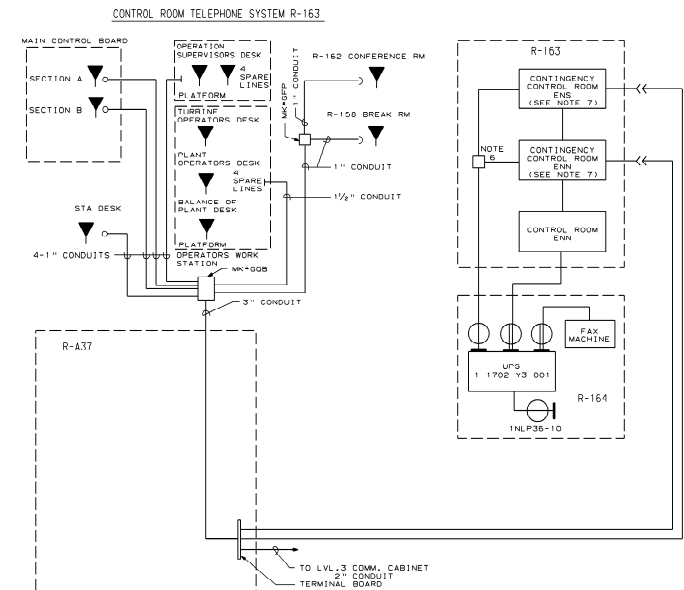
SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
PABX TELEPHONE SYSTEM
RISER DIAGRAM
UNIT 1

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SCALE: NONE
DRAWING NO. 1X30G043-1
REV. 16

TSC —

LVL. 1 —



R-163/R-164

CELL PHONE BASE UNIT #1

TO UNIT #2 R-A31 COMMUNICATIONS CLOSET

The logo for Southern Company Services, Inc. features a stylized triangle with a smaller triangle inside it, pointing upwards. To the right of the logo, the text "SOUTHERN COMPANY SERVICES, INC." is written in a bold, sans-serif font. Below this, "BIRMINGHAM, ALABAMA" is written in a smaller font. Further down, "GEORGIA POWER COMPANY" and "ALVIN W. VOGTLE NUCLEAR PLANT" are listed. At the bottom of the title block, "PABX TELEPHONE SYSTEM" and "RISER DIAGRAM" are written, followed by "UNIT 1" in a larger font.

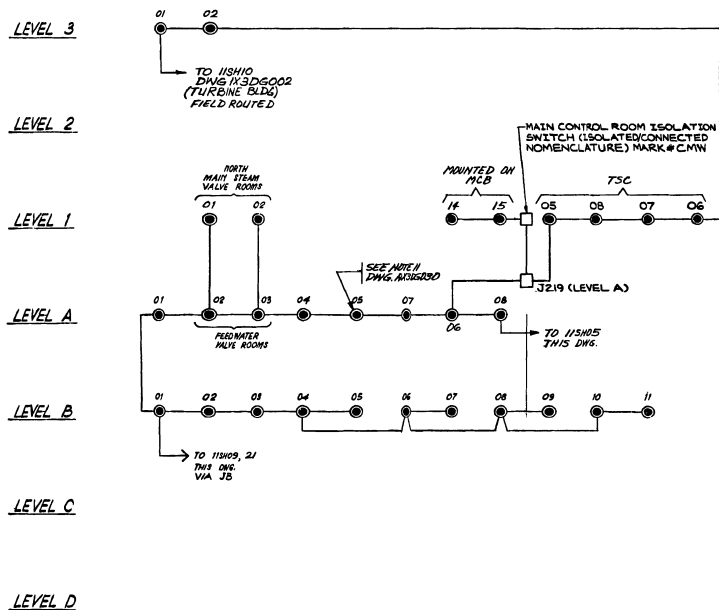
NO.	VERSIONS	DATE	DR	CHK	APPV
17.0	REVISED PER ABN 39777, VER. 1.0	2-8-05	Vep	RBH	DEW

SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X3DC043-2	17.0

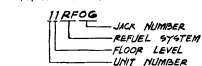
The diagram illustrates the cable routing for the Fuel Handling Building and Main Control Room. Key components and labels include:

- CONTAINMENT BUILDING** (top left):
 - 5.5 POLAR CRANE CAB (NOTE 3)
 - REFUEL MANT
 - SELECTOR SWITCH STATION (MARK CMU)
 - TO 11MT33 DWS 1X3DG040
 - TO 11MT3 VIA CTMT PEN 11B183P44 DWS 1X3DG041
- FUEL HANDLING BUILDING** (top center):
 - SEE NOTE 11 DWS 1X3DG030
 - LOCATED ON FUEL TRANSFER SYSTEM MANIF. 09, 05
- LEVEL 1** (bottom left):
 - 01, 02, 03, 05, 06, 04, 07
 - 02: LOCATED ON THE REFUELING MACHINE
 - 03: CABLE REEL (BY VENDOR)
 - REFUELING MACHINE COMMUNICATIONS JB (BY VENDOR)
- CONTAINMENT PENETRATION** (center):
 - NO. 11B183P44
 - NO. 11B183P68
- MAIN CONTROL ROOM** (right):
 - 11, 12
 - PLANT OPERATORS DESK.
 - TURBINE OPERATORS DESK.

CONTROL BUILDING



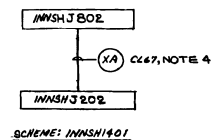
1. THE SOUND-POWERED PHONE JACK NUMBER IS FORMED BY PREFIXING THE NUMBER AS SHOWN ON THE DRAWING WITH THE UNIT NUMBER, FLOOR LEVEL, AND RF. (REFUEL SYSTEM) OR SH. (SHUTDOWN SYSTEM). A JACK NUMBERED 06 IN THE REFUEL SYSTEM WOULD BE:

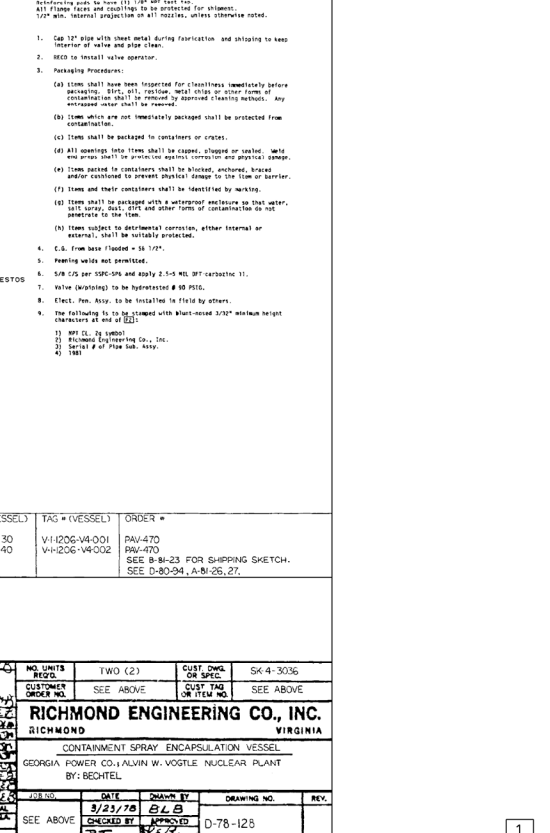
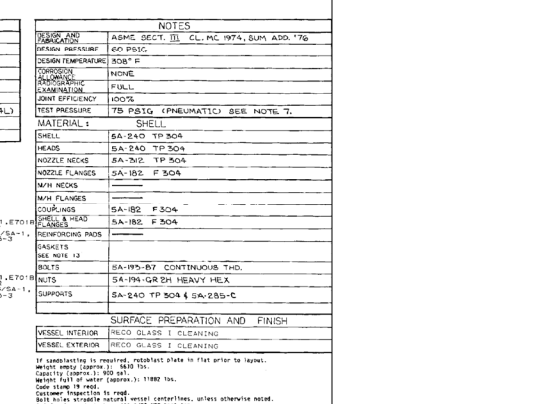


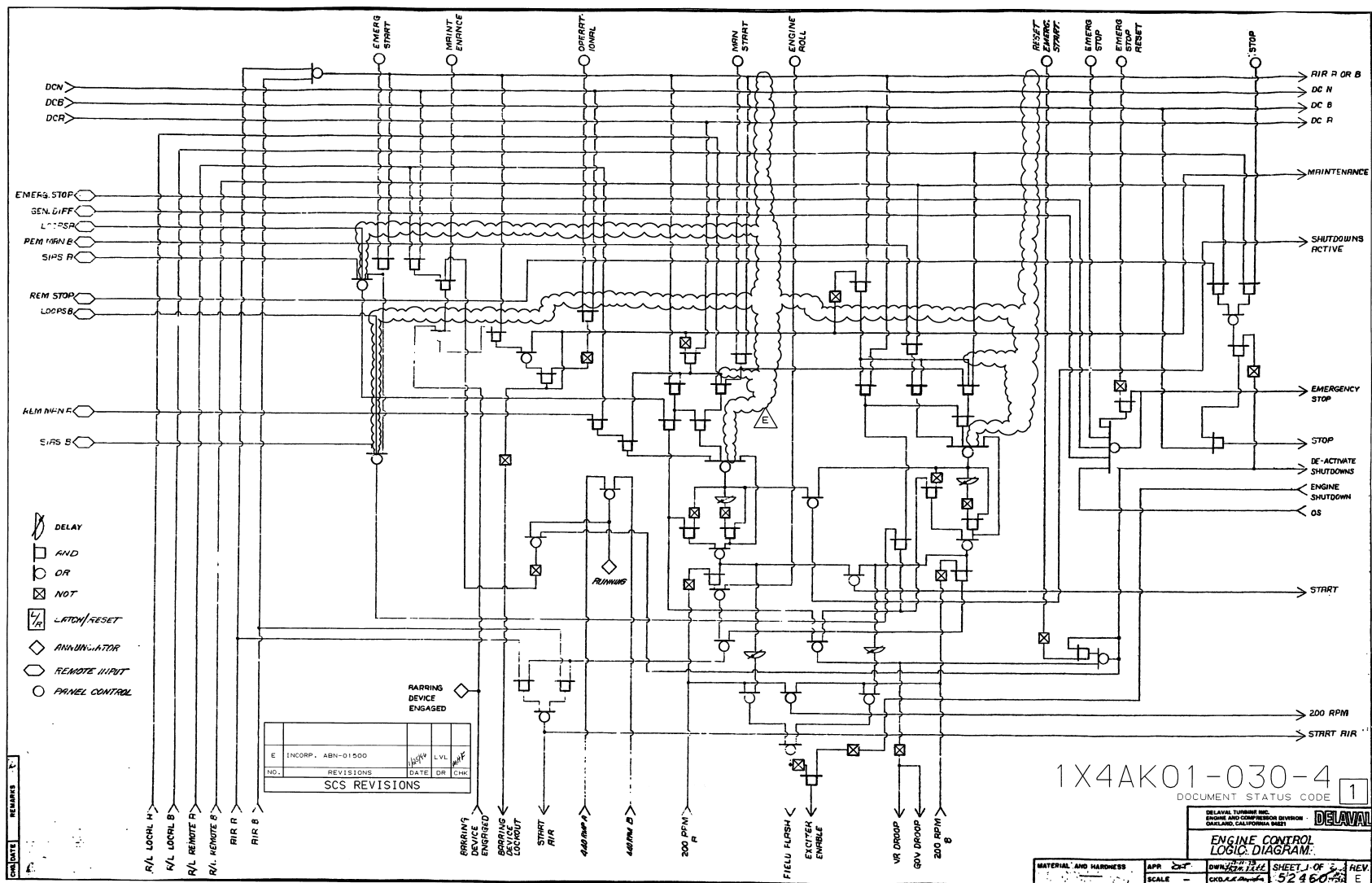
1ASW07

- JACK NUMBER
- SHUTDOWN SYSTEM
- FLOOR LEVEL
- UNIT NUMBER

2. ALL INTERCONNECTING CABLE FOR THE SHUTDOWN AND RESET SYSTEM SHALL BE A 1 BAR - 16 AWG CABLE (CABLE CODE # 67) AND IS TO BE ROUTED IN $\frac{3}{4}$ CONDUIT MINIMUM.
3. ADDITIONAL POLAR CRANE JACKS COULD BE WIRED IN PARALLEL FROM THE CAB JACK
4. FIELD TO CONTINUE ROUTE OF CABLE IN UNSHIELDED RACEWAYS FOR COMPLETION OF WIRING REQUIREMENTS PER RISER DIAGRAM.

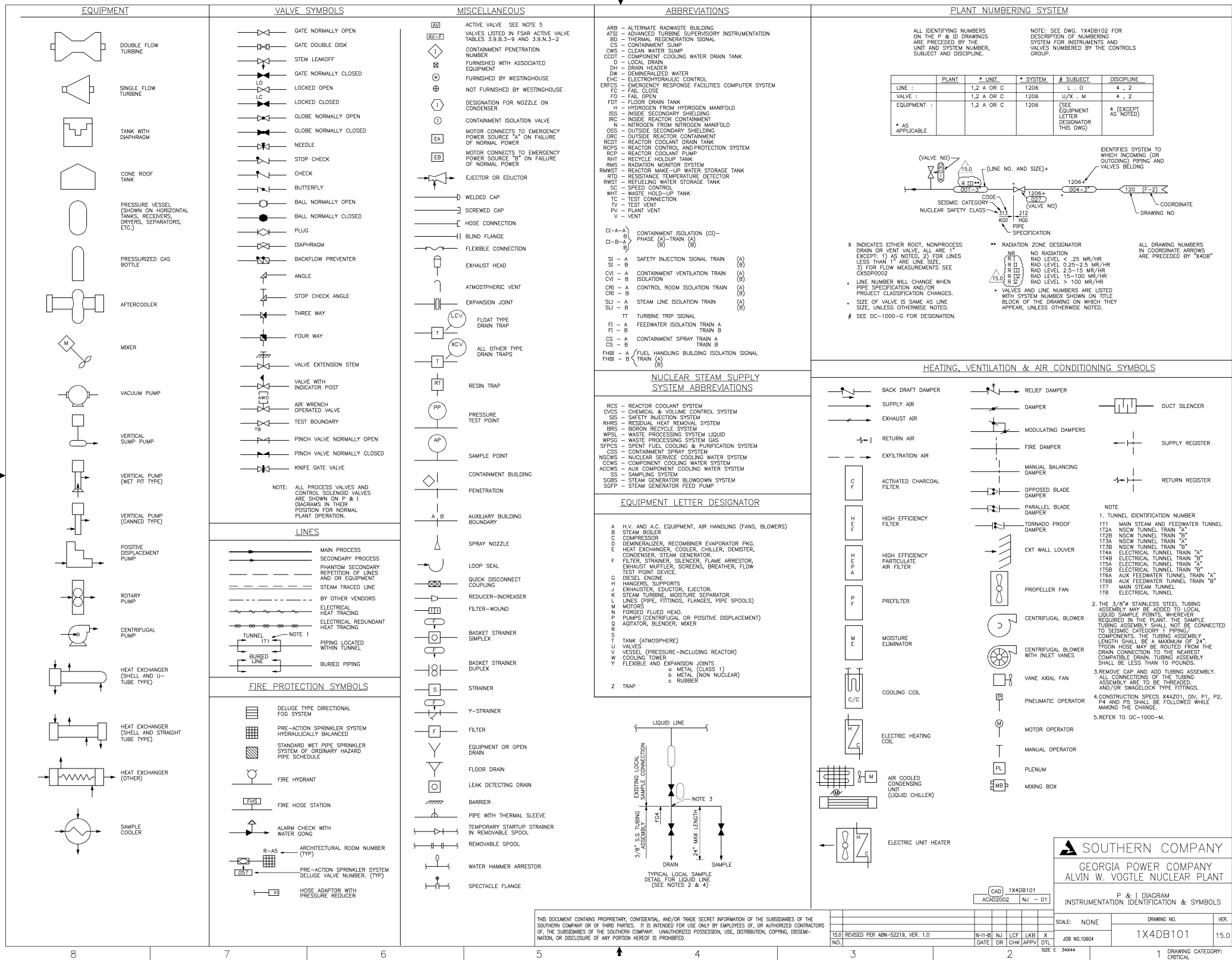


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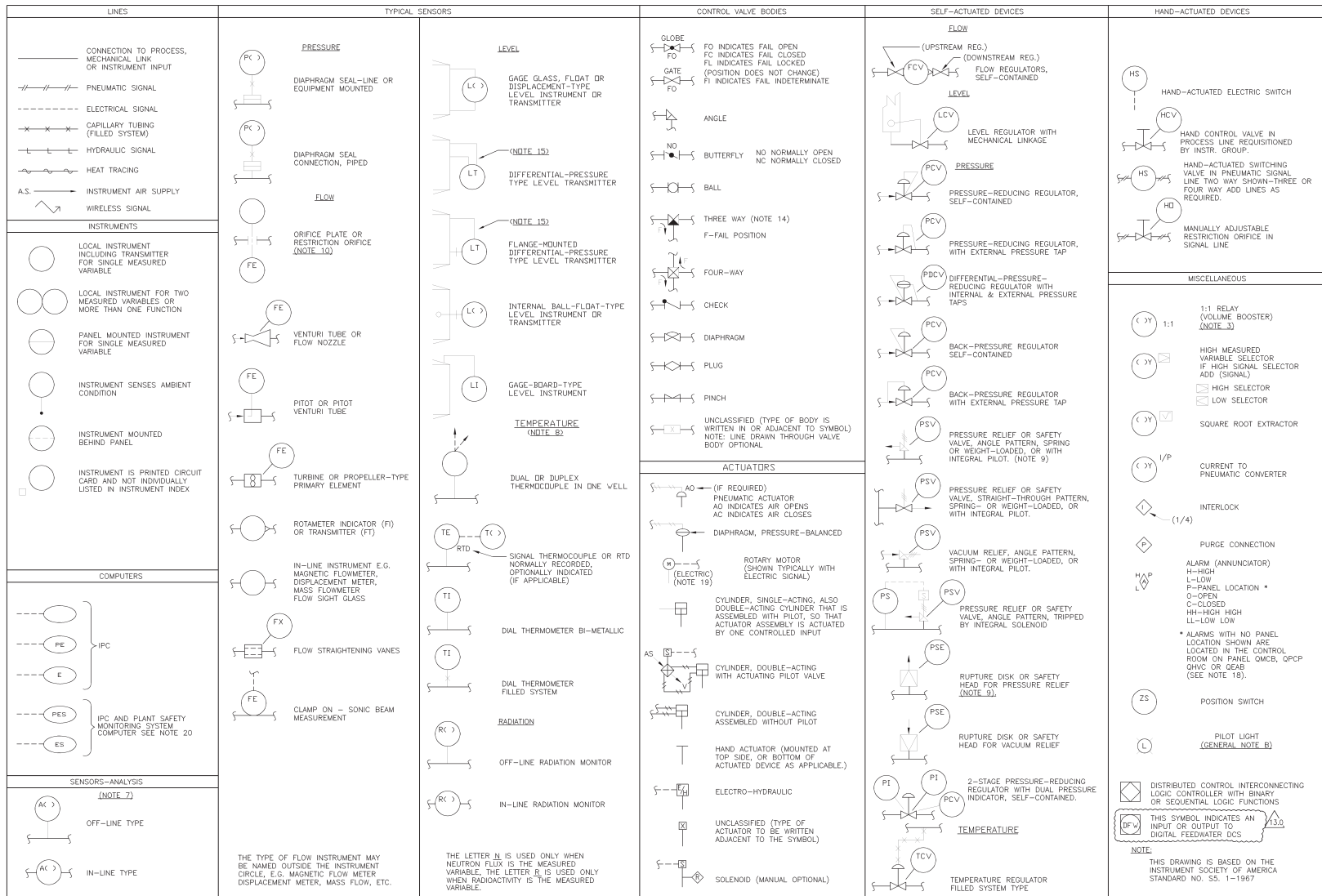


LEGEND AND SYMBOLS FOR P & ID'S				P & ID'S-BALANCE OF PLANT SYSTEMS				P & ID'S-BALANCE OF PLANT SYSTEMS (CONT.)				FLOW DIAGRAMS-HVAC SYSTEMS			
DRAWING NO	SYSTEM NO	B/S	DESCRIPTION	DRAWING NO	SYSTEM NO	B/S	DESCRIPTION	DRAWING NO	SYSTEM NO	B/S	DESCRIPTION	DRAWING NO	SYSTEM NO	B/S	DESCRIPTION
1X4DB100	1X4DB101	B	P & ID AND FLOW DIAGRAM LEGEND	1X4DB050	VARIOUS		CHEM. CLNG. 2 FWDTR. MAIN STEAM AUX.	1X4DB173-552	2331	S	FIRE PROT. PPG-- HIGH VOLT. SWITCHYARD UNITS 1 & 2 VALVEHOUSE NO. 3	AX4DB307-4	1582	S	SERVICE BLDG HVAC SYSTEMS TOILETS/LOCKER RM.
1X4DB101	1X4DB102	B	INSTRUMENTATION IDENTIFICATION & SYMBOLS	1X4DB051	VARIOUS		CHEM. CLNG. 2 FWDTR. MAIN STEAM AUX.	1X4DB173-553	2331	S	FIRE PROT. PPG-- HIGH VOLT. SWITCHYARD UNITS 1 & 2 VALVEHOUSE NO. 3	AX4DB308	1582	S	SERVICE BLDG HVAC SYSTEMS CHILLED WATER SYSTEM
1X4DB102		B	INSTRUMENTATION IDENTIFICATION & SYMBOLS	1X4DB052	VARIOUS		CHEM. CLNG. 2 FWDTR. MAIN STEAM AUX.	1X4DB173-557	2331	S	FIRE PROT. PPG-- HIGH VOLT. SWITCHYARD UNITS 1 & 2 VALVEHOUSE NO. 4	AX4DB309	1594	S	WATER TREATMENT BLDG HVAC SYS. CHILLED WTR. SYS.
P & ID'S-SSSS SYSTEMS				1X4DB053	VARIOUS		CHEM. CLNG. PHASE 1&2 COMMON.	1X4DB173-558	2301	S	FIRE PROT. PPG-- HIGH VOLT. SWITCHYARD UNITS 1 & 2 VALVEHOUSE NO. 4	AX4DB311	1594	S	WATER TREATMENT BLDG HVAC SYS. CHILLED WTR. SYS.
AX4DB104-1	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE FD TK)	1X4DB150	1401		CIRCULATING WATER SYSTEM	1X4DB173-559	2301	S	FIRE PROT. PPG-- HIGH VOLT. SWITCHYARD UNITS 1 & 2 VALVEHOUSE NO. 4	AX4DB312	1585	S	WATER TREATMENT BLDG HVAC SYS. CHILLED WTR. SYS.
AX4DB104-2	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE FD TK)	1X4DB150-1	2424		CONDENSER WATERBOX CATHODIC PROTECTION SYS.	1X4DB173-6	2301	S	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB314	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-3	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (CAUST & EWP.C.F.TK)	1X4DB150-2	1405		TURBINE PLANT CLG WATER SYS	1X4DB173-7	2301	S	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB317	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-4	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE FD & SCBR)	1X4DB151-1	1405		TURBINE PLANT CLG WATER SYS	1X4DB173-8	2301	S	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB318	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-5	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (OFFGAS TREATM.)	1X4DB151-2	1405		TURBINE PLANT CLG WATER SYS	1X4DB173-9	2301	S	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB319	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-6	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (OFFGAS TREATM.)	1X4DB151-3	1405		TURBINE PLANT CLG WATER SYS	1X4DB174-1	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB320	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-7	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB152-1	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-2	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB321	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-8	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB152-2	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-3	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB322	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB104-9	1416	B	PLANT DEMIN. WATER SYS (DECONTAMINATION WATER)	1X4DB152-3	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-4	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB323	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-1	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB152-4	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-5	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB324	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-2	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB152-5	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-6	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB325	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-3	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB152-6	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-7	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB326	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-4	1215	B	AUXILIARY BLDG. & MISC. DRAINS (TRANSFER BLDG)	1X4DB152-7	1402		RIVER INTAKE STRUCTURE SYS	1X4DB174-8	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB327	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-5	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB153	1405,2417		PLANT MAKEUP WTR WELL & POTABLE WATER SYS	1X4DB174-9	2301	B	FIRE PROTECTION PIPING--LOW VOLTAGE SWITCHYARD VALVE HOUSE-- UNIT NO. 1	AX4DB328	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-6	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB154-1	1404		TURBINE PLANT CLOSED COOLING WATER SYSTEM	1X4DB175-1	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB329	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-7	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB154-2	1404		TURBINE PLANT CLOSED COOLING WATER SYSTEM	1X4DB175-2	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB330	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-8	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB155	2622,2419		CONSTRUCTION & UTILITY WATER SYSTEM	1X4DB175-3	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB331	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB105-9	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (WASTE PROC.)	1X4DB156	1401		FEEDWATER HEATER VENT SYSTEM	1X4DB175-4	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB332	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-1	1229	B	SOLIDIFICATION BUILDING DRAINS	1X4DB157	1411		CONDENSATE CHEMICAL INJECTION SYS	1X4DB175-5	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB333	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-2	1229	B	SOLIDIFICATION BUILDING DRAINS	1X4DB157-1	1411		CONDENSATE CHEMICAL INJECTION SYS	1X4DB175-6	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB334	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-3	1229	B	SOLIDIFICATION BUILDING DRAINS	1X4DB157-2	1411		CONDENSATE CHEMICAL INJECTION SYS	1X4DB175-7	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB335	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-4	1229	B	SOLIDIFICATION BUILDING DRAINS	1X4DB157-3	1411		CONDENSATE CHEMICAL INJECTION SYS	1X4DB175-8	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB336	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-5	1609	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (SELECTIVE CUBICLE MONITORING SYSTEM)	1X4DB158-1	1410		CIRC WATER CHEM INJECTION SYS (ACID & DISPERSANT)	1X4DB175-9	2401,2420	S	INSTRUMENT & SERVICE AIR SYSTEM	AX4DB337	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-6	1423	B	RADIWASTE PUMP SEAL WATER SYSTEM	1X4DB158-2	1410		CIRC WATER CHEM INJECTION SYS (ACID & DISPERSANT)	1X4DB176-1	2402	S	AUXILIARY GAS SYSTEM	AX4DB338	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-7	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (DRY ASH STORAGE AND TRANSFER SYSTEM)	1X4DB158-3	1410		CIRC WATER CHEM INJECTION SYS (ACID & DISPERSANT)	1X4DB176-2	2402	S	AUXILIARY GAS SYSTEM	AX4DB339	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
AX4DB106-8	1903	B	RADIWASTE SOLIDIF. & VOL. REDUCT. SYS (SAMPLE/REAGENT ADDITION)	1X4DB159-1	1301		MAIN STEAM SYSTEM	1X4DB176-3	2402,2406	B	AUXILIARY GAS SYSTEM	AX4DB340	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB110	2702	B	POST ACCIDENT SAMPLING SYSTEM	1X4DB159-2	1301		MAIN STEAM SYSTEM	1X4DB177	1409	S	PLANT MAKEUP WTR TREATMENT SYS	AX4DB341	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB111	1201	B	REACTOR COOLANT SYSTEM	1X4DB160-1	1301		MAIN STEAM SYSTEM	1X4DB177-1	2420	S	INSTRUMENT AIR SYSTEM-WATER TREATMENT BLDG.	AX4DB342	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB112	1201	B	REACTOR COOLANT SYSTEM	1X4DB160-2	1301		MAIN STEAM SYSTEM	1X4DB178	1409	S	PLANT MAKEUP WTR TREATMENT SYS	AX4DB343	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB113	1201	B	REACTOR COOLANT SYSTEM	1X4DB160-3	1301		MAIN STEAM SYSTEM	1X4DB179-1	1407	B	STEAM GENERATOR BLOWDOWN SYS	AX4DB344	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB114	1208	B	CHEMICAL & VOLUME CONTROL SYSTEM	1X4DB161-1	1302		AUXILIARY FEEDWATER SYSTEM-- CONDENSATE STORAGE & DEGASIFIER SYSTEM	1X4DB179-2	1407	B	STEAM GENERATOR BLOWDOWN SYS	AX4DB345	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB115	1208	B	CHEMICAL & VOLUME CONTROL SYSTEM	1X4DB161-2	1302		AUXILIARY FEEDWATER SYSTEM-- CONDENSATE STORAGE & DEGASIFIER SYSTEM	1X4DB180-1	2412	S	TURBINE BLDG DRAIN SYSTEM	AX4DB346	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB116-1	1208	B	CHEMICAL & VOLUME CONTROL SYSTEM	1X4DB162-1	1303		EXTRACTION STEAM SYSTEM	1X4DB180-2	2412	S	TURBINE BLDG DRAIN SYSTEM	AX4DB347	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB116-2	1208	B	CHEMICAL & VOLUME CONTROL SYSTEM	1X4DB162-2	1303		EXTRACTION STEAM SYSTEM	1X4DB180-3	2412	S	TURBINE BLDG DRAIN SYSTEM	AX4DB348	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB117	1208	B	CHEMICAL & VOLUME CONTROL SYSTEM	1X4DB162-3	1303		EXTRACTION STEAM SYSTEM	1X4DB180-4	2412	S	TURBINE BLDG DRAIN SYSTEM	AX4DB349	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB118	1208	B	CHEMICAL & VOLUME CONTROL SYSTEM	1X4DB163-1	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6A HTR DRAINS	1X4DB181	1314	B	WASTE EVAPORATOR STEAM SUPPLY SYS	AX4DB350	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB119	1204	B	SAFETY INJECTION SYSTEM	1X4DB163-2	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6B HTR DRAINS	1X4DB182	1309	S	CONDENSER AIR EJECTION SYSTEM	AX4DB351	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB120	1204	B	SAFETY INJECTION SYSTEM	1X4DB163-3	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6B HTR DRAINS	1X4DB183	1226,1227	B	FUEL HANDLING BLDG & ELECT CHASE TUNNEL DRNS	AX4DB352	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB121	1204	B	SAFETY INJECTION SYSTEM	1X4DB163-4	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6B HTR DRAINS	1X4DB184	1228	B	REACTOR MAKE-UP WATER STORAGE TANK & DEGASIFIER.	AX4DB353	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB122	1205	B	RESIDUAL HEAT REMOVAL SYSTEM	1X4DB163-5	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6B HTR DRAINS	1X4DB185-1	1415	S	CONDENSATE FILTER DEMINERALIZER SYS	AX4DB354	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB123-1	1210	B	BORON RECYCLE SYSTEM	1X4DB163-6	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6B HTR DRAINS	1X4DB185-2	1414	S	CONDENSATE FILTER DEMINERALIZER SYS	AX4DB355	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB123-2	1210	B	BORON RECYCLE SYSTEM	1X4DB163-7	1304		FEEDWATER HEATER DRAIN SYS MSR.NO.6B HTR DRAINS	1X4DB185-3	1414	S	CONDENSATE FILTER DEMINERALIZER SYS	AX4DB356	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB124	1901	S	WASTE PROCESSING SYSTEM--LIQUID	1X4DB164-1	2419		UTILITY WATER SYSTEM	1X4DB185-4	1414	S	CONDENSATE FILTER DEMINERALIZER SYS	AX4DB357	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB124-1	1901	S	WASTE PROCESSING SYSTEM--LIQUID	1X4DB164-2	2419		UTILITY WATER SYSTEM	1X4DB186-1	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB358	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB124-2	1901	S	WASTE PROCESSING SYSTEM--LIQUID	1X4DB165	1413		NSCW CHEMICAL INJECTION SYS--CHLORINE	1X4DB186-2	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB359	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB124-3	1901	S	WASTE PROCESSING SYSTEM--LIQUID	1X4DB166	1306		TURBINE DRIVE STEAM SYSTEM	1X4DB186-3	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB360	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB124-4	1901	S	WASTE PROCESSING SYSTEM--LIQUID	1X4DB167-1	1307		TURBINE LUBE OIL STORAGE AND FILTRATION SYSTEM	1X4DB186-4	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB361	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB125	1901	B	WASTE PROCESSING SYSTEM--LIQUID	1X4DB167-2	1307		TURBINE LUBE OIL STORAGE AND FILTRATION SYSTEM	1X4DB186-5	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB362	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB126	1901	B	WASTE PROCESSING SYSTEM--LIQUID	1X4DB167-3	1307		TURBINE LUBE OIL STORAGE AND FILTRATION SYSTEM	1X4DB186-6	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB363	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB127	1901	B	WASTE PROCESSING SYSTEM--LIQUID	1X4DB167-4	1307		TURBINE LUBE OIL STORAGE AND FILTRATION SYSTEM	1X4DB186-7	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB364	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB128	1902	B	WASTE PROCESSING SYSTEM--LIQUID	1X4DB167-5	1307		TURBINE LUBE OIL STORAGE AND FILTRATION SYSTEM	1X4DB186-8	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB365	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB129	1902	B	WASTE PROCESSING SYSTEM--LIQUID	1X4DB168-1	1305		CONDENSATE & FEEDWATER SYS	1X4DB186-9	2420	B	INSTRUMENT AIR SYSTEM CONTROL BUILDING	AX4DB366	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB130	213	B	SPENT FUEL COOLING & PURIFICATION SYSTEM	1X4DB168-2	1305		CONDENSATE & FEEDWATER SYS	1X4DB187	1419	S	CONDENSER TUBE CLEANING SYS	AX4DB367	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB131	1206	B	MISCELLANEOUS LEAK DETECTION SYSTEM	1X4DB168-3	1305		CONDENSATE & FEEDWATER SYS	1X4DB188	2401	S	SERVICE AIR SYSTEM (TURBINE BLDG.)	AX4DB368	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB132	1222	B	NUCLEAR SERVICE CLG WTR SYS	1X4DB168-4	1305		CONDENSATE & FEEDWATER SYS	1X4DB189	1417	S	PLANT MAKEUP WATER TREATMENT WASTE NEUTRALIZATION SYSTEM	AX4DB369	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB133-1	1202	B	NUCLEAR SERVICE CLG WTR SYS	1X4DB168-5	1305		CONDENSATE & FEEDWATER SYS	1X4DB190-1	1418	S	PLANT MAKEUP WATER TREATMENT WASTE NEUTRALIZATION SYSTEM	AX4DB370	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB133-2	1202	B	NUCLEAR SERVICE CLG WTR SYS	1X4DB169-1	2403		DIESEL GEN SYSTEM (TRAIN-A)	1X4DB190-2	1418	S	PLANT MAKEUP WATER TREATMENT WASTE NEUTRALIZATION SYSTEM	AX4DB371	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB134	1202	B	NUCLEAR SERVICE CLG WTR SYS	1X4DB170-1	1311		DIESEL GEN SYSTEM (TRAIN-B)	1X4DB191	1324	B	TURBINE GENERATOR HYDROGEN SEAL OIL SYS	AX4DB372	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB135-1	1202	B	NUCLEAR SERVICE CLG WTR SYS	1X4DB171-1	1311		TURBINE PLANT SAMPLING SYS	1X4DB192	1413	B	NUCLEAR SERVICE COOLING WATER CHEMICAL INJECTION SYS & CHLORINE ANALYSIS SYS	AX4DB373	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB135-2	1202	B	NUCLEAR SERVICE CLG WTR SYS	1X4DB171-2	1311		TURBINE PLANT SAMPLING SYS	1X4DB193	1326	S	TURBINE GENERATOR STATOR COOLING WATER SYS	AX4DB374	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB136	1203	B	COMPONENT COOLING WATER SYS	1X4DB171-3	1311		TURBINE PLANT SAMPLING SYS	1X4DB194	1615	S	TURBINE GENERATOR STATOR COOLING WATER SYS	AX4DB375	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB137	1203	B	COMPONENT COOLING WATER SYS	1X4DB171-4	1311		TURBINE PLANT SAMPLING SYS	1X4DB195-1	1322	S	AUXILIARY STEAM SYSTEM BOILER	AX4DB376	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB138-1	1217	B	AUX COMPONENT COOLING WATER SYS	1X4DB171-5	1311		TURBINE PLANT SAMPLING SYS	1X4DB195-2	1322	S	AUXILIARY STEAM SYSTEM DEAERATOR CHEM. FEED	AX4DB377	1585	S	PRODUCTION WAREHOUSE CHILLED WATER SYS.
1X4DB138-2	1217	B	AUX COMPONENT COOLING WATER SYS	1X4DB171-6	1311		TURBINE PLANT SAMPLING SYS	1X4DB195-3	1322						



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MEASURED VARIABLE	SYMBOL FOR MEASURED VARIABLE	DISPLAY DEVICES										CONTROLLING DEVICES										SENSING DEVICES										LOCAL OBSERVATION GLASS	TEST CONNECTION	RELAY OR CONVERTER (BLIND)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		INDICATING	RECORDING (SEE NOTE 17)	INTEGRATING INDICATOR (SEE NOTE 5)	SCAN (SEE NOTE 7)	COMPUTER ISOLATION (CIR)	ALARM	INDICATOR	RECORDING	BLIND	CONTROL VALVE	SELF-ACTUATED VALVE	FINAL CONTROL ELEMENT (SEE NOTE 11)	SWITCH (SEE NOTE 6)	PRIMARY ELEMENT	BLIND TRANSMITTER	INDICATING TRANSMITTER	INDICATING TRANSMITTER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
TYPICAL SYMBOL	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	(

- NOTES: (1) THE LETTER "A" IS USED FOR ALL ANALYSIS VARIABLES EXCEPT CONDUCTIVITY. THE FOLLOWING TERMS MAY BE PLACED OUTSIDE THE INSTRUMENT CIRCLE OF A LOOP TO DENOTE THE SPECIFIC VARIABLES.
- CC - CATION CONDUCTIVITY
 - CL - CHLORINE
 - CO - CARBON MONOXIDE
 - COMB - COMBUSTION
 - H - DISSOLVED HYDROGEN
 - HA - GASEOUS HYDROGEN
 - NS - SODIUM
 - NH4 - NITROGEN OXIDES
 - O - DISSOLVED OXYGEN
 - OS - GASEOUS OXYGEN
 - PH - PHOSPHORUS
 - SC - SPECIFIC CONDUCTIVITY
 - S₂O₂ - SILICA
 - SMOKE - SMOKE DENSITY
 - SO - SULPHUR DIOXIDE
 - TBB - TURBIDITY
- (2) A USER'S CHOICE LETTER IS INTENDED TO COVER A MEANING THAT WOULD BE USED REPEATIVELY IN A PARTICULAR PROJECT. WHEN USED, THE LETTER MAY HAVE ONE MEANING AS A FIRST LETTER AND ANOTHER MEANING AS A SUCCEEDING LETTER. THE MEANINGS MUST BE DEFINED ONLY ONCE IN A LEGEND, OR OTHERWISE FOR THAT PROJECT. FOR EXAMPLE, THE LETTER "N" MAY BE DEFINED AS TURBIDITY AS A FIRST LETTER AND TEMPERATURE MONITOR AS A SECOND LETTER.
- (3) THE EQUATION OF DESCRIPTION DENOTING THE FUNCTION OF THE RELAY "Y" SHOULD BE SHOWN ON THE P & ID, FOR EXAMPLE, A-B+C+K, LP SELECTOR, VOLUME BOOSTER.
- (4) "Y" IS USED TO REFLECT ANY "SPECIAL" VARIABLES AND MAY BE DEFINED AS REQUIRED. FOR EXAMPLE, MASS FLOW RECORDERS WHICH RECEIVE A SIGNAL FROM A MULTIPLYING RELAY WHICH COMBINES THE PRODUCT OF DENSITY AND FLOW. THIS ITEM IS NOT TO BE CONFUSED WITH "Y" MULTI-VARIABLE SYMBOL.
- (5) WHEN "O" IS USED AS A SECOND SUCCEEDING LETTER IT MAY DENOTE AN INTEGRATING MODIFIER FOR EXAMPLE, "O" IS AN INDICATING FLOW INTEGRATOR (OR TOTALIZER). NOTE THAT THE INTEGRATING FUNCTION SHALL BE SHOWN WITH SEPARATE IDENTIFICATION FOR EXAMPLE, FLOW/INTS OR FLOW/INTS. "O" MAY ALSO INDICATE ELECTRIC POWER SUPPLY, E.G. UO.
- (6) STARTUP AND SHUTDOWN DEVICES ARE USUALLY BLIND, BUT MAY BE INDICATING OR RECORDING. IF SO, ADD "I" OR "R" AFTER MEASURED VARIABLE. FOR EXAMPLE, FIS, TRS SWITCH FUNCTIONS MAY BE FURTHER MODIFIED BY "L" FOR LOW AND "H" FOR HIGH.
- (7) THE DESIGNATION "AL" "Y" MAY DENOTE A SCANNING ANALYZER INDICATOR, RECORDER, TRANSMITTER, ETC. BY USING THE DESIGNATION, AIJ, AJI, AIT, ETC., RESPECTIVELY.
- (8) "TW" DENOTES AN EMPTY THERMOWELL. "TE" DENOTES A THERMOWELL WITH THERMOCOUPLE OR RTD AND HAND SUITABLE FOR USE WITH A SECONDARY INSTRUMENT. "TI" DENOTES DIAL THERMOMETER EITHER BI-METALLIC OR FILLED SYSTEM.
- (9) PRESSURE RELIEF VALVES AND RUPTURE DISKS SHALL BE IDENTIFIED AS "PSV" AND "PSE" RESPECTIVELY.
- (10) "TO" IS USED TO DESIGNATE A RESTRICTION ORIFICE. "T" IS USED TO DESIGNATE A FILTER.
- (11) "RA" IS RADIATION ALARM UNIT. "RX" IS RADIATION SAMPLING NOZZLES. "RX" IS RADIATION SYSTEM DATA PROCESSING MODULE.
- (12) DESCRIPTOR "LOOP" REFERENCES LOOP DIAGRAM.



SOUTHERN COMPANY

GEORGIA POWER COMPANY

ALVIN W. VOGTE NUCLEAR PLANT

P & I DIAGRAM
INSTRUMENTATION
IDENTIFICATION & SYMBOLS

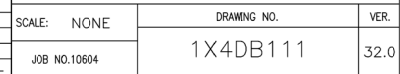
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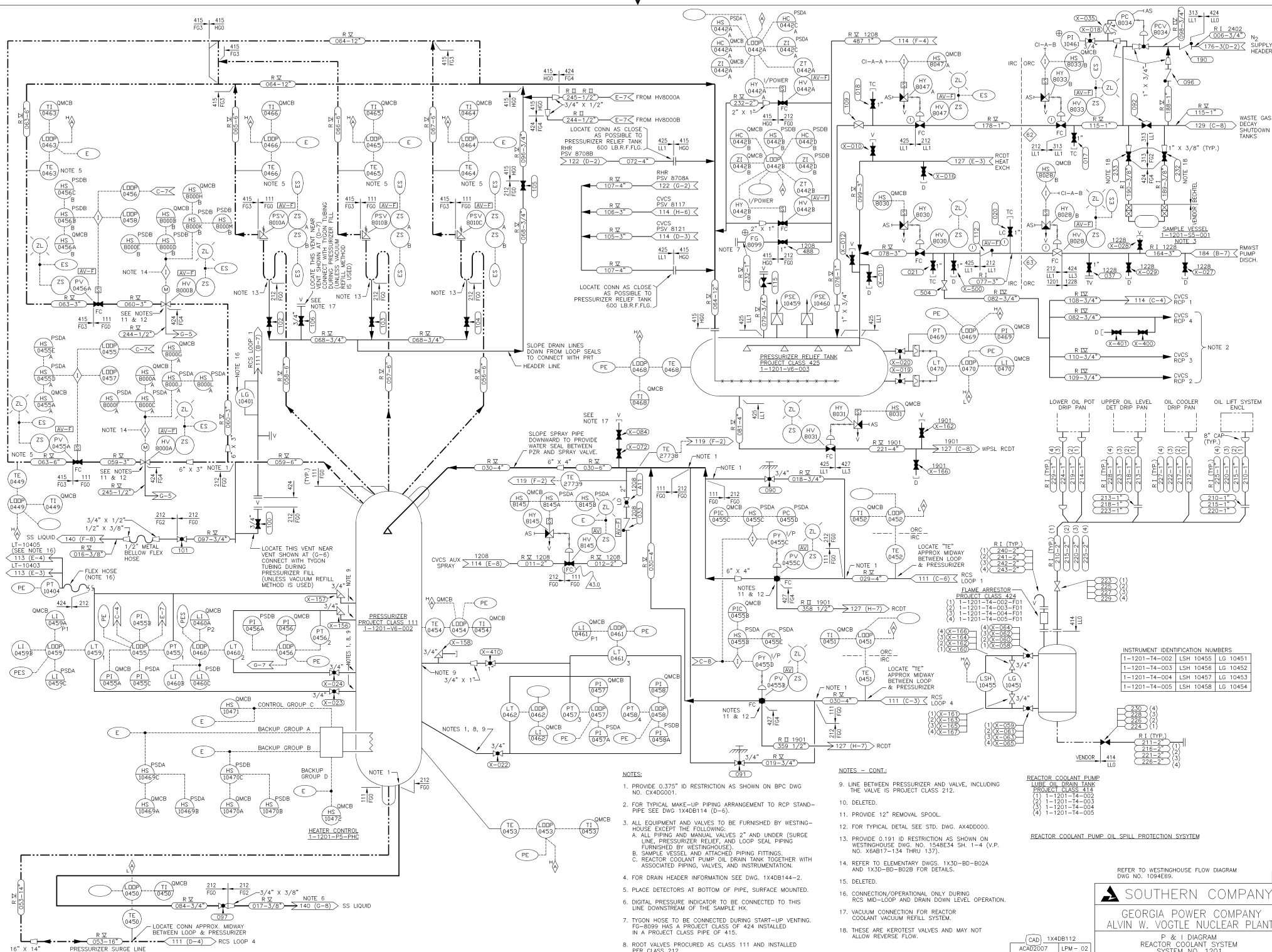
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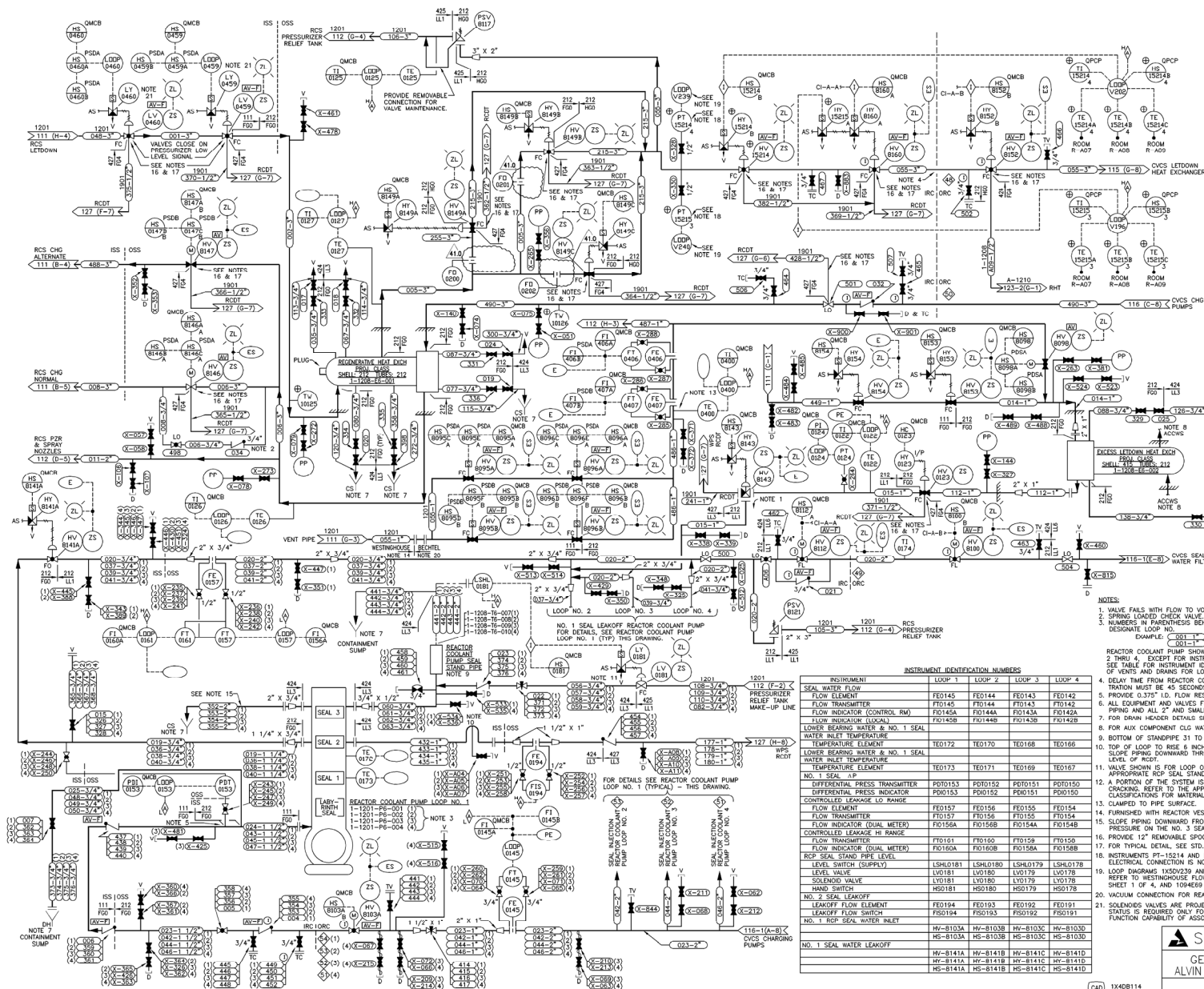
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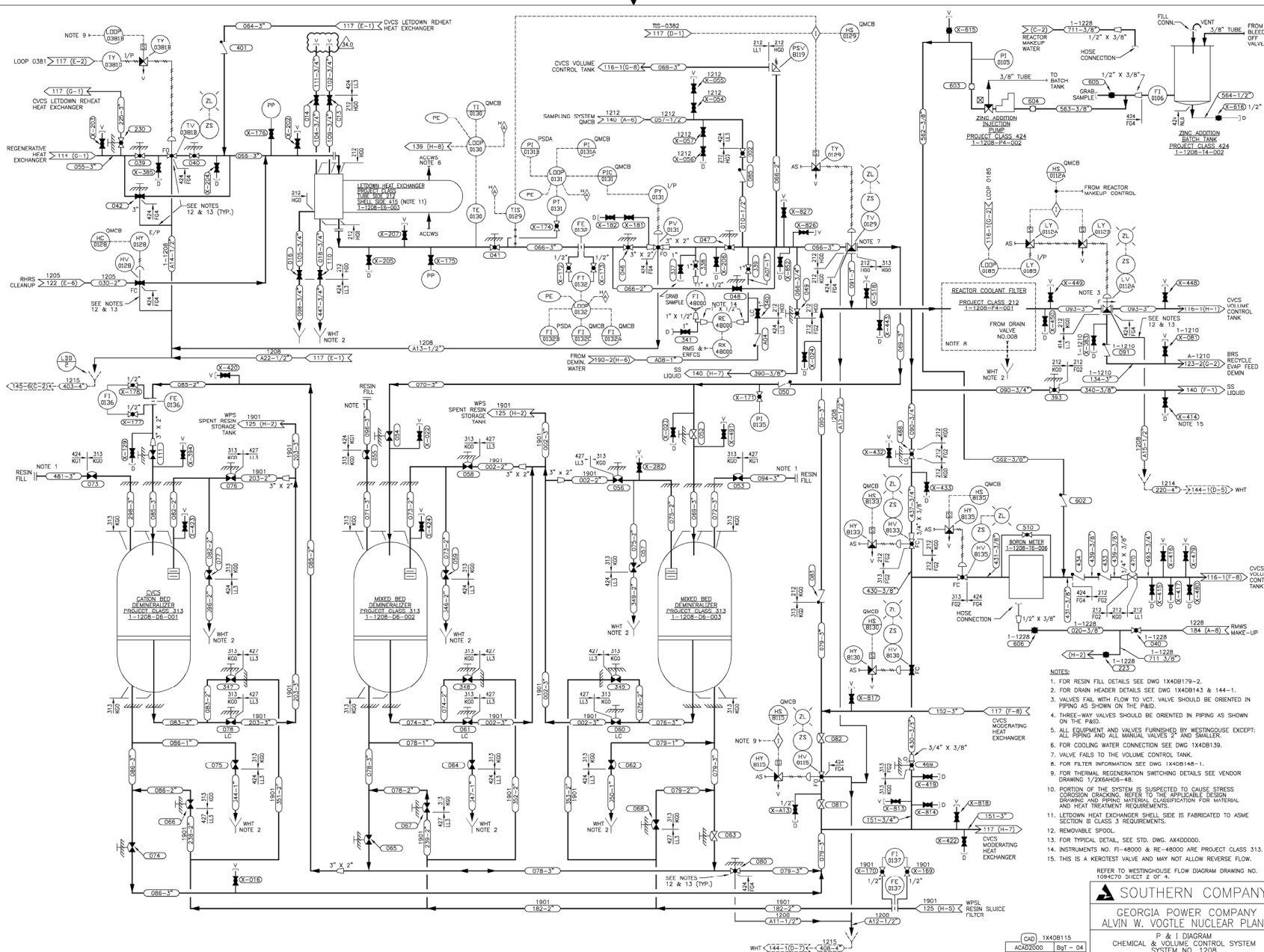


- NOTES:
1. VALVE FAILS WITH FLOW TO VOLUME CONTROL TANK.
 2. SPRING LOADED CHECK VALVE.
 3. NUMBERS IN PARENTHESES BEHIND VALVE AND LINE BUBBLES, DESIGNATE LOOP NO. 1 - LOOP NO. 1, 2 - LOOP NO. 2, 3 - LOOP NO. 3, 4 - LOOP NO. 4.
 4. DELAY TIME FROM REACTOR COOLANT SYSTEM TO THE CONTAINMENT PENETRATION MUST BE AS SECONDS MINIMUM AT MAXIMUM LETDOWN FLOW.
 5. PROVIDE 0.375" I.D. FLOW RESTRICTION AS SHOWN ON SPC DWG 040001.
 6. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT ALL PIPING AND ALL 2" AND SMALLER MANUAL VALVES.
 7. FOR DRAIN HEADER DETAILS SEE DWG 1408143, 141-1 & 141-2.
 8. FOR AUX COMPONENT C/D WATER SYSTEM INFORMATION SEE DWG 1408138-2.
 9. BOTTOM OF STANDPIPE 31 TO 34 FEET ABOVE CONNECTION TO NO. 3 SEAL.
 10. TOP OF LOOP TO RISE 6 INCHES ABOVE NO. 2 SEAL LEAKOFF CONNECTION; SLOPE PIPING DOWNWARD THROUGH RUN TO RCOT. LOCATE CHECK VALVE AT LEVEL OF RCOT.
 11. VALVE SHOWN IS FOR LOOP ONE. VALVES IN OTHER LOOPS WILL USE THE APPROPRIATE RCP SEAL STANDPIPE INSTRUMENTATION FOR THAT LOOP.
 12. A 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.
 13. CLAMPED TO PIPE SURFACE.
 14. FURNISHED WITH REACTOR VESSEL HEAD.
 15. SLOPE PIPING DOWNWARD FROM THIS POINT TO ASSURE 0 PSIG BACK PRESSURE ON THE NO. 3 SEAL.
 16. PROVIDE 12" REMOVABLE SPOOL.
 17. FOR FURTHER DETAIL, SEE STD. DWG. 4X40000.
 18. INSTRUMENTS PT-15214 AND PT-15215 ARE TO BE ABANDONED IN PLACE. ELECTRICAL CONNECTION IS NOT REQUIRED.
 19. LOOP DIAGRAMS 14050239 AND 14050240 ARE VOIDED. REFER TO WESTINGHOUSE FLOW DIAGRAMS, DRAWINGS NO. 1094670 SHEET 1 OF 4, AND 1094669 SHEET 2 OF 2.
 20. VACUUM CONNECTION FOR REACTOR COOLANT VACUUM REPLY SYSTEM.
 21. SLOTTED VALVES ARE PRODUCT CLASSIFICATION 111. SAFETY RELATED STATUS IS REQUIRED ONLY FOR THE SOLENOIDS TO ENSURE ACTIVE VOLUME FUNCTION CAPABILITY OF ASSOCIATED AOV.

INSTRUMENT IDENTIFICATION NUMBERS				
	LOOP 1	LOOP 2	LOOP 3	LOOP 4
SEAL WATER FLOW	FE0145	FE0144	FE0143	FE0142
FLOW TRANSMITTER	FE0145	FE0144	FE0143	FE0142
FLOW INDICATOR (CONTROL RM)	FE0145A	FE0144A	FE0143A	FE0142A
LOOP INDICATOR (LOCAL)	FE0145B	FE0144B	FE0143B	FE0142B
LOWER BEARING WATER & NO. 1 SEAL	TE0172	TE0170	TE0168	TE0166
TEMPERATURE ELEMENT	TE0172	TE0171	TE0169	TE0167
WATER INLET TEMPERATURE	TE0172	TE0171	TE0169	TE0167
NO. 2 SEAL	FE0157	FE0156	FE0155	FE0154
DIFFERENTIAL PRESS TRANSMITTER	PD0153	PD0152	PD0151	PD0150
DIFFERENTIAL PRESS INDICATOR	PD0153	PD0152	PD0151	PD0150
CONTROLLED LEAKAGE L/D RANGE	FE0157	FE0156	FE0155	FE0154
FLOW TRANSMITTER	FE0157	FE0156	FE0155	FE0154
FLOW INDICATOR (LOCAL METER)	FE0157A	FE0156A	FE0155A	FE0154A
CONTROLLED LEAKAGE HI RANGE	FE0161	FE0160	FE0159	FE0158
FLOW TRANSMITTER	FE0161	FE0160	FE0159	FE0158
FLOW INDICATOR (LOCAL METER)	FE0161A	FE0160A	FE0159A	FE0158A
RCP SEAL STAND PIPE LEVEL	LSH0181	LSH0180	LSH0179	LSH0178
LEVEL VALVE	LVO181	LVO180	LVO179	LVO178
SOLENOID VALVE	LVO181	LVO180	LVO179	LVO178
HAND SWITCH	HS0181	HS0180	HS0179	HS0178
NO. 2 SEAL LEAKOFF	FE0194	FE0193	FE0192	FE0191
LEAKOFF FLOW SWITCH	FE0194	FE0193	FE0192	FE0191
NO. 1 RCP SEAL WATER INLET	HY-B103A	HY-B103B	HY-B103C	HY-B103D
NO. 1 SEAL WATER LEAKOFF	HY-B103A	HY-B103B	HY-B103C	HY-B103D
	HY-B141A	HY-B141B	HY-B141C	HY-B141D
	HY-B141A	HY-B141B	HY-B141C	HY-B141D
	HY-B141A	HY-B141B	HY-B141C	HY-B141D

SOUTHERN COMPANY
 GEORGIA POWER COMPANY
 ALVIN W. VOGTLE NUCLEAR PLANT

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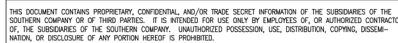


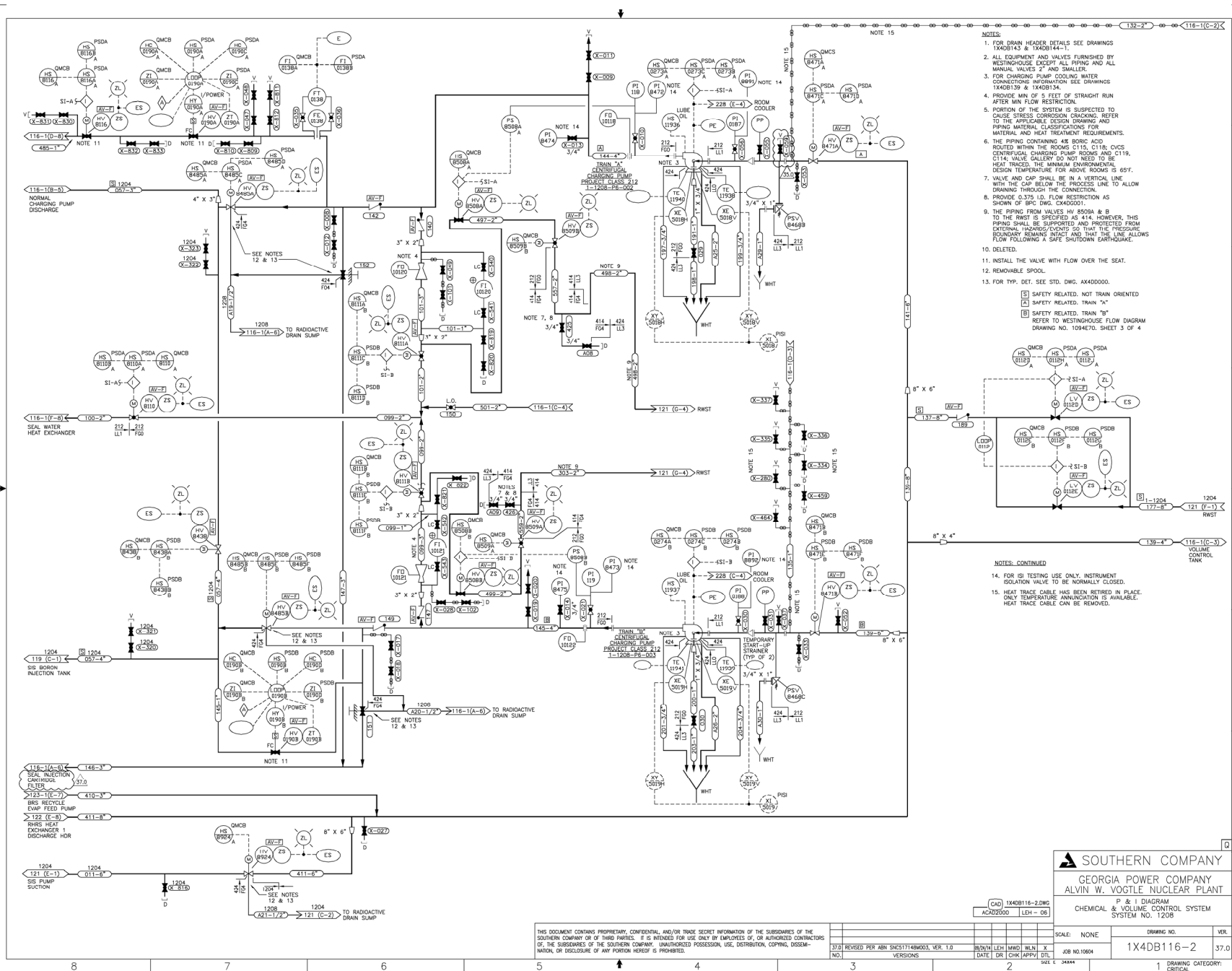
- NOTES:
1. FOR RESIN FILL DETAILS SEE DWG 1X40B179-2.
 2. FOR DRAIN HEADER DETAILS SEE DWG 1X40B143 & 144-1.
 3. VALVES FAIL WITH FLOW TO VCT. VALVE SHOULD BE ORIENTED IN PIPING AS SHOWN ON THE PAID.
 4. THREE-WAY VALVES SHOULD BE ORIENTED IN PIPING AS SHOWN ON THE PAID.
 5. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT: ALL PIPING AND ALL MANUAL VALVES 1/2" AND SMALLER.
 6. FOR COOLING WATER CONNECTION SEE DWG 1X40B139.
 7. VALVE FAILS TO THE VOLUME CONTROL TANK.
 8. FOR FILTER INFORMATION SEE DWG 1X40B148-1.
 9. FOR THERMAL REGENERATION SWITCHING DETAILS SEE VENDOR DRAWING 1/256A406-48.
 10. PORTION OF THE SYSTEM IS SUSPECTED TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAWING AND PIPING MATERIAL CLASSIFICATION FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
 11. LETDOWN HEAT EXCHANGER SHELL SIDE IS FABRICATED TO ASME SECTION II CLASS 3 REQUIREMENTS.
 12. REMOVABLE SPOOL.
 13. FOR TYPICAL DETAIL, SEE STD. DWG. AX400000.
 14. INSTRUMENTS NO. FI-48000 & RE-48000 ARE PROJECT CLASS 313.
 15. THIS IS A KINETEST VALVE AND MAY NOT ALLOW REVERSE FLOW.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
CHEMICAL & VOLUME CONTROL SYSTEM
SYSTEM NO. 1208

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SCALE: NONE	DRAWING NO. 1X40B115	VER. 34.0
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99	11/11/07	JWL/AAN
100	11/11/07	JWL/AAN





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37.0	REVISED PER ABN SNC517148M003, VER. 1.0	09/24/14	LEH	MWD	WLN	X
NO.	VERSIONS	DATE	DR	CHK	APPV	DTL

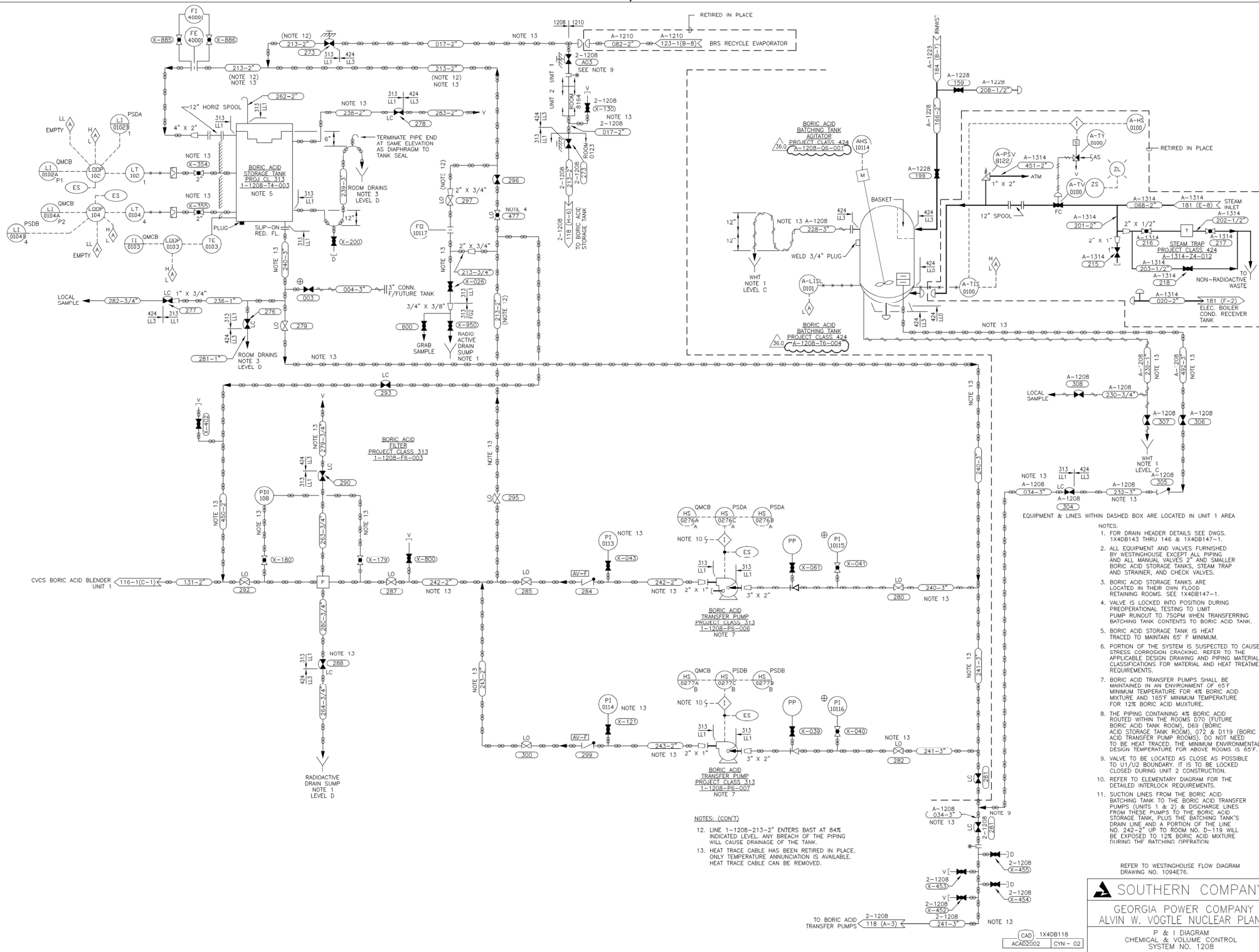
 SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

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

SCALE: NONE	DRAWING NO.	V
JOB NO. 10604	1X4DB116-2	3

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5



- NOTES:
- FOR DRAIN HEADER DETAILS SEE DWGS. 1X4DB143 THRU 146 & 1X4DB147-1.
 - ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT ALL PIPING AND ALL MANUAL VALVES 2" AND SMALLER BORIC ACID STORAGE TANKS, STEAM TRAP AND STRAINER, AND CHECK VALVES.
 - BORIC ACID STORAGE TANKS ARE LOCATED IN THEIR OWN FLOOD RETAINING ROOMS. SEE 1X4DB147-1.
 - VALVE IS LOCKED INTO POSITION DURING PREOPERATIONAL TESTING TO LIMIT PUMP RUNOUT TO 75GPM WHEN TRANSFERRING BATCHING TANK CONTENTS TO BORIC ACID TANK.
 - BORIC ACID STORAGE TANK IS HEAT TRACED TO MAINTAIN 65° F MINIMUM.
 - PORTION OF THE SYSTEM IS SUSPECTED TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAINING AND PIPING MATERIAL CLASSIFICATIONS FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
 - BORIC ACID TRANSFER PUMPS SHALL BE MAINTAINED IN AN ENVIRONMENT OF 65° F MINIMUM TEMPERATURE FOR 4% BORIC ACID MIXTURE AND 105° F MINIMUM TEMPERATURE FOR 12% BORIC ACID MIXTURE.
 - THE PIPING CONTAINING 4% BORIC ACID ROUTED WITHIN THE ROOMS D79 (FUTURE BORIC ACID TANK ROOM), D69 (BORIC ACID STORAGE TANK ROOM), D72 & D119 (BORIC ACID TRANSFER PUMP ROOMS). DO NOT NEED TO BE HEAT TRACED. THE MINIMUM ENVIRONMENTAL DESIGN TEMPERATURE FOR ABOVE ROOMS IS 65° F.
 - VALVE TO BE LOCATED AS CLOSE AS POSSIBLE TO U1/U2 BOUNDARY. IT IS TO BE LOCKED CLOSED DURING UNIT 2 CONSTRUCTION.
 - REFER TO ELEMENTARY DIAGRAM FOR THE DETAILED INTERLOCK REQUIREMENTS.
 - SUCTION LINES FROM THE BORIC ACID BATCHING TANK TO THE BORIC ACID TRANSFER PUMPS (UNITS 1 & 2) & DISCHARGE LINES FROM THESE PUMPS TO THE BORIC ACID STORAGE TANK PLUS THE BATCHING TANK'S DRAIN LINE AND A PORTION OF THE LINE NO. 242-2" UP TO ROOM NO. D-119 WILL BE EXPOSED TO 12% BORIC ACID MIXTURE DURING THE BATCHING OPERATION.

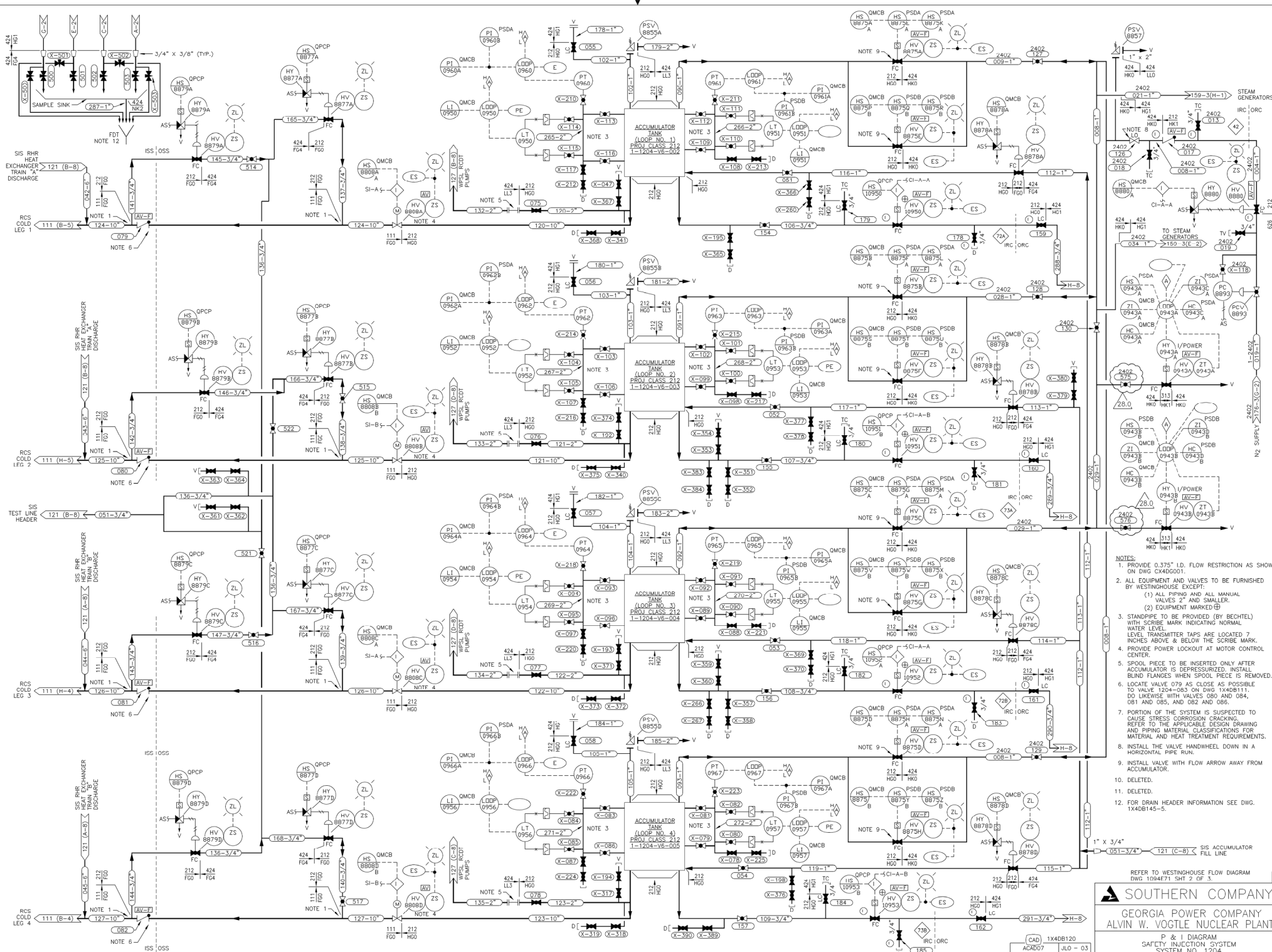
REFER TO WESTINGHOUSE FLOW DIAGRAM
DRAWING NO. 1094E76.

SOUTHERN COMPANY

GEORGIA POWER COMPANY
ALVIN W. VOGTE NUCLEAR PLANT

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

CAD 1X4DB118
ACAD2002 CYN - 02



- NOTES:
1. PROVIDE 0.375" I.D. FLOW RESTRICTION AS SHOWN ON DWG 10400001.
 2. ALL EQUIPMENT AND VALVES TO BE FURNISHED BY WESTINGHOUSE EXCEPT:
 - (1) ALL PIPING AND ALL MANUAL VALVES 2" AND SMALLER
 - (2) EQUIPMENT MARKED (E)
 3. STANDPIPE TO BE PROVIDED (BY BECHTEL) WITH SCRIBE MARK INDICATING NORMAL WATER LEVEL. LEVEL TRANSMITTER TAPS ARE LOCATED 7 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 1204-083 ON DWG 10400111. DO LIKEWISE WITH VALVES 080 AND 084, 081 AND 085, AND 082 AND 086.
 7. 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.
 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. 1040145-5.

REFER TO WESTINGHOUSE FLOW DIAGRAM DWG 1040471 SHT 2 OF 3.

SOUTHERN COMPANY

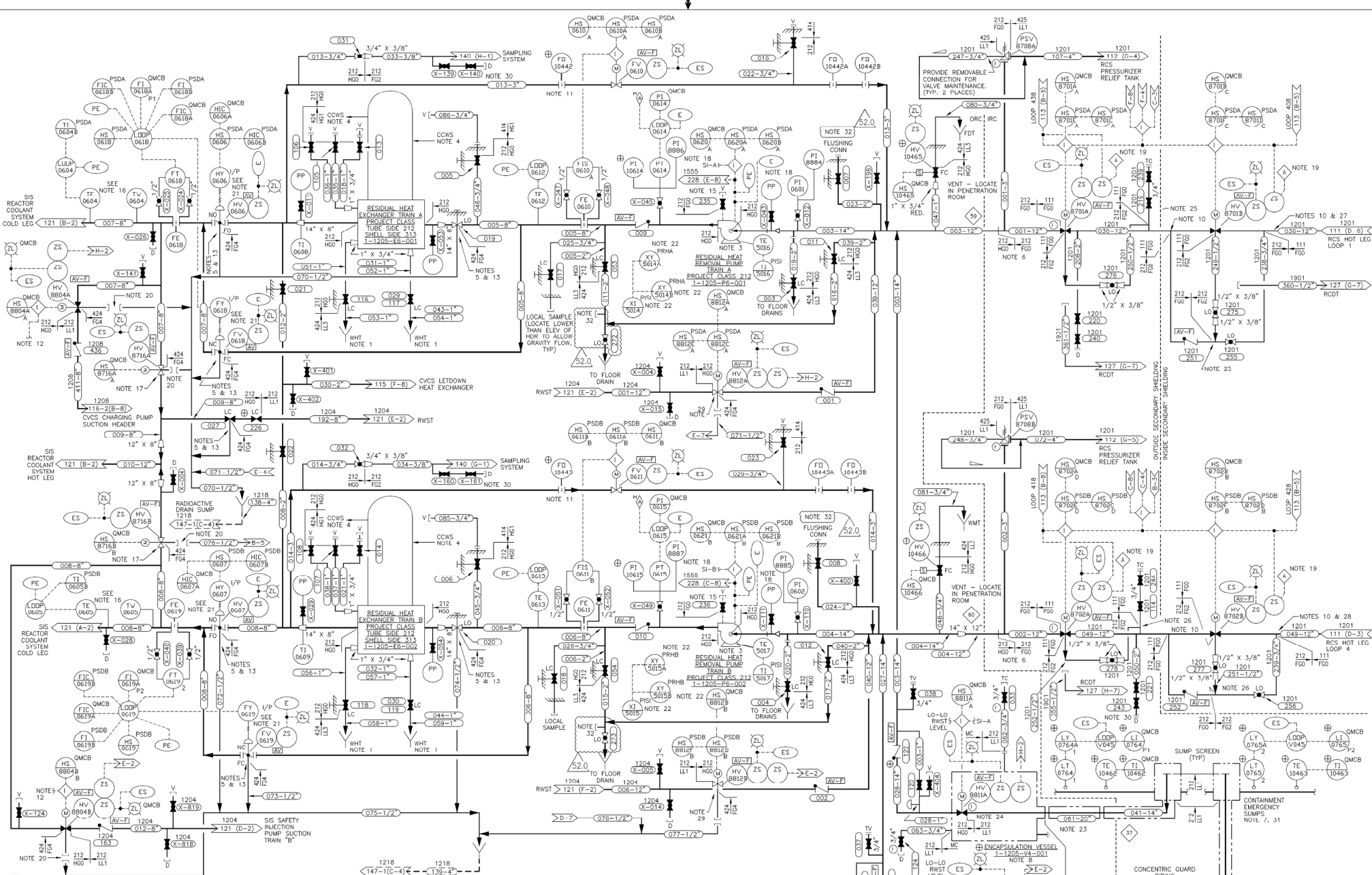
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
SAFETY INJECTION SYSTEM
SYSTEM NO. 1204

(CAD) 104DB120
ACAD007 JLO - 03

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NO.	REVISIONS	DATE	DR	CHK	APPV	DATE	DR	CHK	APPV	SCALE	DRAWING NO.	VER.
28.0	REVISED PER ABN 1039001201M016, VER. 1.0	10/9/12	JLO	WLM	JMR	X				NONE	104DB120	28.0



NOTES:

- FOR DRAIN HEADER INSTRUMENT SEE DWG 1X4DB143, 144-1, 1X4DB145-5 AND 1X4DB185.
- ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT: (1) ALL PIPING AND ALL MANUAL VALVES 2" AND SMALLER, AND (2) EQUIPMENT MARKED "B".
- FOR PUMP AND MOTOR COOLING WATER CONNECTIONS, SEE DWG 1X4DB134 & 1X4DB137.
- FOR HEAT EXCHANGER SHELL SIDE CONNECTIONS SEE DWG 1X4DB137.
- PROVIDE 12" REMOVABLE SPOOL.
- MAKE PIPING MATERIAL CLASS CHANGE AT FIRST WELD OF PENETRATION SLEEVE INSIDE THE CONTAINMENT.
- INSTALL 150 #/F FLANGE ON INLET OF EACH 14" PIPE FOR PERIODIC TESTING. PROVIDE ONE MATING BLIND FLANGE TO BE DRILLED AND TAPPED FOR TEST CONNECTION. MATING FLANGE MUST BE REMOVED FOR NORMAL OPERATION.
- VESSEL IS CONSTRUCTED TO SEISMIC CATEGORY 1 AND ASME III CLASS MC.
- PORTIONS OF THIS SYSTEM ARE SUSPECTED TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAWING AND PIPING MATERIAL CLASSIFICATIONS FOR MATERIAL AND HEAT TREATMENT REQUIREMENTS.
- PROVIDE 0.375" ID FLOW RESTRICTION AS SHOWN ON DWG 4X400001.
- THE OFFICE SHOULD BE LOCATED ON A HORIZONTAL STRETCH OF PIPE.
- REFER TO ELEMENTARY DIAGRAM FOR THE DETAILED INTERLOCK CONNECTION.
- FOR TYPICAL DETAIL SEE STD. DWG 4X400000.
- DELETED.
- HIGH POINT VENT VALVE (BECHTEL-FURNISHED) FOR SEAL PIPING - SEE 1X4A022-25.
- TE S A SURFACE TYPE CLAMP ON RTD, TW IS INSTALLED BUT NOT USED.
- VENT HOLE IS DRILLED ON RESPECTIVE RH.
- FOR ISI TESTING USE ONLY. INSTRUMENT ISOLATION VALVE TO BE NORMALLY CLOSED.
- ALARM ON OPEN HOT LEG VALVE AND HIGH RCS PRESSURE.
- DELETED.
- AIR ISOLATED DURING POWER OPERATION TO ENSURE VALVE FAILS TO ITS SAFETY POSITION (FULL OPEN OR FULL CLOSED).
- ABANDON IN-PLACE INSTRUMENTS X5014, X5014A, X5014B, X5014C, X5014D, X5014E, X5014F, X5014G, X5014H, X5014I, X5014J, X5014K, X5014L, X5014M, X5014N, X5014O, X5014P, X5014Q, X5014R, X5014S, X5014T, X5014U, X5014V, X5014W, X5014X, X5014Y, X5014Z, X5014AA, X5014AB, X5014AC, X5014AD, X5014AE, X5014AF, X5014AG, X5014AH, X5014AI, X5014AJ, X5014AK, X5014AL, X5014AM, X5014AN, X5014AO, X5014AP, X5014AQ, X5014AR, X5014AS, X5014AT, X5014AU, X5014AV, X5014AW, X5014AX, X5014AY, X5014AZ, X5014BA, X5014BB, X5014BC, X5014BD, X5014BE, X5014BF, X5014BG, X5014BH, X5014BI, X5014BJ, X5014BK, X5014BL, X5014BM, X5014BN, X5014BO, X5014BP, X5014BQ, X5014BR, X5014BS, X5014BT, X5014BU, X5014BV, X5014BW, X5014BX, X5014BY, X5014BZ, X5014CA, X5014CB, X5014CC, X5014CD, X5014CE, X5014CF, X5014CG, X5014CH, X5014CI, X5014CJ, X5014CK, X5014CL, X5014CM, X5014CN, X5014CO, X5014CP, X5014CQ, X5014CR, X5014CS, X5014CT, X5014CU, X5014CV, X5014CW, X5014CX, X5014CY, X5014CZ, X5014DA, X5014DB, X5014DC, X5014DD, X5014DE, 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VALVE	REF. CALC
1-1205-U4-272	BC-00-013
1-1205-U4-273	BC-00-011

32. CONNECTION USED TO SUPPORT FLEX CORING STRATEGY PER NRC ORDER EA-12-048. CONNECTIONS LISTED BELOW ARE ADEQUATELY ROBUST TO MEET FLEX REQUIREMENTS:

VALVE	REF. CALC
1-1205-U4-272	BC-00-013
1-1205-U4-273	BC-00-011

33. SUMP SCREEN TAG NO'S. 1-1205-G2-001 (TRAIN "A") AND 1-1205-G2-002 (TRAIN "B")

34. VENT HOLE IS DRILLED TO VERIFY MOTOR OPERATED VALVE STROKE TEST WITHOUT REMOVING THE VESSEL HEAD.

35. VENT HOLE IS DRILLED ON CONTAINMENT SIDE OF DISC.

36. FLOW RESTRICTOR PROVIDED AS SHOWN ON 1-1205-251-01.

37. 0.25 INCH FLOW RESTRICTOR AS SHOWN ON 1-1205-036-01.

38. 0.25 INCH FLOW RESTRICTOR AS SHOWN ON 1-1205-049-02.

39. A SECTION OF THE LEAKOFF LINE HAS BEEN REMOVED AND BOTH ENDS CAPPED.

40. THESE ARE KEROTEST VALVES AND MAY NOT FOLLOW REVERSE FLOW.

41. SUMP SCREEN TAG NO'S. 1-1205-G2-001 (TRAIN "A") AND 1-1205-G2-002 (TRAIN "B")

42. CONNECTION USED TO SUPPORT FLEX CORING STRATEGY PER NRC ORDER EA-12-048. CONNECTIONS LISTED BELOW ARE ADEQUATELY ROBUST TO MEET FLEX REQUIREMENTS:

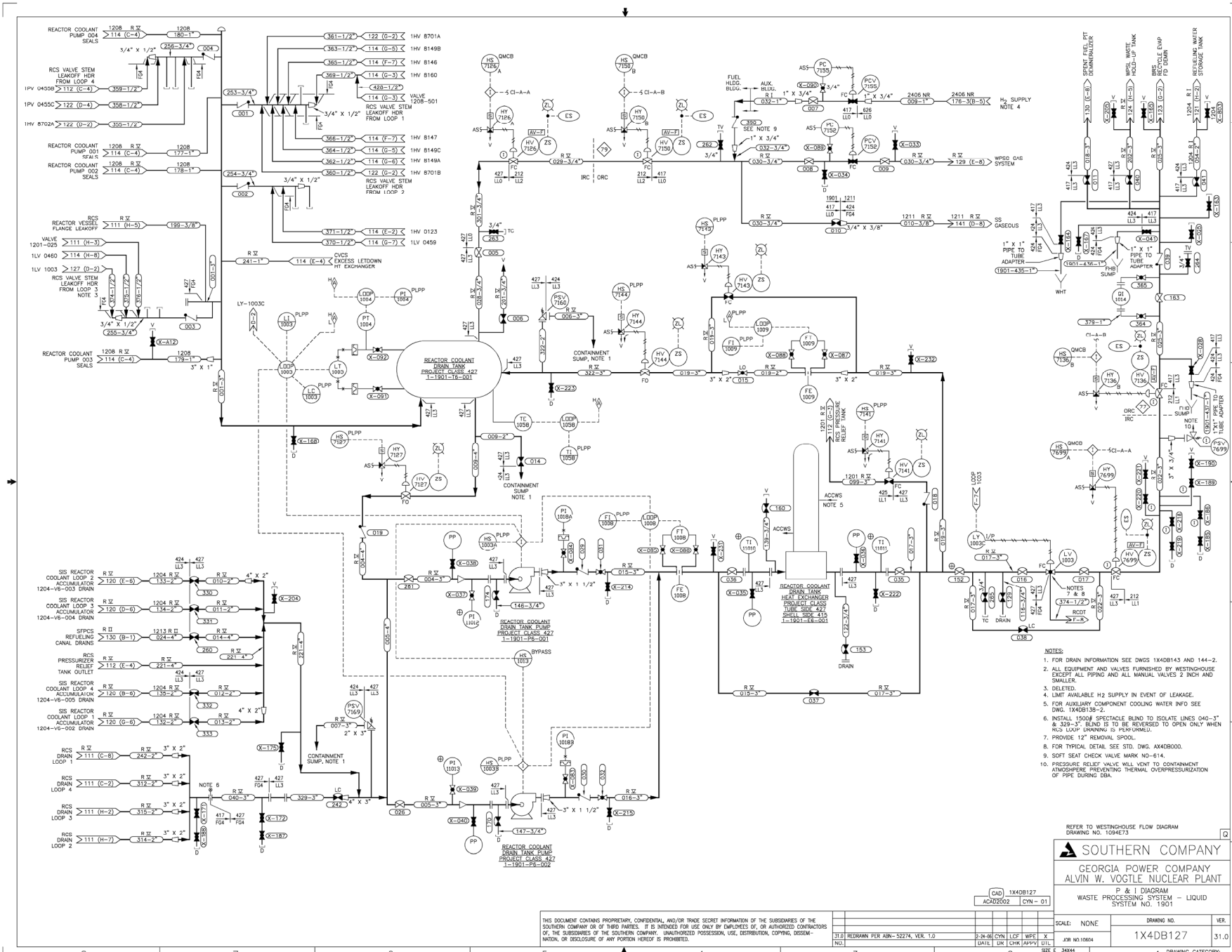
VALVE	REF. CALC
1-1205-U4-272	BC-00-013
1-1205-U4-273	BC-00-011

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
 RESIDUAL HEAT REMOVAL
 SYSTEM NO. 1205

CAD 1X4DB122
 ACAD2007 TDA - 08

SCALE: NONE
 DRAWING NO. 1X4DB122
 VER. 52.0



- NOTES:
1. FOR DRAIN INFORMATION SEE DWGS 1X40B143 AND 144-2.
 2. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT ALL PIPING AND ALL MANUAL VALVES 2 INCH AND SMALLER.
 3. DELETED.
 4. LIMIT AVAILABLE H₂ SUPPLY IN EVENT OF LEAKAGE.
 5. FOR AUXILIARY COMPONENT COOLING WATER INFO SEE DWG. 1X40B139-2.
 6. INSTALL 150#W SPECTACLE BLIND TO ISOLATE LINES 040-3" & 329-3". BLIND IS TO BE REVERSED TO OPEN ONLY WHEN RCS LOOP DRAINING IS PLANNED.
 7. PROVIDE 12" REMOVAL SPOOL.
 8. FOR TYPICAL DETAIL SEE STD. DWG. AK40B000.
 9. SOFT SEAT CHECK VALVE MARK NO-614.
 10. PRESSURE RELIEF VALVE WILL VENT TO CONTAINMENT ATMOSPHERE PREVENTING THERMAL OVERPRESSURIZATION OF PIPE DURING DBA.

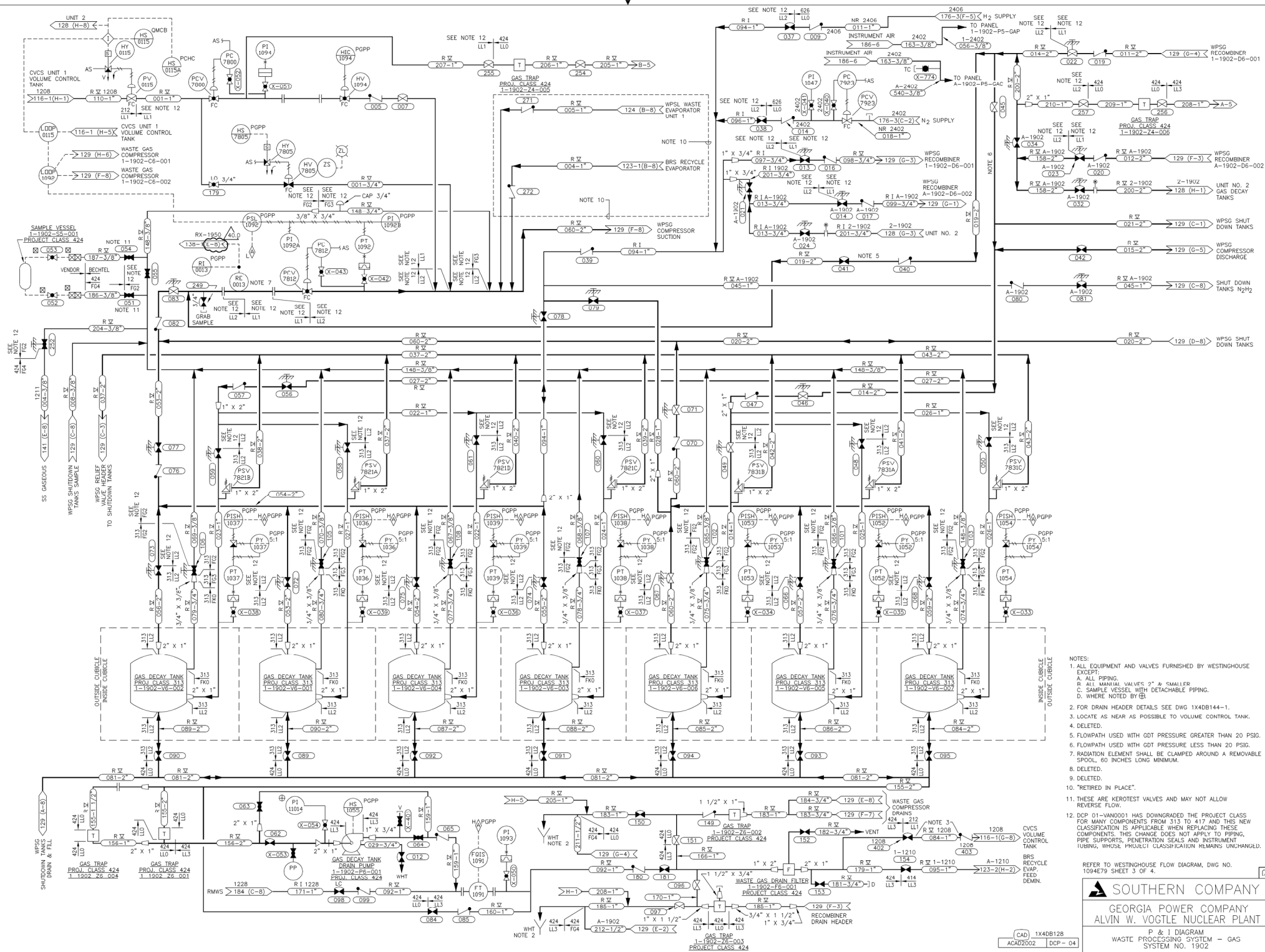
REFER TO WESTINGHOUSE FLOW DIAGRAM
DRAWING NO. 1094E73

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
WASTE PROCESSING SYSTEM - LIQUID
SYSTEM NO. 1901

CAD 1X40B127
ACAD2002 CYN-01

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DRAWING NO.	VER.
1X40B127	31.0
SCALE: NONE	
DATE: 1/11/11	BY: J. L. W. / W. J. W.
DATE: 1/11/11	BY: J. L. W. / W. J. W.
DATE: 1/11/11	BY: J. L. W. / W. J. W.
DATE: 1/11/11	BY: J. L. W. / W. J. W.
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DATE: 1/11/11	BY: J. L. W. / W. J. W.
DATE: 1/11/11	BY: J. L. W. / W. J. W.



- NOTES:
1. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT:
A. ALL PIPING.
B. ALL MANUAL VALVES 2" & SMALLER.
C. SAMPLE VESSEL WITH DETACHABLE PIPING.
D. WHERE NOTED BY B.
 2. FOR DRAIN HEADER DETAILS SEE DWG 1X4DB144-1.
 3. LOCATE AS NEAR AS POSSIBLE TO VOLUME CONTROL TANK.
 4. DELETED.
 5. FLOWPATH USED WITH GDT PRESSURE GREATER THAN 20 PSIG.
 6. FLOWPATH USED WITH GDT PRESSURE LESS THAN 20 PSIG.
 7. RADIATION ELEMENT SHALL BE CLAMPED AROUND A REMOVABLE SPOOL, 60 INCHES LONG MINIMUM.
 8. DELETED.
 9. DELETED.
 10. "RETAINED IN PLACE".
 11. THESE ARE KEROSENE VALVES AND MAY NOT ALLOW REVERSE FLOW.
 12. DCP 01-VAND001 HAS DOWNGRADED THE PROJECT CLASS FOR MANY COMPONENTS FROM 313 TO 417 AND THIS NEW CLASSIFICATION IS APPLICABLE WHEN REPLACING THESE COMPONENTS. THIS CHANGE DOES NOT APPLY TO PIPING, PIPE SUPPORTS, PENETRATION SEALS AND INSTRUMENT USING, WHICHE PROJECT CLASSIFICATION REMAINS UNCHANGED.

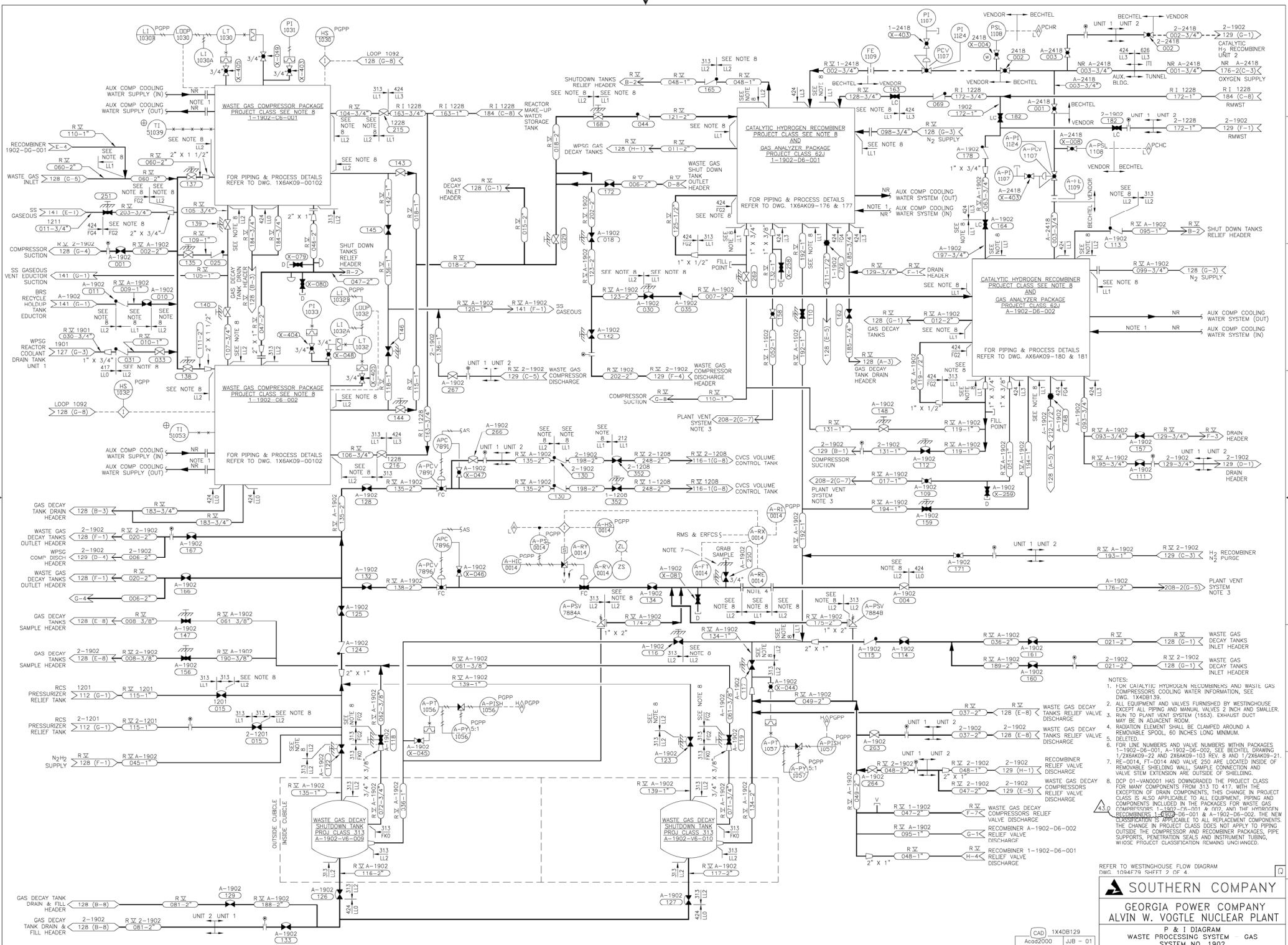
REFER TO WESTINGHOUSE FLOW DIAGRAM, DWG NO. 1094E79 SHEET 3 OF 4.

SOUTHERN COMPANY

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
WASTE PROCESSING SYSTEM - GAS
SYSTEM NO. 1902

(CAD) 1X4DB128
ACAD2002 DCP - 04



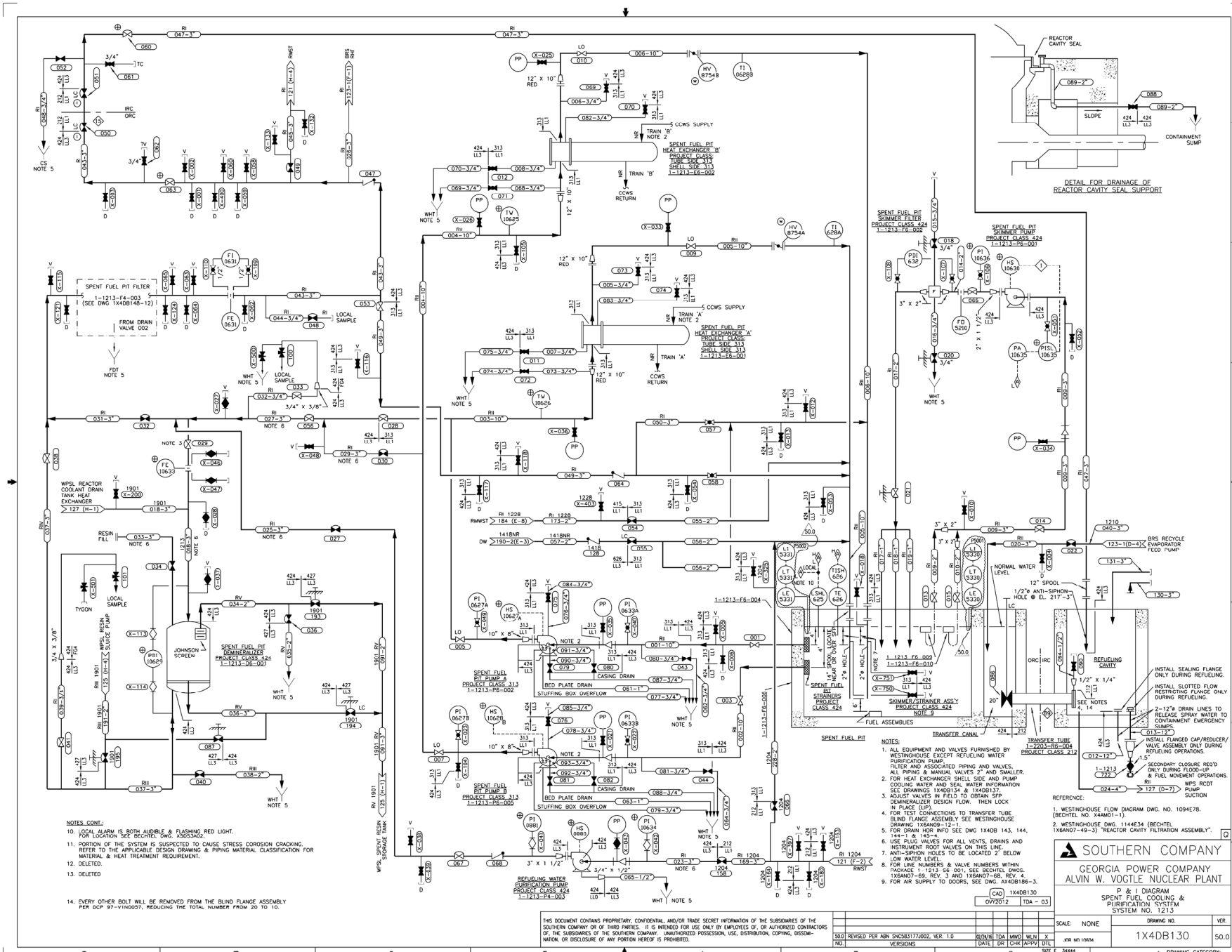
- NOTES:
1. FOR CATALYTIC HYDROGEN RECOMBINERS AND WASTE GAS COMPRESSORS COOLING WATER INFORMATION, SEE DWG. 1X408139.
 2. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT ALL PIPING AND MANUAL VALVES 2 INCH AND SMALLER. RUN TO PLANT VENT SYSTEM (1553). EXHAUST DUCT MAY BE IN ADJACENT ROOM.
 3. RADIATION ELEMENT SHALL BE CLAMPED AROUND A REMOVABLE SPOOL, 60 INCHES LONG MINIMUM.
 4. DELETED.
 5. FOR LINE NUMBERS AND VALVE NUMBERS WITHIN PACKAGES 1-1902-06-001, A-1902-06-002, SEE BECHTEL DRAWING 1/268409-22 AND 2/268409-103. REVISION 8 AND 1/268409-21.
 6. RE-0014, FT-0014 AND VALVE 250 ARE LOCATED INSIDE OF REMOVABLE SHIELDING WALL. SAMPLES COLLECTION AND VALVE STEM EXTENSION ARE OUTSIDE OF SHIELDING.
 7. DCP 01-01-00001 HAS DOWNGRADED THE PROJECT CLASS FOR MANY COMPONENTS FROM 313 TO 417. WITH THE EXCEPTION OF DRAIN COMPONENTS, THIS CHANGE IN PROJECT CLASS IS ALSO APPLICABLE TO ALL EQUIPMENT, PIPING AND COMPONENTS INCLUDED IN THE PACKAGES FOR WASTE GAS COMPRESSORS 1-1902-15-001 & 002, AND THE HYDROGEN RECOMBINERS 2-2418-01 & A-1902-06-002. THE NEW CLASSIFICATION IS APPLICABLE TO ALL REPLACEMENT COMPONENTS. THE CHANGE IN PROJECT CLASS DOES NOT APPLY TO PIPING OUTSIDE THE COMPRESSOR AND RECOMBINER PACKAGES. PIPE SUPPORTS, PENETRATION SEALS AND WELDING, WHICHEVER PROJECT CLASSIFICATION REMAINS UNCHANGED.

REFER TO WESTINGHOUSE FLOW DIAGRAM
DWG. 1094F78 SHEET 2 OF 4

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
WASTE PROCESSING SYSTEM - GAS
SYSTEM NO. 1902

(CAD) 1X4DB129
Acc'd 2000 JJB - 01



- NOTES: CONT.
10. LOCAL ALARM IS BOTH AUDIBLE & FLASHING RED LIGHT. FOR LOCATION SEE BECHTEL DWG. A5023A02.
 11. PORTION OF THE SYSTEM IS SUSPECTED TO CAUSE STRESS CORROSION CRACKING. REFER TO THE APPLICABLE DESIGN DRAWING & PIPING MATERIAL CLASSIFICATION FOR MATERIAL & HEAT TREATMENT REQUIREMENT.
 12. DELETED.
 13. DELETED.
 14. EVERY OTHER BOLT WILL BE REMOVED FROM THE BLIND FLANGE ASSEMBLY PER DCP 97-1100037, REDUCING THE TOTAL NUMBER FROM 20 TO 10.

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- NOTES:
1. ALL EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT FUELING WATER PURIFICATION PUMP, FILTER AND ASSOCIATED PIPING AND VALVES. ALL PIPING & MANUAL VALVES 2" AND SMALLER.
 2. FOR HEAT EXCHANGER SHELL SIDE AND PUMP COOLING WATER AND SEAL WATER INFORMATION SEE DRAWINGS 1X40B134 & 1X40B137.
 3. ADJUST VALVES IN FIELD TO OBTAIN SPP DEMINERALIZER DESIGN FLOW. THEN LOCK IN PLACE (UP).
 4. FOR TEST CONNECTIONS TO TRANSFER TUBE BLIND FLANGE ASSEMBLY SEE WESTINGHOUSE DRAWING 1X6009-12-1.
 5. FOR DRAIN HIGH INFO SEE DWG 1X40B 143, 144, 144-1 & 143-4.
 6. PLUS VALVES FOR ALL VENTS, DRAINS AND INSTRUMENT ROOT VALVES ON THIS LINE.
 7. ANTI-SIPHON HOLES TO BE LOCATED 2' BELOW LOW WATER LEVEL.
 8. FUEL LINE NUMBERS & VALVE NUMBERS WITHIN PACKAGE 1-1213-SE-001, SEE BECHTEL DWGS. 1X6007-60, REV. 3 AND 1X6007-60, REV. 4.
 9. FOR AIR SUPPLY TO DOORS, SEE DWG. AX40B186-3.

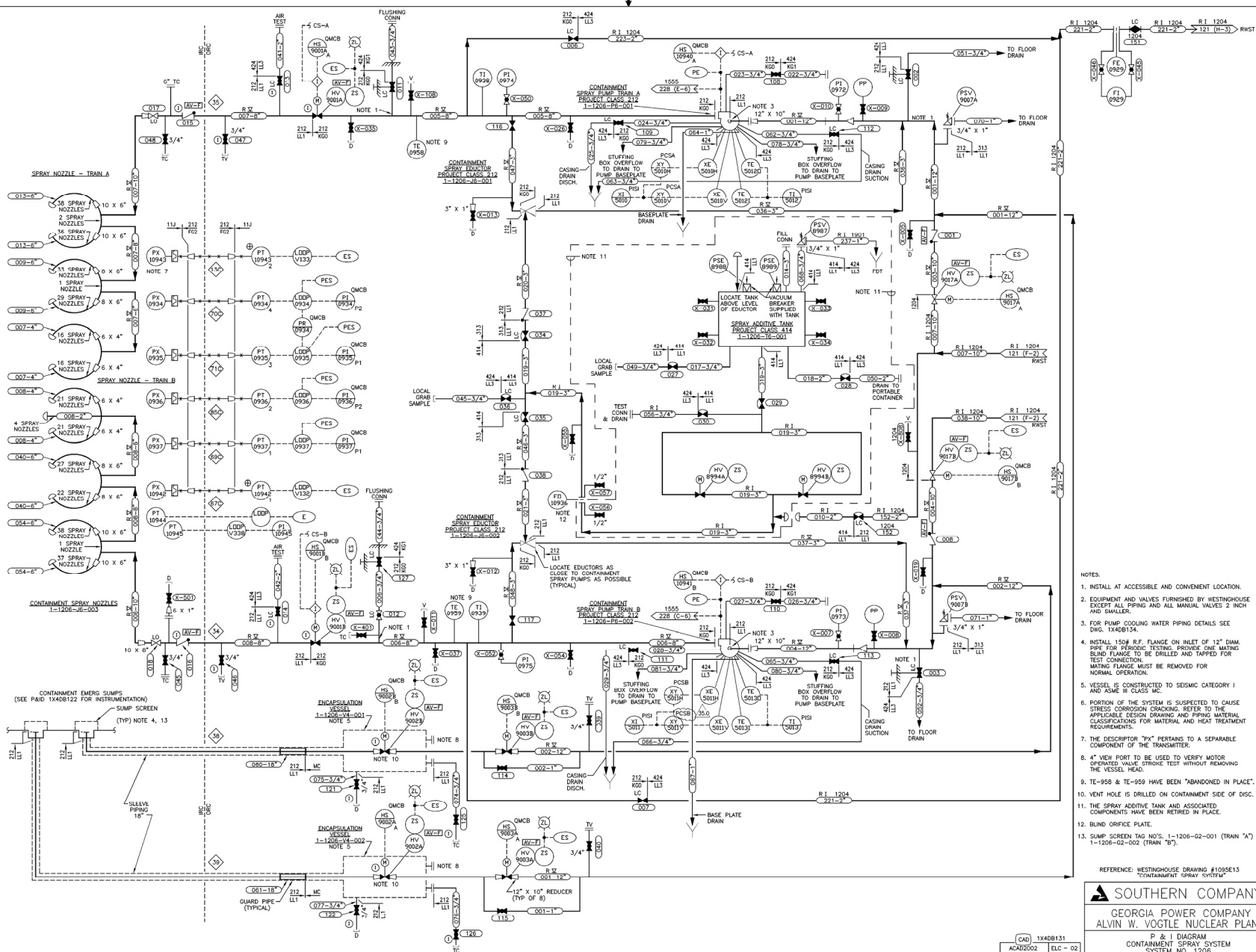
- REFERENCE:
1. WESTINGHOUSE FLOW DIAGRAM DWG. NO. 109478. (BECHTEL NO. 1X4001-1).
 2. WESTINGHOUSE DWG. 114434 (BECHTEL 1X6007-49-3) "REACTOR CAVITY FILTRATION ASSEMBLY".

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
SPENT FUEL COOLING AND
PURIFICATION SYSTEM
SYSTEM NO. 1213

SCALE: NONE	DRAWING NO. 1X40B130	VER. 50.0
30.0 REVISED PER ABR SWS03177002, VER. 1.0	DATE 07/20/12	BY 34844
NO. 1	DATE 07/20/12	BY 34844
NO. 2	DATE 07/20/12	BY 34844
NO. 3	DATE 07/20/12	BY 34844
NO. 4	DATE 07/20/12	BY 34844
NO. 5	DATE 07/20/12	BY 34844
NO. 6	DATE 07/20/12	BY 34844
NO. 7	DATE 07/20/12	BY 34844
NO. 8	DATE 07/20/12	BY 34844
NO. 9	DATE 07/20/12	BY 34844
NO. 10	DATE 07/20/12	BY 34844
NO. 11	DATE 07/20/12	BY 34844
NO. 12	DATE 07/20/12	BY 34844
NO. 13	DATE 07/20/12	BY 34844
NO. 14	DATE 07/20/12	BY 34844
NO. 15	DATE 07/20/12	BY 34844
NO. 16	DATE 07/20/12	BY 34844
NO. 17	DATE 07/20/12	BY 34844
NO. 18	DATE 07/20/12	BY 34844
NO. 19	DATE 07/20/12	BY 34844
NO. 20	DATE 07/20/12	BY 34844

DRAWING CATEGORY: CRITICAL



- NOTES:
1. INSTALL AT ACCESSIBLE AND CONVENIENT LOCATION.
 2. EQUIPMENT AND VALVES FURNISHED BY WESTINGHOUSE EXCEPT ALL PIPING AND ALL MANUAL VALVES 2 INCH AND SMALLER.
 3. FOR PUMP COOLING WATER PIPING DETAILS SEE DWG. 1X4DB134.
 4. INSTALL 150# R.F. FLANGE ON INLET OF 12" DIAM. PIPE FOR PERIODIC TESTING. PROVIDE ONE MATING BLIND FLANGE TO BE DRILLED AND TAPPED FOR TEST CONNECTION. MATING FLANGE MUST BE REMOVED FOR NORMAL OPERATION.
 5. VESSEL IS CONSTRUCTED TO SEISMIC CATEGORY I AND ISGEC B CLASS MC.
 6. 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.
 7. THE DESCRIPTOR "PX" PERTAINS TO A SEPARABLE COMPONENT OF THE TRANSMITTER.
 8. 4" VENT PORT TO BE USED TO VERIFY MOTOR OPERATED VALVE STROKE TEST WITHOUT REMOVING THE VESSEL HEAD.
 9. TE-958 & TE-959 HAVE BEEN "ABANDONED IN PLACE".
 10. VENT HOLE IS DRILLED ON CONTAINMENT SIDE OF DISC.
 11. THE SPRAY ADDITIVE TANK AND ASSOCIATED COMPONENTS HAVE BEEN RETIRED IN PLACE.
 12. BLIND ORIFICE PLATE.
 13. SUMP SCREEN TAG NO'S. 1-1206-02-001 (TRAIN "A") 1-1206-02-002 (TRAIN "B").

REFERENCE: WESTINGHOUSE DRAWING #1095E13
"CONTAINMENT SPRAY SYSTEM"

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
CONTAINMENT SPRAY SYSTEM
SYSTEM NO. 1206

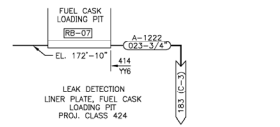
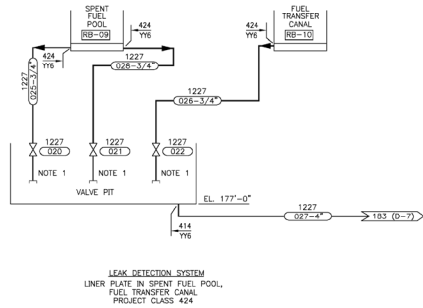
CAD 1X4DB131
ACAD2002 ELC - 02

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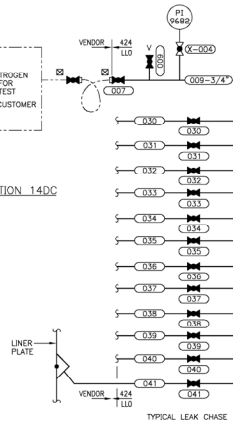
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35.0	REVISED PER XEN ABN-5214, VER. 1.0 (MCC CORRECTIONS)	1-26-11	ELC	TSL	JMR

SCALE	DRAWING NO.	VER.
NONE	1X4DB131	35.0

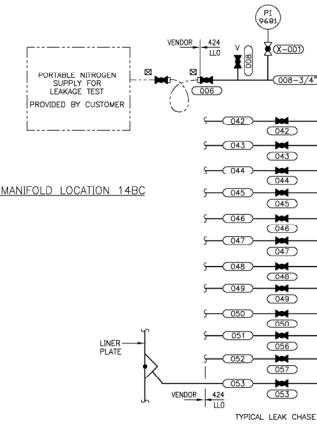
DRAWING CATEGORY: CRITICAL



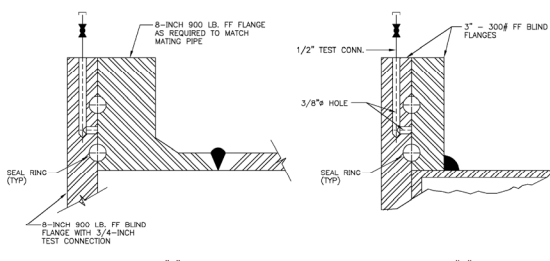
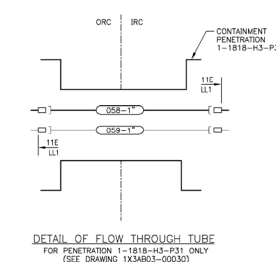
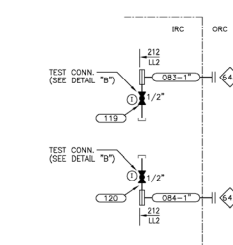
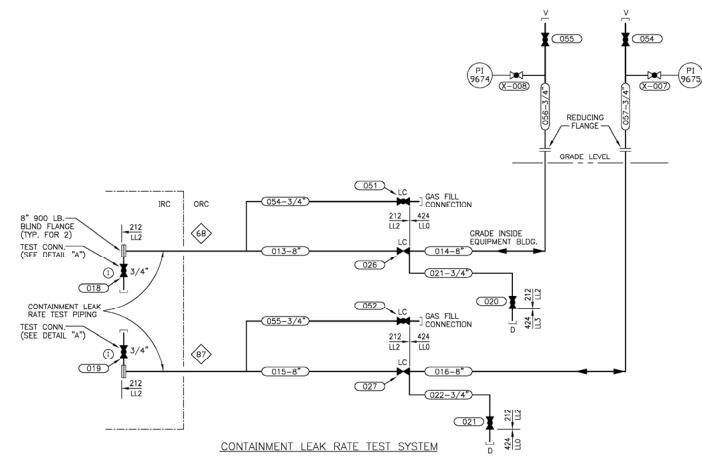
MANIFOLD LOCATION 14DC



MANIFOLD LOCATION 14BC



CONTAINMENT LEAK CHASE SYSTEM

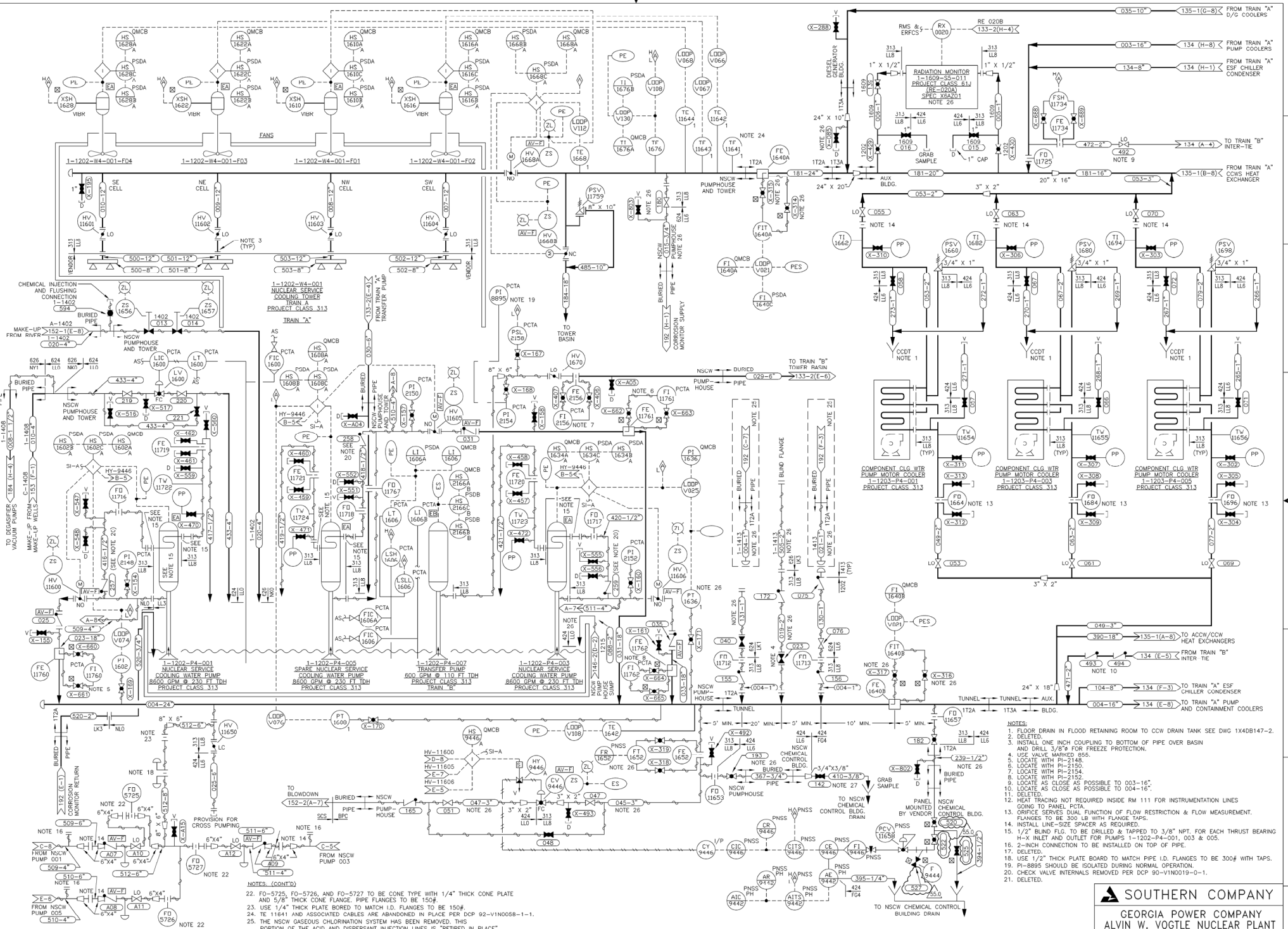


NOTE:
1. CHICAGO FITTING.

SOUTHERN COMPANY
 GEORGIA POWER COMPANY
 ALVIN W. VOGTLE NUCLEAR PLANT
 P & I DIAGRAM
 MISCELLANEOUS LEAK DETECTION
 SYSTEM NO. 1222

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18.0	REDRAWN PER AEN-52271, VER. 1.0	1-30-86 CYN	LOF	LIB	X	DATE	DN	CHK	APPV	UTL	SIZE	E	34844	1	DRAWING CATEGORY: CRITICAL
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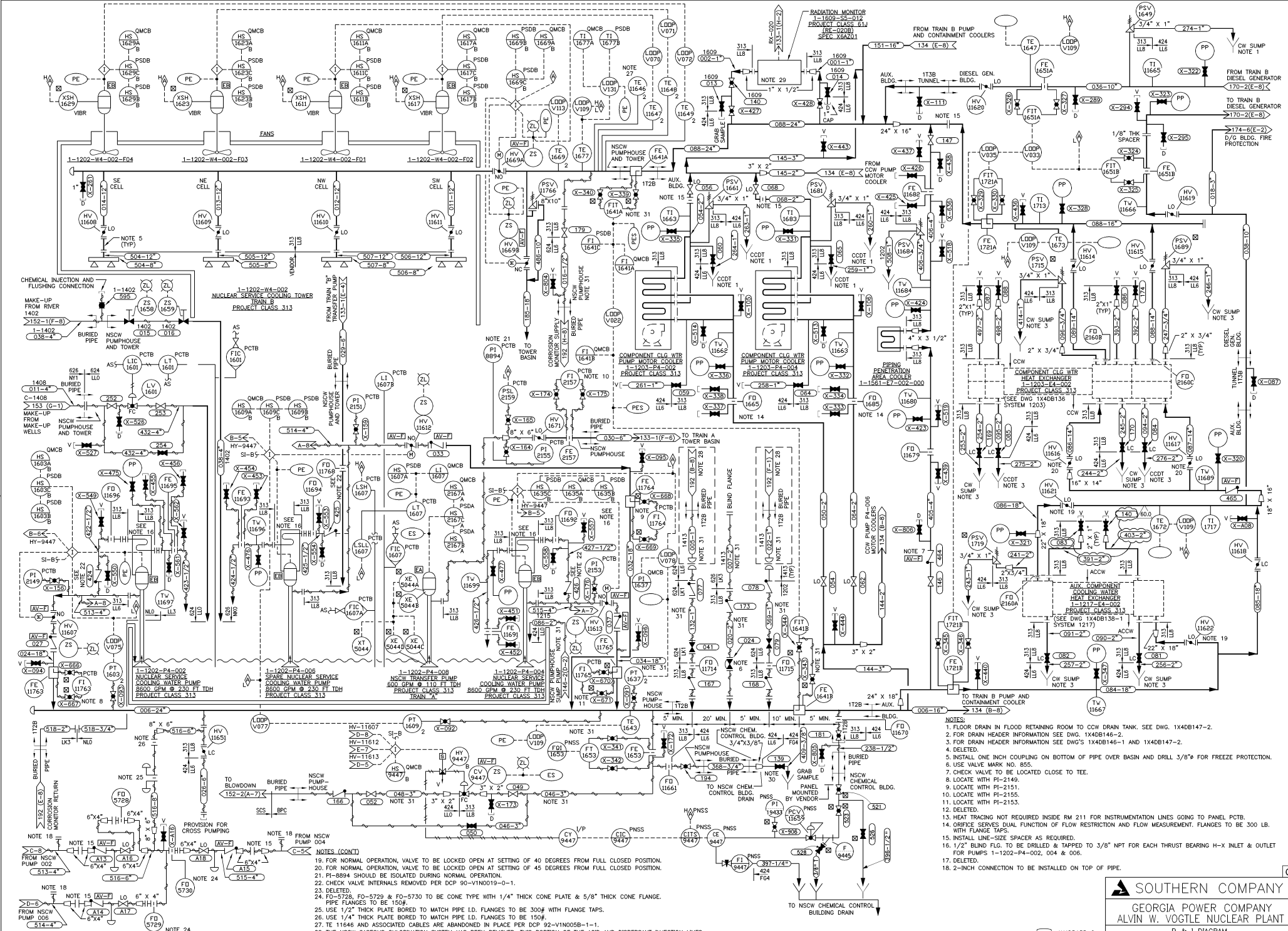
NOTES (CONT'D)

22. FO-5725, FO-5726, and FO-5727 to be cone type with 1/4" thick cone plate and 5/8" thick cone flange. Pipe flanges to be 150#.
23. Use 1/4" thick plate bored to match I.D. flanges to be 150#.
24. TE 11641 and associated cables are abandoned in place per DCP 92-VIN0058-1-1.
25. The NSCW gaseous chlorination system has been removed. This portion of the acid and dispersant injection lines is "retired in place".
26. Heat tracing on the following lines, valves and instrumentation is retired in place:
1-1201-239-1/2", FIT-1640B (X-316), FIT-1640C (X-317), 1-1413-021-1",
1-1202-130-1", 1-1413-505-2", 1-1202-019-2", 1-1413-004-1", 1-1202-131-1",
1-1636, 1-1202-045-3", 1-1202-047-3", FIT-1652, 1-1202-367-3/4",
1-1215-086-2", 1-1202-015-3/4" (X-803) & FIT-1640A (X-314) (X-315) (X-085).
27. This a KEROTEST valve and may NOT allow reverse flow.
28. RE-0020A sample flow path components will be maintained as project class 313 (REFER TO VENDOR MANUAL 1X8201-10001 SECTION 3-1-3-9 AND DWG 6093050-SHEET 2).

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55.0	REVISED PER ASB SNCR721284M001, VER. 1.0	4/27/01	SMD	MWD	WLN	DATE	DR	CHK	APP	DLT	SCALE: None	DRAWING NO. 1X4DB133-1	VER. 55.0
NO.	VERSIONS										SIZE E 34x44		

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & ID DIAGRAM
NUCLEAR SERVICE COOLING
WATER SYSTEM
SYSTEM NO. 1202



NOTES (CONT.)

19. FOR NORMAL OPERATION, VALVE TO BE LOCKED OPEN AT SETTING OF 40 DEGREES FROM FULL CLOSED POSITION.

20. FOR NORMAL OPERATION, VALVE TO BE LOCKED OPEN AT SETTING OF 45 DEGREES FROM FULL CLOSED POSITION.

21. PI-8894 SHOULD BE ISOLATED DURING NORMAL OPERATION.

22. CHECK VALVE INTERNALS REMOVED PER DCP 90-VIN0019-0-1.

23. DELETED.

24. FO-5728, FO-5729 & FO-5730 TO BE CONE TYPE WITH 1/4" THICK CONE PLATE & 5/8" THICK CONE FLANGE. PIPE FLANGES TO BE 150#.

25. USE 1/2" THICK PLATE BORED TO MATCH PIPE I.D. FLANGES TO BE 300# WITH FLANGE TAPS.

26. USE 1/4" THICK PLATE BORED TO MATCH PIPE I.D. FLANGES TO BE 150#.

27. TE 11646 AND ASSOCIATED CABLES ARE ABANDONED IN PLACE PER DCP 92-VIN0058-1-1.

28. THE NSCW GASEOUS CHLORINATION SYSTEM HAS BEEN REMOVED. THIS PORTION OF THE ACID AND DISPERSANT INJECTION LINES IS RETIRED IN PLACE.

29. REDUCED MECHANICAL COMPONENTS WILL BE MAINTAINED AS PROJECT CLASS 313.

30. THIS IS A KEROTEST VALVE AND MAY NOT ALLOW REVERSE FLOW.

31. HEAT TRACING ON THE FOLLOWING LINES, VALVES & INSTRUMENTATION IS RETIRED IN PLACE: 1-1202-235-2-2, 1-1413-007-2-2, 1-1202-048-1, 1-1202-368-3-4, 1-1202-020-2-1, 1-1413-005-1, FIT-1641B (X-344), FIT-1641B (X-343), FIT-1653, FIT-1637, 1-1215-088-2, 1-1202-016-3/4 (X-306), & FIT-1641A (X-339) (X-340).

NOTES

1. FLOOR DRAIN IN FLOOD RETAINING ROOM TO COW DRAIN TANK. SEE DWG. 1X4DB147-2.

2. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB146-2.

3. FOR DRAIN HEADER INFORMATION SEE DWG'S 1X4DB146-1 AND 1X4DB147-2.

4. DELETED.

5. INSTALL ONE INCH COUPLING ON BOTTOM OF PIPE OVER BASIN AND DRILL 3/8" FOR FREEZE PROTECTION.

6. USE VALVE MARK NO. 855.

7. CHECK VALVE TO BE LOCATED CLOSE TO TEE.

8. LOCATE WITH PI-2149.

9. LOCATE WITH PI-2151.

10. LOCATE WITH PI-2155.

11. LOCATE WITH PI-2153.

12. DELETED.

13. HEAT TRACING NOT REQUIRED INSIDE RM 211. FOR INSTRUMENTATION LINES GOING TO PANEL PCTB.

14. ORIFICE SERVES DUAL FUNCTION OF FLOW RESTRICTION AND FLOW MEASUREMENT. FLANGE TO BE 300 LB. WITH FLANGE TAPS.

15. INSTALL LINE-SIZE SPACER AS REQUIRED.

16. 1/2" BUNG BUNG TO BE DRILLED & TAPPED TO 3/8" NPT FOR EACH THRUST BEARING H-X INLET & OUTLET FOR PUMPS 1-1202-P4-002, 004 & 006.

17. DELETED.

18. 2-INCH CONNECTION TO BE INSTALLED ON TOP OF PIPE.

SOUTHERN COMPANY

GEORGIA POWER COMPANY

ALVIN V. VOGTLE NUCLEAR PLANT

P & I DIAGRAM

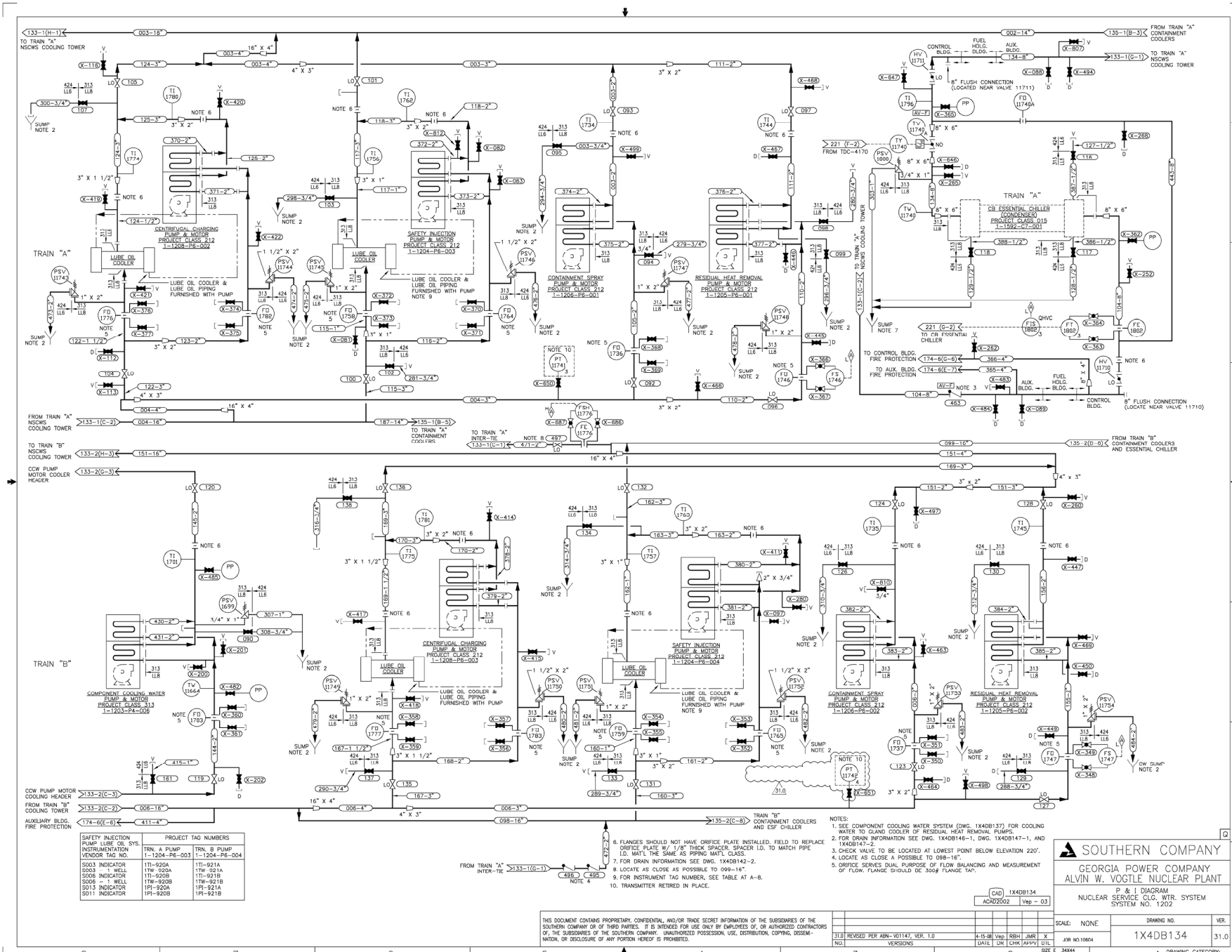
NUCLEAR SERVICE COOLING WATER SYSTEM

SYSTEM NO. 1202

1X4DB133-2

60.0

H
G
F
E
D
C
B
A



SAFETY INJECTION PUMP LUBE OIL SYS. INSTRUMENTATION		PROJECT TAG NUMBERS	
VENDOR TAG NO.		TRIN. A PUMP	TRIN. B PUMP
5003 INDICATOR	11-920A	11-921A	11-921A
5006 INDICATOR	11W-920A	11W-921A	11W-921A
5008 - 1 WELL	11W-920B	11W-921B	11W-921B
5013 INDICATOR	11P-920A	11P-921A	11P-921A
5011 INDICATOR	11P-920B	11P-921B	11P-921B

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- NOTES:
- SEE COMPONENT COOLING WATER SYSTEM (DWG. 1X4DB137) FOR COOLING WATER TO GLAND COOLER OF RESIDUAL HEAT REMOVAL PUMPS.
 - FOR DRAIN INFORMATION SEE DWG. 1X4DB146-1, DWG. 1X4DB147-1, AND 1X4DB147-2.
 - CHECK VALVES TO BE LOCATED AT LOWEST POINT BELOW ELEVATION 220'.
 - LOCATE AS CLOSE AS POSSIBLE TO 098-16'.
 - ORIFICE SERVES DUAL PURPOSE OF FLOW BALANCING AND MEASUREMENT OF FLOW. FLANGE SHOULD BE 305# FLANGE TAG.
 - FOR INSTRUMENT TAG NUMBER, SEE TABLE AT A-B.
 - TRANSMITTER RETIRED IN PLACE.

SOUTHERN COMPANY

GEORGIA POWER COMPANY

ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM

NUCLEAR SERVICE CLS. WTR. SYSTEM

SYSTEM NO. 1202

CAD 1X4DB134

ACAD2002

Ver. - 03

SCALE: NONE

DRAWING NO. 1X4DB134

VER. 31.0

8

7

6

5

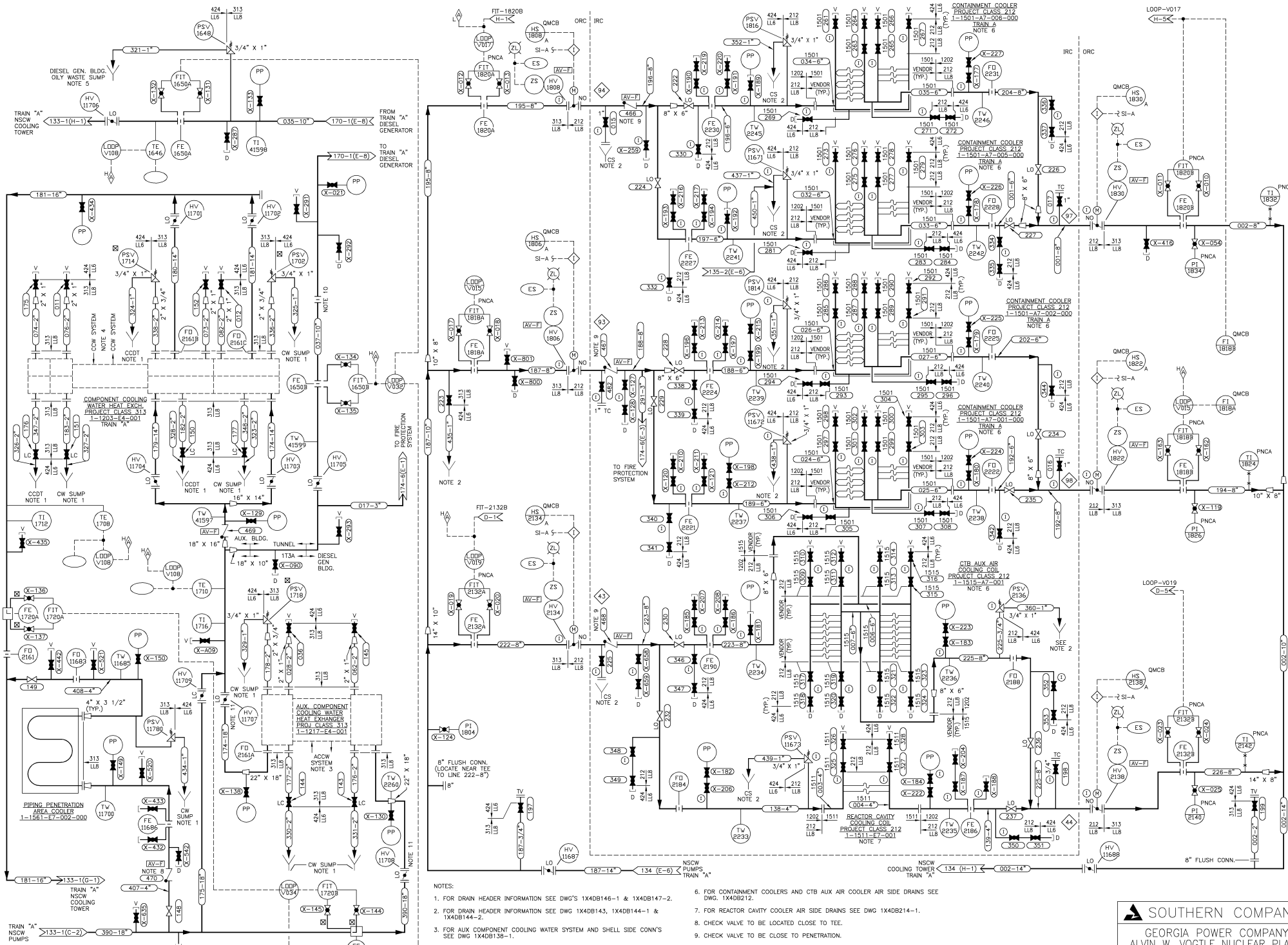
4

3

2

1

DRAWING CATEGORY: CRITICAL



- NOTES:
- FOR DRAIN HEADER INFORMATION SEE DWG'S 1X4DB146-1 & 1X4DB147-2.
 - FOR DRAIN HEADER INFORMATION SEE DWG 1X4DB144-1 & 1X4DB144-2.
 - FOR AUX COMPONENT COOLING WATER SYSTEM AND SHELL SIDE CONN'S SEE DWG 1X4DB138-1.
 - FOR COMPONENT COOLING WATER SYSTEMS AND SHELL SIDE CONN'S SEE DWG 1X4DB136.
 - FOR DIESEL GEN. BLDG SUMP INFORMATION SEE DWG. 1X4DB146-2.
 - FOR CONTAINMENT COOLERS AND CTB AUX AIR COOLER AIR SIDE DRAINS SEE DWG. 1X4DB212.
 - FOR REACTOR CAVITY COOLER AIR SIDE DRAINS SEE DWG 1X4DB214-1.
 - CHECK VALVE TO BE LOCATED CLOSE TO TEE.
 - CHECK VALVE TO BE CLOSE TO PENETRATION.
 - LINE SPACER TO BE INSTALLED.
 - FOR NORMAL OPERATION, VALVE TO BE LOCKED OPEN AT SETTING OF 42.5 DEGREES FROM FULL CLOSED POSITION.

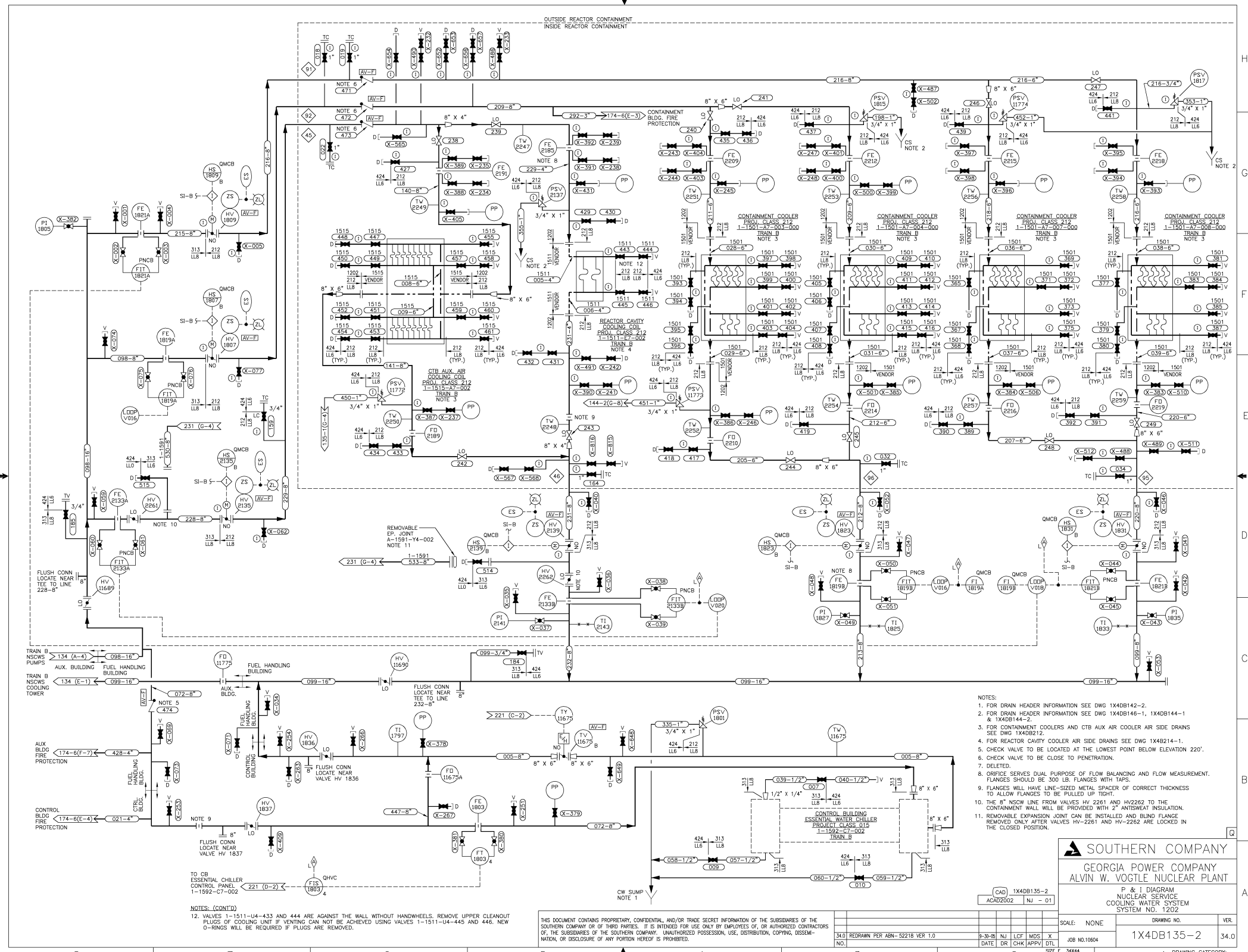
SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
NUCLEAR SERVICE
COOLING WATER SYSTEM
SYSTEM NO. 1202

CAD 1X4DB135-1
ACAD2002 NJ - 01

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26.0	REDRAWN PER ABRN-52215, VER. 1.0	9-7-05	NJ	LCP	LKB	X	DTI
DATE	DR	CHK	APPV	SEE E	34X44		
SCALE:	NONE	DRAWING NO.	VER.				
		1X4DB135-1	29.0				
JOB NO.10604							
DRAWING CATEGORY:							
CRITICAL							



- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG 1X4DB142-2.
 2. FOR DRAIN HEADER INFORMATION SEE DWG 1X4DB146-1, 1X4DB144-1 & 1X4DB144-2.
 3. FOR CONTAINMENT COOLERS AND CTB AUX AIR COOLER AIR SIDE DRAINS SEE DWG 1X4DB222.
 4. FOR REACTOR CAVITY COOLER AIR SIDE DRAINS SEE DWG 1X4DB214-1.
 5. CHECK VALVE TO BE LOCATED AT THE LOWEST POINT BELOW ELEVATION 220'.
 6. CHECK VALVE TO BE CLOSE TO PENETRATION.
 7. DELETED.
 8. ORIFICE SERVES DUAL PURPOSE OF FLOW BALANCING AND FLOW MEASUREMENT. FLANGES SHOULD BE 300 LB. FLANGES WITH TAPS.
 9. FLANGES WILL HAVE LINE-SIZED METAL SPACER OF CORRECT THICKNESS TO ALLOW FLANGES TO BE PULLED UP TIGHT.
 10. THE 8" NSCW LINE FROM VALVES HV 2261 AND HV 2262 TO THE CONTAINMENT WALL WILL BE PROVIDED WITH 2" ANTIWEAT INSULATION.
 11. REMOVABLE EXPANSION JOINT CAN BE INSTALLED AND BLIND FLANGE REMOVED ONLY AFTER VALVES HV-2261 AND HV-2262 ARE LOCKED IN THE CLOSED POSITION.

NOTES: (CONT'D)

12. VALVES 1-1511-U4-433 AND 444 ARE AGAINST THE WALL WITHOUT HANDWHEELS. REMOVE UPPER CLEANOUT PLUGS OF COOLING UNIT IF VENTING CAN NOT BE ACHIEVED USING VALVES 1-1511-U4-445 AND 446. NEW O-RINGS WILL BE REQUIRED IF PLUGS ARE REMOVED.

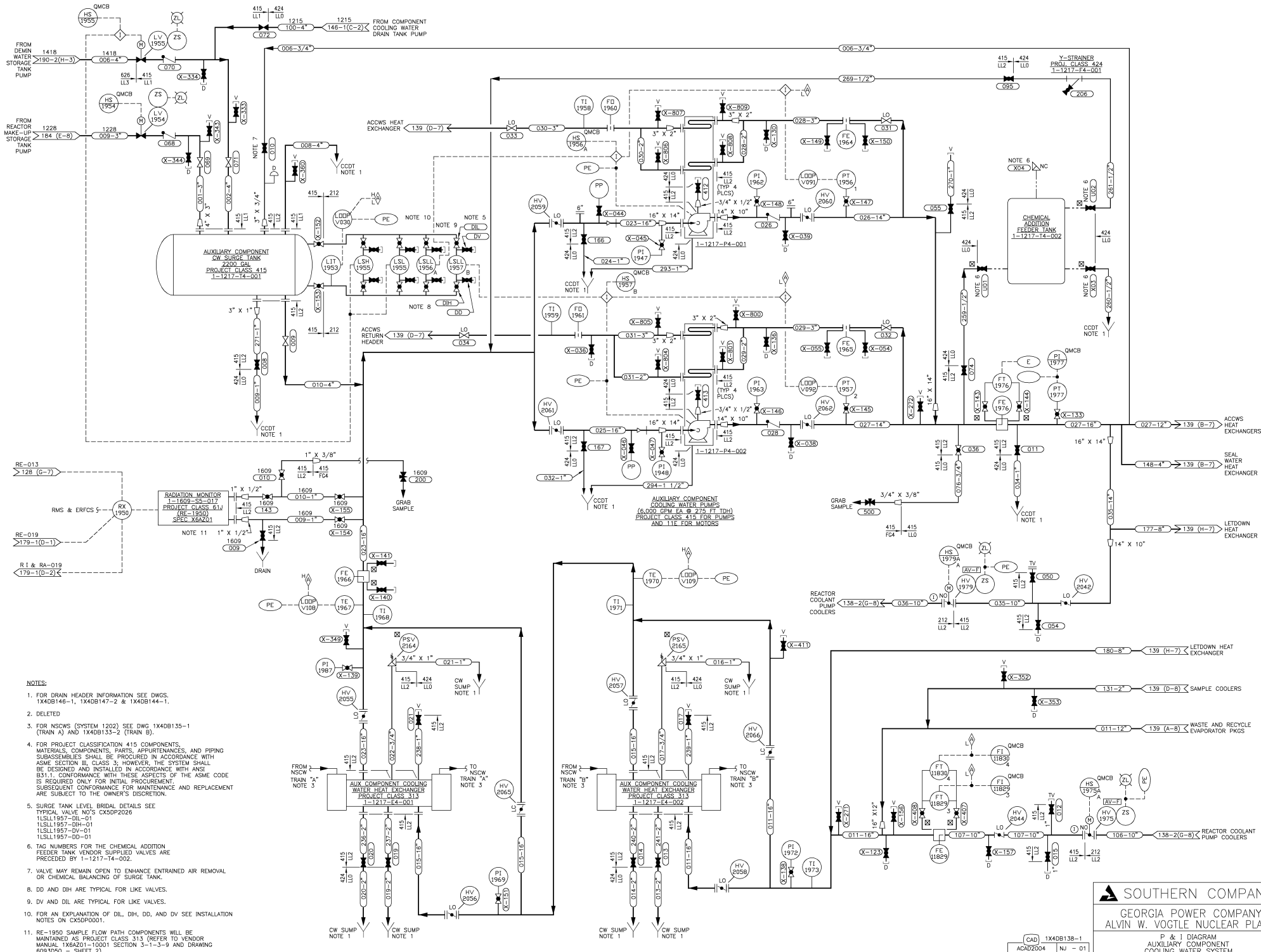
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34.0 REDRAWN PER ABN-52218 VER 1.0

CAD 1X4DB135-2
ACAD2002 NJ - 01


SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
NUCLEAR SERVICE
COOLING WATER SYSTEM
SYSTEM NO. 1202

SCALE: NONE
DRAWING NO. 1X4DB135-2
VER. 34.0
JOB NO. 10604
DATE: 08-06-01
DR: LCF
MDS: X
DTI: 01
SEE E 34X44
DRAWING CATEGORY: CRITICAL



NOTES:

1. FOR DRAIN HEADER INFORMATION SEE DWGS. 1X4DB146-1, 1X4DB147-2 & 1X4DB144-1.
2. DELETED
3. FOR NSCW (SYSTEM 1202) SEE DWG 1X4DB135-1 (TRAIN A) AND 1X4DB133-2 (TRAIN B).
4. FOR PROJECT CLASSIFICATION 415 COMPONENTS, MATERIALS, COMPONENTS, PARTS, APPURTENANCES, AND PIPING SUBASSEMBLIES SHALL BE PROCURED IN ACCORDANCE WITH ASME SECTION III, CLASS 3; HOWEVER, THE SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ANSI B31.1. CONFORMANCE WITH THESE ASPECTS OF THE ASME CODE IS REQUIRED ONLY FOR INITIAL PROCUREMENT. SUBSEQUENT CONFORMANCE FOR MAINTENANCE AND REPLACEMENT ARE SUBJECT TO THE OWNER'S DISCRETION.
5. SURGE TANK LEVEL BRIDAL DETAILS SEE TYPICAL VALVE NOTS CX50P2026 1LSLL1957-DIL-01 1LSLL1957-DIH-01 1LSLL1957-DV-01 1LSLL1957-DD-01
6. TAG NUMBERS FOR THE CHEMICAL ADDITION FEEDER TANK VENDOR SUPPLIED VALVES ARE PRECEDED BY 1-1217-14-002.
7. VALVE MAY REMAIN OPEN TO ENHANCE ENTRAINED AIR REMOVAL OR CHEMICAL BALANCING OF SURGE TANK.
8. DD AND DIH ARE TYPICAL FOR LIKE VALVES.
9. DV AND DIL ARE TYPICAL FOR LIKE VALVES.
10. FOR AN EXPLANATION OF DIL, DIH, DD, AND DV SEE INSTALLATION NOTES ON CX50P0001.
11. RE-1950 SAMPLE FLOW PATH COMPONENTS WILL BE MAINTAINED AS PROJECT CLASS 313 (REFER TO VENDOR MANUAL 1X6A201-10001 SECTION 3-1-3-9 AND DRAWING 6093200 - SHEET 2).



SOUTHERN COMPANY

GEORGIA POWER COMPANY

ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM

AUXILIARY COMPONENT

COOLING WATER SYSTEM

SYSTEM NO. 1217

CAD 1X4DB138-1

ACAD2004 NJ - 01

SCALE: NONE

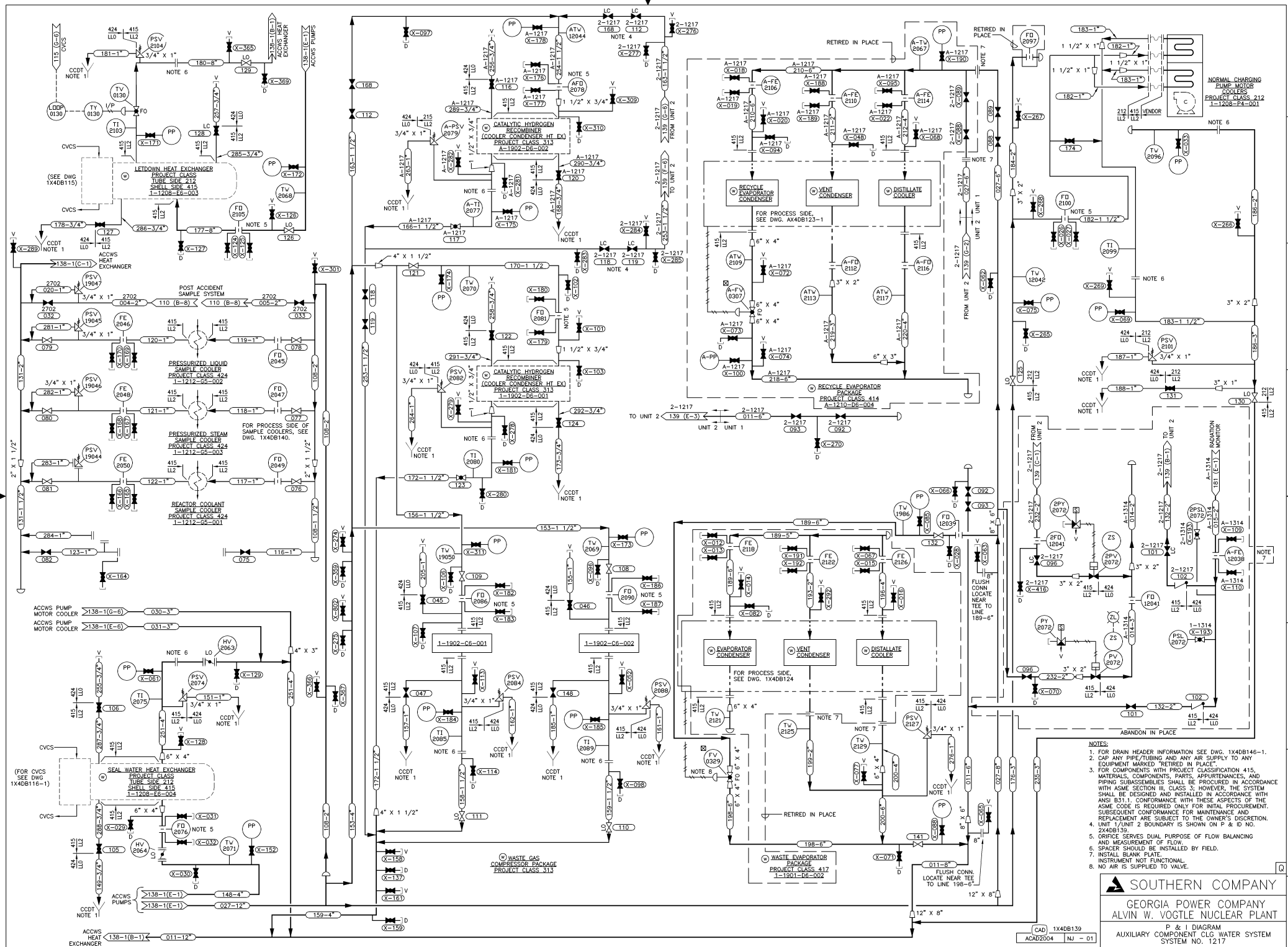
DRAWING NO. 1X4DB138-1

VER. 30.0

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30.0	REDRAWN PER ABR-V70113, VER. 1.0	08/21/01	NJ	LCP	MDS	X
NO.	VERSIONS	DATE	DR	CHK	APPV	DTL

JOB NO.10604	DRAWING CATEGORY: CRITICAL
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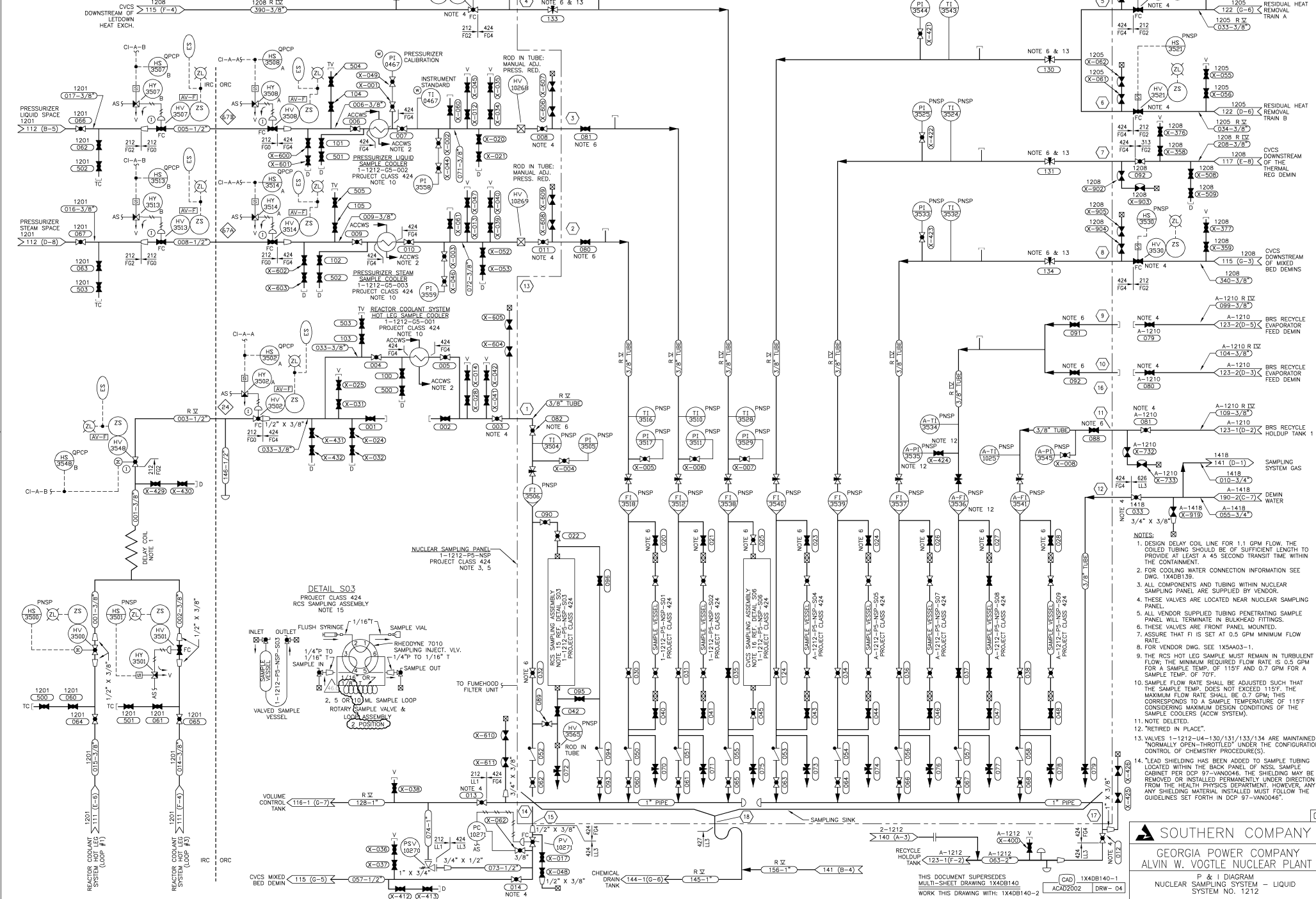
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25.0 REDRAWN PER ABN-V70117, VER. 1.0
DATE 10/22/00 NJ LCF MDS X
JOB NO. 10604

SCALE: NONE
DRAWING NO. 1X4DB139
VER. 29.0

DATE 10/22/00 NJ LCF MDS X
JOB NO. 10604
DRAWING CATEGORY: CRITICAL

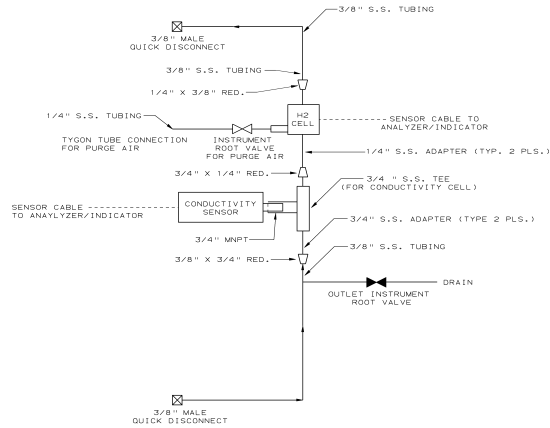
- NOTES: CONT'D
15. RCS SAMPLE MAY BE OBTAINED FROM NSP PANEL AT STATION 503 BY USE OF 1-1212-P5-NSP-503 VALVED SAMPLE VESSEL WITH QUICK DISCONNECTS OR BY USE OF RHEODYNE MODEL 7010 ROTARY (2 POSITION) SAMPLE VALVE ASSEMBLY WITH 2, 5 OR 10 ML SAMPLE LOOP & QUICK DISCONNECTS. FOR DETAIL 503, REF. DCP 97-VAN036 (CD 1071849/01).
16. FOR ALL VENT, DRAIN, AND TEST CONNECTION ISOLATION VALVES, CHECK NPSIS AND PMS BEFORE ATTEMPTING REVERSE FLOW. KEROTEST VALVES MAY NOT OPEN FOR REVERSE FLOW.



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DETAIL S06

PROJECT CLASS 424
CVCS SAMPLING ASSEMBLY



CONTINUATION OF NOTES:

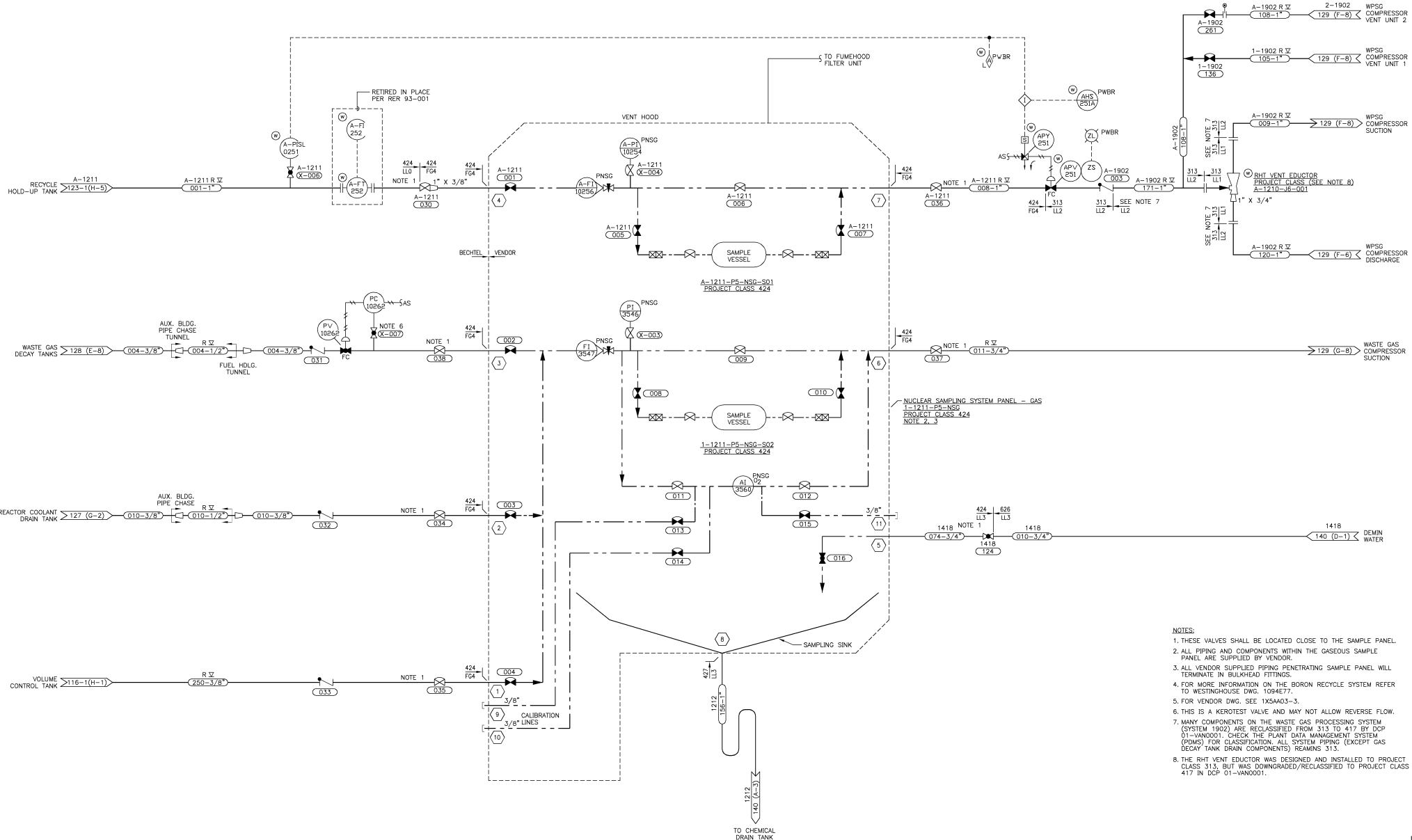
16. IN-LINE HYDROGEN ANALYZERS AND CONDUCTIVITY ELEMENTS HAVE REPLACED THE "SAMPLE BOMB" AND WILL PROVIDE CONTINUOUS SAMPLE CAPABILITY. REFERENCE MOC 88-VAND45.

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

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NO.	REVISIONS	DATE	DR	CHK	APPY	DTL
1	INCORPORATED PER REA 01-VAA037	8/24/01	JGM	JRP	PDG	JLM
2	ISSUED FOR CONSTRUCTION					

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.	REV.
JOB NO.10604	1X4DB140-2	35



- NOTES:
1. THESE VALVES SHALL BE LOCATED CLOSE TO THE SAMPLE PANEL.
 2. ALL PIPING AND COMPONENTS WITHIN THE GASEOUS SAMPLE PANEL ARE SUPPLIED BY VENDOR.
 3. ALL VENDOR SUPPLIED PIPING PENETRATING SAMPLE PANEL WILL TERMINATE IN BULKHEAD FITTINGS.
 4. FOR MORE INFORMATION ON THE BORON RECYCLE SYSTEM REFER TO WESTINGHOUSE DWS. 108477.
 5. FOR VENDOR DWG. SEE 1X5AA03-3.
 6. THIS IS A KEROTEST VALVE AND MAY NOT ALLOW REVERSE FLOW.
 7. MANY COMPONENTS ON THE WASTE GAS PROCESSING SYSTEM (SYSTEM 1902) ARE RECLASSIFIED FROM 313 TO 417 BY DCP 01-VAN001. CHECK THE PLANT DATA MANAGEMENT SYSTEM (PDMS) FOR CLASSIFICATION. ALL SYSTEM PIPING (EXCEPT GAS DECAY TANK DRAIN COMPONENTS) REMAINS 313.
 8. THE RHT VENT EDUCTOR WAS DESIGNED AND INSTALLED TO PROJECT CLASS 313, BUT WAS DOWNGRADED/RECLASSIFIED TO PROJECT CLASS 417 IN DCP 01-VAN001.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
NUCLEAR SAMPLING SYSTEM - GASEOUS
SYSTEM NO. 1211

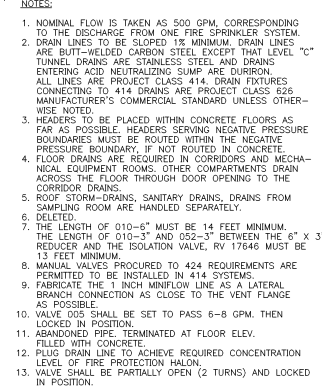
CAD 1X4DB141
ACAD2002 CYN - 01

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20.0	REDRAWN PER ABN-V70009, VER. 1.0	5-10-06	CYN	LCP	SHS	X
NO.	DATE	DR	CHK	APPV	DTL	SEE E

SCALE: NONE	DRAWING NO.	VER.
	1X4DB141	20.0

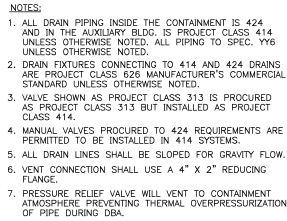
DRAWING CATEGORY: CRITICAL



SYSTEM NO. 1225			
SCALE: NONE	DRAWING NO.	VER.	
X DTL	1X4DB142-1	27.	
JOB NO.10604			
SIZE F 34X44	DRAWING CATEGORY		

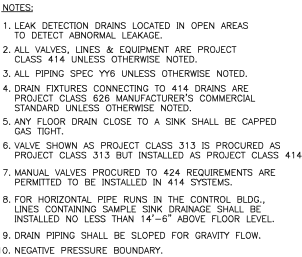
27.0	REDRAWN PER ABN- 52224, VER. 1.0	1-9-06	NJ	LCF	WPE
NO.		DATE	DR	CHK	APPV

	SCALE: NONE	DRAWING NO.	VER.
X	JOB NO.10604	1X4DB142-1	27.
DTL			
SZ/F	34X44	DRAWING CATEGORY:	



CAD 1X4DB143	
ACAD2002	CYN - 01

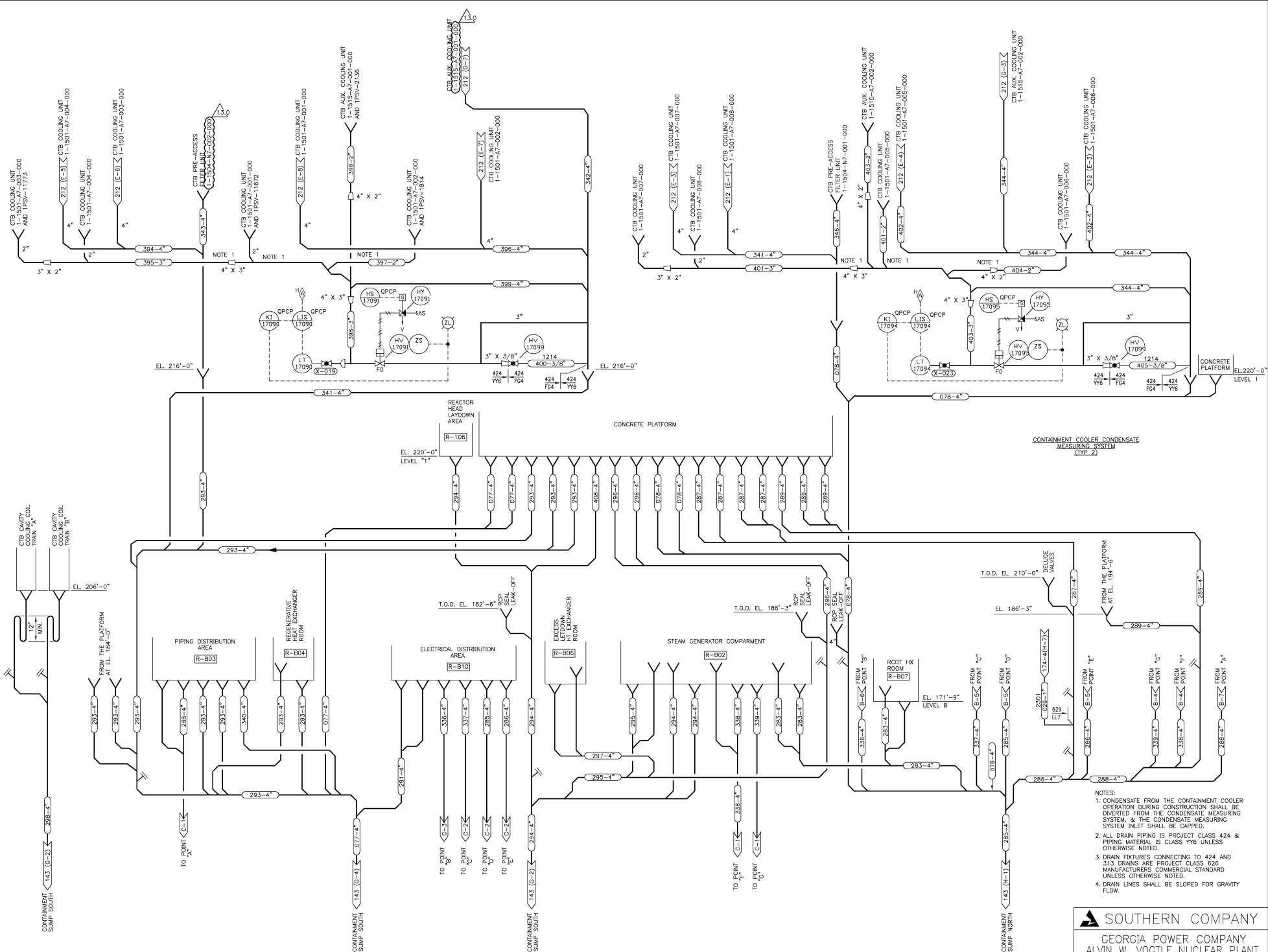
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25.0 REDRAWN PER ASN-V70013, VER. 1.0.				4-3-06		CYN	LCF	LKB	X	1X4DB143		25.0							
NO.		DATE		DIR	CHK	APPR	DTL	JOB NO.10604											
5		4		3		2		1		DRAWING CATEGORY:									




CAD	1X4DB144-1
ACAD2002	CYN - 01

SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X4DB144-1	12.0

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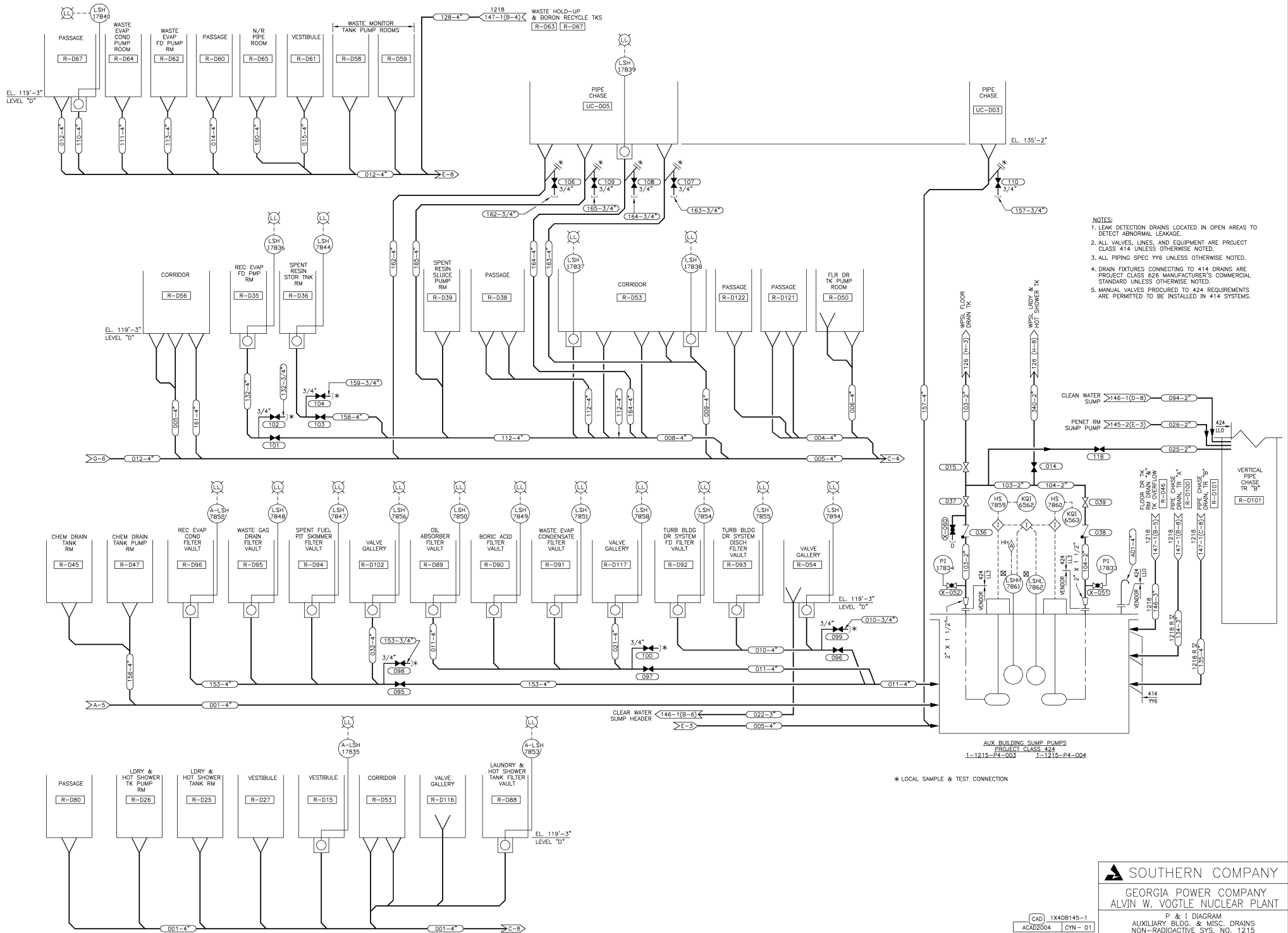
- NOTES:
- CONDENSATE FROM THE CONTAINMENT COOLER OPERATION DURING CONSTRUCTION SHALL BE DIVERTED FROM THE CONDENSATE MEASURING SYSTEM, & THE CONDENSATE MEASURING SYSTEM INLET SHALL BE CAPPED.
 - ALL DRAIN PIPING IS PROJECT CLASS 424 & PIPING MATERIAL IS CLASS Y76 UNLESS OTHERWISE NOTED.
 - DRAIN FIXTURES CONNECTING TO 424 AND 313 DRAINS ARE PROJECT CLASS 626 MANUFACTURERS COMMERCIAL STANDARD UNLESS OTHERWISE NOTED.
 - DRAIN LINES SHALL BE SLOPED FOR GRAVITY FLOW.

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

P & I DIAGRAM
CONTAINMENT & AUX. BLDG. DRAINS -
RADIOACTIVE SYSTEM - SYSTEM NO. 1214

CAD 1X4DB144-2
Acaad2002 TJS - 02

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13.0	REVISED PER ABN-V01497, VER. 1.0.	1-28-09	TJS	LRP	PML	X			
NO.	VERSIONS	DATE	DR	CHK	APPV	DTI			
SCALE: NONE									
DRAWING NO. 1X4DB144-2									
JOB NO. 10604									
DRAWING CATEGORY: CRITICAL									





SOUTHERN COMPANY

GEORGIA POWER COMPANY

ALVIN W. VOGTLE NUCLEAR PLANT

CAD 1X4DB145-1

ACAD2004 CYN - 01

P & I DIAGRAM

AUXILIARY BLDG. & MISC. DRAINS

NON-RADIOACTIVE SYS. NO. 1215

SCALE: NONE

DRAWING NO. 1X4DB145-1

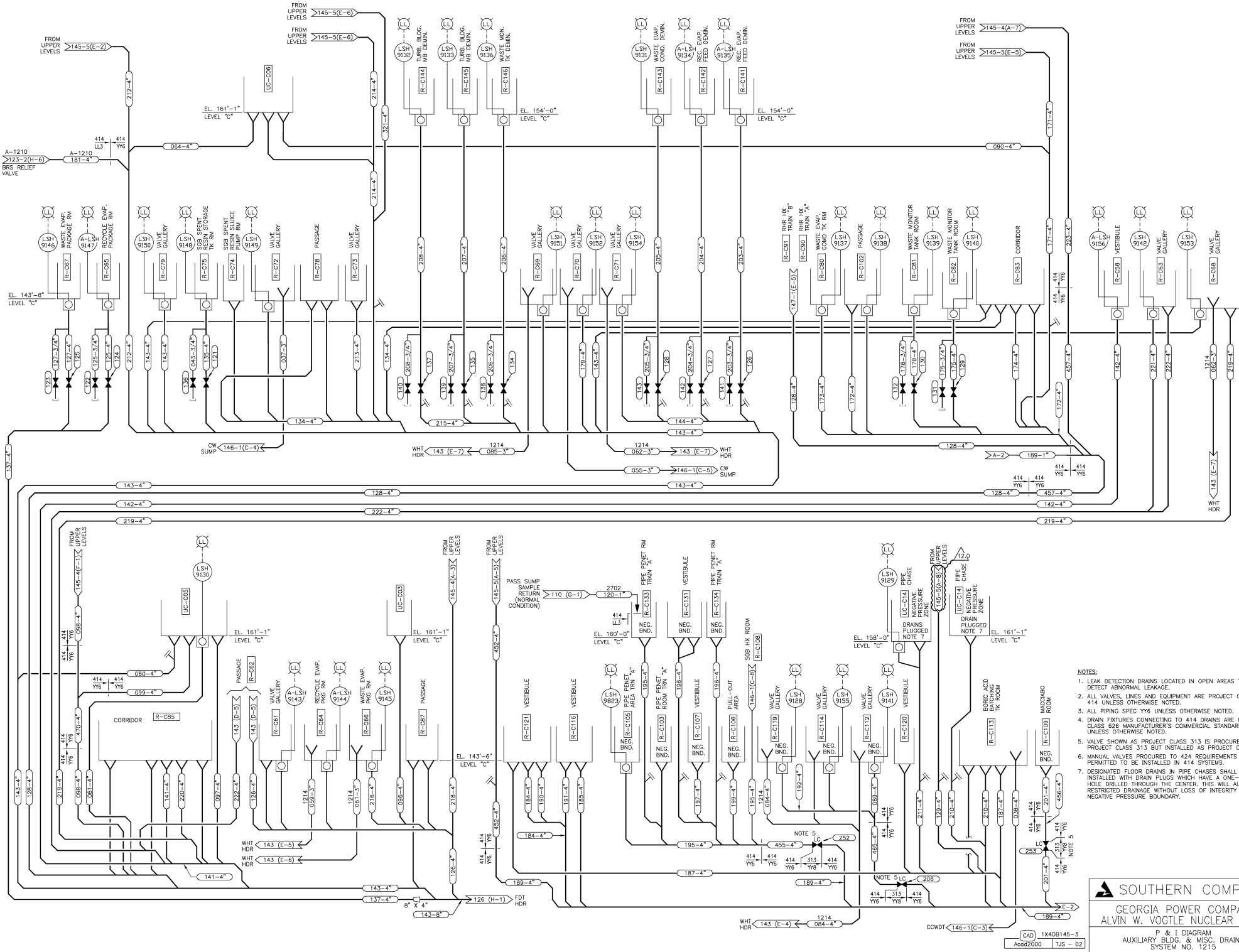
VER. 15.0

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15.0	REDRAWN PER ABN-V70140, VER. 1.0	09-30-08	CYN	LCP	WPE	X	DTL
NO.	VERSIONS	DATE	DR	CHK	APPV		

SCALE: NONE	DRAWING NO. 1X4DB145-1	VER. 15.0
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DRAWING CATEGORY: CRITICAL



- NOTES:
1. LEAK DETECTION DRAINS LOCATED IN OPEN AREAS TO DETECT ABNORMAL LEAKAGE.
 2. ALL VALVES, LINES AND EQUIPMENT ARE PROJECT CLASS 414 UNLESS OTHERWISE NOTED.
 3. ALL PIPING SPEC YY6 UNLESS OTHERWISE NOTED.
 4. DRAIN FIXTURES CONNECTING TO 414 DRAINS ARE PROJECT CLASS 622 MANUFACTURER'S COMMERCIAL STANDARD UNLESS OTHERWISE NOTED.
 5. VALVE SHOWN AS PROJECT CLASS 313 IS PROCURED AS PROJECT CLASS 313 BUT INSTALLED AS PROJECT CLASS 414.
 6. MANUAL VALVES PROCURED TO 424 REQUIREMENTS ARE PERMITTED TO BE INSTALLED IN 414 SYSTEMS.
 7. DESIGNATED FLOOR DRAINS IN PIPE CHASES SHALL BE INSTALLED WITH DRAIN PLUGS WHICH HAVE A ONE-INCH HOLE DRILLED THROUGH THE CENTER. THIS WILL ALLOW RESTRICTED DRAINAGE WITHOUT LOSS OF INTEGRITY OF THE NEGATIVE PRESSURE BOUNDARY.



SOUTHERN COMPANY

GEORGIA POWER COMPANY

ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM

AUXILIARY BLDG. & MISC. DRAINS

SYSTEM NO. 1215

CAD 1X4DB145-3

Acad2000 TJS - 02

SCALE: NONE

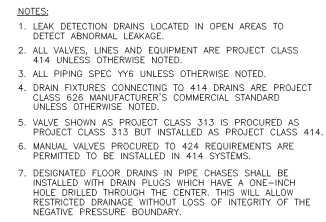
DRAWING NO. 1X4DB145-3

VER. 12.0

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12.0	REVISED PER ABN-V01110, VER. 1.0.	3-27-08	TJS	LRP	PML	X
NO.	VERSIONS	DATE	DR	CHK	APPV	DTI

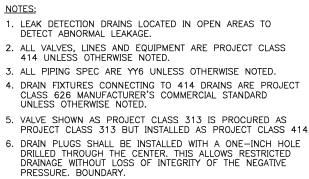
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JOB NO.10604	DRAWING CATEGORY: CRITICAL	



CAD	1X4DB145-5
ACAD2004	CYN - 01

SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X4DB145-5	14.

SIZE E	34X44	1	DRAWING CATEGORY: CRITICAL
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 SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
AUXILIARY BUILDING & MISC. DRAINS
SYSTEM NO. 1215

SCALE: NONE	DRAWING NO.	VER.
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1X4DD1.15	7
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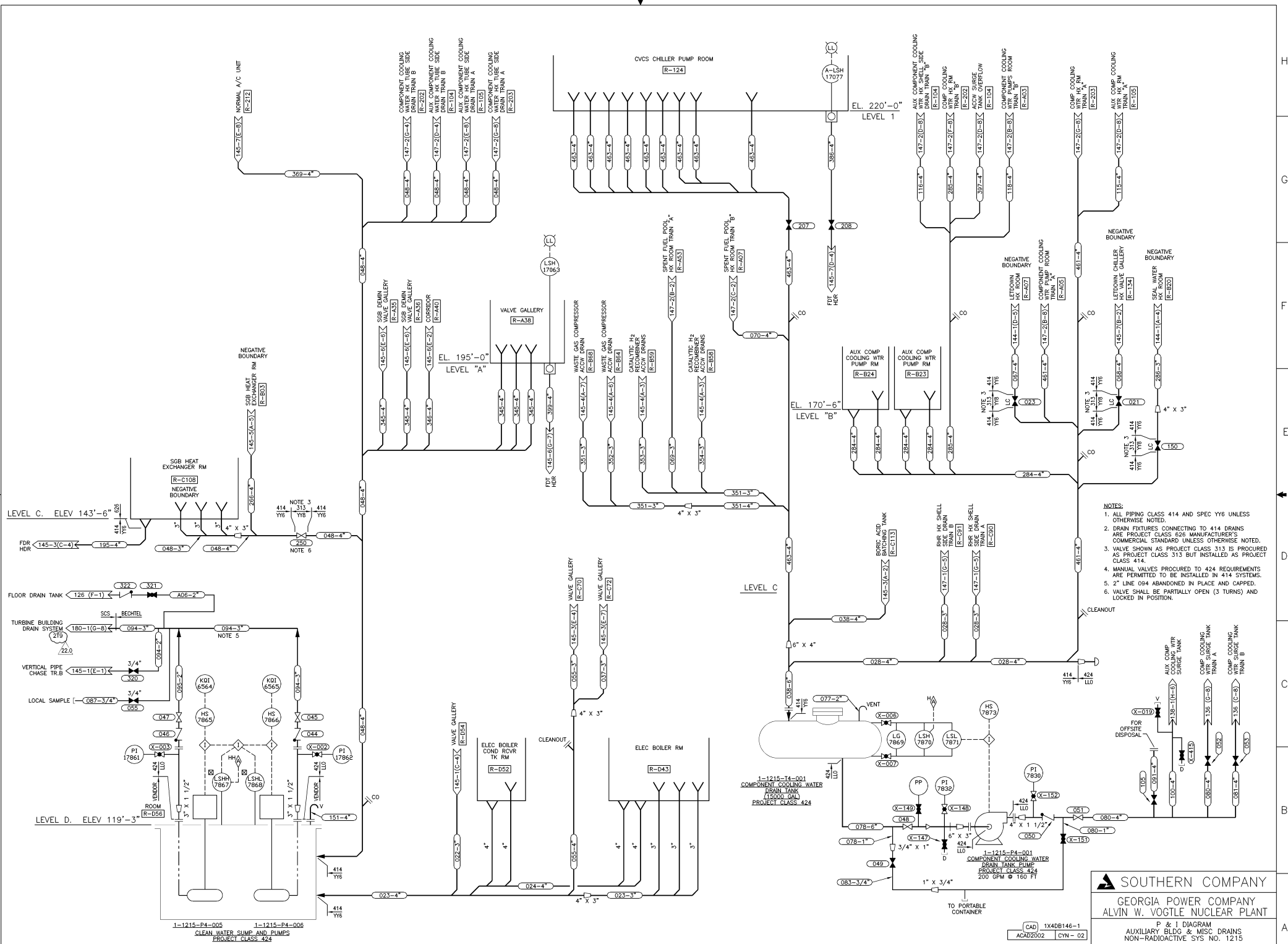
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34X44	DRAWING CATEGORY:
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1	DRAWING CATEGORY: CRITICAL
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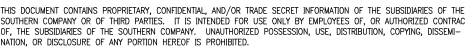
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11.0	REDRAWN PER ABN-V70103, VER. 1.0				8-1-06	CYN	LCF	WPE	X	JOB NO.10604				
NO.	VERSIONS				DATE	DR	CHK	APPV	DTL					
										3444		DRAWING CATEGORY:		



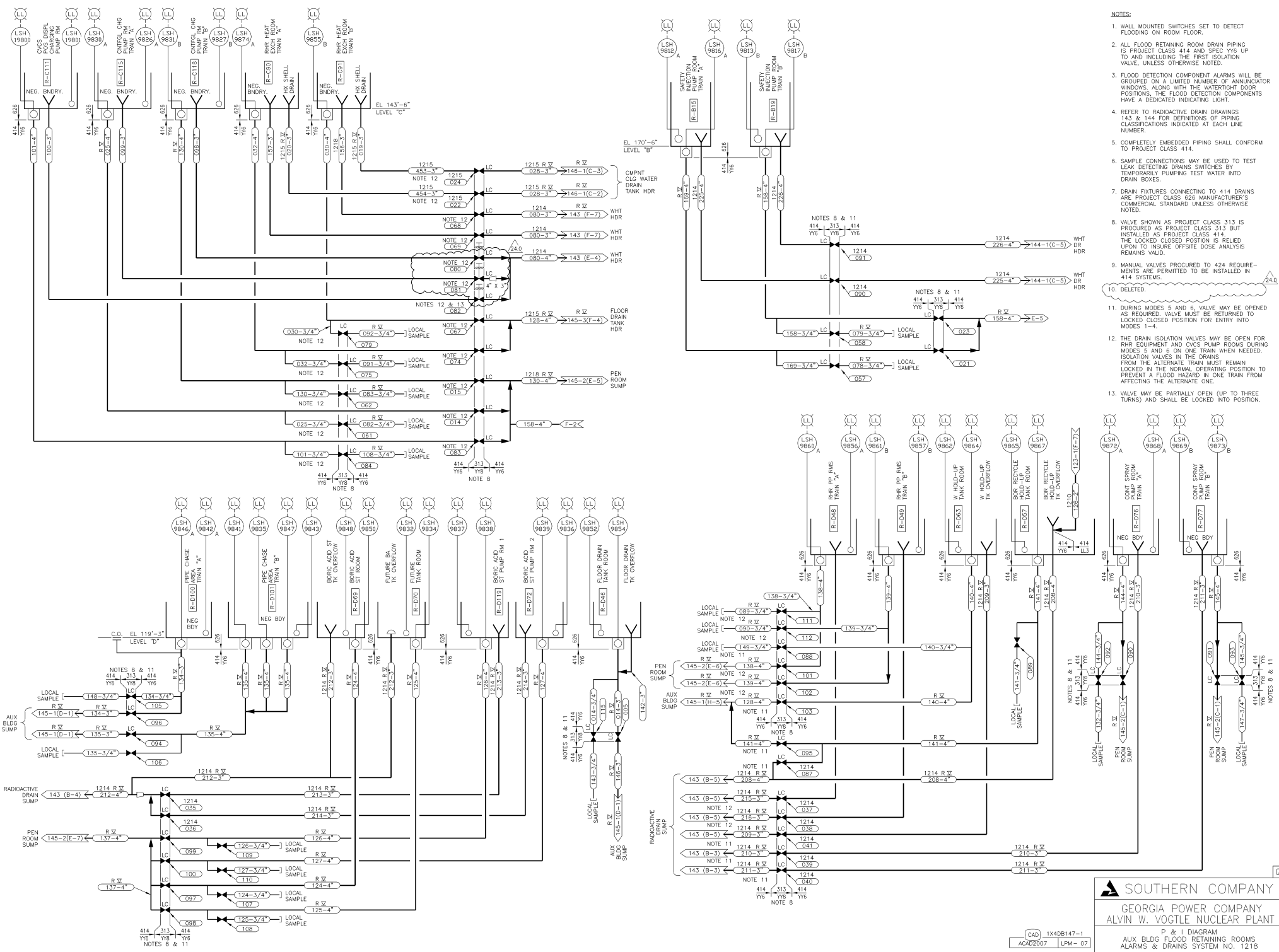
- NOTES:
1. ALL PIPING CLASS 414 AND SPEC Y6 UNLESS OTHERWISE NOTED.
 2. DRAIN FIXTURES CONNECTING TO 414 DRAINS ARE PROJECT CLASS 526 MANUFACTURER'S COMMERCIAL STANDARD UNLESS OTHERWISE NOTED.
 3. VALVE SHOWN AS PROJECT CLASS 313 IS PROCURED AS PROJECT CLASS 313 BUT INSTALLED AS PROJECT CLASS 414.
 4. MANUAL VALVES PROCURED TO 424 REQUIREMENTS ARE PERMITTED TO BE INSTALLED IN 414 SYSTEMS.
 5. 2" LINE 094 ABANDONED IN PLACE AND CAPPED.
 6. VALVE SHALL BE PARTIALLY OPEN (3 TURNS) AND LOCKED IN POSITION.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
AUXILIARY BLDG & MISC DRAINS
NON-RADIOACTIVE SYS NO. 1215

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NO.		NO.		NO.		NO.		NO.		NO.		NO.	
8		7		6		5		4		3		2	
1		2		3		4		5		6		7	
DRAWING CATEGORY: CRITICAL		SCALE: NONE		DRAWING NO. 1X4DB146-1		VER. 22.0		J08 NO.10604		DRAWING NO. 1X4DB146-1		VER. 22.0	



 SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT
P & I DIAGRAM
AUXILIARY BUILDING & MISC. DRAINS
SYSTEM NO. 1215



- NOTES:
1. WALL MOUNTED SWITCHES SET TO DETECT FLOODING ON ROOM FLOOR.
 2. ALL FLOOD RETAINING ROOM DRAIN PIPING IS PROJECT CLASS 414 AND SPEC Y16 UP TO AND INCLUDING THE FIRST ISOLATION VALVE, UNLESS OTHERWISE NOTED.
 3. FLOOD DETECTION COMPONENT ALARMS WILL BE GROUPED ON A LIMITED NUMBER OF ANNUNCIATOR WINDOWS, ALONG WITH THE WATERTIGHT DOOR POSITIONS, THE FLOOD DETECTION COMPONENTS HAVE A DEDICATED INDICATING LIGHT.
 4. REFER TO RADIOACTIVE DRAIN DRAWINGS 143 & 144 FOR DEFINITIONS OF PIPING CLASSIFICATIONS INDICATED AT EACH LINE NUMBER.
 5. COMPLETELY EMBEDDED PIPING SHALL CONFORM TO PROJECT CLASS 414.
 6. SAMPLE CONNECTIONS MAY BE USED TO TEST LEAK DETECTING DRAIN SWITCHES BY TEMPORARILY PUMPING TEST WATER INTO DRAIN BOXES.
 7. DRAIN FIXTURES CONNECTING TO 414 DRAINS ARE PROJECT CLASS 626 MANUFACTURER'S COMMERCIAL STANDARD UNLESS OTHERWISE NOTED.
 8. VALVE SHOWN AS PROJECT CLASS 313 IS PROCURED AS PROJECT CLASS 313 BUT INSTALLED AS PROJECT CLASS 414. THE LOCKED CLOSED POSITION MUST REMAIN UPON TO INSURE OFFSITE DOSE ANALYSIS REMAINS VALID.
 9. MANUAL VALVES PROCURED TO 424 REQUIREMENTS ARE PERMITTED TO BE INSTALLED IN 414 SYSTEMS.
 10. DELETED.
 11. DURING MODES 5 AND 6, VALVE MAY BE OPENED AS REQUIRED. VALVE MUST BE RETURNED TO LOCKED CLOSED POSITION FOR ENTRY INTO MODES 1-4.
 12. THE DRAIN ISOLATION VALVES MAY BE OPEN FOR RHR EQUIPMENT AND CYCS PUMP ROOMS DURING MODES 5 AND 6 ON ONE TRAIN WHEN NEEDED. ISOLATION VALVES IN THE DRAINS FROM THE ALTERNATE TRAIN MUST REMAIN LOCKED IN THE NORMAL OPERATING POSITION TO PREVENT A FLOOD HAZARD IN ONE TRAIN FROM AFFECTING THE ALTERNATE ONE.
 13. VALVE MAY BE PARTIALLY OPEN (UP TO THREE TURNS) AND SHALL BE LOCKED INTO POSITION.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
AUX BLDG FLOOD RETAINING ROOMS
ALARMS & DRAINS SYSTEM NO. 1218

(CAD) 1X4DB147-1
ACAD2007 LPM - 01

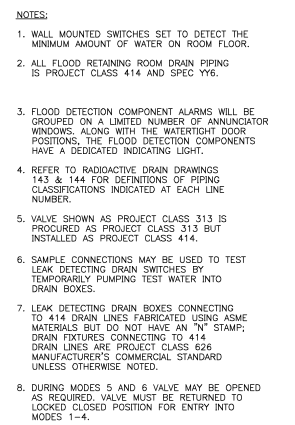
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24.0	REVISED PER ABN-V01889, VERSION 1.0	8-2-10 LPM LRP DEW X	JOB NO.10604
NO.	VERSION	DATE	DR CHK APPV DTL

SIZE E 34x44

1X4DB147-1 24.0

DRAWING CATEGORY: CRITICAL

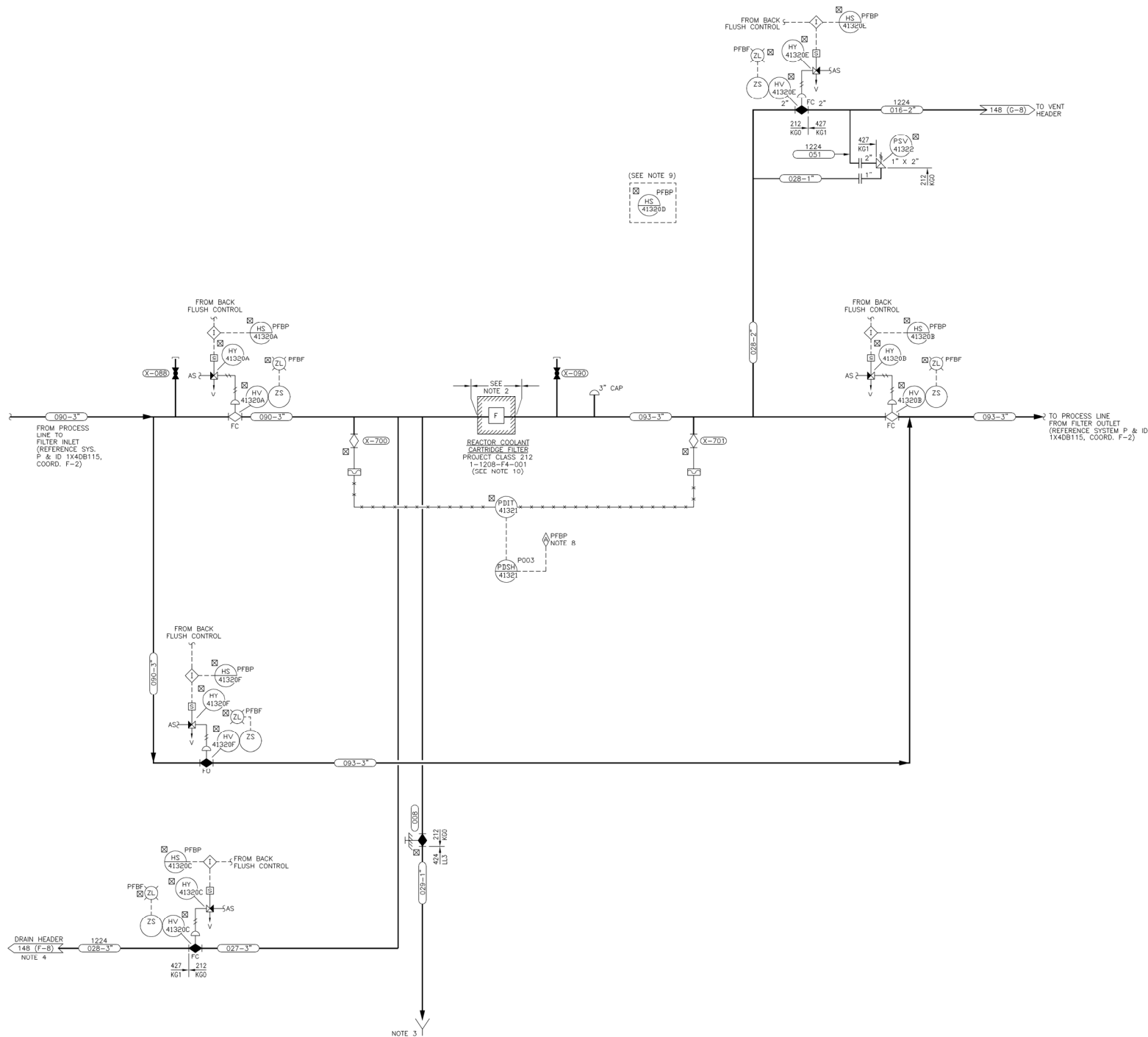
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P & I DIAGRAM
AUX BLDG FLOOD RETAINING ROOMS
ALARMS & DRAINS
SYSTEM NO. 1218

SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X4DB147-2	9.C
E 34X44	1	DRAWING CATEGORY:

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5	4



- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB143 AND 1X4DB144-1.
 2. ALL EQUIPMENT, VALVES AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY BECHTEL.
 3. SEE SYSTEM P & I DIAGRAM 1X4DB115 FOR DRAINAGE SYSTEM.
 4. DRAIN LINES WILL SLOPE TO THE BACKFLUSHABLE FILTER CRUID TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS R II.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRUID TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVES SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ANNUNCIATOR IN THE MAIN CONTROL ROOM.
 9. HYS-413200 ON PANEL 1-1224-P5-FBP IS RETIRED IN PLACE.
 10. THIS FILTER HAS BEEN MODIFIED TO UTILIZE PALL TRINITY DISPOSABLE CARTRIDGES.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

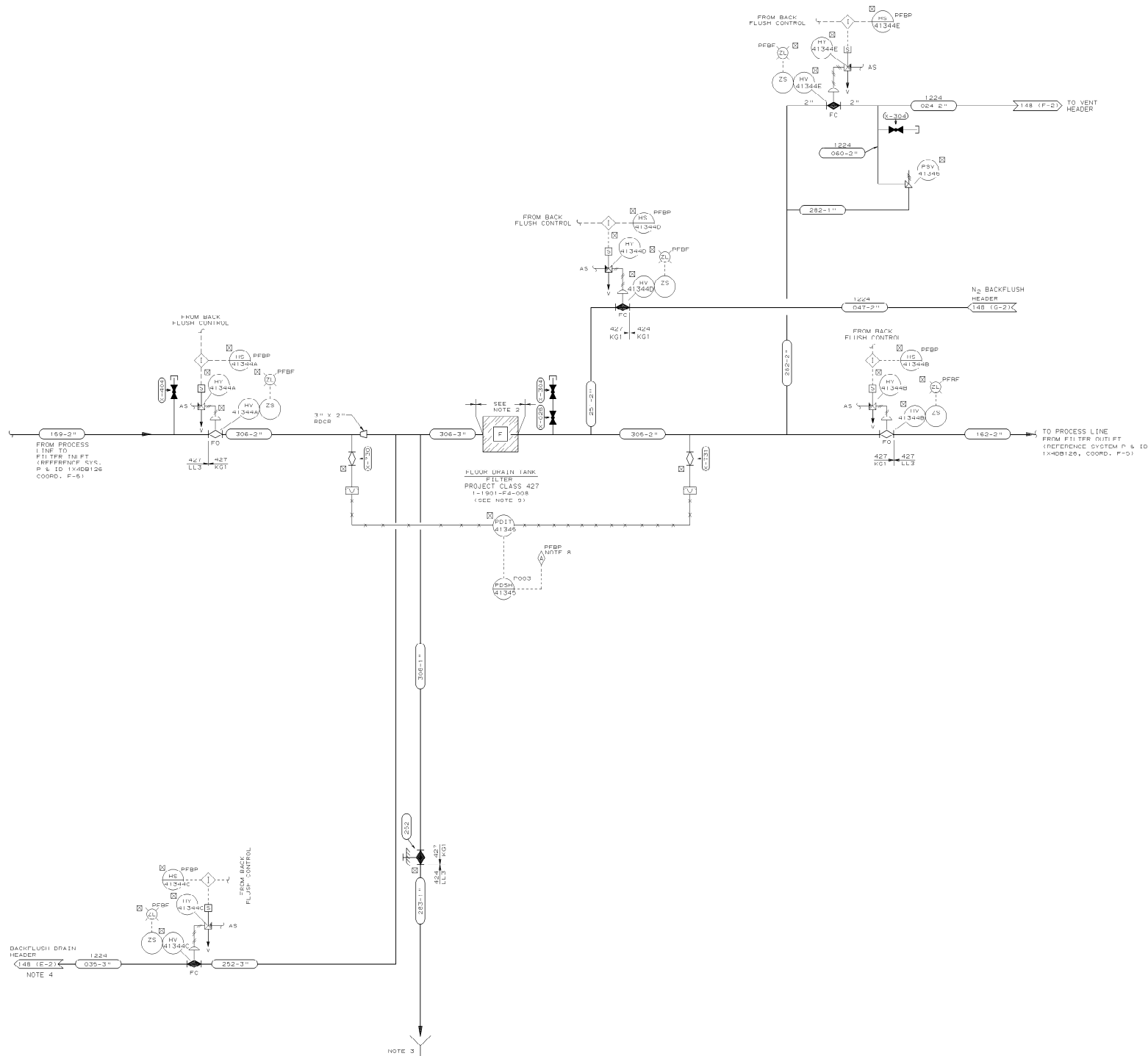
P & I DIAGRAM
 REACTOR COOLANT FILTER
 SYSTEM NO. 1208

(CAD) 1X4DB148-1
 ACAD2004 CYN - 01

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NO.	DATE	DR	CHK	APPV	DTL	SCALE	DRAWING NO.	VER.
1.0	REDRAWN PER ABN-V70077, VER. 1.0					NONE	1X4DB148-1	1.0

DRAWING CATEGORY: CRITICAL



- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X40B143 AND 1X40B144-1.
 2. ALL EQUIPMENT, VALVES, AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY VENDOR.
 3. SEE SYSTEM P & I DIAGRAM 1X40B126 FOR DRAINAGE SYSTEM.
 4. BACKFLUSH DRAIN LINES WILL SLOPE TO THE BACKFLUSHABLE FILTER CRUD TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS RV.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRUD TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVED SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ANNUNCIATOR IN THE MAIN CONTROL ROOM.
 9. FILTER ELEMENTS HAVE BEEN REMOVED FROM THIS UNIT.

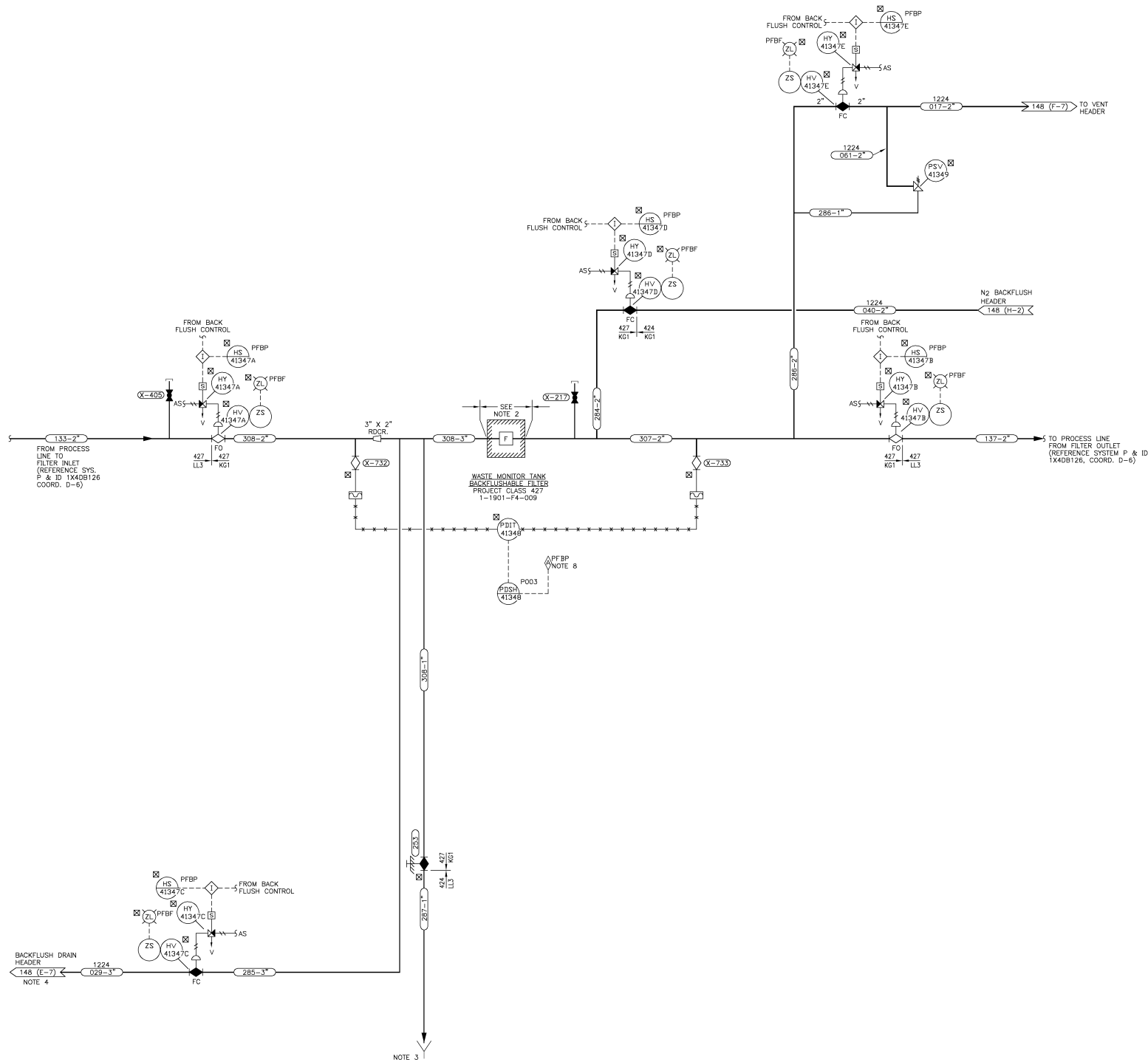
SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTE NUCLEAR PLANT


P & I DIAGRAM
FLOOR DRAIN TANK FILTER SYSTEM
SYSTEM NO. 1901

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NO.	INCORP.	PER	DATE	DR	CHK	APPV	WEP	DTL	REV.

SCALE: NONE	DRAWING NO.	REV.
JOB NO. 10604	1X40B148-10	0



- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB143 AND 1X4DB144-1.
 2. ALL EQUIPMENT, VALVES AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY BECHTEL.
 3. SEE SYSTEM P & I DIAGRAM 1X4DB126 FOR DRAINAGE SYSTEM.
 4. BACKFLUSH DRAIN LINES WILL SLOPE TO THE BACKFLUSHABLE FILTER CRUD TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS R 32.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRUD TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVES SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ANNUNCIATOR IN THE MAIN CONTROL ROOM.

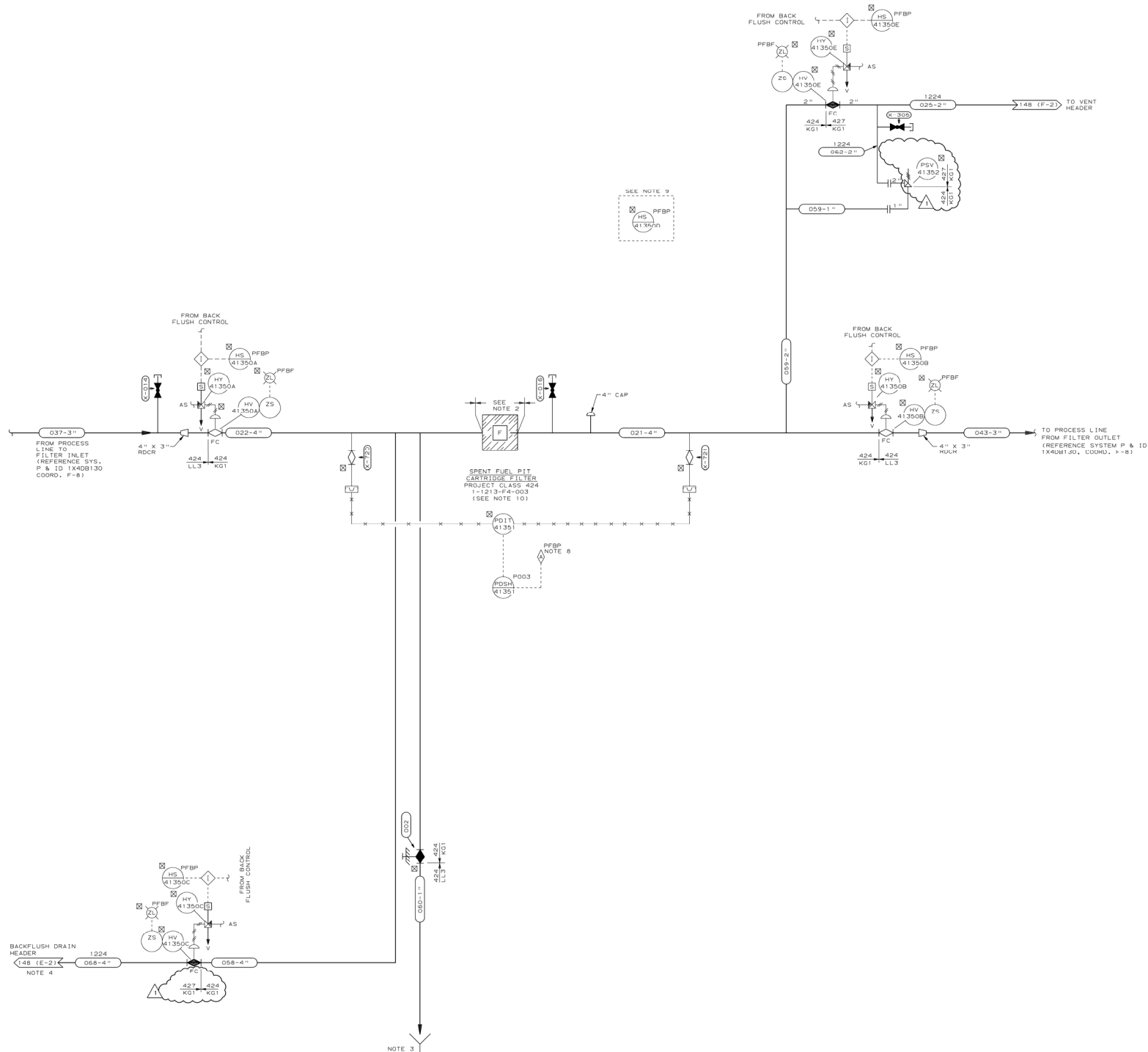
 SOUTHERN COMPANY	
GEORGIA POWER COMPANY	
ALVIN W. VOGTLE NUCLEAR PLANT	
P & I DIAGRAM	
WASTE MONITOR TANK BACKFLUSHABLE FILTER SYSTEM NO. 1901	
SCALE: NONE	DRAWING NO. 1X4DB148-11
JOB NO. 10604	VER. 1.0

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CAD 1X4DB148-11		ACAD2004		CYN - 01	
NO.	VERSION	DATE	DR	CHK	APPV
1.0	REDRAWN PER ABN-V70079, VER. 1.0	7-11-08	CYN	LCP	WPE

SCALE: NONE	DRAWING NO. 1X4DB148-11	VER. 1.0
JOB NO. 10604		

DRAWING CATEGORY: CRITICAL



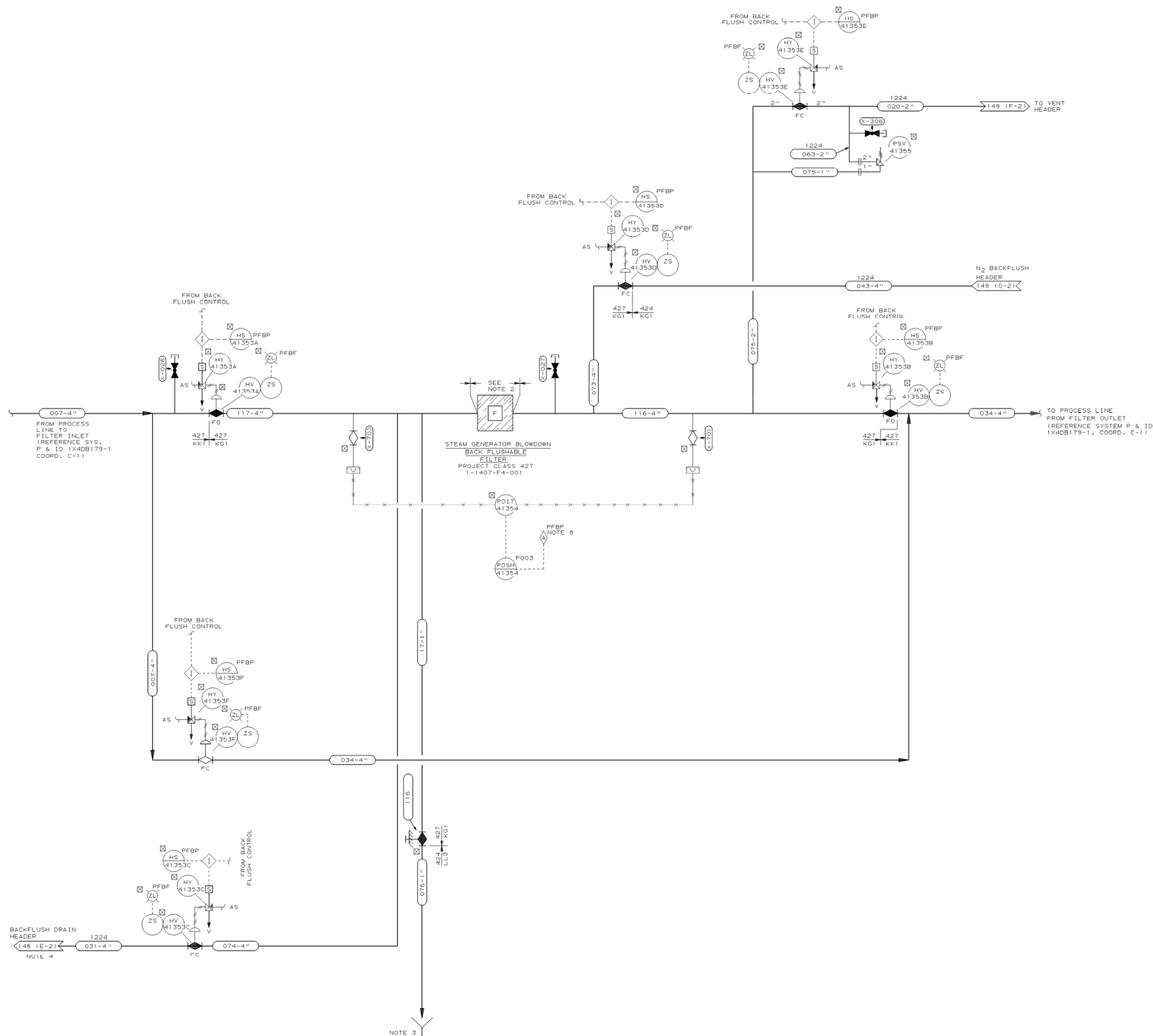
- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB143 AND 1X4DB144-1.
 2. ALL EQUIPMENT, VALVES AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY BECHTEL.
 3. SEE SYSTEM P & I DIAGRAM 1X4DB130 FOR DRAINAGE SYSTEM.
 4. DRAIN LINES WILL SLOPE TO THE BACKFLUSHABLE FILTER CRUD TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS RV.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRD TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVES SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ANNUNCIATOR IN THE MAIN CONTROL ROOM.
 9. IHS-413500 ON PANEL 1-1224-PS-FBP IS RETIRED IN PLACE.
 10. THIS FILTER HAS BEEN MODIFIED TO UTILIZE PALL TRINITY DISPOSABLE CARTRIDGES.

SOUTHERN COMPANY SERVICES, INC. BIRMINGHAM, ALABAMA	
GEORGIA POWER COMPANY ALVIN W. VOGTLE NUCLEAR PLANT	
P & I DIAGRAM SPENT FUEL PIT FILTER SYSTEM SYSTEM NO. 1213	
SCALE: NONE	DRAWING NO. 1X4DB148-12
REV. 1	

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NO.	REVISIONS	DATE	DR	CHK	APPV	DL
1	INCORP. PER ABN-36988 & ABN-37014	04/01/88	PM	GLB	ELC	

SIZE E 34x44



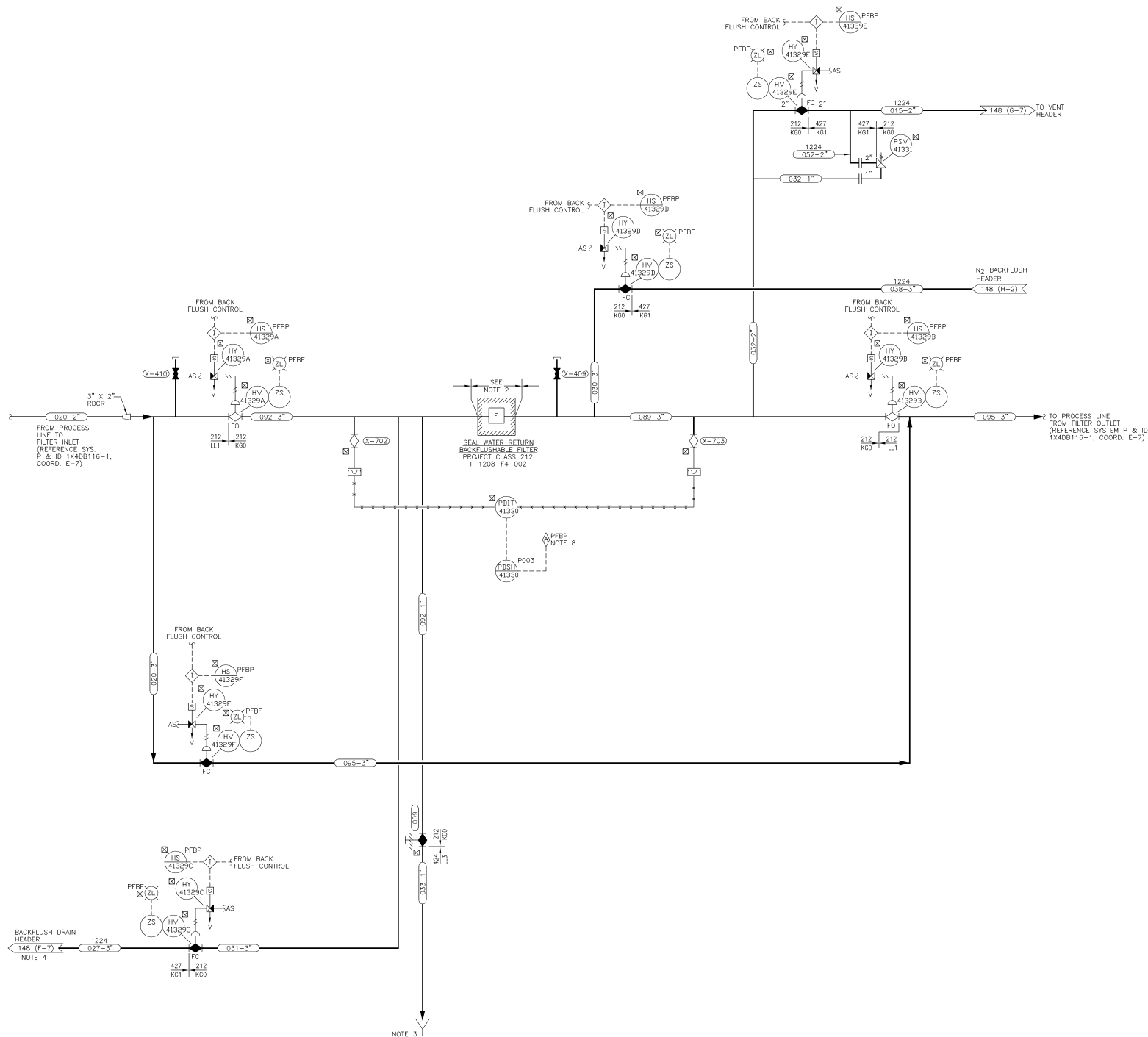
- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB143 AND 1X4DB144-1.
 2. ALL EQUIPMENT, VALVES, AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY BECHTEL.
 3. SEE SYSTEM P & I DIAGRAM 1X4DB179-1 FOR DRAINAGE SYSTEM.
 4. BACKFLUSH DRAIN LINES WILL SLOPE TO THE BACKFLUSHABLE FILTER GRID TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS RV.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRACK TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVES SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ALARMATOR IN THE MAIN CONTROL ROOM.

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
STEAM GENERATOR BLOWDOWN
BACKFLUSHABLE FILTER
SYSTEM NO. 1407

SCALE:	DATE	REV.	NO.	BY	CHK	APPV	DTL	WFP	MWD	JGM	LVL	4/4/98	INCOMP.	PER	ABN-33048	REVISIONS
1X4DB148-13	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15



- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB143 AND 1X4DB144-1.
 2. ALL EQUIPMENT, VALVES AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY BECTEL.
 3. SEE SYSTEM P & I DIAGRAM 1X4DB116-1 FOR DRAINAGE SYSTEM.
 4. BACKFLUSH DRAIN LINES WILL BE SLOPED TO THE BACKFLUSHABLE FILTER CRUD TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS R.X.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRUD TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVES SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ANNUNCIATOR IN THE MAIN CONTROL ROOM.

SOUTHERN COMPANY
GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
 SEAL WATER RETURN
 BACKFLUSHABLE FILTER
 SYSTEM NO. 1208

(CAD) 1X4DB148-2
 ACAD2004 CYN - 01

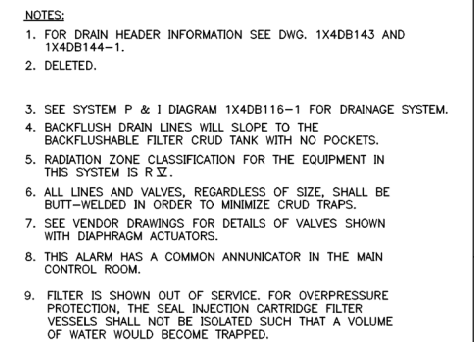
SCALE: NONE DRAWING NO. VER.

1X4DB148-2 1.0

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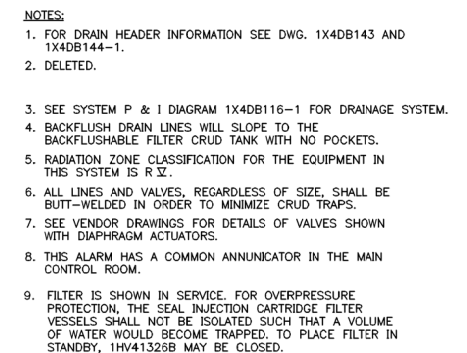
1.0	REDRAWN PER ABN-V70077, VER. 1.0	06-28-98	CYN	LCF	LKB	X
NO.	DATE	DR	CHK	APPV	DTL	

JOB NO.10604
 SIZE E 34X44
 1 DRAWING CATEGORY: CRITICAL



SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X4DB148-3	3.0

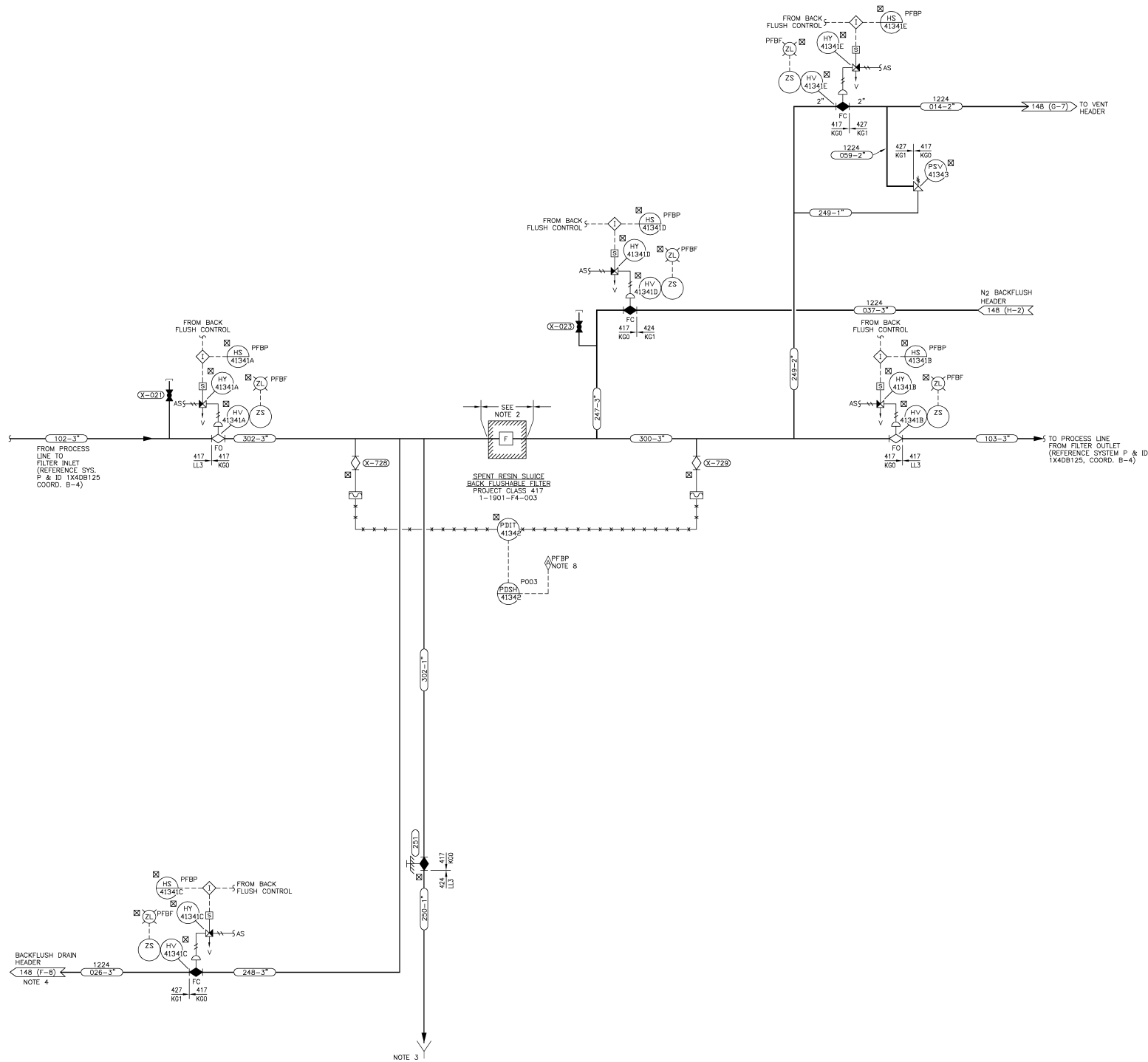
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														SCALE: NONE										DRAWING NO.		VER.	
																								1X4DB148-3		3.0	
														3.0		REVISED PER ABN--V03760, VER. 1.0				09-24-14		DCP		MWL		X	
NO.		VERSION				DATE		DR		CHK		APPV		DTL													
5				4				3				2				1				DRAWING CATEGORY: CRITICAL							
												SIZE E 34x44															




SCALE: NONE	DRAWING NO.	VER.
JOB NO.10604	1X4DB148-4	3.0

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											SCALE: NONE	DRAWING NO.	VER.
	3.0	REVISED PER ABN=V03780, VER. 1.0	9-25-14	DCP	MWC	WLN	X		JOB NO.10604	1X4DB148-4	3.0		
	NO.	VERSION	DATE	DR	CHK	APPV	DTL						
5	4	3	2	1							SIZE E 34x44	DRAWING CATEGORY:	

1 DRAWING CATEGORY:
CRITICAL



- NOTES:
1. FOR DRAIN HEADER INFORMATION SEE DWG. 1X4DB143 AND 1X4DB144-1.
 2. ALL EQUIPMENT, VALVES AND INSTRUMENTATION SHALL BE SUPPLIED BY THE VENDOR. ALL INTERCONNECTING PIPING SHALL BE FURNISHED BY BECHTEL.
 3. SEE SYSTEM P & I DIAGRAM 1X4DB125 FOR DRAINAGE SYSTEM.
 4. BACKFLUSH DRAIN LINES WILL SLOPE TO THE BACKFLUSHABLE FILTER CRUD TANK WITH NO POCKETS.
 5. RADIATION ZONE CLASSIFICATION FOR THE EQUIPMENT IN THIS SYSTEM IS R 3.
 6. ALL LINES AND VALVES, REGARDLESS OF SIZE, SHALL BE BUTT-WELDED IN ORDER TO MINIMIZE CRUD TRAPS.
 7. SEE VENDOR DRAWINGS FOR DETAILS OF VALVES SHOWN WITH DIAPHRAGM ACTUATORS.
 8. THIS ALARM HAS A COMMON ANNUNCIATOR IN THE MAIN CONTROL ROOM.

 SOUTHERN COMPANY

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & I DIAGRAM
SPENT RESIN SLUDGE BACKFLUSHABLE
FILTER SYSTEM SYSTEM NO. 1901

SCALE: NONE	DRAWING NO.	VER.
	1X4DB148-9	1.0

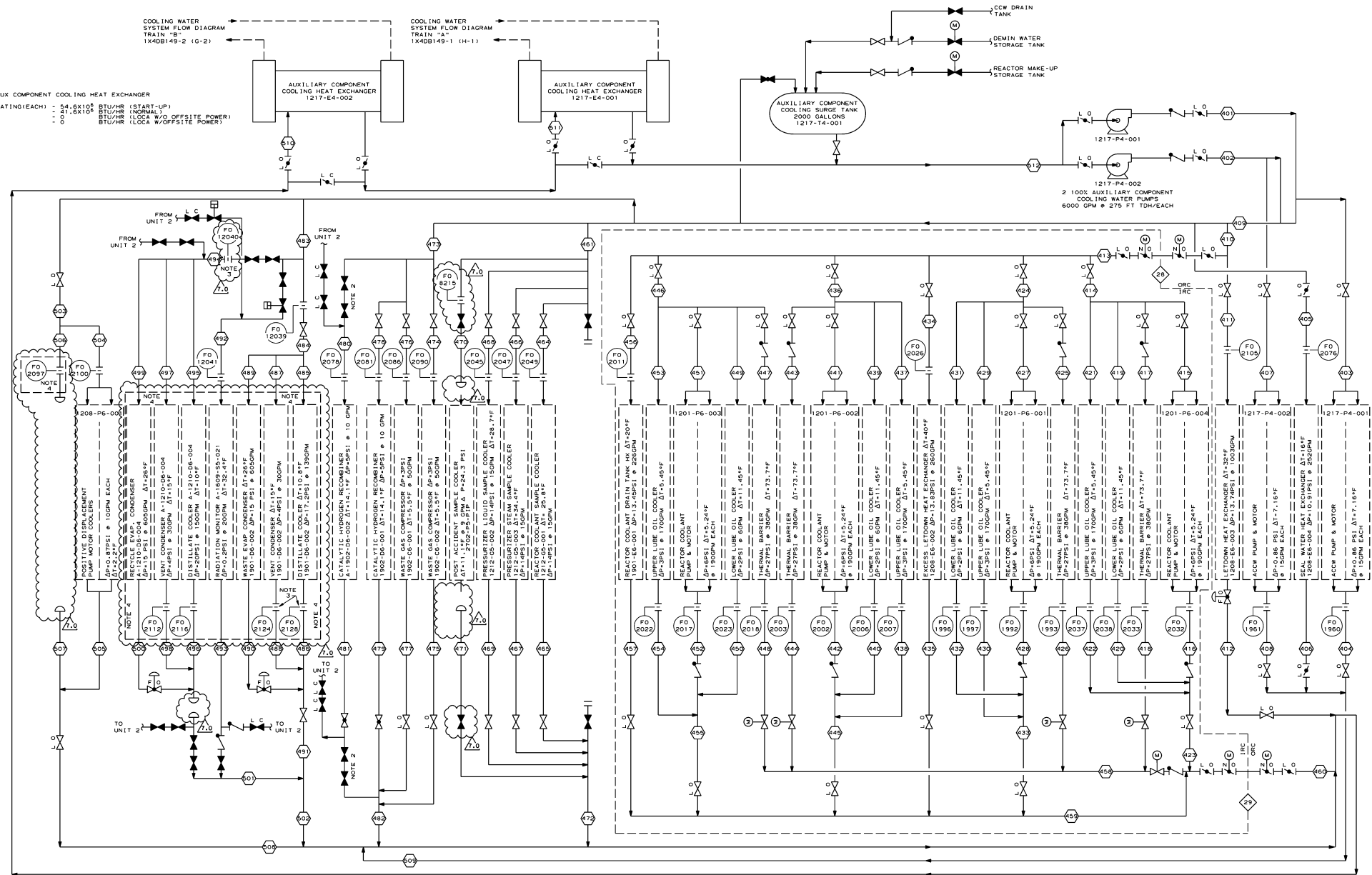
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CAD 1X4DB148-9		ACAD2004		CYN - 01	
NO.	VERSION	DATE	DR	CHK	APPV
1.0	REDRAWN PER ABN-V70079, VER. 1.0	7-11-08	CYN	LCP	WPE

SCALE: NONE	DRAWING NO.	VER.
	1X4DB148-9	1.0

DRAWING CATEGORY: CRITICAL

AUX COMPONENT COOLING HEAT EXCHANGER
RATING(EACH) : 54,6X10⁶ BTU/HR (START-UP)
 : 21.6X10⁶ BTU/HR (NORMAL)
 : 0 BTU/HR (LOCA W/O OFFSITE POWER)
 : 0 BTU/HR (LOCA W/OFFSITE POWER)



AUXILIARY COMPONENT COOLING WATER SYSTEM

- NOTE
1. THE DATA SHOWN ON THIS FLOW DIAGRAM ARE FOR INFORMATION PURPOSES ONLY, AND WHILE USEFUL AS GUIDES IN OPERATION, DO NOT REPRESENT EXACT OR GUARANTEED OPERATING CONDITIONS.
 2. THESE VALVES WILL BE LOCKED CLOSED WHEN COOLING WATER IS SUPPLIED FROM UNIT 2.
 3. BLANK PLATE
 4. "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

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SCALE: NONE
DRAWING NO. 1X4DB149-3
VER. 7.0

REVISIONS
7.0 REVISED PER ABN-V02460, VER. 1.0
DATE 08/01/04
BY BGT
CHK AAN
APPV

JOB NO. 10604
SIZE E 34x44

DWG CATEGORY: CRITICAL

6.0

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8

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SCALE: NONE	DRAWING NO.	VER.
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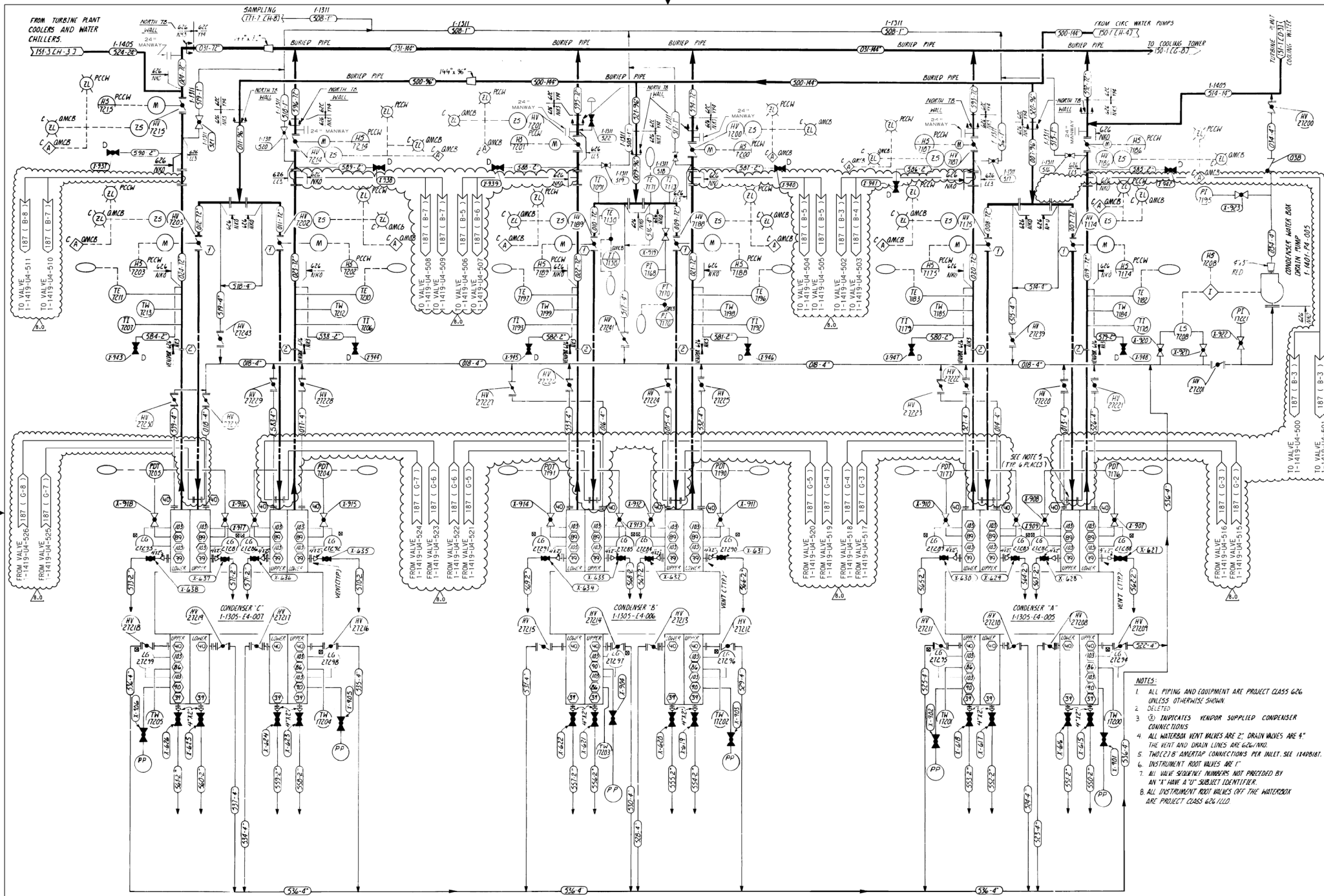
6.0	REVISED PER ABN-V02460, VER.1.0	3-15-11	Bgt	DHM

SCALE: NONE	DRAWING NO.	VER.
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SECRET - NONE		
JOB NO. 10604	1X4DB149-4	6.0

REF ID: A66544	DWG CATEGORY: CRITICAL
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- NOTES:
1. ALL PIPING AND EQUIPMENT ARE PROJECT CLASS 626 UNLESS OTHERWISE SHOWN.
 2. DELETED
 3. (C) INDICATES VENDOR SUPPLIED CONDENSER CONNECTIONS
 4. ALL WATERGATE HENT VALVES ARE 2". DRAIN VALVES ARE 4". THE HENT AND DRAIN LINES ARE 626/IND.
 5. TWO(2) "B" AMTAP CONNECTIONS PER INLET. SEE 1340/BIAT.
 6. INSTRUMENT ROOT VALVES ARE 1".
 7. ALL VALVE SIZING NUMBERS NOT PRECEDED BY AN "X" HAVE A "U" SUBJECT IDENTIFIER.
 8. ALL INSTRUMENT ROOT VALVES OFF THE WATERGATE ARE PROJECT CLASS 626/LLD.

SOUTHERN COMPANY SERVICES, INC.
BIRMINGHAM, ALABAMA

GEORGIA POWER COMPANY
ALVIN W. VOGTLE NUCLEAR PLANT

P & ID DIAGRAM
CIRCULATING WATER SYSTEM
SYSTEM NO. 1401

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REVISED PER	ABN-00004, VER. 1.0	3-23-98	DFV	MWD	ASK	SCALE: NONE	DRAWING NO.	VER.
NO.	VERSIONS	DATE	DR	CHK	APPV	JOB NO. 10604	1X4DB150	8.0
						SIZE E 36x44	DRAWING CATEGORY: 1	

