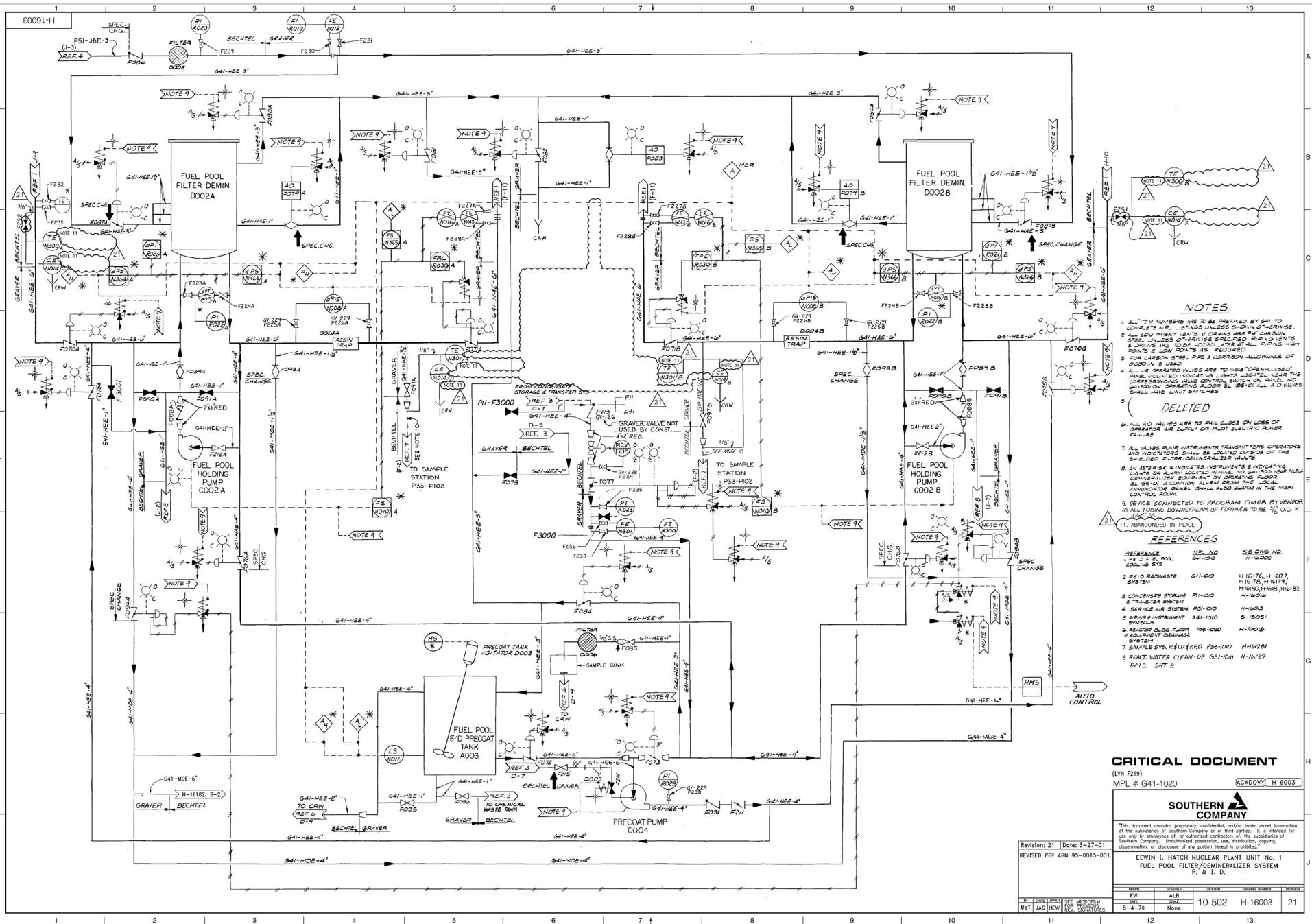


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NOTES

1. ALL TAG NUMBERS ARE TO BE PREPARED BY G41 TO CORRECTIVE ACTION UNLESS SHOWN OTHERWISE.
2. ALL VALVE TAG NUMBERS ARE TO BE PREPARED BY G41 TO CORRECTIVE ACTION UNLESS SHOWN OTHERWISE.
3. SPECIFIC TAG NUMBERS ARE TO BE PREPARED BY G41 TO CORRECTIVE ACTION UNLESS SHOWN OTHERWISE.
4. ALL OPERATED VALVES ARE TO HAVE "OPEN-CLOSED" TAGS INDICATING POSITIVE POSITIONS. NEAR THE CORRESPONDING VALVE CONTROL SWITCH OR VALVE, NO SWITCHES OR OPERATING FLUOR BE OPERATED. ALL VALVES SHALL HAVE LIMIT SWITCHES.
5. (DELETED)
6. ALL SD VALVES ARE TO FAIL CLOSE ON LOSS OF OPERATOR OR SUPPLY OF ELECTRIC POWER FAILURE.
7. ALL VALVE TAG NUMBERS INDICATING POSITIONS AND INDICATORS SHALL BE LOCATED OUTSIDE OF THE SCHEDULED FILTER/DEMINERALIZER VALVES.
8. AN INSTRUMENT INDICATES POSITIONS AND INDICATORS SHALL BE LOCATED OUTSIDE OF THE SCHEDULED FILTER/DEMINERALIZER VALVES. INDICATORS SHALL BE LOCATED OUTSIDE OF THE SCHEDULED FILTER/DEMINERALIZER VALVES. INDICATORS SHALL BE LOCATED OUTSIDE OF THE SCHEDULED FILTER/DEMINERALIZER VALVES.
9. DEVICE CONNECTED TO PROGRAM TIMER BY VENDOR ON ALL TUBING DOWNSTREAM OF F0704A TO BE 1/2" O.C. X 1/2" O.C.
11. ABANDONED IN PLACE.

REFERENCES

REFERENCE	REV. NO.	REV. DATE
1. FUEL POOL HOLDING PUMP	H-1000	H-1000
2. REACTOR SYSTEM	G11-100	H-16176, H-16177, H-16178, H-16179, H-16180, H-16181, H-16182
3. CONDENSATE STORAGE & TRANSFER SYSTEM	P11-100	H-16183
4. SERVICE AIR SYSTEM	P51-100	H-16184
5. SERVICE INSTRUMENTATION	A41-100	S-16081
6. REACTOR BUILDUP FLOOR EQUIPMENT	T41-100	H-16185
7. SAMPLE SYSTEM	P33-100	H-16281
8. REACTOR WATER CLEAN-UP	G31-100	H-16189

CRITICAL DOCUMENT

(LW F219)
MPL # G41-1020
ACAD001 H16003

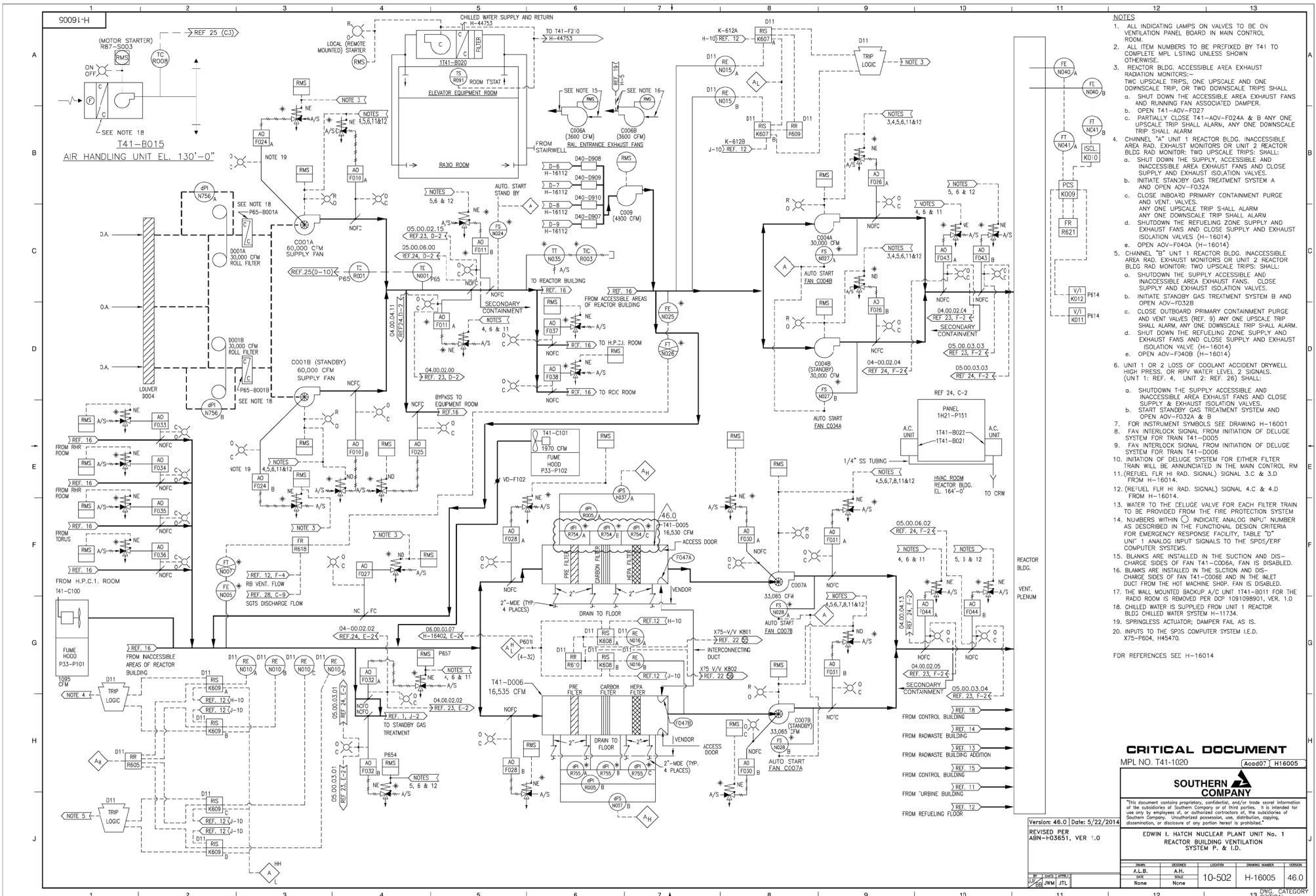


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EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1
FUEL POOL FILTER/DEMINERALIZER SYSTEM
P. & I. D.

Revision: 21 Date: 3-27-01
REVISED PER ABN 95-0015-001.

NO.	DATE	BY	REASON	SCALE	PROJECT	REVISION
1	EW	ALB		10-502	H-16003	21
2	JAS	HEW		8-4-70	None	



- NOTES**
- ALL INDICATING LAMPS ON VALVES TO BE ON VENTILATION PANEL BOARD IN MAIN CONTROL ROOM.
 - ALL ITEM NUMBERS TO BE PREFIXED BY T41 TO COMPLETE MPL LISTING UNLESS SHOWN OTHERWISE.
 - REACTOR BLDG. ACCESSIBLE AREA EXHAUST RADON MONITORS- TWO UPSCALE TRIPS, ONE UPSCALE AND ONE DOWNSCALE TRIP, OR TWO DOWNSCALE TRIPS SHALL:
 - SHUT DOWN THE ACCESSIBLE AREA EXHAUST FANS AND RUNNING FAN ASSOCIATED DAMPER.
 - OPEN T41-ADV-F027
 - PARTIALLY CLOSE T41-ADV-F024A & B ANY ONE UPSCALE TRIP SHALL ALARM
 - ANY ONE DOWNSCALE TRIP SHALL ALARM
 - CHANNEL "A" UNIT 1 REACTOR BLDG. INACCESSIBLE AREA RAD. EXHAUST MONITORS OR UNIT 2 REACTOR BLDG RAD MONITOR: TWO UPSCALE TRIPS: SHALL:
 - SHUT DOWN THE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY AND EXHAUST ISOLATION VALVES.
 - INITIATE STANDBY GAS TREATMENT SYSTEM A AND OPEN ADV-F032A
 - CLOSE INBOARD PRIMARY CONTAINMENT PURGE AND VENT. VALVES
 - ANY ONE UPSCALE TRIP SHALL ALARM
 - ANY ONE DOWNSCALE TRIP SHALL ALARM
 - SHUT DOWN THE REFUELING ZONE SUPPLY AND EXHAUST FANS AND CLOSE SUPPLY AND EXHAUST ISOLATION VALVES (H-16014)
 - CHANNEL "B" UNIT 1 REACTOR BLDG. INACCESSIBLE AREA RAD. EXHAUST MONITORS OR UNIT 2 REACTOR BLDG RAD MONITOR: TWO UPSCALE TRIPS: SHALL:
 - SHUT DOWN THE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY AND EXHAUST ISOLATION VALVES.
 - INITIATE STANDBY GAS TREATMENT SYSTEM B AND OPEN ADV-F032B
 - CLOSE OUTBOARD PRIMARY CONTAINMENT PURGE AND VENT VALVES (REF. 9) ANY ONE UPSCALE TRIP SHALL ALARM, ANY DOWNSCALE TRIP SHALL ALARM.
 - SHUT DOWN THE REFUELING ZONE SUPPLY AND EXHAUST FANS AND CLOSE SUPPLY AND EXHAUST ISOLATION VALVE (H-16014)
 - OPEN ADV-F040B (H-16014)
 - UNIT 1 OR 2 LOSS OF COOLANT ACCIDENT DRYWELL HIGH PRESS. OR RPV WATER LEVEL 2 SIGNALS. (UNIT 1: REF. 4, UNIT 2: REF. 26) SHALL:
 - SHUTDOWN THE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY & EXHAUST ISOLATION VALVES.
 - START STANDBY GAS TREATMENT SYSTEM AND OPEN ADV-F032A & B
 - FOR INSTRUMENT SYMBOLS SEE DRAWING H-16001
 - FAN INTERLOCK SIGNAL FROM INITIATION OF DELUGE SYSTEM FOR TRAIN T41-0005
 - FAN INTERLOCK SIGNAL FROM INITIATION OF DELUGE SYSTEM FOR TRAIN T41-0006
 - INITIATION OF DELUGE SYSTEM FOR EITHER FILTER TRAIN WILL BE ANNUNCIATED IN THE MAIN CONTROL RM
 - (REFUEL FLR H. RAD. SIGNAL) SIGNAL 3.C & 3.D FROM H-16014.
 - (REFUEL FLR H. RAD. SIGNAL) SIGNAL 4.C & 4.D FROM H-16014.
 - WATER TO THE REFUEL VALVE FOR EACH FILTER TRAIN TO BE PROVIDED FROM THE FIRE PROTECTION SYSTEM
 - NUMBERS WITHIN \square INDICATE ANALOG INPUT NUMBER AS DESCRIBED IN THE FUNCTIONAL DESIGN CRITERIA FOR EMERGENCY RESPONSE FACILITY, TABLE "D" UNIT 1 ANALOG INPUT SIGNALS TO THE SPDS/ERF COMPUTER SYSTEMS.
 - BLANKS ARE INSTALLED IN THE SUCTION AND DISCHARGE SIDES OF FAN T41-C006A. FAN IS DISABLED.
 - BLANKS ARE INSTALLED IN THE SUCTION AND DISCHARGE SIDES OF FAN T41-C006B AND IN THE INLET DUCT FROM THE HOT MACHINE SHOP. FAN IS DISABLED.
 - THE WALL MOUNTED BACKUP A/C UNIT T41-B011 FOR THE RADIO ROOM IS REMOVED PER DCP 1291098901, VER. 1.0
 - CHILLED WATER IS SUPPLIED FROM UNIT 1 REACTOR BLDG CHILLED WATER SYSTEM H-11734.
 - SPRINGLOADED ACTUATOR; DAMPER FAIL AS IS.
 - INPUTS TO THE SPDS COMPUTER SYSTEM I.E.D. X75-FRCA, H45470.
- FOR REFERENCES SEE H-16014

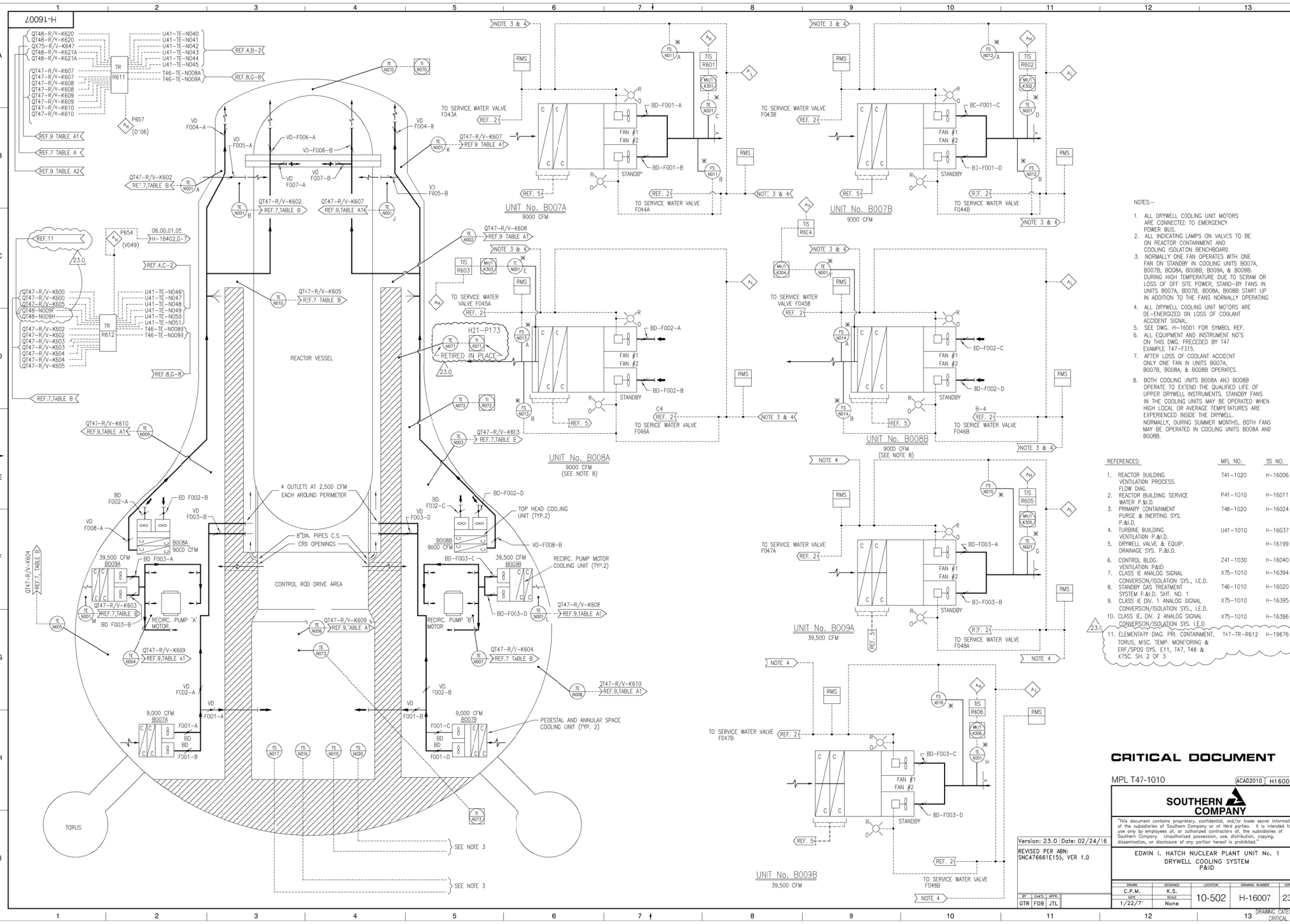
CRITICAL DOCUMENT
 MPL NO. T41-1020 (acc007) H16005
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Version: 46.0 [Date: 5/22/2014]
 REVISED PER ABN-H03651, VER 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
 REACTOR BUILDING VENTILATION SYSTEM F. & I.

DATE	ISSUED	LOCATION	ISSUED NUMBER	ORDER
10-502	H-16005	10-502	H-16005	46.0
REV	DATE	BY	DESCRIPTION	
1				
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13 Dwg. CATEGORY
 CRITICAL



- NOTES:-
1. ALL DRYWELL COOLING UNIT MOTORS ARE CONNECTED TO EMERGENCY POWER BUS.
 2. ALL INDICATING LAMPS ON VALVES TO BE ON REACTOR CONTAINMENT AND COOLING ISOLATION BENCHMARK.
 3. NORMALLY ONE FAN OPERATES WITH ONE FAN ON STANDBY IN COOLING UNITS B007A, B007B, B008A, B008B, B009A & B009B. DURING HIGH TEMPERATURE DUE TO SCRAM OR LOSS OF OFF SITE POWER, STANDBY FANS IN UNITS B007A, B007B, B008A, B008B START UP IN ADDITION TO THE FANS NORMALLY OPERATING.
 4. ALL DRYWELL COOLING UNIT MOTORS ARE DE-ENERGIZED ON LOSS OF COOLANT ACCIDENT SIGNAL.
 5. SEE DWG. H-16001 FOR SYMBOL. REF.
 6. ALL EQUIPMENT AND INSTRUMENT NO'S ON THIS DWG. PRECEDED BY T47 EXAMPLE T47-F315.
 7. AFTER LOSS OF COOLANT ACCIDENT ONLY ONE FAN IN UNITS B007A, B007B, B008A & B008B OPERATES.
 8. BOTH COOLING UNITS B008A AND B008B OPERATE TO EXTEND THE QUALIFIED LIFE OF UPPER DRYWELL INSTRUMENTS. STANDBY FANS IN THE COOLING UNITS MAY BE OPERATED WHEN HIGH LOCAL OR AVERAGE TEMPERATURES ARE EXPERIENCED INSIDE THE DRYWELL. NORMALLY, DURING SUMMER MONTHS, BOTH FANS MAY BE OPERATED IN COOLING UNITS B008A AND B008B.

REFERENCES:

	MPL NO.	SS NO.
1. REACTOR BUILDING VENTILATION PROCESS FLOW DIAG.	T41-1020	H-16006
2. REACTOR BUILDING SERVICE WATER P.&I.	P41-1010	H-16011
3. PRIMARY CONTAINMENT PURGE & INERTING SYS. P.&I.D.	T48-1020	H-16024
4. TURBINE BUILDING VENTILATION P.&I.	U41-1010	H-16037
5. DRYWELL VALVE & EQUIP. DRAINAGE SYS. P.&I.D.		H-16199
6. CONTROL BLDG. VENTILATION P.&I.	Z41-1030	H-16040
7. CLASS 1C ANALOG SIGNAL CONVERSION/SOLATION SYS. I.E.D.	X75-1010	H-16394
8. STANDBY GAS TREATMENT SYSTEM P.&I.D. SHI. NO. 1	T46-1010	H-16020
9. CLASS 1E DIV. 1 ANALOG SIGNAL CONVERSION/SOLATION SYS. I.E.D.	X75-1010	H-16395
10. CLASS 1E, DIV. 2 ANALOG SIGNAL CONVERSION/SOLATION SYS. I.E.D.	X75-1010	H-16396
11. ELEMENTARY DIAG. PRI. CONTAINMENT, TORUS, MISC. TEMP. MONITORING & ERF/SPOS SYS. E11, T47, T48 & X75C. SH. 2 OF 3	T47-TR-R612	H-19676

CRITICAL DOCUMENT

MPL T47-1010 ACAD2010 H16007



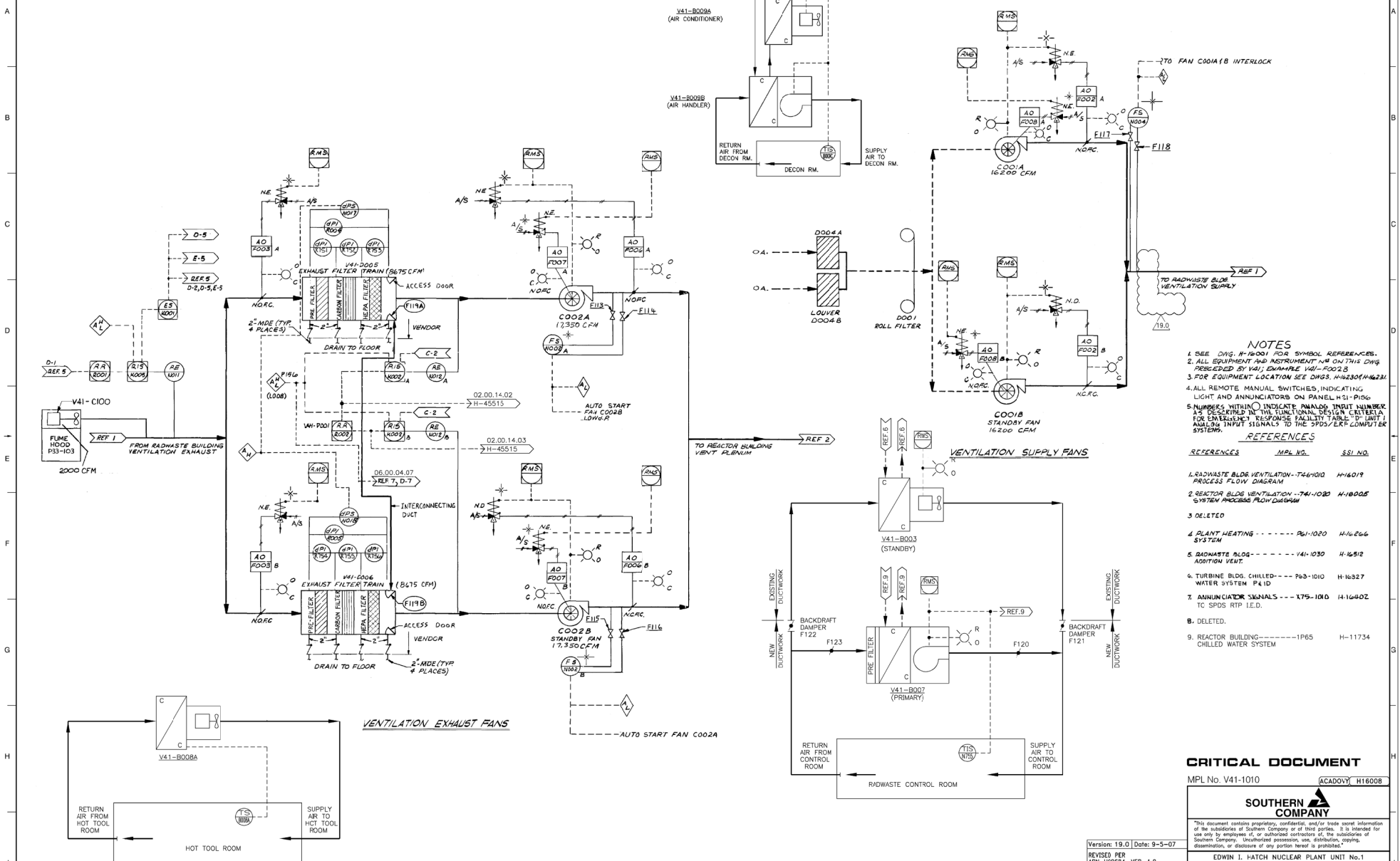
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EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1
DRYWELL COOLING SYSTEM
P.&I.D.

Version: 23.0 Date: 02/24/16
REVISED PER ABN: SNC4766E1E155, VER 1.0

ISSUED	REVISION	LOCATION	DESCRIPTION	VERSION
C.P.M.	K.S.			
JOS				
1/22/77	None	10-502	H-16007	23.0

DR. GTR FGB JTL



NOTES

1. SEE DWG. H-16001 FOR SYMBOL REFERENCES.
2. ALL EQUIPMENT AND INSTRUMENT AIR ON THIS DWG PRECEDED BY V41; EXHAUST V41-FOO2'S.
3. FOR EQUIPMENT LOCATION SEE DWGS. H-6230(H-6231).
4. ALL REMOTE MANUAL SWITCHES, INDICATING LIGHT AND ANNUNCIATORS ON PANEL H-31-915G.
5. NUMBERS WITHIN () INDICATE ANALOG INPUT NUMBER AS DESCRIBED IN THE FUNCTIONAL DESIGN CRITERIA FOR SWINLEY'S RESPONSE FACILITY TABLE; () INDICATE ANALOG INPUT SIGNALS TO THE SPDS/ERF COMPUTER SYSTEMS.

- REFERENCES**
- | REFERENCES | MPL NO. | SSI NO. |
|--|---------|---------|
| 1. RADWASTE BLDG VENTILATION - T46-010 | H-16019 | |
| 2. REACTOR BLDG VENTILATION - T41-1020 | H-16005 | |
| 3. DELETED | | |
| 4. PLANT HEATING SYSTEM | H-16020 | H-16266 |
| 5. RADWASTE BLDG - ADDITION VENT. | H-16030 | H-16512 |
| 6. TURBINE BLDG. CHILLED WATER SYSTEM P&ID | H-16100 | H-16327 |
| 7. ANNUNCIATOR SIGNALS TO SPDS RTP I.E.D. | H-16402 | H-16402 |
| 8. DELETED. | | |
| 9. REACTOR BUILDING CHILLED WATER SYSTEM | H-11734 | |

CRITICAL DOCUMENT
MPL No. V41-1010 (ACAD0VY) H16008

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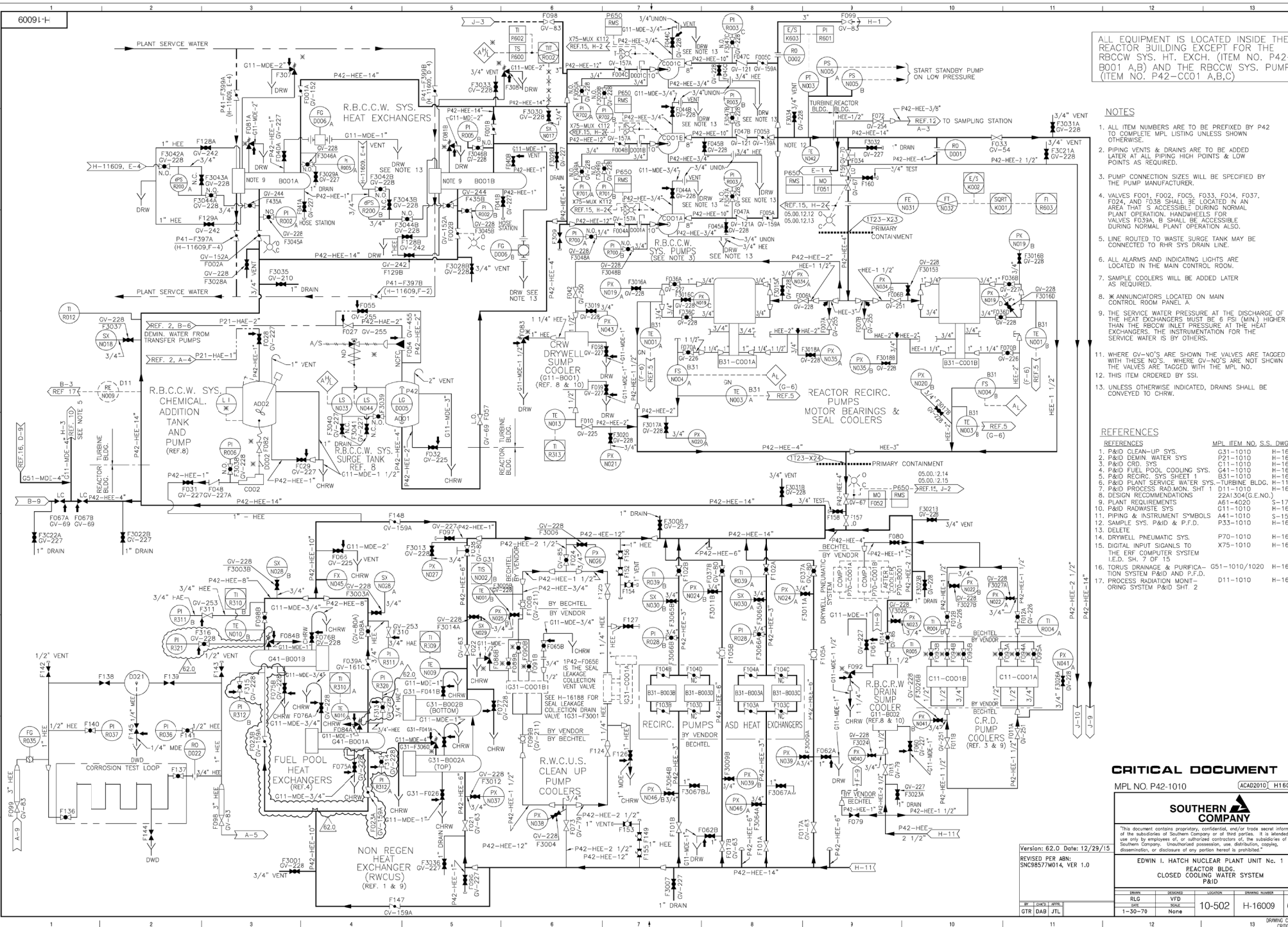
EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
RADWASTE BUILDING VENTILATION
P & ID

Version: 19.0 Date: 9-5-07

REVISED PER
REV. 1.0

REV	DATE	BY	CHKD	APP'D	SEE MICROFILM FOR PROJ. REV. SIGNATURES.
19	9-22-70	JMW			No Scale

REV	DATE	BY	CHKD	APP'D	LOCATION	DRAWING NUMBER	VERSION
19	9-22-70	JMW			10-502	H-16008	19.0



ALL EQUIPMENT IS LOCATED INSIDE THE REACTOR BUILDING EXCEPT FOR THE RBCCW SYS. HT. EXCH. (ITEM NO. P42-8001 A,B) AND THE RBCCW SYS. PUMPS (ITEM NO. P42-CC01 A,B,C)

NOTES

1. ALL ITEM NUMBERS ARE TO BE PREFIXED BY P42 TO COMPLETE MPL LISTING UNLESS SHOWN OTHERWISE.
2. PIPING VENTS & DRAINS ARE TO BE ADDED LATER AT ALL PIPING HIGH POINTS & LOW POINTS AS REQUIRED.
3. PUMP CONNECTION SIZES WILL BE SPECIFIED BY THE PUMP MANUFACTURER.
4. VALVES F001, F002, F005, F033, F034, F037, F024, and F038 SHALL BE LOCATED IN AN AREA THAT IS ACCESSIBLE DURING NORMAL PLANT OPERATION, HANDHELS FOR VALVES F039, B SHALL BE ACCESSIBLE DURING NORMAL PLANT OPERATION ALSO.
5. LINE ROUTED TO WASTE SURGE TANK MAY BE CONNECTED TO RHR SYS DRAIN LINE.
6. ALL ALARMS AND INDICATING LIGHTS ARE LOCATED IN THE MAIN CONTROL ROOM.
7. SAMPLE COOLERS WILL BE ADDED LATER AS REQUIRED.
8. * ANNUNCIATORS LOCATED ON MAIN CONTROL ROOM PANEL A.
9. THE SERVICE WATER PRESSURE AT THE DISCHARGE OF THE HEAT EXCHANGERS MUST BE 6 PSI (MIN.) HIGHER THAN THE RBCCW INLET PRESSURE AT THE HEAT EXCHANGERS. THE INSTRUMENTATION FOR THE SERVICE WATER IS BY OTHERS.
11. WHERE GV-NO'S ARE SHOWN THE VALVES ARE TAGGED WITH THESE NO'S. TAGGED GV-NO'S ARE NOT SHOWN THE VALVES ARE TAGGED WITH THE MPL NO.
12. THIS ITEM ORDERED BY SSI.
13. UNLESS OTHERWISE INDICATED, DRAINS SHALL BE CONVEYED TO CHRW.

REFERENCES

REFERENCES	MPL ITEM NO.	S.S.	DWG. NO.
1. P&ID CLEAN-UP SYS.	G31-1010	H	-16188
2. P&ID DEMIN. WATER SYS.	P21-1010	H	-16015
3. P&ID GRID. SYS.	G11-1010	H	-16002
4. P&ID FUEL POOL COOLING SYS.	G41-1010	H	-16002
5. P&ID RECIRC. SYS SHEET 1	B31-1010	H	-16066
6. P&ID PLANT SERVICE WATER SYS.—TURBINE BLDG.	H-11024	H	-11024
7. P&ID PROCESS RADMON. SHT 1	D11-1010	H	-16563
8. DESIGN RECOMMENDATIONS	221-504(G.E.N.O.)		
9. PLANT REQUIREMENTS	A61-4020	S	-17109
10. P&ID RADWASTE SYS.	G11-1010	H	-16177
11. PIPING & INSTRUMENT SYMBOLS	A41-1010	S	-15061
12. SAMPLE SYS. P&ID & P.F.D.	P33-1010	H	-16281
13. DELETE			
14. DRYWELL PNEUMATIC SYS.	P70-1010	H	-16286
15. DIGITAL INPUT SIGNALS TO THE ERIF COMPUTER SYSTEM (I.E.D. SH. 7 OF 15)	X75-1010	H	-16409
16. TORUS DRAINAGE & PURIFICATION SYSTEM P&ID AND P.F.D.	G51-1010/1020	H	-16135
17. PROCESS RADIATION MONT. DRIVING SYSTEM P&ID SHT. 2	D11-1010	H	-16564

CRITICAL DOCUMENT

MPL NO. P42-1010 AC402010 H16009

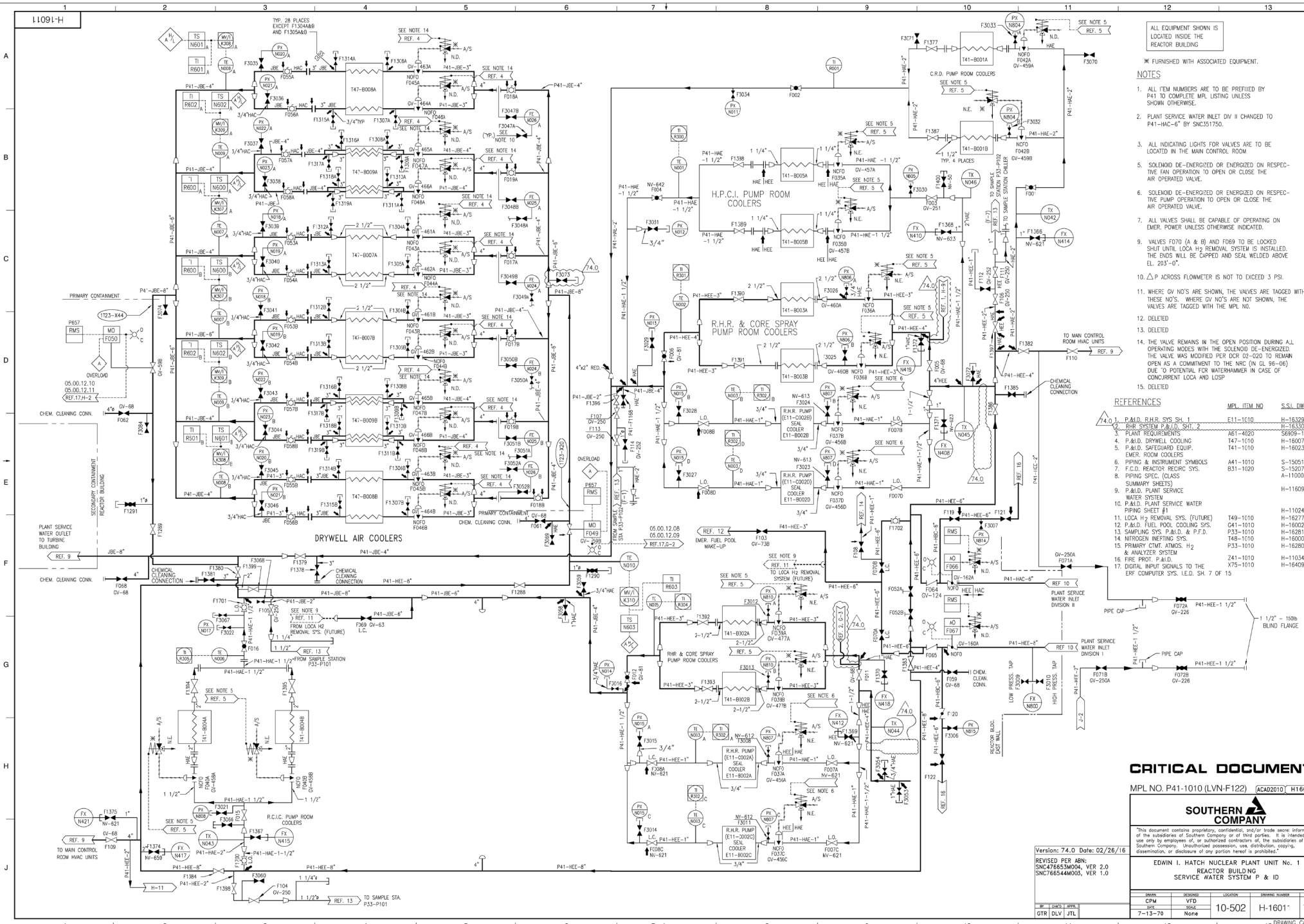


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Version: 62.0 Date: 12/29/15
 REVISED PER ABN SNC657/M014, VER 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1			
REACTOR BLDG. CLOSED COOLING WATER SYSTEM P&ID			
REV.	DATE	DESCRIPTION	ISSUED BY
1	1-30-76	None	H-16009 62.0

GTR DAB JTL



ALL EQUIPMENT SHOWN IS LOCATED INSIDE THE REACTOR BUILDING.

* FURNISHED WITH ASSOCIATED EQUIPMENT.

- NOTES**
- ALL ITEM NUMBERS ARE TO BE PREFIXED BY P41 TO COMPLETE M.P. LISTING UNLESS SHOWN OTHERWISE.
 - PLANT SERVICE WATER INLET DIV #1 CHANGED TO P41-HAC-6" BY SNC151750.
 - ALL INDICATING LIGHTS FOR VALVES ARE TO BE LOCATED IN THE MAIN CONTROL ROOM.
 - SOLENOID DE-ENERGIZED OR ENERGIZED ON RESPECTIVE FAI OPERATION TO OPEN OR CLOSE THE AIR OPERATED VALVE.
 - SOLENOID DE-ENERGIZED OR ENERGIZED ON RESPECTIVE PUMP OPERATION TO OPEN OR CLOSE THE AIR OPERATED VALVE.
 - ALL VALVES SHALL BE CAPABLE OF OPERATING ON EMER. POWER UNLESS OTHERWISE INDICATED.
 - VALVES F070 (A & B) AND F069 TO BE LOCKED SHUT UNTIL LOCA H₂ REMOVAL SYSTEM IS INSTALLED. THE ENDS WILL BE CAPPED AND SEAL WELDED ABOVE EL. 203'-0".
 - Δ P ACROSS FLOWMETER IS NOT TO EXCEED 3 PSI.
 - WHERE GV NO'S ARE SHOWN, THE VALVES ARE TAGGED WITH THESE NO'S. WHERE GV NO'S ARE NOT SHOWN, THE VALVES ARE TAGGED WITH THE MPL NO.
 - DELETED
 - DELETED
 - THE VALVE REMAINS IN THE OPEN POSITION DURING ALL OPERATING MODES WITH THE SOLENOID DE-ENERGIZED. THE VALVE WAS MODIFIED PER DCR 02-020 TO REMAIN OPEN AS A COMMITMENT TO THE NRC (ON CL 96-06) DUE TO POTENTIAL FOR WATERHAMMER IN CASE OF COMPONENT LOCA AND LOSP.
 - DELETED

REFERENCES

MPL ITEM NO	S.S.I. DWG NO	
1. P.A.D. R.H.R. SYS. SH. 1	F11-1100	H-18229
2. R.H.R. SYSTEM P.A.D. SH. 2	F11-1100	H-18229
3. PLANT REQUIREMENTS	A61-4020	56909-1
4. P.A.D. DRYWELL COOLING	T47-1010	H-16007
5. P.A.D. SAFEGUARD EQUIP. EMER. ROOM COOLERS	T41-1010	H-16023
6. PIPING & INSTRUMENT SYMBOLS	A41-1010	S-15051
7. F.C.I. REACTOR RECIRC. SYS.	631-1020	S-15027
8. PIPING SPEC. (CLASS SUMMARY SHEETS)		A-11000
9. P.A.D. PLANT SERVICE WATER		H-11609
10. P.A.D. PLANT SERVICE WATER PIPING SHEET #1		H-11024
11. LOCA H ₂ REMOVAL SYS. (FUTURE)	T49-1010	H-18277
12. P.A.D. FUEL POOL COOLING SYS.	C41-1010	H-16002
13. SAMPLING SYS. P.A.D. & P.F.D.	P33-1010	H-16281
14. NITROGEN INERTING SYS.	T48-1010	H-16004
15. PRIMARY CONT. ATMOS. H ₂ ANALYZER SYSTEM	P33-1010	H-16280
16. FIRE PROT. P.A.D.	Z41-1010	H-11034
17. DIGITAL INPUT SIGNALS TO THE ERF COMPUTER SYS. I.E.D. SH. 7 OF 15	X75-1010	H-16409

CRITICAL DOCUMENT

MPL NO. P41-1010 (LVN-F122) ACAD2010 H16011

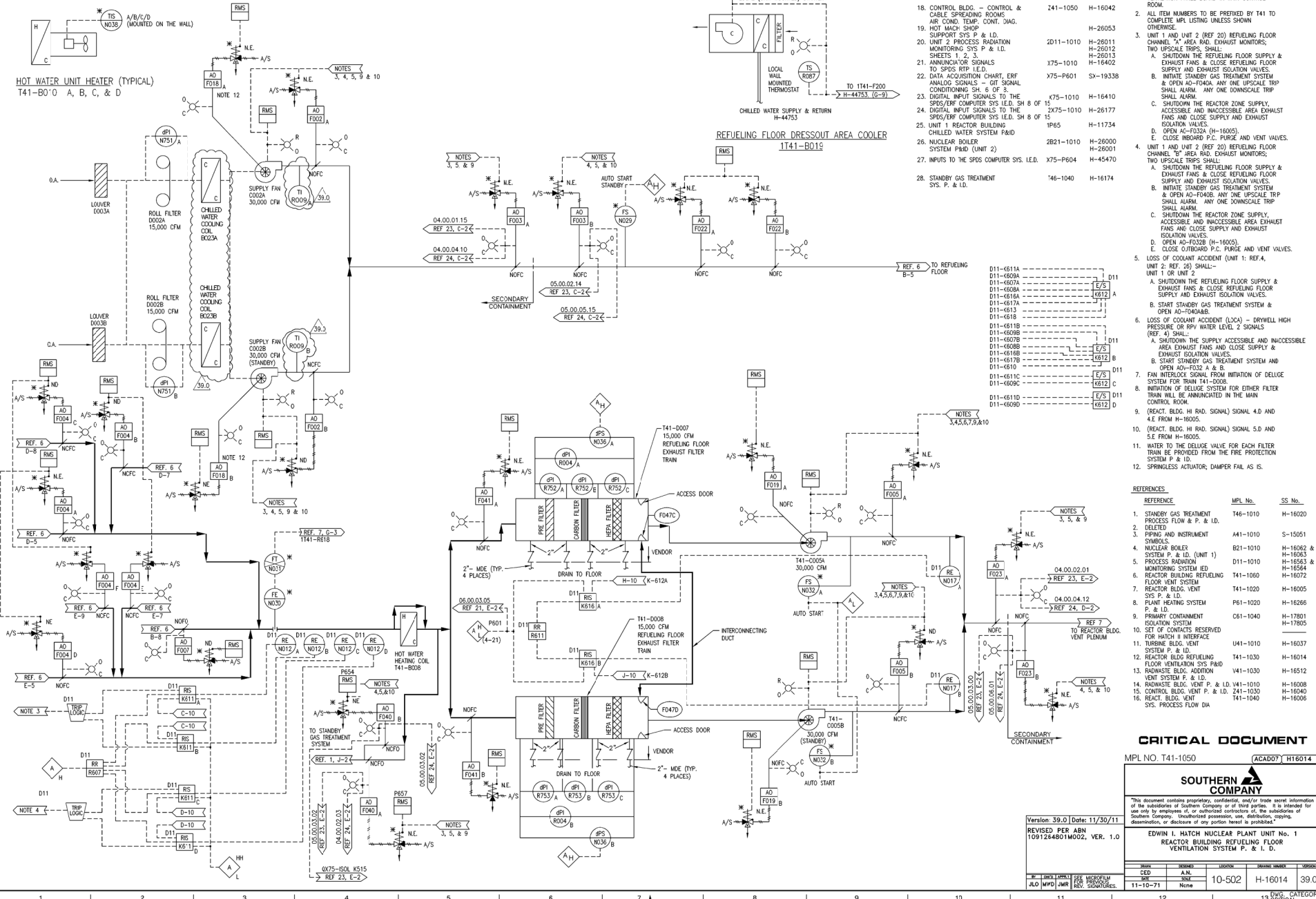


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EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1
REACTOR BUILDING
SERVICE WATER SYSTEM P & ID

Version: 74.0 Date: 02/26/16
REVISED PER ABR SNC476553M004, VER 2.0
SNC766544M003, VER 1.0

NO.	DATE	BY	REVISION	DESCRIPTION
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- REFERENCES (CONT.)
- 17. DELETED
 - 18. CONTROL BLDG. - CONTROL & CABLE SPREADING ROOMS AIR COND TEMP. CONT. DIAG. H-26053
 - 19. HOT MACH SHOP SUPPORT SYS P & I.D. H-26011
 - 20. UNIT 2 PROCESS RADIATION MONITORING SYS P & I.D. SHEETS 1, 2, 3. D011-1010 H-26012
 - 21. ANNUNCIATOR SIGNALS TO SPDS RIP I.E.D. H-18402
 - 22. DATA ACQUISITION CHART, ERF ANALOG SIGNALS - GT SIGNAL CONDITIONING SH 6 OF 8. H-18402
 - 23. DIGITAL INPUT SIGNALS TO THE SPDS/ERF COMPUTER SYS I.E.D. SH 8 OF 15. H-16410
 - 24. DIGITAL INPUT SIGNALS TO THE SPDS/ERF COMPUTER SYS I.E.D. SH 8 OF 15. H-26177
 - 25. UNIT 1 REACTOR BUILDING CHILLED WATER SYSTEM P&ID. H-11734
 - 26. NUCLEAR BOILER CHILLED WATER SYSTEM P&ID. H-26000
 - 27. INPUTS TO THE SPDS COMPUTER SYS. I.E.D. H-45470
 - 28. STANDBY GAS TREATMENT SYS. P. & I.D. H-16174

- NOTES
1. ALL INDICATING LAMPS ON VALVES TO BE ON VENTILATION PANEL BOARD IN MAIN CONTROL ROOM.
 2. ALL ITEM NUMBERS TO BE PREPARED BY T41 TO COMPLETE MPL LISTING UNLESS SHOWN OTHERWISE.
 3. UNIT 1 AND UNIT 2 (REF 20) REFUELING FLOOR CHANNEL 'A' AREA RAD. EXHAUST MONITORS, TWO UPSCALE TRIPS SHALL:
 - A. SHUTDOWN THE REFUELING FLOOR SUPPLY & EXHAUST ISOLATION VALVES.
 - B. INITIATE STANDBY GAS TREATMENT SYSTEM & OPEN AO-F040B. ANY ONE UPSCALE TRIP SHALL ALARM. ANY ONE DOWNSCALE TRIP SHALL ALARM.
 - C. SHUTDOWN THE REACTOR ZONE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY AND EXHAUST ISOLATION VALVES.
 - D. OPEN AO-F032A (H-16005).
 - E. CLOSE INBOARD P.C. PURGE AND VENT VALVES.
 4. UNIT 1 AND UNIT 2 (REF 20) REFUELING FLOOR CHANNEL 'B' AREA RAD. EXHAUST MONITORS, TWO UPSCALE TRIPS SHALL:
 - A. SHUTDOWN THE REFUELING FLOOR SUPPLY & EXHAUST ISOLATION VALVES.
 - B. INITIATE STANDBY GAS TREATMENT SYSTEM & OPEN AO-F040B. ANY ONE UPSCALE TRIP SHALL ALARM. ANY ONE DOWNSCALE TRIP SHALL ALARM.
 - C. SHUTDOWN THE REACTOR ZONE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY AND EXHAUST ISOLATION VALVES.
 - D. OPEN AO-F032B (H-16005).
 - E. CLOSE OUTBOARD P.C. PURGE AND VENT VALVES.
 5. LOSS OF COOLANT ACCIDENT (UNIT 1: REF. 4, UNIT REF. 20) SHALL:
 - UNIT 1 OR UNIT 2:
 - A. SHUTDOWN THE REFUELING FLOOR SUPPLY & EXHAUST FANS & CLOSE REFUELING FLOOR SUPPLY AND EXHAUST ISOLATION VALVES.
 - B. START STANDBY GAS TREATMENT SYSTEM & OPEN AO-F040AB.
 - C. SHUTDOWN THE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY & EXHAUST ISOLATION VALVES.
 - D. START STANDBY GAS TREATMENT SYSTEM AND OPEN AO-F032 A & B.
 - UNIT 2:
 - A. SHUTDOWN THE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY & EXHAUST ISOLATION VALVES.
 - B. START STANDBY GAS TREATMENT SYSTEM AND OPEN AO-F032 A & B.
 6. LOSS OF COOLANT ACCIDENT (LOCA) - DRYWELL HIGH PRESSURE OR RPV WATER LEVEL 2 SIGNALS (REF. 4) SHALL:
 - A. SHUTDOWN THE SUPPLY ACCESSIBLE AND INACCESSIBLE AREA EXHAUST FANS AND CLOSE SUPPLY & EXHAUST ISOLATION VALVES.
 - B. START STANDBY GAS TREATMENT SYSTEM AND OPEN AO-F032 A & B.
 7. FAN INTERLOCK SIGNAL FROM INITIATION OF DELUGE SYSTEM FOR TRAIN T41-0008.
 8. INITIATION OF DELUGE SYSTEM FOR EITHER FILTER TRAIN WILL BE ANNUNCIATED IN THE MAIN CONTROL ROOM.
 9. (REACT. BLDG. H. RAD. SIGNAL) SIGNAL 4.D AND 4.E FROM H-16005.
 10. (REACT. BLDG. H. RAD. SIGNAL) SIGNAL 5.D AND 5.E FROM H-16005.
 11. WATER TO THE DELUGE VALVE FOR EACH FILTER TRAIN BE PROVIDED FROM THE PROTECTION SYSTEM P & I.D.
 12. SPRINGLESS ACTUATOR; DAMPER FAIL AS IS.

REFERENCES

REFERENCE	MPL No.	SS No.
1. STANDBY GAS TREATMENT PROCESS FLOW & P. & I.D.	T46-1010	H-16020
2. DELETED		
3. PIPING AND INSTRUMENT SYMBOLS	A41-1010	S-15051
4. NUCLEAR BOILER SYSTEM P. & I.D. (UNIT 1)	B02-1010	H-16022 & H-16023
5. PROCESS RADIATION MONITORING SYSTEM IED	D11-1010	H-16583 & H-16584
6. REACTOR BUILDING REFUELING FLOOR VENT SYSTEM	T41-1060	H-16072
7. REACTOR BLDG. VENT	T41-1020	H-16005
8. PLANT HEATING SYSTEM P. & I.D.	P61-1020	H-16266
9. PRIMARY CONTAINMENT ISOLATION SYSTEM	C61-1040	H-17801 & H-17805
10. SET OF CONTACTS RESERVED FOR HATCH II INTERFACE		
11. TURBINE BLDG. VENT SYSTEM P. & I.D.	U41-1010	H-16037
12. REACTOR BLDG REFUELING FLOOR VENTILATION SYS P&ID	T41-1030	H-16014
13. RADWASTE BLDG. ADDITION	V41-1030	H-16512
14. RADWASTE BLDG. VENT P. & I.D. U41-1010		H-16008
15. CONTROL BLDG. VENT P. & I.D. T41-1030		H-16040
16. REACT. BLDG. VENT SYS. PROCESS FLOW DIA	T41-1040	H-16006

CRITICAL DOCUMENT

MPL NO. T41-1050 (ACAD07) H16014

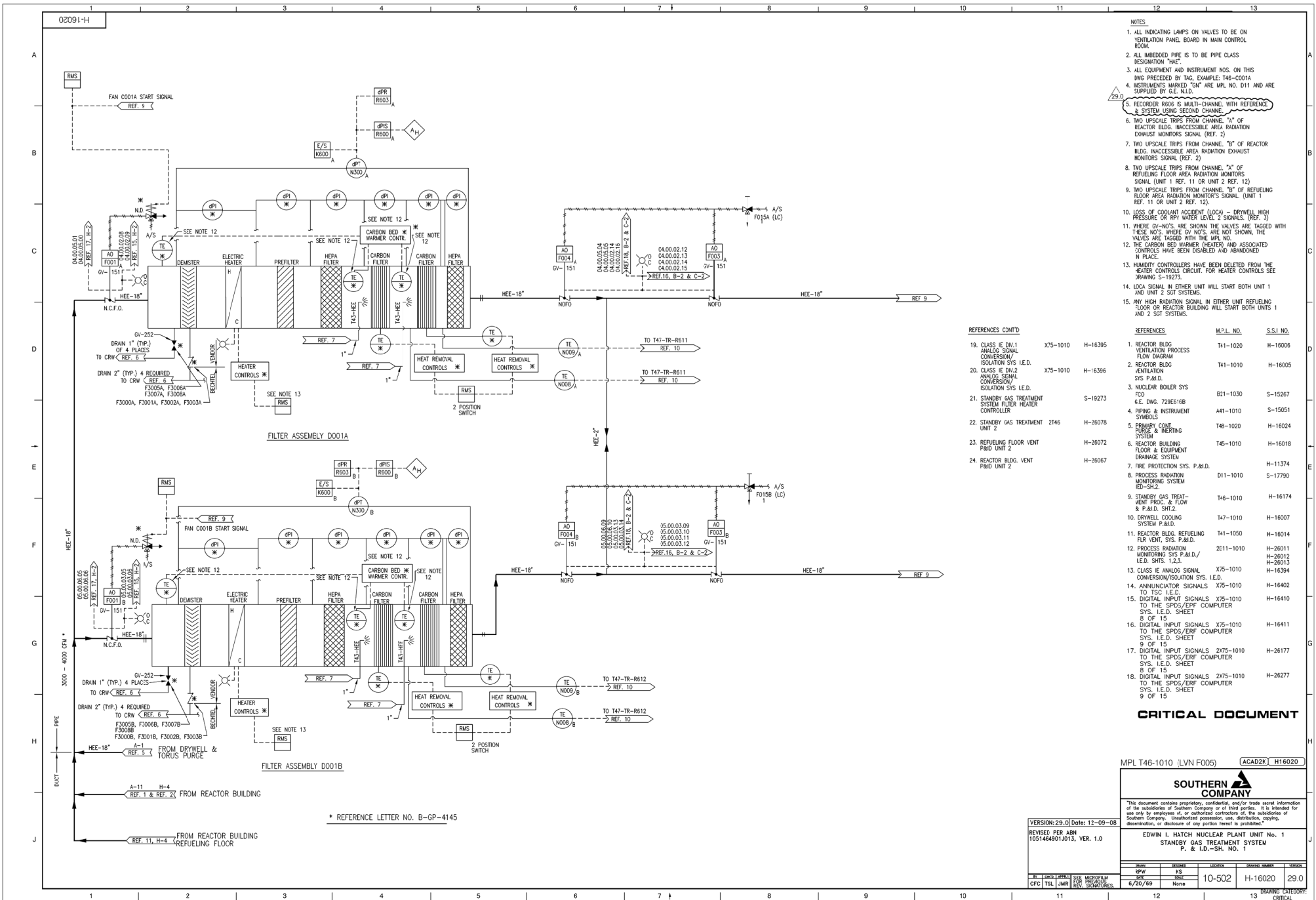


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EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
REACTOR BUILDING REFUELING FLOOR
VENTILATION SYSTEM P. & I. D.

Version 39.0 [Date: 11/30/11]
REVISED PER ADM 1091244-601M002, VER. 1.0

NO.	DATE	BY	REASON	LOCATION	ISSUED NUMBER	ORIGINAL
11-10-21			None	10-502	H-16014	39.0



- NOTES**
1. ALL INDICATING LAMPS ON VALVES TO BE ON VENTILATION PANEL BOARD IN MAIN CONTROL ROOM.
 2. ALL IMBEDDED PIPE IS TO BE PIPE CLASS DESIGNATION "HE".
 3. ALL EQUIPMENT AND INSTRUMENT NOS. ON THIS DWG PRECEDED BY TAG, EXAMPLE: T46-C001A
 4. INSTRUMENTS MARKED "CM" ARE MPL NO. D11 AND ARE SUPPLIED BY G.E. N.L.D.
 5. RECORDER R606 IS MULTI-CHANNEL, WITH REFERENCE & SYSTEM USING SECOND CHANNEL.
 6. TWO UPSCALE TRIPS FROM CHANNEL "A" OF REACTOR BLDG. INACCESSIBLE AREA RADIATION EXHAUST MONITORS SIGNAL (REF. 2)
 7. TWO UPSCALE TRIPS FROM CHANNEL "B" OF REACTOR BLDG. INACCESSIBLE AREA RADIATION EXHAUST MONITORS SIGNAL (REF. 2)
 8. TWO UPSCALE TRIPS FROM CHANNEL "A" OF REFUELING FLOOR AREA RADIATION MONITORS SIGNAL (UNIT 1 REF. 11 OR UNIT 2 REF. 12)
 9. TWO UPSCALE TRIPS FROM CHANNEL "B" OF REFUELING FLOOR AREA RADIATION MONITORS SIGNAL (UNIT 1 REF. 11 OR UNIT 2 REF. 12)
 10. LOSS OF COOLANT ACCIDENT (LOCA) - DRYWELL HIGH PRESSURE OR RPI WATER LEVEL 2 SIGNALS. (REF. 3)
 11. WHERE O.V.-NOS. ARE SHOWN THE VALVES ARE TAGGED WITH THESE NOS. WHERE O.V. NOS. ARE NOT SHOWN, THE VALVES ARE TAGGED WITH THE MPL NO.
 12. THE CARBON BED WARMER (HEATER) AND ASSOCIATED CONTROLS HAVE BEEN DISASSEMBLED AND ABANDONED IN PLACE.
 13. HANDBOOK CONTROLLERS HAVE BEEN DELETED FROM THE WATER CONTROLS CIRCUIT. FOR HEATER CONTROLS SEE DRAWING S-19273.
 14. LOCA SIGNAL IN EITHER UNIT WILL START BOTH UNIT 1 AND UNIT 2 SET SYSTEMS.
 15. ANY HIGH RADIATION SIGNAL IN EITHER UNIT REFUELING FLOOR OR REACTOR BUILDING WILL START BOTH UNITS 1 AND 2 SET SYSTEMS.

REFERENCES CONT'D

CLASS	NO.	SYMBOL	DESCRIPTION	M.P.L. NO.	S.S.I. NO.
19.	CLASS IE DIV.1 ANALOG SIGNAL CONVERSION/ ISOLATION SYS I.E.D.	X15-1010	H-16395	1. REACTOR BLDG. VENTILATION PROCESS FLOW DIAGRAM	T41-1020 H-16006
20.	CLASS IE DIV.2 ANALOG SIGNAL CONVERSION/ ISOLATION SYS I.E.D.	X15-1010	H-16396	2. REACTOR BLDG. VENTILATION SYS P.&I.D.	T41-1010 H-16005
21.	STANDBY GAS TREATMENT SYSTEM FILTER HEATER CONTROLLER	S-19273		3. NUCLEAR BOILER SYS FCO G.E. DWG. 7246168	B21-1030 S-15267
22.	STANDBY GAS TREATMENT UNIT 2	H-26078		4. PIPING & INSTRUMENT SYMBOLS	A41-1010 S-15051
23.	REFUELING FLOOR VENT P&ID UNIT 2	H-26072		5. PRIMARY CONT. PIPING & HEATING SYSTEM	T48-1020 H-16024
24.	REACTOR BLDG. VENT P&ID UNIT 2	H-26067		6. REACTOR BUILDING FLOOR & EQUIPMENT DRAINAGE SYSTEM	T45-1010 H-16018
				7. FIRE PROTECTION SYS. P.&I.D.	H-11374
				8. PROCESS RADIATION MONITORING SYSTEM IED-SH.2.	D11-1010 S-17790
				9. STANDBY GAS TREATMENT PROC. & FLOW & P.&I.D. SH.2.	T46-1010 H-16174
				10. DRYWELL COOLING SYSTEM P.&I.D.	T47-1010 H-16007
				11. REACTOR BLDG. REFUELING FLR VENT, SYS. P.&I.D.	T41-1050 H-16014
				12. PROCESS RADIATION MONITORING SYS P.&I.D./ I.E.D. SHTS. 1,2,3.	2011-1010 H-26011 H-26012 H-26013
				13. CLASS IE ANALOG SIGNAL CONVERSION/ISOLATION SYS. I.E.D.	X15-1010 H-16394
				14. ANNUNCIATOR SIGNALS	X15-1010 H-16402
				15. DIGITAL INPUT SIGNALS TO THE SPDS/EPF COMPUTER SYS. I.E.D. SHEET 8 OF 15	X15-1010 H-16410
				16. DIGITAL INPUT SIGNALS TO THE SPDS/EPF COMPUTER SYS. I.E.D. SHEET 9 OF 15	X15-1010 H-16411
				17. DIGITAL INPUT SIGNALS TO THE SPDS/EPF COMPUTER SYS. I.E.D. SHEET 8 OF 15	2975-1010 H-26177
				18. DIGITAL INPUT SIGNALS TO THE SPDS/EPF COMPUTER SYS. I.E.D. SHEET 9 OF 15	2975-1010 H-26277

CRITICAL DOCUMENT

MPL T46-1010 (LVN F005) **ACAD2K H16020**



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EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
STANDBY GAS TREATMENT SYSTEM
P. & I.D.-SH. NO. 1

VERSION: 29.0 Date: 12-09-08
REVISED PER AEN 1031464921.013, VER. 1.0

NO.	DATE	BY	CHKD.	REV.	DESCRIPTION
1	6/20/69	JWR			REV. SIGNATURES

NO.	DATE	BY	CHKD.	REV.	DESCRIPTION
1	6/20/69	JWR			REV. SIGNATURES

* REFERENCE LETTER NO. B-GP-4145

OTHER SYSTEMS
 SERVICE WATER TO EMERGENCY EQUIPMENT
 SERVICE WATER INSTALLED WITH UNIT 1 BUT SERVING UNIT 2
 OTHER SERVICE WATER

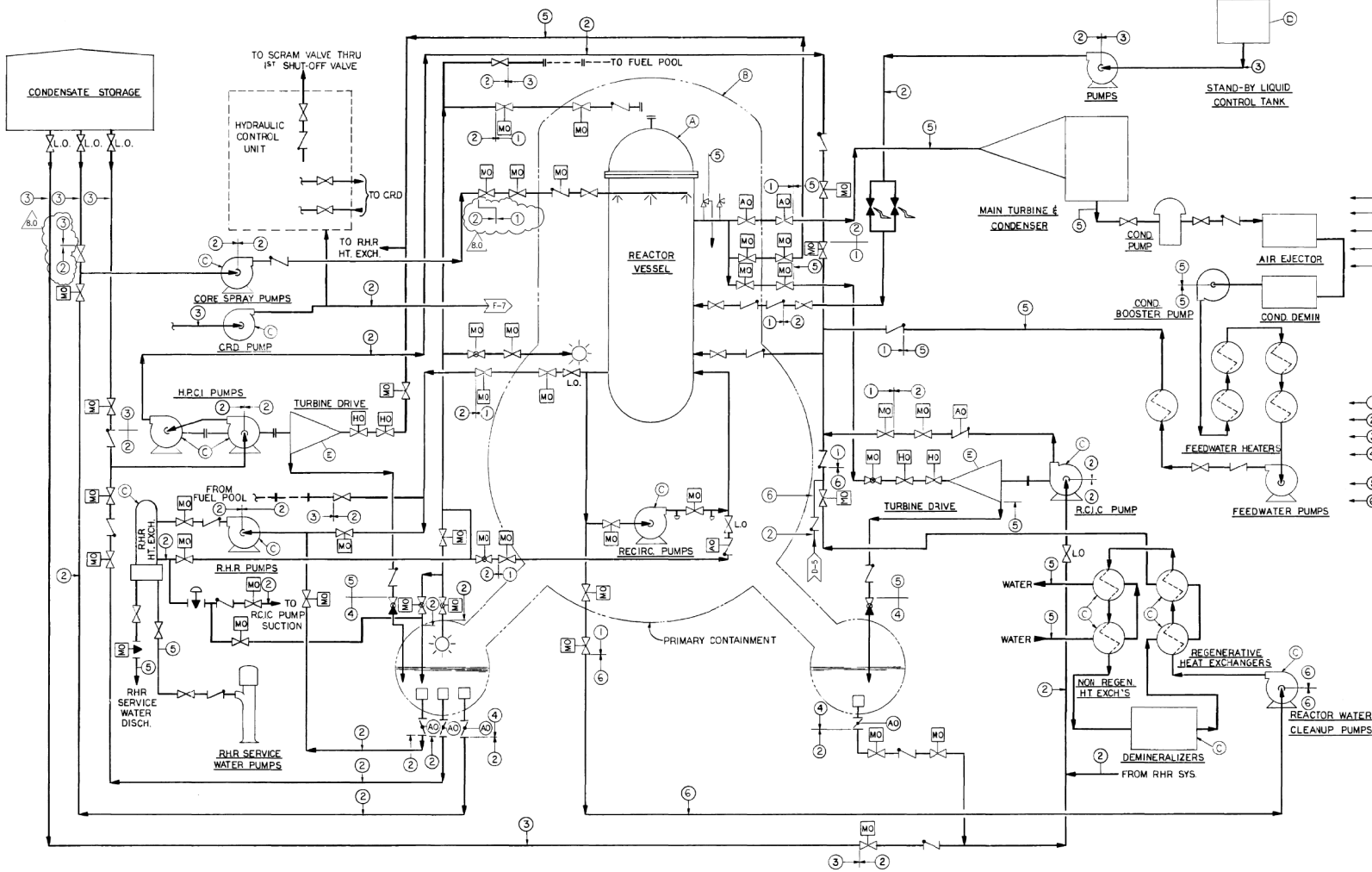
CLASSIFICATION
 F-ADDITIONAL QUALITY CONTROL
 3
 5

EQUIPMENT CODES

- Ⓐ ASME SECTION IIIA
- Ⓑ ASME SECTION IIIB
- Ⓒ ASME SECTION IIIC
- Ⓓ ASME SECTION VIII API 620 650
- Ⓔ ENGINEERING SPECIFICATION

PIPING CLASSIFICATION

- ① USAS B31.7 CODE CLASS 1 PIPING
- ② USAS B31.7 CODE CLASS 2 PIPING
- ③ USAS B31.7 CODE CLASS 3 PIPING
- ④ ASME CODE SECTION III EXTENSION OF CONTAINMENT
- ⑤ USAS B31.1 CODE
- ⑥ ASME SECTION III CLASS 3



ACADDPY 1116022

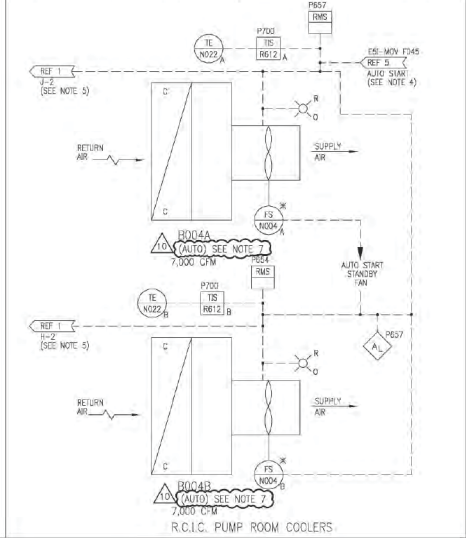
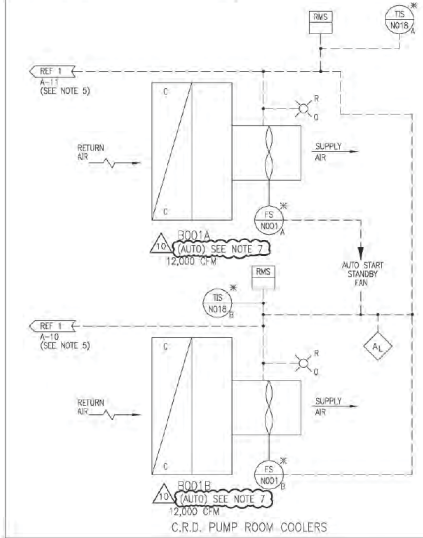
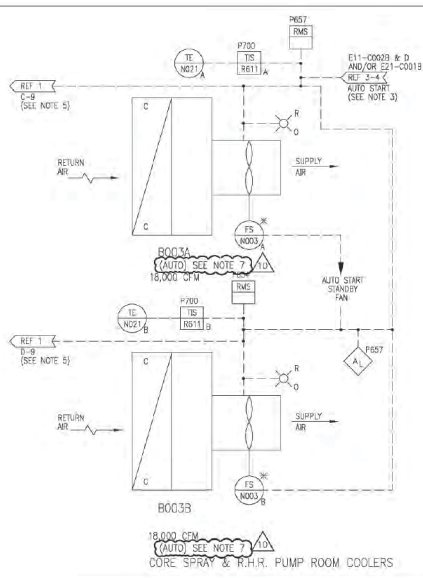
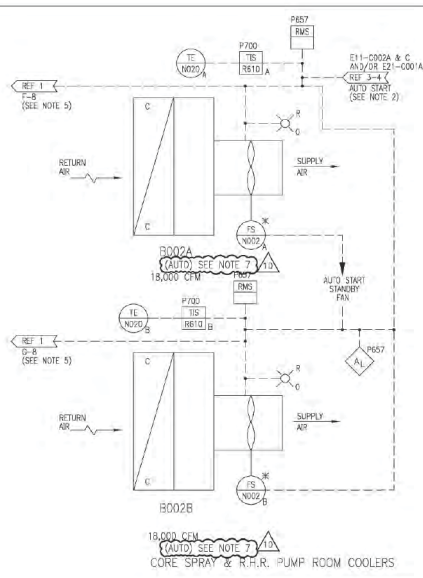
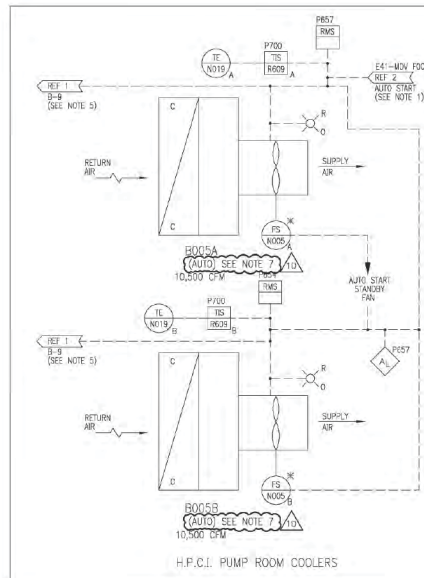


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Version: 8.0 | Date: 02/11/09
 Revised by: ASN-H0114,
 Ver. 1.0.

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
 PIPING AND EQUIPMENT CODE
 CLASSIFICATION DIAGRAM

REV	DATE	BY	CHKD	ISSUED	DESCRIPTION
1	02/11/09	ASN	ASN	10-502	H-16022 8.0



- NOTES**
1. AUTOMATIC START SIGNAL FROM VALVE CONTACT E41-F001
 2. AUTOMATIC START SIGNAL FROM PUMPS STARTER CIRCUIT E11-C002A, C AND/OR E21-C001A
 3. AUTOMATIC START SIGNAL FROM PUMPS STARTER CIRCUIT E11-C002B, D AND/OR E21-C001B
 4. AUTOMATIC START SIGNAL FROM VALVE CONTACT E51-F045
 5. DE-ENERGIZE SOLENOID VALVE ON RESPECTIVE FAN OPERATION TO OPEN AIR OPERATED VALVE.
 6. ALL EQUIPMENT AND INSTRUMENT NOTED ON THIS SWG PRECEDED BY 141; EXAMPLE: 141-B000A
 7. DURING NORMAL PLANT OPERATION, BOTH "A" & "B" COOLERS ARE ALLOWED TO THE "AUTO" POSITION. ANY ONE COOLER MAY BE OPERATED AS NEEDED. DURING ABNORMAL OR ACCIDENT CONDITION, UPON VERIFICATION OF START OF BOTH COOLERS, ANY ONE COOLER COULD BE SELECTED TO BE IN THE "STANDBY" POSITION.

REFERENCES

REF.	REFERENCES	MPL No.	SS No.
1.	REACTOR BUILDING PLANT SERVICE WATER SYSTEM P. & I.D.	P41-1010	H-16011
2.	F.C.D. H.P.C.I. SYSTEM	E41-1030	H-19900
3.	F.C.D. R.H.R. SYSTEM	E11-1030	H-19937
4.	F.C.D. CORE SPRAY SYSTEM	E21-1030	H-19944
5.	F.C.D. R.C.I.C. SYSTEM	E51-1030	H-19956
6.	PIPING & INSTRUMENT SYMBOLS	A41-1010	SI-15051

CRITICAL DOCUMENT

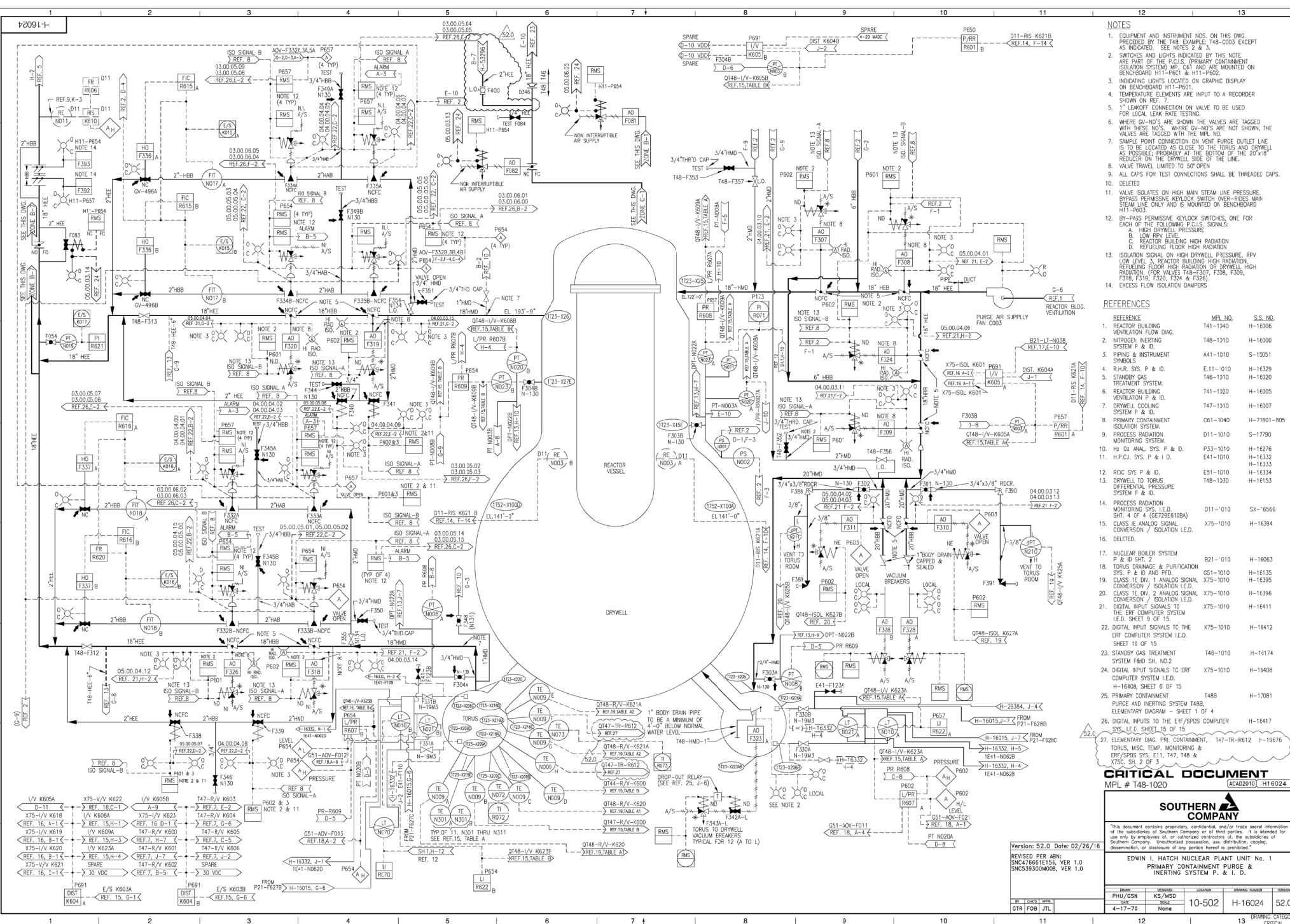
MPL T41-1030 (ACAD14) H16023



EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1 SAFEGUARD EQUIPMENT COOLING P. & I.D.

Revision: 10 Date: 12-28-99
REVISED PER ABN 97-0163

NO.	DATE	BY	CHKD.	REVISION	REASON
10	12/28/99	JLR	MS	10-502	None



- NOTES**
- EQUIPMENT AND INSTRUMENT NOS. ON THIS DWG. PRECEDED BY THE TAG EXAMPLE, 148-0003 EXCEPT AS INDICATED. SEE NOTES 2 & 3.
 - SWITCHES AND LIGHTS INDICATED BY THIS NOTE ARE PART OF THE P.C.S. (PRIMARY CONTAINMENT ISOLATION SYSTEM) MP, CV, AND ARE MOUNTED ON BENCHBOARD H11-P601 & H11-P602.
 - INDICATING LIGHTS COCTED ON GRAPHIC DISPLAY ON BENCHBOARD H11-P601.
 - TEMPERATURE ELEMENTS ARE INPUT TO A RECORDER SHOWN ON REF. 2.
 - 1\"/> LEAKOFF CONNECTION ON VALVE TO BE USED FOR LOCAL LEAK RATE TESTING.
 - WHERE DV-NOS ARE SHOWN THE VALVES ARE TAGGED WITH THESE NOS. WHERE DV-NOS ARE NOT SHOWN, THE VALVES ARE TAGGED WITH THE MPL NO.
 - SAMPLE POINT CONNECTION ON VENT FLOOR OUTLET LINE IS TO BE LOCATED AS CLOSE TO THE TORUS AND DRYWELL AS POSSIBLE. CONNECTION AT THE BOTTOM OF THE 20\"/> REDUCER ON THE DRYWELL SIDE OF THE LINE.
 - VALVE TRAVEL LIMITED TO 50\"/> OPEN.
 - ALL OPS FOR TEST CONNECTIONS SHALL BE THREADED CAPS.
 - DELETED.
 - VALVE ISOLATES ON HIGH MAIN STEAM LINE PRESSURE. BYPASS PERMISSIVE KEYLOCK SWITCH OVER-RIDES MAIN LINE ONLY AND IS MOUNTED ON BENCHBOARD H11-P603.
 - BY-PASS PERMISSIVE KEYLOCK SWITCHES, ONE FOR EACH OF THE FOLLOWING P.C.S. SWITCHES:
 - A. HIGH DRYWELL PRESSURE
 - B. LOW RPV LEVEL
 - C. HIGH REACTOR BUILDUP HIGH RADIATION
 - D. REFUELING FLOOR HIGH RADIATION
 - ISOLATION SIGNAL ON HIGH DRYWELL PRESSURE, RPV LOW LEVEL, REACTOR BUILDUP HIGH RADIATION, REFUELING FLOOR HIGH RADIATION OR DRYWELL HIGH RADIATION, FOR VALVES 148-F307, F308, F309, F318, F319, F320, F324 & F326.
 - EXCESS FLOW ISOLATION DAMPERS

- REFERENCES**
- | REFERENCE | MPL NO. | S.S. NO. |
|---|----------|------------|
| 1. REACTOR BUILDING VENTILATION FLOOR DIAG. | 148-1340 | H-16006 |
| 2. NITROGEN INERTING SYSTEM P & I | 148-1310 | H-16000 |
| 3. PIPING & INSTRUMENT SYMBOLS | 441-1010 | S-15051 |
| 4. R.H.R. SYS. P & I. | E11-1010 | H-16329 |
| 5. STANDBY GAS TREATMENT SYSTEM P & I. | 148-1310 | H-16020 |
| 6. REACTOR BUILDING VENTILATION P & I. | 141-1220 | H-16005 |
| 7. DRYWELL COOLING SYSTEM P & I. | 147-1310 | H-16007 |
| 8. PRIMARY CONTAINMENT DIFFERENTIAL PRESSURE SYSTEM P & I. | 061-1040 | H-7801-805 |
| 9. PROCESS RADIATION MONITORING SYSTEM. | 011-1010 | S-17890 |
| 10. H ₂ O ₂ ANAL. SYS. P & I. | P33-1010 | H-16276 |
| 11. H ₂ P.C.I. SYS. P & I. | E41-1010 | H-16333 |
| 12. RDC SYS P & I. | E51-1010 | H-16334 |
| 13. DRYWELL TO TORUS DIFFERENTIAL PRESSURE SYSTEM P & I. | 148-1330 | H-16153 |
| 14. PROCESS RADIATION MONITORING SYS. I.E.D. SHEET 4 OF 4 (GE728510BA) | D11-1010 | SV-6566 |
| 15. CLASS II ANALOG SIGNAL CONVERTER / ISOLATION I.E.D. DELETED. | X75-1010 | H-16394 |
| 16. DELETED. | | |
| 17. NUCLEAR BOILER SYSTEM P & I SHEET 2. | B21-1010 | H-16063 |
| 18. TORUS DRAINAGE & PURIFICATION SYS. P & I AND PFD | G51-1010 | H-16135 |
| 19. CLASS I DIV. 1 ANALOG SIGNAL CONVERTER / ISOLATION I.E.D. | X75-1010 | H-16395 |
| 20. CLASS II DIV. 2 ANALOG SIGNAL CONVERTER / ISOLATION I.E.D. | X75-1010 | H-16396 |
| 21. DIGITAL INPUT SIGNALS TO THE ERF COMPUTER SYSTEM I.E.D. SHEET 9 OF 15. | X75-1010 | H-16411 |
| 22. DIGITAL INPUT SIGNALS TO THE ERF COMPUTER SYSTEM I.E.D. SHEET 10 OF 15. | X75-1010 | H-16412 |
| 23. STANDBY GAS TREATMENT SYSTEM F&O SHEET NO.2. | 148-1010 | H-16174 |
| 24. DIGITAL INPUT SIGNALS TO ERF COMPUTER SYSTEM I.E.D. H-16408, SHEET 6 OF 15. | X75-1010 | H-16408 |
| 25. PRIMARY CONTAINMENT PURGE AND INERTING SYSTEM T&B, ELEMENTARY DIAGRAM - SHEET 1 OF 4. | T48B | H-17081 |
| 26. DIGITAL INPUT SIGNALS TO THE ERF/SPDS COMPUTER SYS. I.E.D. SHEET 15 OF 15. | X75-1010 | H-16417 |
| 27. ELEMENTARY DIAG. PRI. CONTAINMENT, T47-TR-R612 F-19576 TORUS, MISC. TEMP. MONITORING & ERF/SPDS SYS. E11, T47, T48 & C75C SHEET 3 OF 3. | | |

CRITICAL DOCUMENT
MPL # 148-1020 (AC402010) H16024



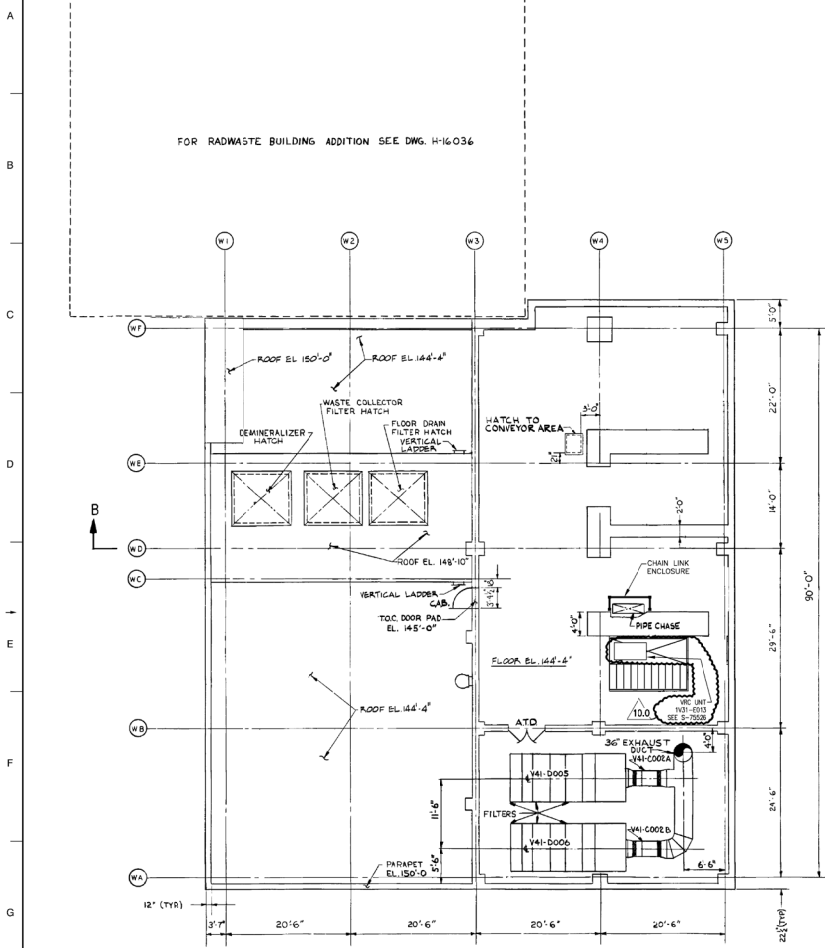
EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
PRIMARY CONTAINMENT PURGE & INERTING SYSTEM P. & I. D.

Version: 52.0 Date: 02/26/16
REVISED PER ABN
SN47661815, VER 1.0
SN353900006, VER 1.0

PHU/CSN	KS/MSD	LOCATION	DESIGN NUMBER	DATE
			10-502	H-16024
			4-17-70	None
				52.0

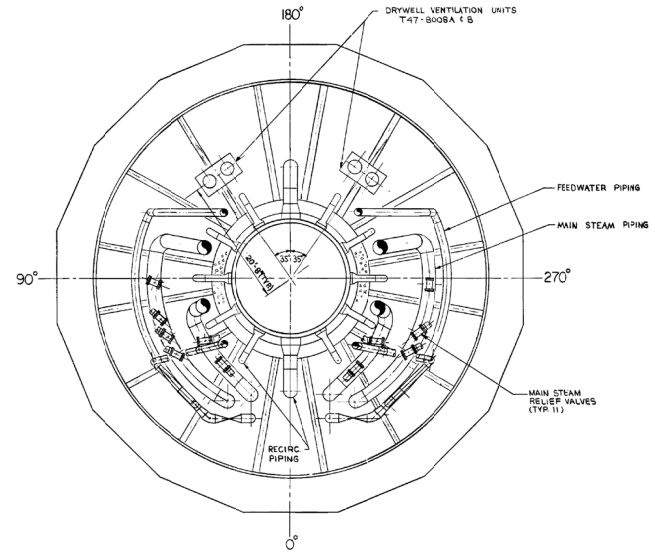
J2091-H

FOR RADWASTE BUILDING ADDITION SEE DWG. H-16036



DWG. H-16033

FLOOR EL. 144'-4"



DRYWELL PLAN ABOVE T.O.S.
EL. 148'-3 1/2"

GVY2000 H16027



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Version: 10.0 Date: 07/28/15
REVISED PER: SNCS17510015 VER 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No.1
EQUIPMENT LOCATIONS
REACTOR & RADWASTE BLOWERS ABOVE EL.144'-4"

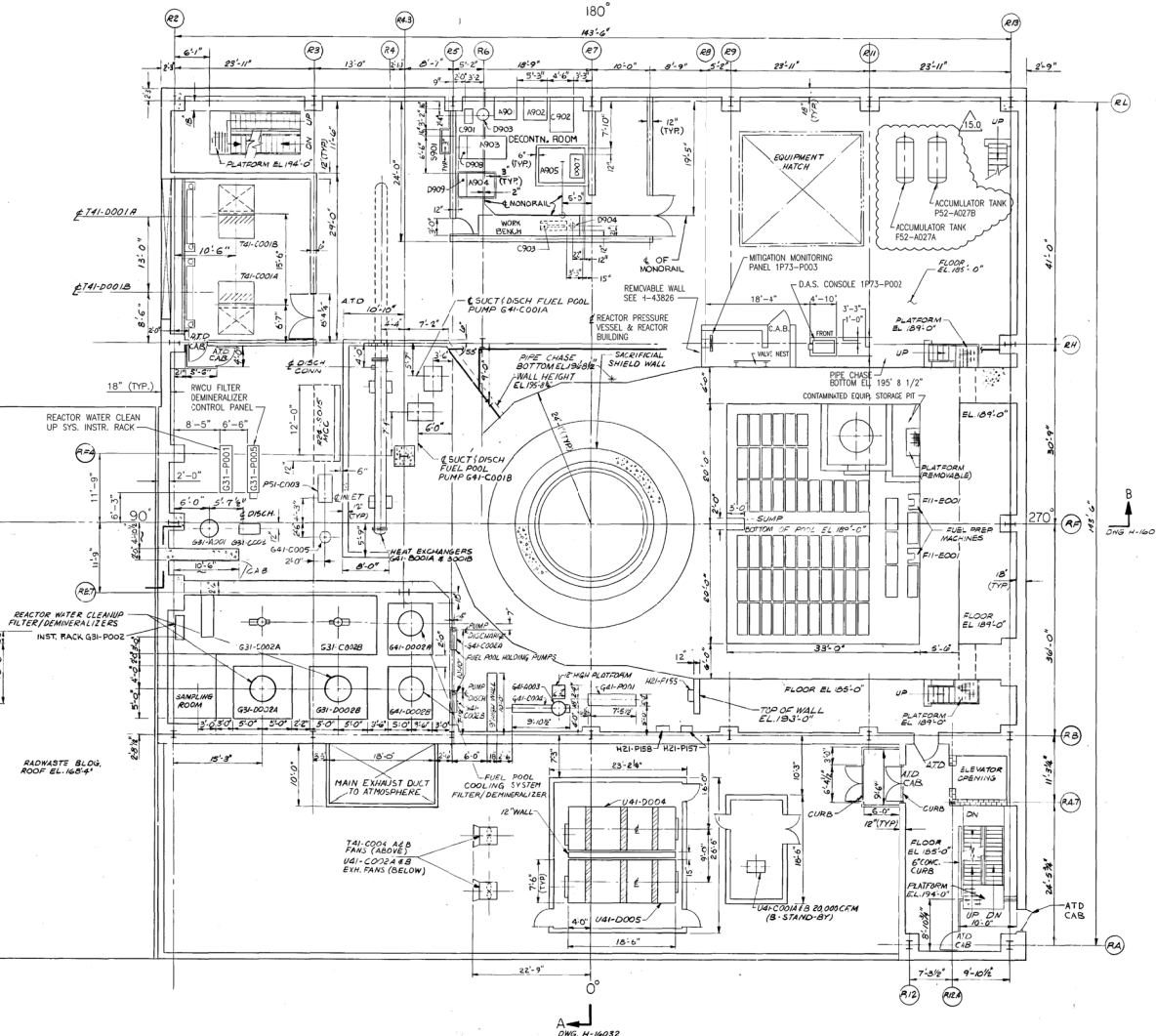
REV	DATE	BY	CHKD	APPD
DAB	JEP	JTL		

DATE	ISSUED	LOCATION	DRAWING NUMBER	VERSION
FY88	FEB			
DATE	SCALE	NO.	NO.	NO.
1-13-69	1/8"=1'-0"	10-502	H-16027	10.0

62091-H



FOR RADWASTE BUILDING ADDITION
SEE DWG. H-16036



NOTES:
1. ALL EQUIPMENT MPL'S LOCATED IN THE
DECONTAMINATION ROOM ARE PREFIXED
BY 'D40'.

REFERENCES:

	MPL NO.	S.S. NO.
1. REACTOR BUILDING HEAT LINE SECTIONAL PLAN	-	H-15305
2. REACTOR BUILDING INTERIOR WALLS	-	H 15356

FLOOR EL. 185'-0"

ACADOVY H16029

SOUTHERN COMPANY

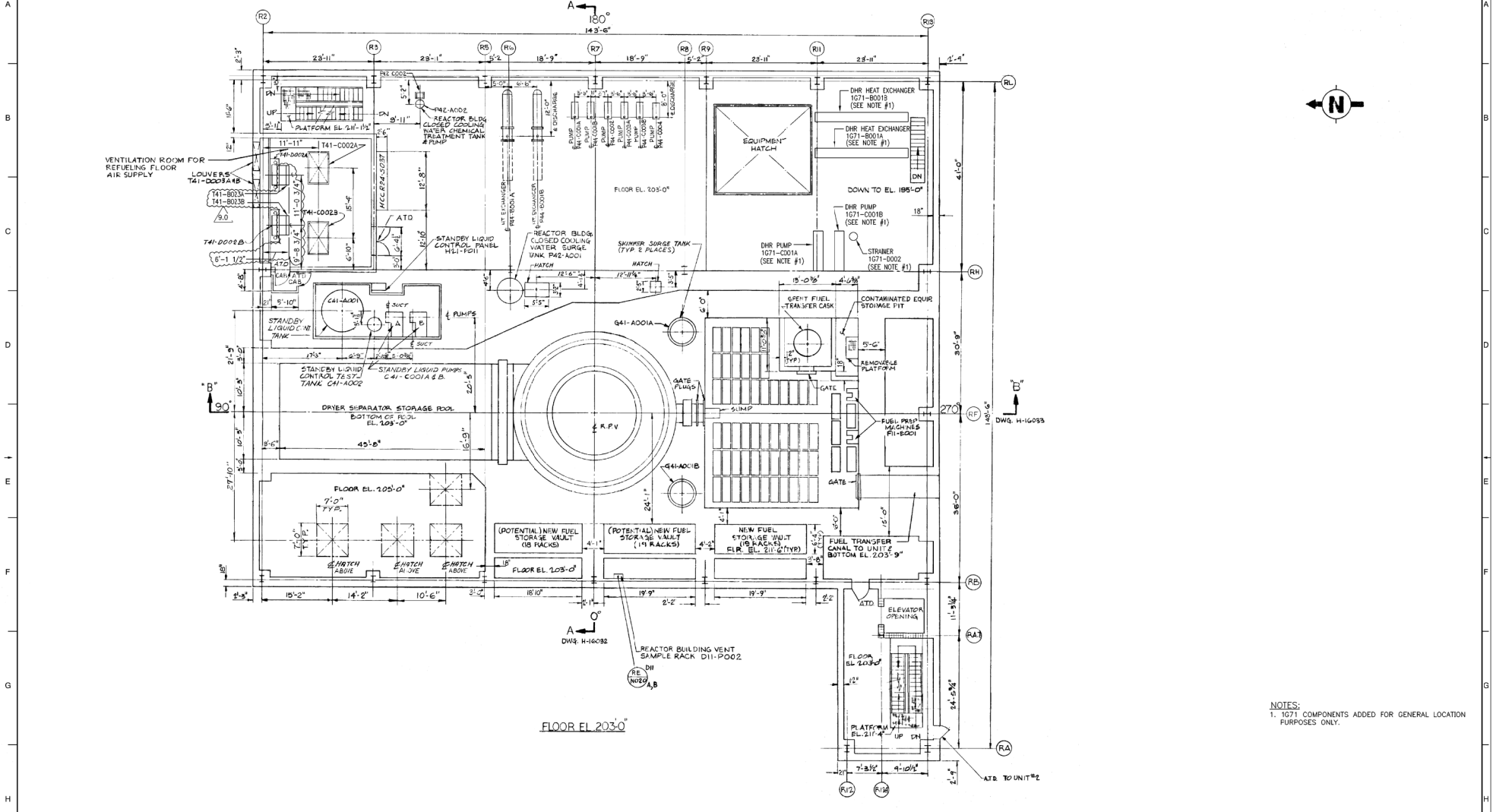
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Version: 15.0 | Date: 4/8/16
REVISED PER ABN
SNCS9390M062, VER. 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1
EQUIPMENT LOCATIONS
REACTOR AND RADWASTE BLDGS. EL. 185'-0"

BY	DATE	REVISION	LOCATION	DRAWING NUMBER	ISSUE
AAG	08	CB			
JLD	07	None	10-502	H-16029	15.0

06091-H



NOTES:
 1. 1G71 COMPONENTS ADDED FOR GENERAL LOCATION PURPOSES ONLY.

ACAD0071 H16030

SOUTHERN COMPANY

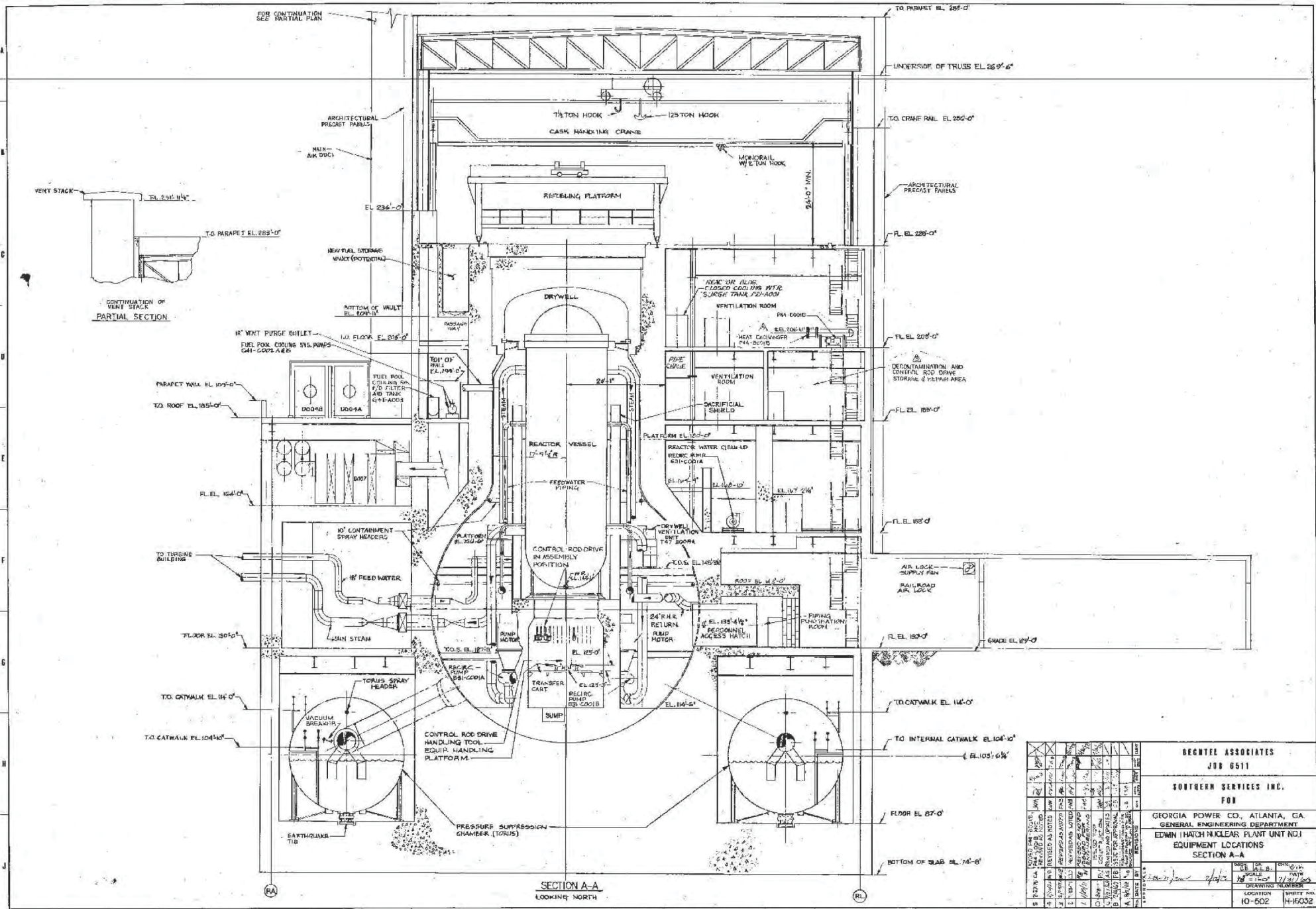
EDWIN I. HATCH NUCLEAR PLANT UNIT No.1
EQUIPMENT LOCATIONS
REACTOR BLDG. EL. 203'-0"

Version: 9.0 Date: 1/12/12
 REVISED PER ABN 1091214601M012, VER. 2.0

NO.	DATE	BY	CHKD.	ISSUED	LOCATION	ISSUED NUMBER	VERSION
1	1/8-11-07	JWR	None	None	10-502	H-16030	9.0

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DCP (MWD) JWR SEE MICROFILM FOR SIGNATURES

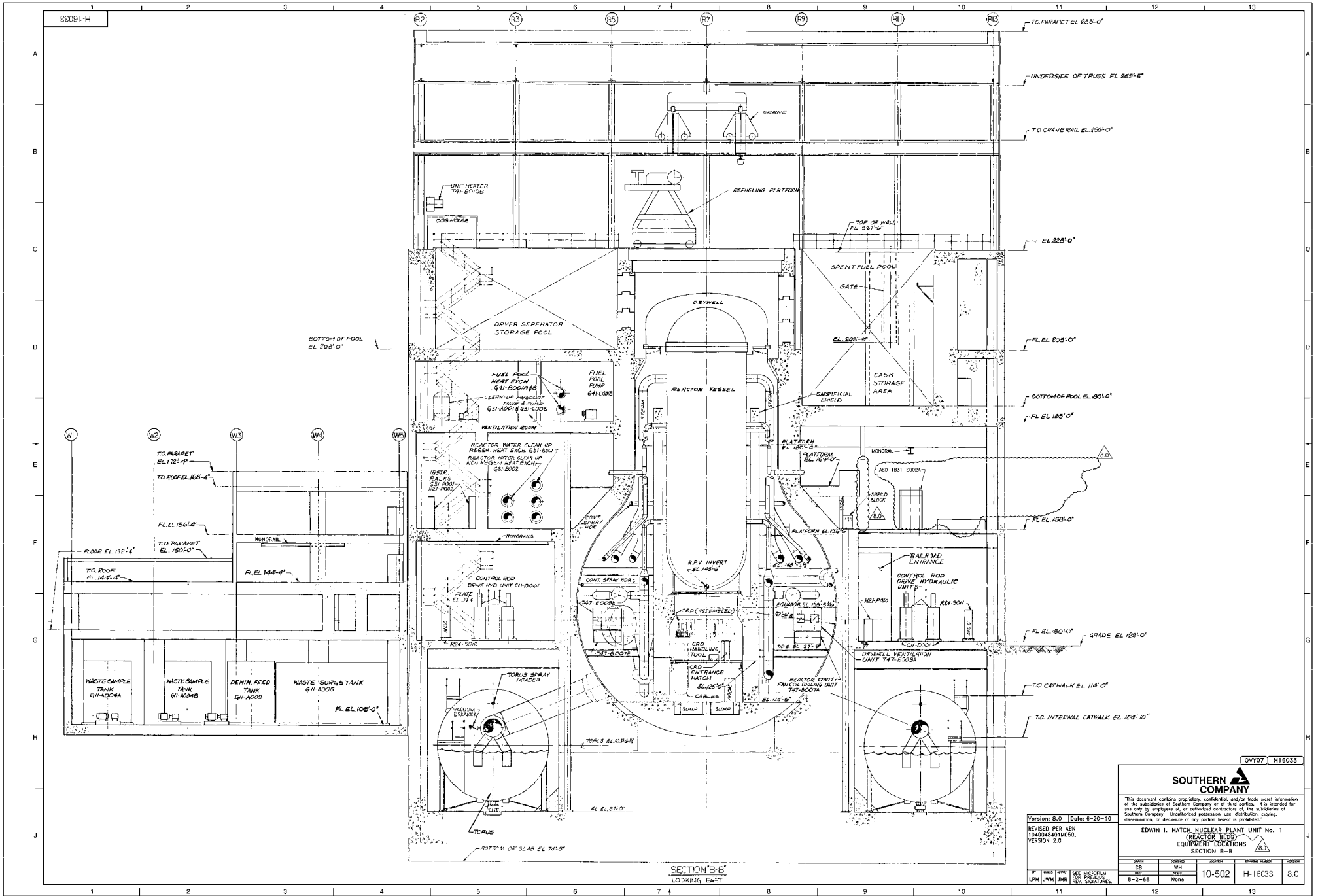


SECTION A-A
LOOKING NORTH

NO.	DATE	BY	CHKD.	DESCRIPTION
1	10/15/52	J. H. HARRIS	J. H. HARRIS	PRELIMINARY
2	11/10/52	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
3	12/15/52	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
4	1/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
5	2/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
6	3/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
7	4/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
8	5/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
9	6/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
10	7/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
11	8/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
12	9/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
13	10/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
14	11/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED
15	12/15/53	J. H. HARRIS	J. H. HARRIS	REVISED AS NOTED

REEDEL ASSOCIATES
 JOB 6511
 SOUTHERN SERVICES INC.
 FOR
 GEORGIA POWER CO., ATLANTA, GA.
 GENERAL ENGINEERING DEPARTMENT
 EDWIN HATCH NUCLEAR PLANT UNIT NO. 1
 EQUIPMENT LOCATIONS
 SECTION A-A

DATE: 10/15/52
 SCALE: 1/8" = 1'-0"
 DRAWING NUMBER: 10-502
 SHEET NO.: 11-15032



00Y07 H16033

SOUTHERN COMPANY

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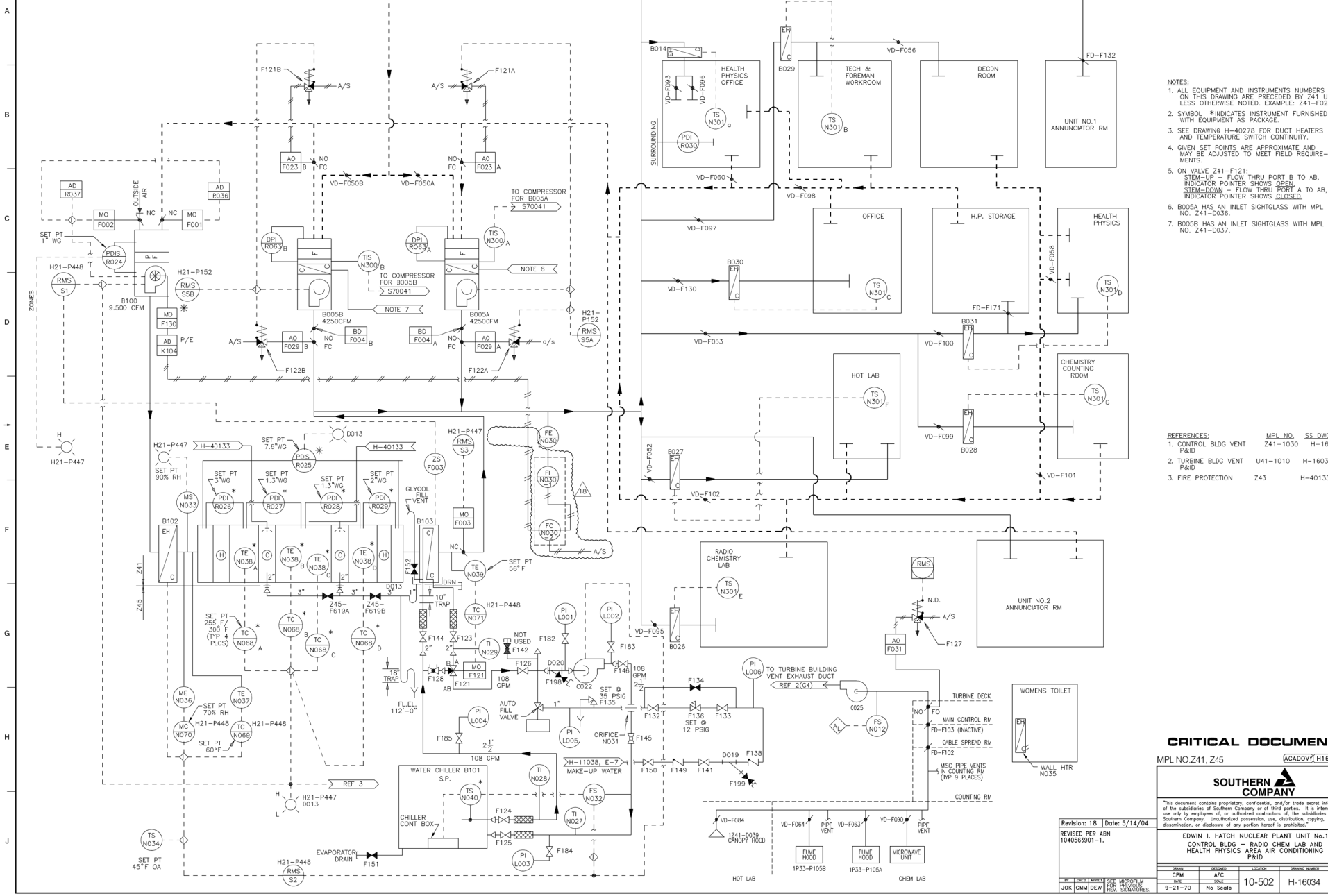
EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
(REACTOR BLDG)
EQUIPMENT LOCATIONS
SECTION B-B

Version: 8.0 Date: 6-20-10
REVISED PER AEM 104026431M001 VERSION 2.0

NO.	DATE	BY	CHKD.	APP'D.	REVISION
1	08/10/09	CS	WRS	WRS	10-502
2	09/10/09	CS	WRS	WRS	10-502
3	09/10/09	CS	WRS	WRS	10-502
4	09/10/09	CS	WRS	WRS	10-502
5	09/10/09	CS	WRS	WRS	10-502
6	09/10/09	CS	WRS	WRS	10-502
7	09/10/09	CS	WRS	WRS	10-502
8	09/10/09	CS	WRS	WRS	10-502
9	09/10/09	CS	WRS	WRS	10-502
10	09/10/09	CS	WRS	WRS	10-502
11	09/10/09	CS	WRS	WRS	10-502
12	09/10/09	CS	WRS	WRS	10-502
13	09/10/09	CS	WRS	WRS	10-502

PC091-H

MAKEUP AIR
REF 1 (J9)



- NOTES:**
1. ALL EQUIPMENT AND INSTRUMENTS NUMBERS ON THIS DRAWING ARE PRECEDED BY Z41 UNLESS OTHERWISE NOTED. EXAMPLE: Z41-F025
 2. SYMBOL * INDICATES INSTRUMENT FURNISHED WITH EQUIPMENT AS PACKAGE
 3. SEE DRAWING H-40278 FOR DUCT HEATERS AND TEMPERATURE SWITCH CONTINUITY.
 4. GIVEN SET POINTS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD REQUIREMENTS.
 5. ON VALVE Z41-F121:
STEM-UP - FLOW THRU PORT B TO AB, INDICATOR POINTER SHOWS OPEN.
STEM-DOWN - FLOW THRU PORT A TO AB, INDICATOR POINTER SHOWS CLOSED.
 6. B005A HAS AN INLET SIGHTGLASS WITH MPL NO. Z41-D036.
 7. B005B HAS AN INLET SIGHTGLASS WITH MPL NO. Z41-D037.

- REFERENCES:**
- | | MPL NO. | SS | DWG NO. |
|---------------------------|----------|----|---------|
| 1. CONTROL BLDG VENT P&ID | Z41-1030 | H- | 16040 |
| 2. TURBINE BLDG VENT P&ID | U41-1010 | H- | 16037 |
| 3. FIRE PROTECTION | Z43 | H- | 40133 |

CRITICAL DOCUMENT

MPL NO. Z41, Z45 ACAD0VY H1603401

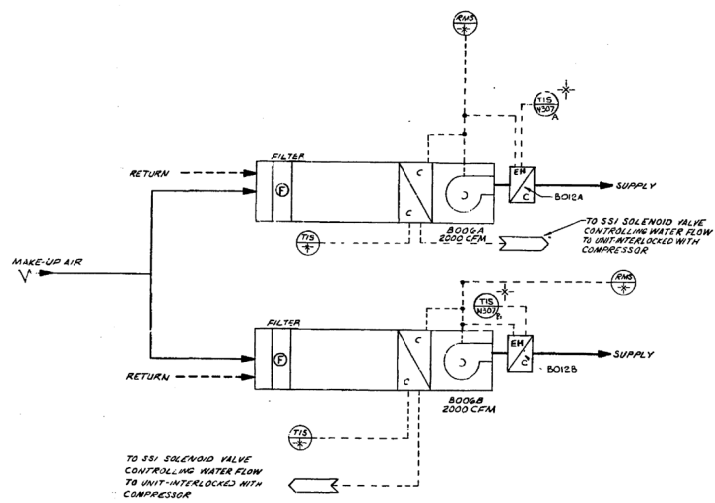


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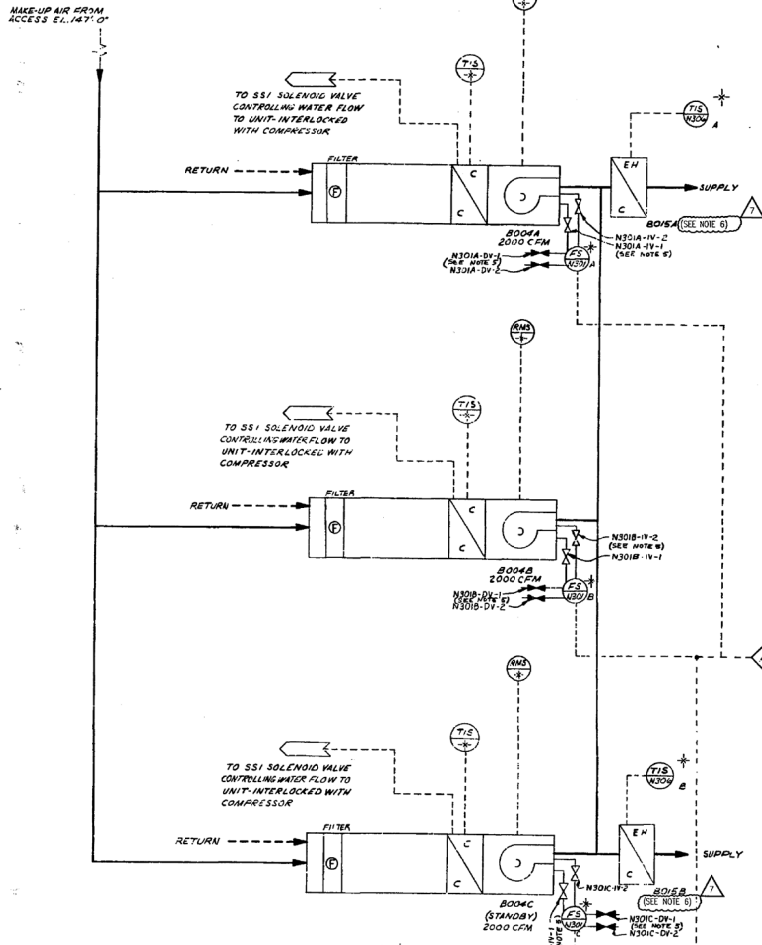
EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
CONTROL BLDG - RADIO CHEM LAB AND
HEALTH PHYSICS AREA AIR CONDITIONING
P&ID

Revision: 18 Date: 5/14/04
REVISED PER AEN 10463921-1.

NO.	DATE	BY	REVISION	LOCATION	ISSUED	REVISION
18	5/14/04	JOK	CHM/DEW	SEE MICROFILM FOR SIGNATURES	10-502	18



WATER ANALYSIS ROOM
PACKAGE AIR CONDITIONING UNITS



COMPUTER ROOM
PACKAGE AIR CONDITIONING UNITS

NOTES

- SEE DWG. H-14001 FOR SYMBOL REFERENCES
- ALL EQUIPMENT AND INSTRUMENTS NOT ON THIS DWG. PRECEDED BY 241 EXCEPT 241-8004B.
- FOR EQUIPMENT LOCATIONS SEE DWGS. H-14001-14005.
- THIS SYMBOL INDICATES INSTRUMENT FURNISHED WITH EQUIPMENT AS A PACKAGE.
- SYMBOLS WITH REST VALUES FUNCTION AS ISOLATION VALVES FOR ASSOCIATED INSTRUMENTATION. REMOVAL OF COVER REVEALS WIRE CONNECTIONS. SEE SEPARATE INSTRUMENTATION.
- 241-8015 A AND B HAVE POWER REMOVED AND ARE ABANDONED IN PLACE.

REFERENCES

- REF:
- TURBINE BUILDING VENTILATION P-1 I.D. MPL-NR 241-1020 H-14001
 - TURBINE BUILDING VENTILATION PROCESS FLOW DIAGRAM U41-1020 H-14002
 - CONTROL BLDG. COMPUTER ROOM WATER ANALYSIS ROOM A/C PROCESS FLOW DIAGRAM PROCESS FLOW DIAGRAM 241-1020 H-14003
 - CONTROL BLDG. VENTILATION 241-1040 H-14004
 - CONTROL BLDG. GOLD LAB P-1 I.D. H-14005

(CONT. H-14005)

REV.	DATE	BY	CHKD.	APP'D.	REVISIONS
1	10/18/79	RB	RB	RB	REVISED AS PER REV. 83-26 (N.V.O.)
2					REMOVED DOCUMENTATION ERRORS

MPL-NR 241-1020

DEGTEL ASSOCIATES
JOB 0511

SOUTHERN SERVICES INC.
FBI

GEORGIA POWER CO., ATLANTA, GA
GENERAL ENGINEERING DEPARTMENT

EDWIN LATCH NUCLEAR PLANT NO. 1
CONTROL BLDG. COMPUTER, WATER ANALYSIS
RMS, AIR COND. P. & I. D.

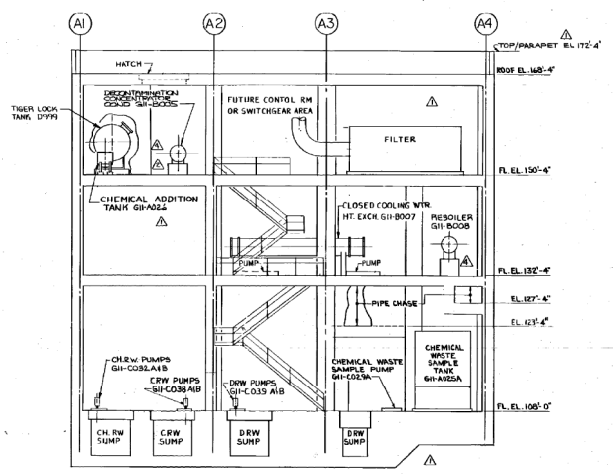
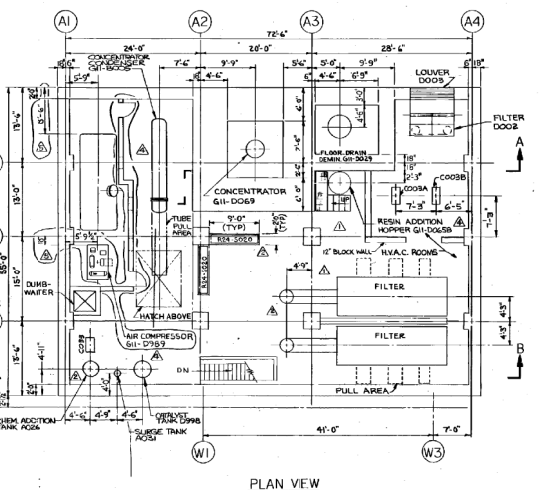
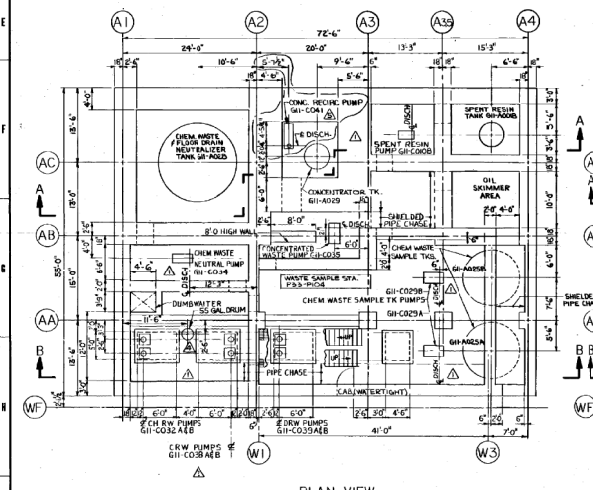
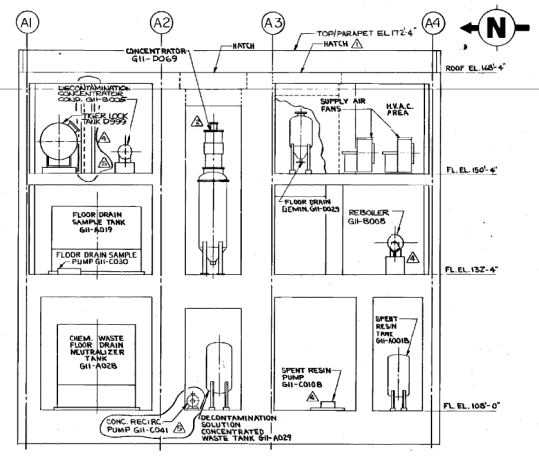
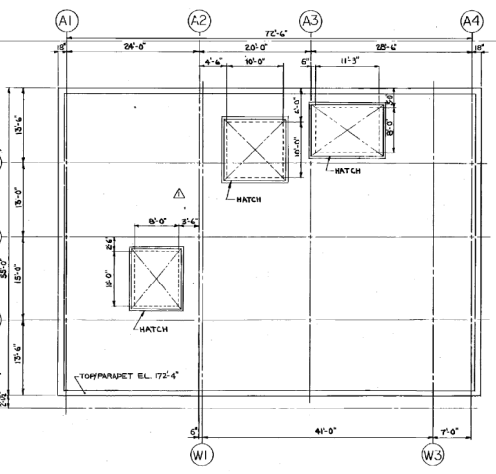
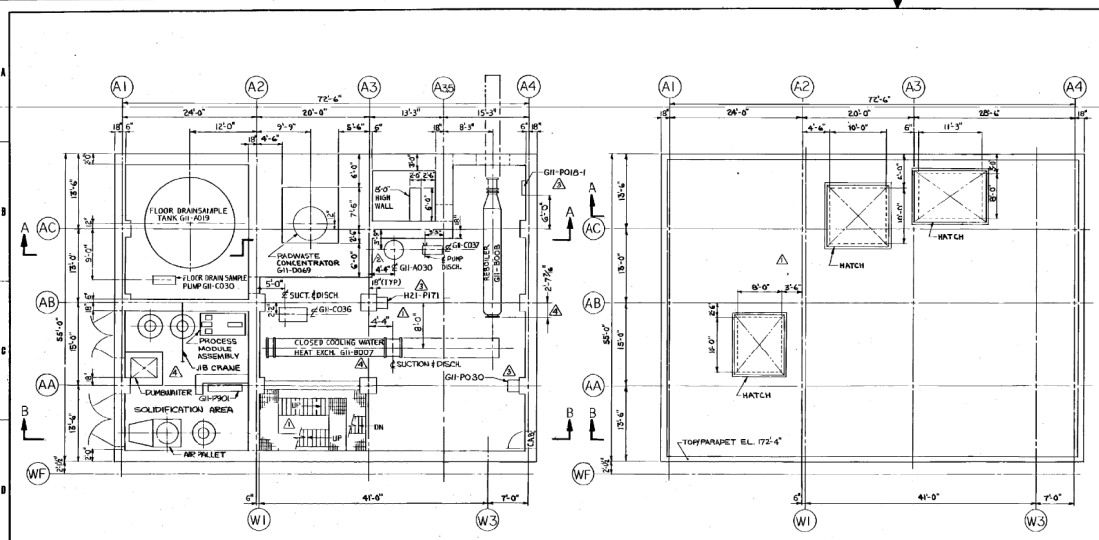
SCALE: 1/8" = 1'-0"

DRAWING NUMBER: 10-502

SHEET NO.: H-14035

POOR QUALITY ORIGINAL
SCAN MAY NOT BE LEGIBLE

SCANNED DATE: 10-18-97

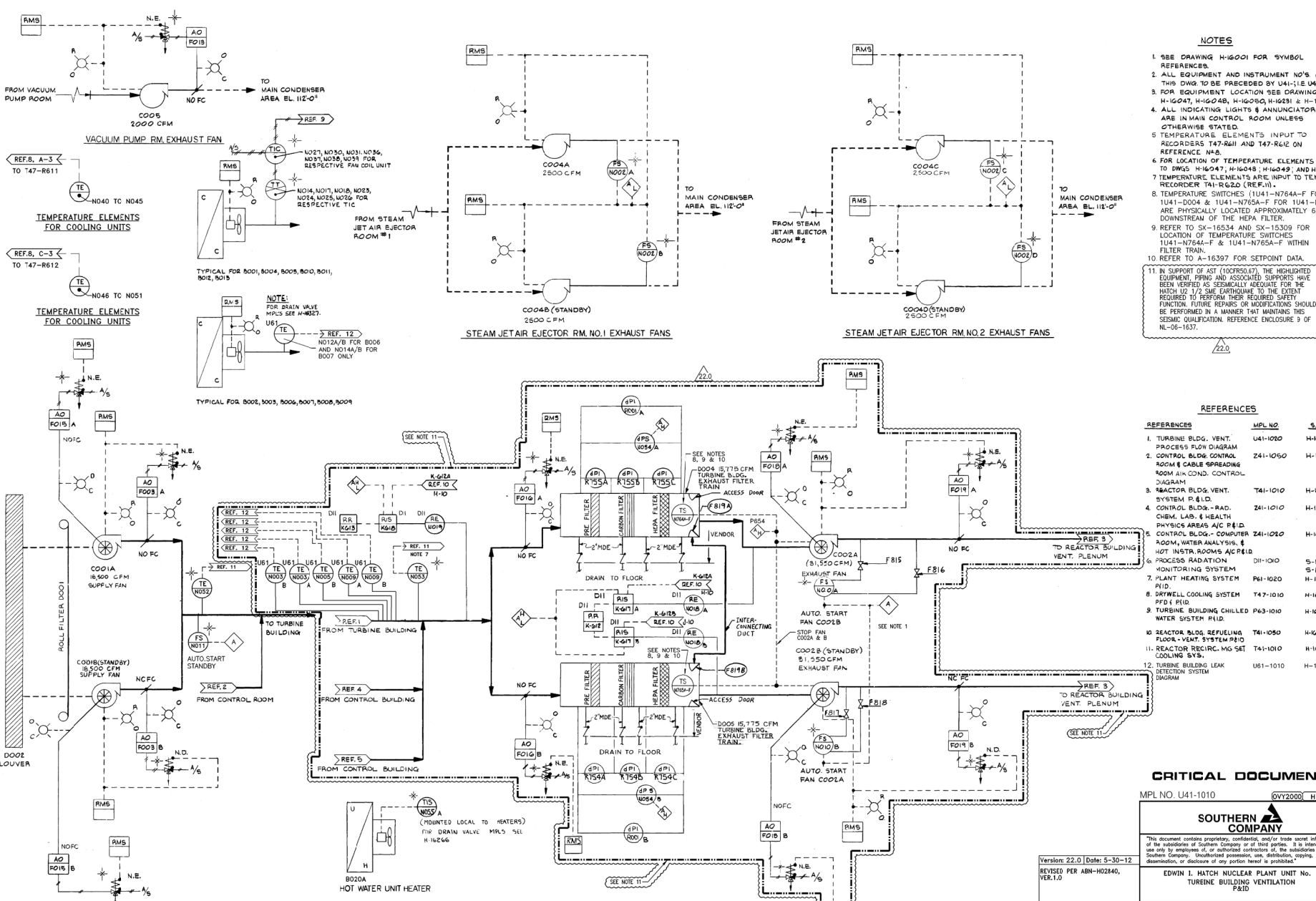


NO.	DATE	BY	CHKD.	APP.
1	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
2	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
3	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
4	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
5	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
6	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
7	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
8	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
9	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
10	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
11	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
12	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS
13	10/1/77	J. H. HARRIS	J. H. HARRIS	J. H. HARRIS

BECTEL ASSOCIATES
 JOB 0511
 SOUTHERN SERVICES INC.
 FOR
 GEORGIA POWER CO., ATLANTA, GA.
 GENERAL ENGINEERING DEPARTMENT
 EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1
 EQUIPMENT LOCATIONS
 RADWASTE BUILDING ADDITION
 DRAWING NUMBER
 LOCATION SHEET NO.
 NO. 5502 PH-16036

8-24
 J. H. HARRIS 10/1/77

Z091-H



- NOTES**
- SEE DRAWING H-16001 FOR SYMBOL REFERENCES.
 - ALL EQUIPMENT AND INSTRUMENT NO'S ON THIS DWG TO BE LOCATED BY U41-11E U41-0005.
 - FOR EQUIPMENT LOCATION SEE DRAWINGS; H-16047, H-16048, H-16050, H-16251 & H-16232.
 - ALL INDICATING LIGHTS & ANNUNCIATORS ARE IN MAIN CONTROL ROOM UNLESS OTHERWISE STATED.
 - TEMPERATURE ELEMENTS INPUT TO RECORDERS T47-R611 AND T47-R612 ON REFERENCE N/A.
 - FOR LOCATION OF TEMPERATURE REF TO DWGS H-16047, H-16048, H-16049, AND H-16050.
 - TEMPERATURE ELEMENTS ARE INPUT TO TEMP. RECORDER T41-R620 (REF. 11).
 - TEMPERATURE SWITCHES (U41-N7644-F FOR U41-0004 & U41-N7654-F FOR U41-0005) ARE PHYSICALLY LOCATED APPROXIMATELY 6" DOWNSTREAM OF THE HEPA FILTER.
 - REFER TO SK-18534 AND SK-15309 FOR LOCATION OF TEMPERATURE SWITCHES U41-N7644-F & U41-N7654-F WITHIN FILTER TRAIN.
 - REFER TO A-16397 FOR SETPOINT DATA.
 - IN SUPPORT OF AST (10CFR50.67), THE HIGHLIGHTED EQUIPMENT, Piping AND ASSOCIATED SUPPORTS HAVE BEEN VERIFIED AS BEING ADEQUATE FOR THE HATCH U2 1/2 SIE EARTHQUAKE TO THE EXTENT REQUIRED TO PERFORM THEIR REQUIRED SAFETY FUNCTION. FUTURE REPAIRS OR MODIFICATIONS SHOULD BE PERFORMED IN A MANNER THAT MAINTAINS THIS SEISMIC QUALIFICATION. REFERENCE ENCLOSURE 3 OF NL-06-1637.

- REFERENCES**
- | REFERENCES | MPL NO | S.S. NO |
|--|----------|---------|
| 1. TURBINE BLDG. VENT. | U41-1070 | H-16038 |
| 2. PROCESS FLOW DIAGRAM | | |
| 3. CONTROL BLDG. CONTROL ROOM & CABLE SPREADING ROOM AIR COND. CONTROL DIAGRAM | 241-1050 | H-16042 |
| 4. REACTOR BLDG. VENT. SYSTEM P&ID | T41-1010 | H-16005 |
| 5. CONTROL BLDG. - RAD. CHEM. LAB. & HEALTH PHYSICS AREAS A/C P&ID | 241-1010 | H-16054 |
| 6. CONTROL BLDG. - COMPUTER ROOM, WATER ANALYSIS, & HOT INSTR. ROOMS A/C P&ID | 241-1020 | H-16035 |
| 7. PROCESS RADIATION MONITORING SYSTEM | D11-1010 | S-10161 |
| 8. PLANT HEATING SYSTEM | P61-1020 | H-16244 |
| 9. TURBINE BUILDING CHILLED WATER SYSTEM P&ID | T47-1010 | H-16007 |
| 10. REACTOR BLDG. REFUELING FLOOR - HEAT SYSTEM P&ID | P63-1010 | H-16327 |
| 11. REACTOR RECIRC. M/G SET COOLING SYS. | T41-1010 | H-16001 |
| 12. TURBINE BUILDING LEAK DETECTION SYSTEM DIAGRAM | U61-1010 | H-16083 |

CRITICAL DOCUMENT

MPL NO. U41-1010 0VY2000 H16037



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EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
TURBINE BUILDING VENTILATION
P&ID

Version: 22.0 | Date: 5-30-12
REVISED PER ABN-H0240, VER.1.0

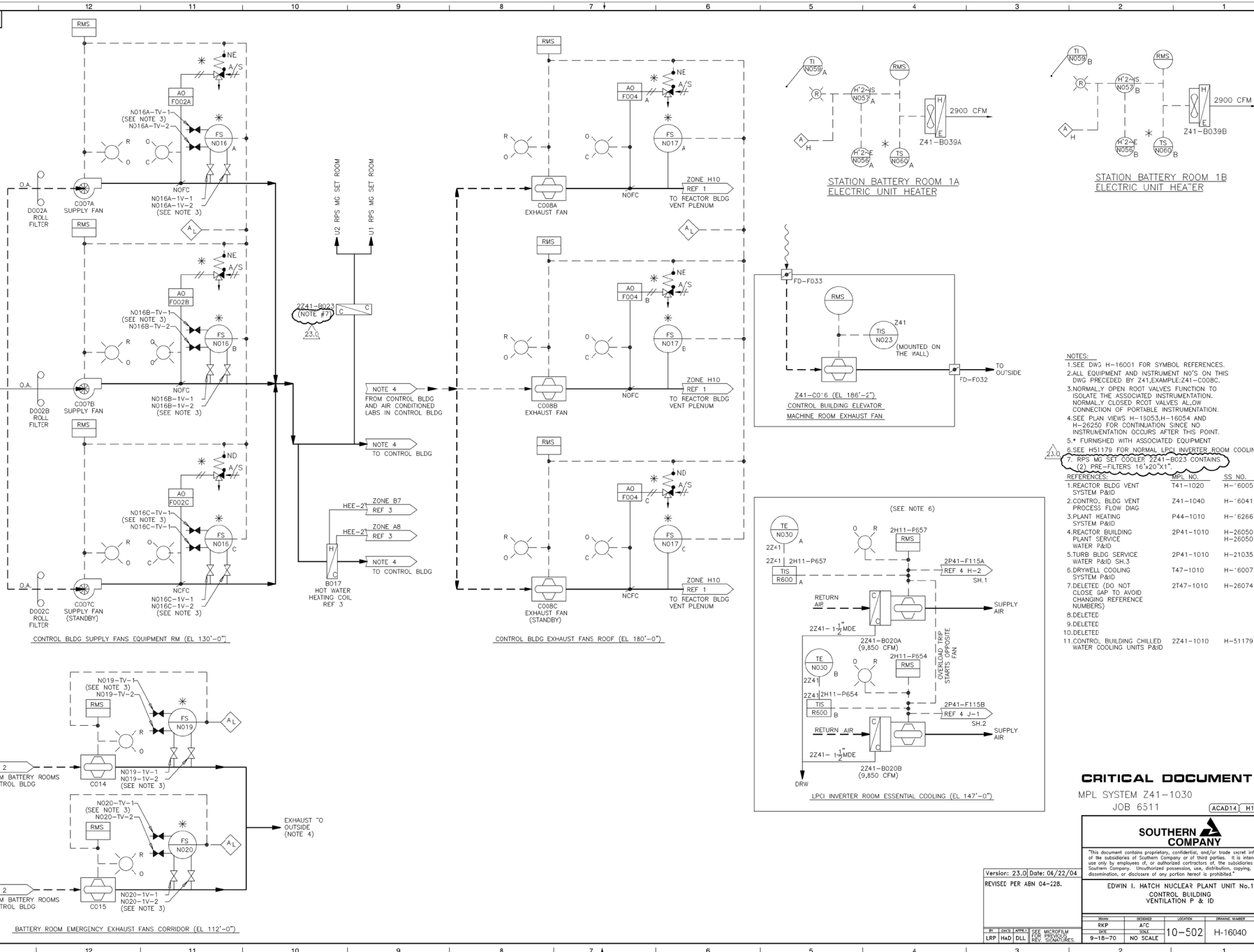
REV.	DATE	BY	CHKD.	APP'D.	LOCATION	REVISION NUMBER	VER.
1	6-5-70	None			10-502	H-16037	22.0

DRAWING CATEGORY: CRITICAL

06091-H

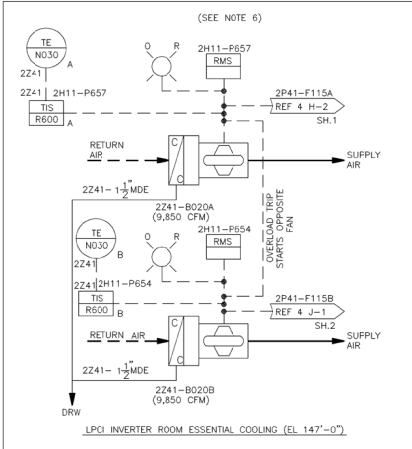
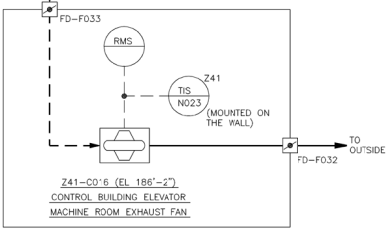
J
H
G
F
E
D
C
B
A

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



STATION BATTERY ROOM 1A
ELECTRIC UNIT HEATER

STATION BATTERY ROOM 1B
ELECTRIC UNIT HEATER



- NOTES:
- SEE DWG H-16001 FOR SYMBOL REFERENCES.
 - ALL EQUIPMENT AND INSTRUMENT NOS ON THIS DWG PRECEDED BY Z41, EXCEPT Z41-CO08C.
 - NORMALLY OPEN ROOT VALVES FUNCTION TO ISOLATE THE ASSOCIATED INSTRUMENTATION. NORMALLY CLOSED ROOT VALVES ALLOW CONNECTION OF PORTABLE INSTRUMENTATION.
 - SEE PLAN VIEWS H-15053, H-16054 AND H-26250 FOR CONTINUATION SINCE NO INSTRUMENTATION OCCURS AFTER THIS POINT.
 - FURNISHED WITH ASSOCIATED EQUIPMENT.
 - SEE HS1179 FOR NORMAL LPCL INVERTER ROOM COOLING.
 - RPS MG SET COOLER, Z241-B023 CONTAINS (2) PRE-FILTERS: H-15071, H-15072.

REFERENCES:

REF.	MPL NO.	SS NO.
1.	REACTOR BLDG VENT SYSTEM P&ID	T41-1020 H-6005
2.	CONTROL BLDG VENT PROCESS FLOW DIAG	Z41-1040 H-6041
3.	PLANT HEATING SYSTEM P&ID	P44-1010 H-6266
4.	REACTOR BUILDING PLANT SERVICE WATER P&ID	2P41-1010 H-26050 SH. 1
5.	TURB BLDG SERVICE WATER P&ID SH.3	2P41-1010 H-21035
6.	DRYWELL COOLING SYSTEM P&ID	T47-1010 H-6007
7.	DELETED (DO NOT CLOSE GAP TO AVOID CHANGING REFERENCE NUMBERS)	2T47-1010 H-26074
8.	DELETED	
9.	DELETED	
10.	DELETED	
11.	CONTROL BUILDING CHILLED WATER COOLING UNITS P&ID	Z241-1010 H-51179

CRITICAL DOCUMENT

MPL SYSTEM Z41-1030
JOB 6511

ACAD141 H16040

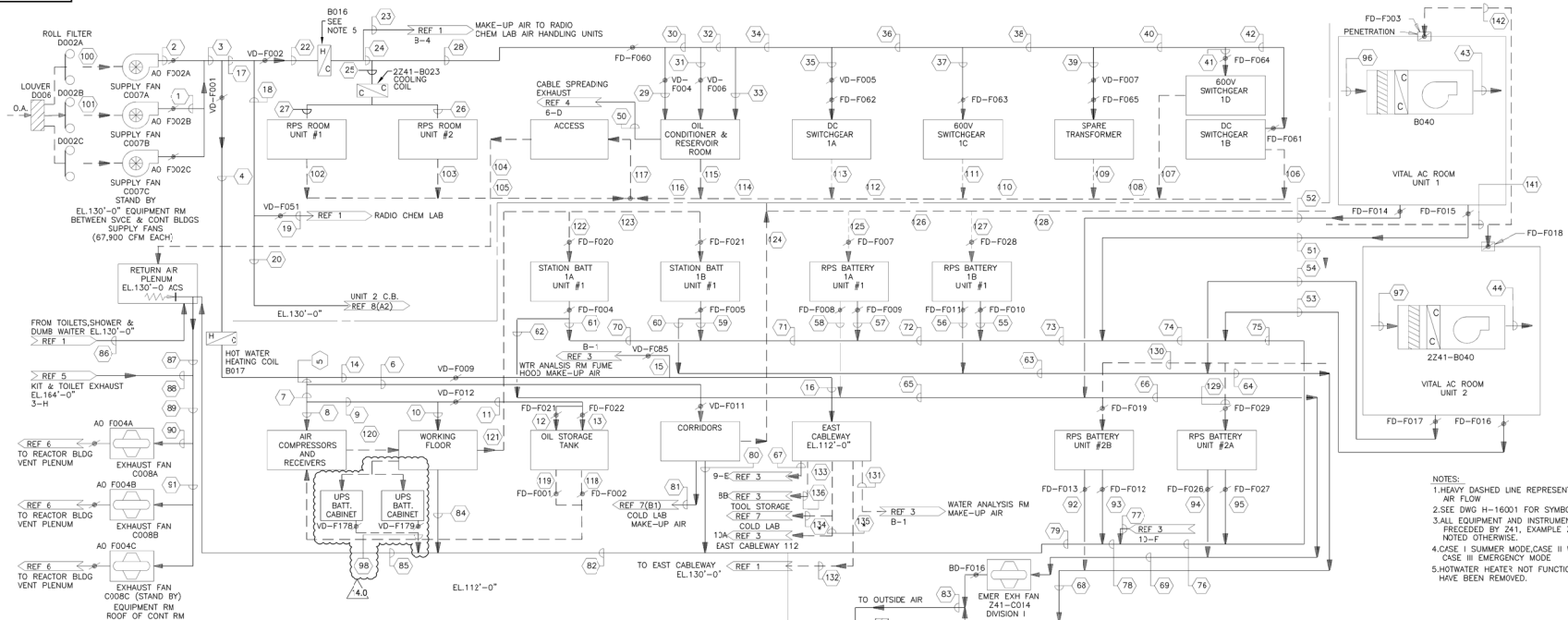


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EDWIN I. HATCH NUCLEAR PLANT UNIT No.1
CONTROL BUILDING VENTILATION P & ID

Version: 23.0 Date: 06/22/04
REVISED PER AEN 04-228.

REV	DATE	BY	CHK	DESCRIPTION	SCALE
10	502			H-16040	23.0



- NOTES:
1. HEAVY DASHED LINE REPRESENTS NON-DUCTED AIR FLOW
 2. SEE DWG H-16001 FOR SYMBOL REFERENCES
 3. ALL EQUIPMENT AND INSTRUMENT NO'S ON THIS DWG FRECEIVED BY 241. EXAMPLE 241-CO07C, UNLESS NOTED OTHERWISE.
 4. CASE I: SUMMER MODE, CASE II: WINTER MODE, CASE III: EMERGENCY MODE
 5. HOT WATER HEATER NOT FUNCTIONAL, INTERNALS HAVE BEEN REMOVED.

REFERENCES:

CONTROL BLDG RADIO CHEM USE & HEALTH PHYSICS AREA AIR COND PROCESS FLOW DIAG	MPL ITEM NO.	SS W/G NO.
1. CONTROL BLDG RADIO CHEM USE & HEALTH PHYSICS AREA AIR COND PROCESS FLOW DIAG	241-1070	H-16044
2. TURBINE BLDG VENT PROCESS FLOW DIAG	U41-1020	H-16038
3. CONTROL BLDG COMPUTER ROOM WATER ANALYSIS ROOM & INSTRUMENT STORAGE ROOM A/C PROCESS FLOW DIAG	241-1080	H-16045
4. CONT BLDG CABLE SPREADING ROOM EL.147'-0" PROCESS FLOW DIAG	241-1090	H-16046
5. CONTROL BLDG CONTROL ROOM PROCESS FLOW DIAG	241-1060	H-16043
6. REACTOR BLDG VENT SVS PROCESS FLOW DIAG	T41-1040	H-16006
7. CONTROL BLDG COLD LAB EL.112'-0" PFD	241	H-40057
8. UNIT NO.2 CONTROL BLDG F&ID AND PROCESS FLOW DIAG	241-1010	H-26093
9. CONTROL BLDG VENTILATION P&D	241-1030	H-16040
10. CONTROL BLDG CHILLED WATER COLLING UNITS P&D	2241-1010	H-51179

CASE	PARAMETER	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44																																											
		CFM	67,900	67,900	135,800	25,250	18,400	7,800	10,800	4,800	6,000	3,600	2,400	1,200	1,200	6,850	850	6,000	110,350	58,950	2,550	43,750	51,600	2,600	49,000	1,800	900	900	45,000	4,400	40,600	2,200	38,400	4,400	3,400	2,700	31,300	9,600	21,700	9,600	12,100	9,600	2,500	6,800	6,800
I	CFM	67,900	67,900	135,800	25,250	18,400	7,800	10,800	4,800	6,000	3,600	2,400	1,200	1,200	6,850	850	6,000	110,350	58,950	2,550	43,750	51,600	2,600	49,000	1,800	900	900	45,000	4,400	40,600	2,200	38,400	4,400	3,400	2,700	31,300	9,600	21,700	9,600	12,100	9,600	2,500	6,800	6,800	
II	CFM	67,900	67,900	135,800	25,250	18,400	7,800	10,800	4,800	6,000	3,600	2,400	1,200	1,200	6,850	850	6,000	110,350	58,950	2,550	43,750	51,600	2,600	49,000	1,800	900	900	45,000	4,400	40,600	2,200	38,400	4,400	3,400	2,700	31,300	9,600	21,700	9,600	12,100	9,600	2,500	6,800	6,800	
III	CFM	67,900	67,900	135,800	25,250	18,400	7,800	10,800	4,800	6,000	3,600	2,400	1,200	1,200	6,850	850	6,000	110,350	58,950	2,550	43,750	51,600	2,600	49,000	1,800	900	900	45,000	4,400	40,600	2,200	38,400	4,400	3,400	2,700	31,300	9,600	21,700	9,600	12,100	9,600	2,500	6,800	6,800	

CASE	PARAMETER	50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98																																
		800	300	300	850	850	1,800	1,800	300	1,800	3,600	4,450	5,300	5,600	5,900	6,750	1,700	8,450	9,300	3,300	300	12,600	7,110	19,800	800	68,800	450	69,250	34,625	34,625	850	6,800	6,800	90
I	CFM	800 <td>300 <td>300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 <td>4,450 <td>5,300 <td>5,600 <td>5,900 <td>6,750 <td>1,700 <td>8,450 <td>9,300 <td>3,300 <td>300 <td>12,600 <td>7,110 <td>19,800 <td>800 <td>68,800 <td>450 <td>69,250 <td>34,625 <td>34,625 <td>850 <td>6,800 <td>6,800 <td>90 </td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	300 <td>300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 <td>4,450 <td>5,300 <td>5,600 <td>5,900 <td>6,750 <td>1,700 <td>8,450 <td>9,300 <td>3,300 <td>300 <td>12,600 <td>7,110 <td>19,800 <td>800 <td>68,800 <td>450 <td>69,250 <td>34,625 <td>34,625 <td>850 <td>6,800 <td>6,800 <td>90 </td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 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<td>6,800 <td>6,800 <td>90 </td></td></td>	6,800 <td>6,800 <td>90 </td></td>	6,800 <td>90 </td>	90
II	CFM	800 <td>300 <td>300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 <td>4,450 <td>5,300 <td>5,600 <td>5,900 <td>6,750 <td>1,700 <td>8,450 <td>9,300 <td>3,300 <td>300 <td>12,600 <td>7,110 <td>19,800 <td>800 <td>68,800 <td>450 <td>69,250 <td>34,625 <td>34,625 <td>850 <td>6,800 <td>6,800 <td>90 </td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	300 <td>300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 <td>4,450 <td>5,300 <td>5,600 <td>5,900 <td>6,750 <td>1,700 <td>8,450 <td>9,300 <td>3,300 <td>300 <td>12,600 <td>7,110 <td>19,800 <td>800 <td>68,800 <td>450 <td>69,250 <td>34,625 <td>34,625 <td>850 <td>6,800 <td>6,800 <td>90 </td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 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III	CFM	800 <td>300 <td>300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 <td>4,450 <td>5,300 <td>5,600 <td>5,900 <td>6,750 <td>1,700 <td>8,450 <td>9,300 <td>3,300 <td>300 <td>12,600 <td>7,110 <td>19,800 <td>800 <td>68,800 <td>450 <td>69,250 <td>34,625 <td>34,625 <td>850 <td>6,800 <td>6,800 <td>90 </td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	300 <td>300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 <td>3,600 <td>4,450 <td>5,300 <td>5,600 <td>5,900 <td>6,750 <td>1,700 <td>8,450 <td>9,300 <td>3,300 <td>300 <td>12,600 <td>7,110 <td>19,800 <td>800 <td>68,800 <td>450 <td>69,250 <td>34,625 <td>34,625 <td>850 <td>6,800 <td>6,800 <td>90 </td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	300 <td>850 <td>850 <td>1,800 <td>1,800 <td>300 <td>1,800 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CASE	PARAMETER	100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136																																				
		900	900	2,000	2,000	48,200	4,000	2,500	9,600	12,100	9,600	21,700	9,600	31,300	2,700	34,000	10,200	44,200	48,200	2,400	2,400	7,200	3,600	1,800	1,800	4,000	850	3,150	850	2,300	850	850	400	3,700	1,400	1,400	1,400	200
I	CFM	900 <td>900 <td>2,000 <td>2,000 <td>48,200 <td>4,000 <td>2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td></td></td></td></td></td></td></td></td></td>	900 <td>2,000 <td>2,000 <td>48,200 <td>4,000 <td>2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> 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II	CFM	900 <td>900 <td>2,000 <td>2,000 <td>48,200 <td>4,000 <td>2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td></td></td></td></td></td></td></td></td></td>	900 <td>2,000 <td>2,000 <td>48,200 <td>4,000 <td>2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> 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III	CFM	900 <td>900 <td>2,000 <td>2,000 <td>48,200 <td>4,000 <td>2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td></td></td></td></td></td></td></td></td></td>	900 <td>2,000 <td>2,000 <td>48,200 <td>4,000 <td>2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> 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<td>1,400</td> <td>200</td> </td></td></td></td></td></td>	2,500 <td>9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td></td></td></td>	9,600 <td>12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td></td></td>	12,100 <td>9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td></td>	9,600 <td>21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td></td>	21,700 <td>9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td> </td>	9,600 <td>31,300</td> <td>2,700</td> <td>34,000</td> <td>10,200</td> <td>44,200</td> <td>48,200</td> <td>2,400</td> <td>2,400</td> <td>7,200</td> <td>3,600</td> <td>1,800</td> <td>1,800</td> <td>4,000</td> <td>850</td> <td>3,150</td> <td>850</td> <td>2,300</td> <td>850</td> <td>850</td> <td>400</td> <td>3,700</td> <td>1,400</td> <td>1,400</td> <td>1,400</td> <td>200</td>	31,300	2,700	34,000	10,200	44,200	48,200	2,400	2,400	7,200	3,600	1,800	1,800	4,000	850	3,150	850	2,300	850	850	400	3,700	1,400	1,400	1,400	200

* INFILTRATION TO EITHER THE COLD LAB OR EAST CABLEWAY EL.112'-0"

MPL NO. Z41-1030 ACAD H16041



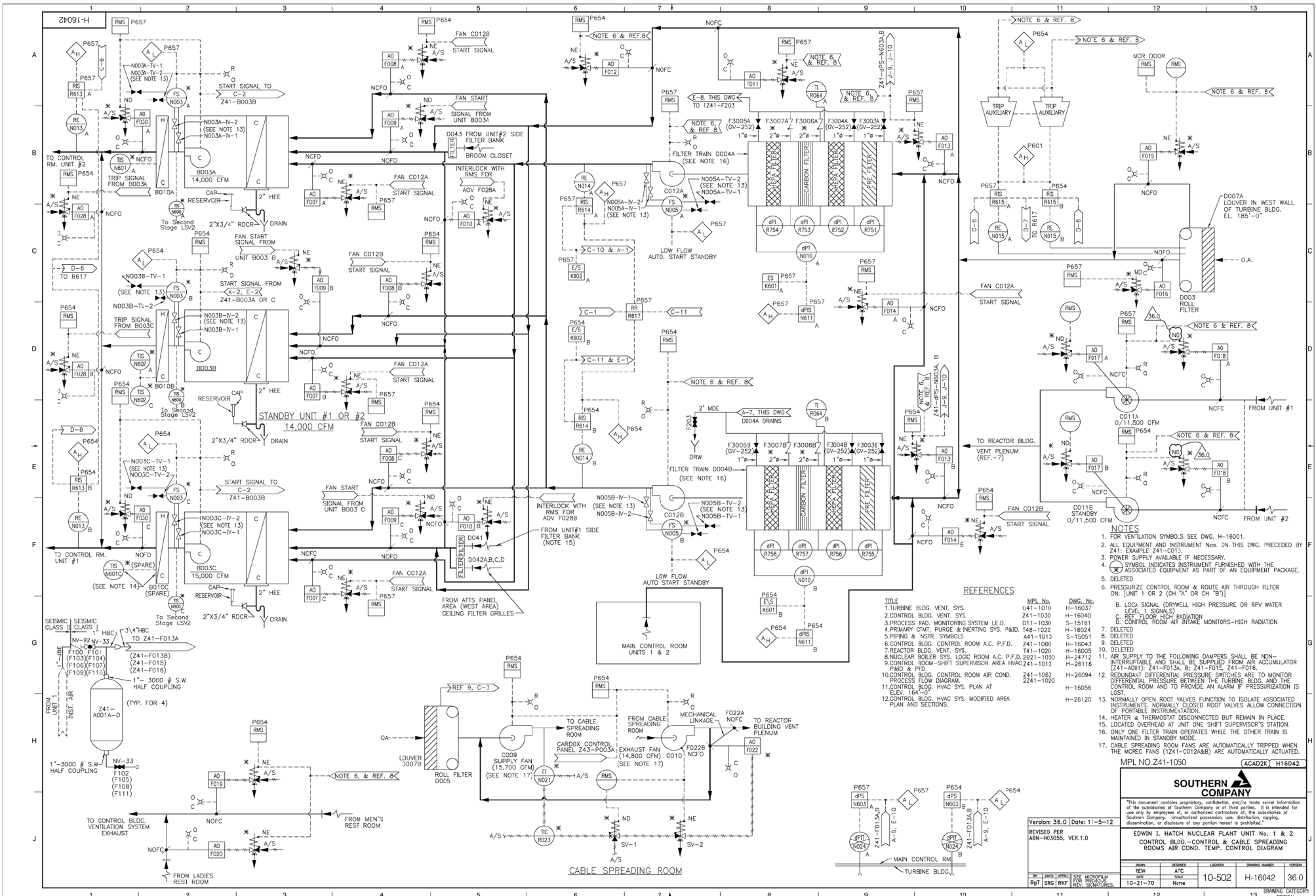
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Version: 14.0 | Date: 2/25/16
 REVISED PER ABN SNC476661M005, VER. 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT NO. 1
 CONTROL BUILDING
 VENTILATION PROCESS FLOW DIAGRAM

NO.	ISSUES	LOGICIAN	ISSUES NUMBER	REVISION
RFK	AFK			
JLO	CYN	TSL	7-09-70	None

10-502 H-16041 14.0



- NOTES**
- FOR VENTILATION SYMBOLS SEE DWG. H-16001.
 - ALL EQUIPMENT AND INSTRUMENT NOS. DN THIS DWG. PRECEDED BY Z41; EXAMPLE Z41-C011.
 - POWER SUPPLY AVAILABLE IF NECESSARY.
 - SYMBOL INDICATES INSTRUMENT FURNISHED WITH THE ASSOCIATED EQUIPMENT AS PART OF AN EQUIPMENT PACKAGE.
 - DELETED.
 - PRESSURIZE CONTROL ROOM & ROUTE AIR THROUGH FILTER ON [UNIT 1 OR 2 (CH "A" OR CH "B")]
 - LOCA SIGNAL (DRYWELL HIGH PRESSURE OR RPV WATER LEVEL) SIGNALS.
 - CONTROL ROOM HIGH RADIATION.
 - DELETED.
 - DELETED.
 - DELETED.
 - AIR SUPPLY TO THE FOLLOWING DAMPERS SHALL BE NON-INTERFERABLE AND SHALL BE SUPPLIED FROM AIR ACCUMULATOR (Z41-A001); Z41-F013A, B; Z41-F015, Z41-F016.
 - REDUNDANT DIFFERENTIAL PRESSURE SWITCHES ARE TO MONITOR DIFFERENTIAL PRESSURE BETWEEN THE TURBINE BLDG. AND THE CONTROL ROOM AND TO PROVIDE AN ALARM IF PRESSURIZATION IS DELETED.
 - NORMALLY OPEN ROOT VALVES FUNCTION TO ISOLATE ASSOCIATED INSTRUMENTS. NORMALLY CLOSED ROOT VALVES ALLOW CONNECTION OF PORTABLE INSTRUMENTATION.
 - HEATER & THERMOSTAT DISCONNECTED BUT REMAIN IN PLACE.
 - LOCATED OVERHEAD AT UNIT ONE SHIFT SUPERVISOR'S STATION.
 - ONLY ONE FILTER TRAIN OPERATES WHILE THE OTHER TRAIN IS MAINTAINED IN STANDBY MODE.
 - CABLE SPREADING ROOM FANS ARE AUTOMATICALLY TRIPPED WHEN THE MCR EC FANS (Z41-C012A&B) ARE AUTOMATICALLY ACTUATED.

- REFERENCES**
- | MPL No. | DWG. No. | DESCRIPTION |
|----------------|----------|--|
| U41-1010 | H-16037 | 1. TURBINE BLDG. VENT. SYS. |
| Z41-1030 | H-16040 | 2. CONTROL BLDG. VENT. SYS. |
| D11-1030 | S-15161 | 3. PROCESS RAD. MONITORING SYSTEM I.E.D. |
| P&ID, 148-1020 | H-16054 | 4. PRIMARY CONT. PURGE & NERTING SYS. P&ID. |
| A41-1011 | S-15051 | 5. PIPING & INSTR. SYMBOLS |
| Z41-1069 | H-16043 | 6. CONTROL BLDG. CONTROL ROOM A.C. P.F.D. |
| 141-1029 | H-16005 | 7. REACTOR BLDG. VENT. SYS. |
| Z41-2821-1030 | H-24712 | 8. NUCLEAR BOILER SYS. LOGIC ROOM A.C. P.F.D. |
| HVAC Z41-1011 | H-26116 | 9. CONTROL ROOM-SHIFT SUPERVISOR AREA HVAC |
| P&ID & PFD. | | |
| Z41-1063 | H-26094 | 10. CONTROL BLDG. CONTROL ROOM AIR COND. |
| Z41-1063 | H-16056 | 11. CONTROL BLDG. HVAC SYS. PLAN AT ELEV. 184'-0" |
| | H-26120 | 12. CONTROL BLDG. HVAC SYS. MODIFIED AREA PLAN AND SECTIONS. |

REFERENCES

MPL No.	DWG. No.	DESCRIPTION
U41-1010	H-16037	1. TURBINE BLDG. VENT. SYS.
Z41-1030	H-16040	2. CONTROL BLDG. VENT. SYS.
D11-1030	S-15161	3. PROCESS RAD. MONITORING SYSTEM I.E.D.
P&ID, 148-1020	H-16054	4. PRIMARY CONT. PURGE & NERTING SYS. P&ID.
A41-1011	S-15051	5. PIPING & INSTR. SYMBOLS
Z41-1069	H-16043	6. CONTROL BLDG. CONTROL ROOM A.C. P.F.D.
141-1029	H-16005	7. REACTOR BLDG. VENT. SYS.
Z41-2821-1030	H-24712	8. NUCLEAR BOILER SYS. LOGIC ROOM A.C. P.F.D.
HVAC Z41-1011	H-26116	9. CONTROL ROOM-SHIFT SUPERVISOR AREA HVAC
P&ID & PFD.		
Z41-1063	H-26094	10. CONTROL BLDG. CONTROL ROOM AIR COND.
Z41-1063	H-16056	11. CONTROL BLDG. HVAC SYS. PLAN AT ELEV. 184'-0"
	H-26120	12. CONTROL BLDG. HVAC SYS. MODIFIED AREA PLAN AND SECTIONS.

MPL NO. Z41-1050 (ACAD2K) H16042

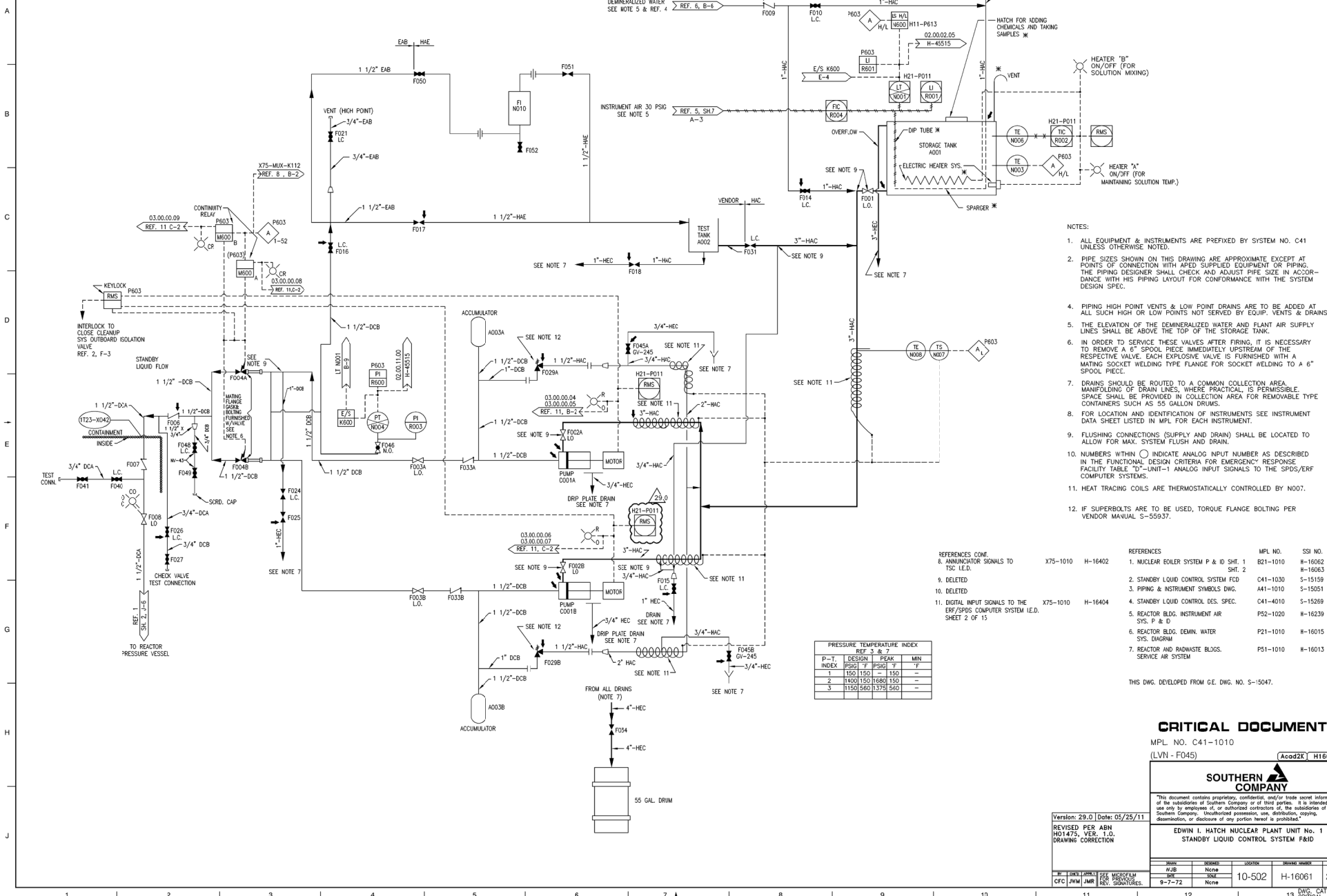
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EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1 & 2
CONTROL BLDG.-CONTROL & CABLE SPREADING ROOMS AIR COND. TEMP. CONTROL DIAGRAM

Version: 36.0 Date: 11-5-12
REVISED PER ASN-HC0055, VER.1.0

REV	DATE	BY	CHKD	LOCATION	ISSUED NUMBER	DESCRIPTION
1	10-21-70	None	None		10-502	H-16042
36.0						



- NOTES:
1. ALL EQUIPMENT & INSTRUMENTS ARE PREFIXED BY SYSTEM NO. C41 UNLESS OTHERWISE NOTED.
 2. PIPE SIZES SHOWN ON THIS DRAWING ARE APPROXIMATE EXCEPT AT POINTS OF CONNECTION WITH APED SUPPLIED EQUIPMENT OR PIPING. THE PIPING DESIGNER SHALL CHECK AND ADJUST PIPE SIZE IN ACCORDANCE WITH HIS PIPING LAYOUT FOR CONFORMANCE WITH THE SYSTEM DESIGN SPEC.
 3. PIPING HIGH POINT VENTS & LOW POINT DRAINS ARE TO BE ADDED AT ALL SUCH HIGH OR LOW POINTS NOT SERVED BY EQUIP. VENTS & DRAINS.
 4. THE ELEVATION OF THE DEMINERALIZED WATER AND PLANT AIR SUPPLY LINES SHALL BE ABOVE THE TOP OF THE STORAGE TANK.
 5. IN ORDER TO SERVICE THESE VALVES AFTER FIRING, IT IS NECESSARY TO REMOVE A 6" SPOOL PIECE IMMEDIATELY UPSTREAM OF THE RESPECTIVE VALVE. EACH EXPLOSIVE VALVE IS FURNISHED WITH A MATING SOCKET WELDING TYPE FLANGE FOR SOCKET WELDING TO A 6" SPOOL PIECE.
 6. DRAINS SHOULD BE ROUTED TO A COMMON COLLECTION AREA. MANUFACTURING OF DRAIN LINES, WHERE PRACTICAL, IS PERMISSIBLE. SPACE SHALL BE PROVIDED IN COLLECTION AREA FOR REMOVABLE TYPE CONTAINERS SUCH AS 55 GALLON DRUMS.
 7. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS SEE INSTRUMENT DATA SHEET LISTED IN MPL FOR EACH INSTRUMENT.
 8. FLUSHING CONNECTIONS (SUPPLY AND DRAIN) SHALL BE LOCATED TO ALLOW FOR MAX. SYSTEM FLUSH AND DRAIN.
 9. NUMBERS WITHIN () INDICATE ANALOG INPUT NUMBER AS DESCRIBED IN THE FUNCTIONAL DESIGN CRITERIA FOR EMERGENCY RESPONSE FACILITY TABLE "D"-UNIT-1 ANALOG INPUT SIGNALS TO THE SPDS/ERF COMPUTER SYSTEMS.
 10. HEAT TRACING COILS ARE THERMOSTATICALLY CONTROLLED BY NOOT.
 11. IF SUPERBOILS ARE TO BE USED, TORQUE FLANGE PER VENDOR MANUAL 5-55937.

REFERENCES CONT.

REF.	DESCRIPTION	REF. NO.	SI NO.
8.	ANNUNCIATOR SIGNALS TO TSC I.E.D.	X75-1010 H-16402	1. NUCLEAR EOLER SYSTEM P & ID SHT. 1 SHT. 2
9.	DELETED		
10.	DELETED		
11.	DIGITAL INPUT SIGNALS TO THE ERF/SPDS COMPUTER SYSTEM I.E.D. SHEET 2 OF 15	X75-1010 H-16404	4. STANDBY LIQUID CONTROL DES. SPEC. C41-1030 S-15159 3. PIPING & INSTRUMENT SYMBOLS DWG. A41-1010 S-15051 2. STANDBY LIQUID CONTROL SYS. FCD SHT. 2 1. REACTOR BLDG. INSTRUMENT AIR SYS. P & D 6. REACTOR BLDG. DEMIN. WATER SYS. DIAGRAM 7. REACTOR AND RAHWASTE BLDGS. SERVICE AIR SYSTEM

THIS DWG. DEVELOPED FROM G.E. DWG. NO. S-15047.

PRESSURE TEMPERATURE INDEX

REF. 3 & 7	DESIGN	PEAK	MIN
INDEX	PSIG	PSIG	F
1	150	150	-
2	1800	1680	150
3	1150	560	560

CRITICAL DOCUMENT

MPL NO. C41-1010
(LVN - F045) **Acad2K H16061**



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Version: 29.0 | Date: 05/25/11
REVISED PER ABN H01475, VER. 1.0.
DRAWING CORRECTION

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
STANDBY LIQUID CONTROL SYSTEM P&ID

NO.	DATE	BY	CHKD.	REV.	DESCRIPTION
10-502	9-7-72	None	None	None	None

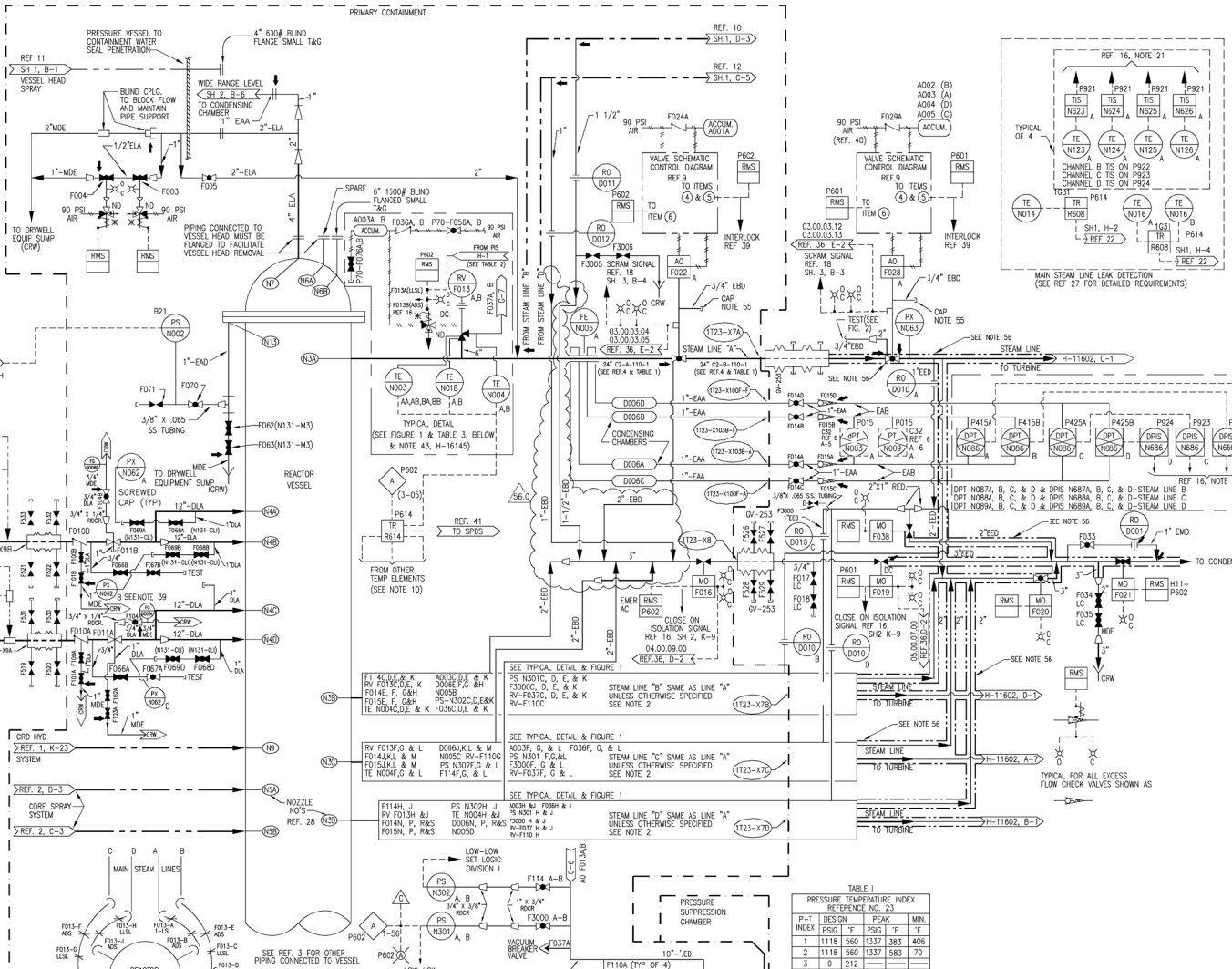


FIGURE 1 SAFETY/RELIEF VALVE LOCATION & ADS/LSL IDENTIFICATION (SEE NOTE 4)

TABLE 3 SAFETY/RELIEF VALVE SUFFIX ASSIGNMENT AND ASSOCIATED EQUIPMENT

SAFETY/RELIEF VALVE	F013 A	B	C	D	E	F	G	H	J	K	L
VALVE PILOT STAGE	AA	BA	CA	DA	EA	FA	GA	HA	JA	KA	LA
TEMP. ELEM. (DUPEX ELEMENT)	AB	BB	CB	DB	EB	FB	GB	HB	JB	KB	LB
VALVE 2ND STAGE	NO18 A	B	C	D	E	F	G	H	J	K	L
TEMP. ELEM.											
VALVE DISCHARGE	NO04 A	B	C	D	E	F	G	H	J	K	L
TEMP. ELEM.											

TABLE 1 PRESSURE TEMPERATURE INDEX REFERENCE NO. 23

DESIGN INDEX	DESIGN	PEAK	MIN.
INDEX	PSIG	°F	°F
1	1118	560	1337
2	1118	560	1337
3	0	212	
4	448	457	535
5	1475	575	1475
6	7	1146	560
8	1118	560	1337

TABLE 2 (FOR TYP DETAIL B)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
N123A	B-6	N697A	P227	N697G	P227	N697I	P227	F013B	F013B
N123B	B-6	N697B	P228	N697H	P228	N697J	P228	F013C	F013C
N123C	E-2	N697C	P227	N697G	P227	N697I	P227	F013A	F013A
N123D	F-12	N697D	P228	N697H	P228	N697J	P228	F013F	F013F

CRITICAL DOCUMENT
FOR NOTES SEC DWG H-16145 (SHT. 3)
MPL No. B21-1010 (ACAD2010) H16062



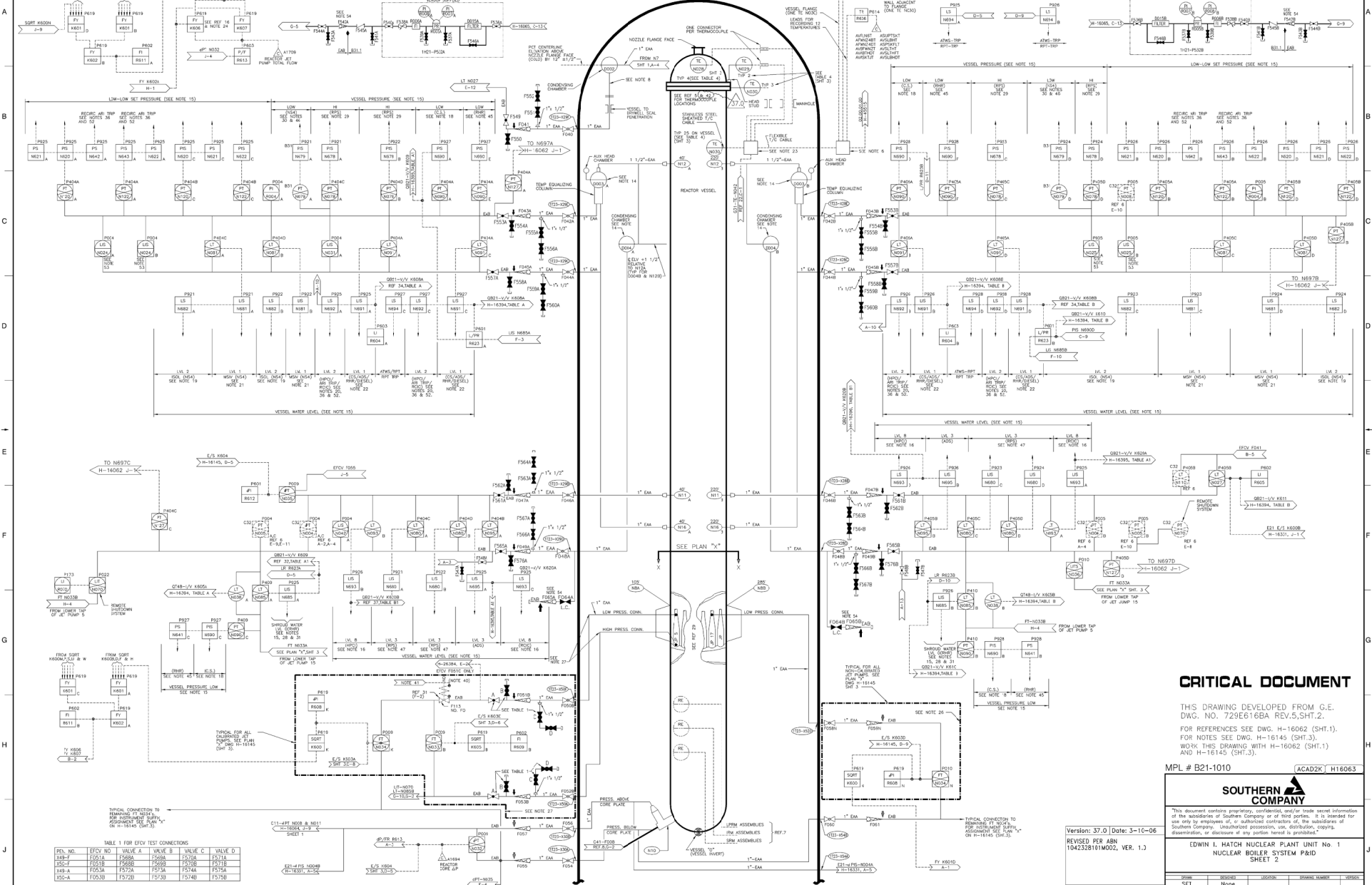
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Version: 56.0 Date: 06/06/16
REVISED PER: SNC75328M001, VER. 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
BOILER SYSTEM P&ID
SHEET 1


NO.	DATE	ISSUED	LOCATION	ISSUED NUMBER	VERSION
1	11/11/72	SSC	None	10-502	H-16062
2		SSC			56.0

E9091-H



CRITICAL DOCUMENT

THIS DRAWING DEVELOPED FROM G.E. DWG. NO. 729E616BA REV.5,SHT.2.
 FOR REFERENCES SEE DWG. H-16062 (SHT.1).
 FOR NOTES SEE DWG. H-16145 (SHT.3).
 WORK THIS DRAWING WITH H-16062 (SHT.1) AND H-16145 (SHT.3).

MPL # B21-1010  H16063

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Version: 37.0 Date: 3-10-06
 REVISED PER AEN 104232810M002, VER. 1.3

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
 NUCLEAR BOILER SYSTEM P&ID
 SHEET 2

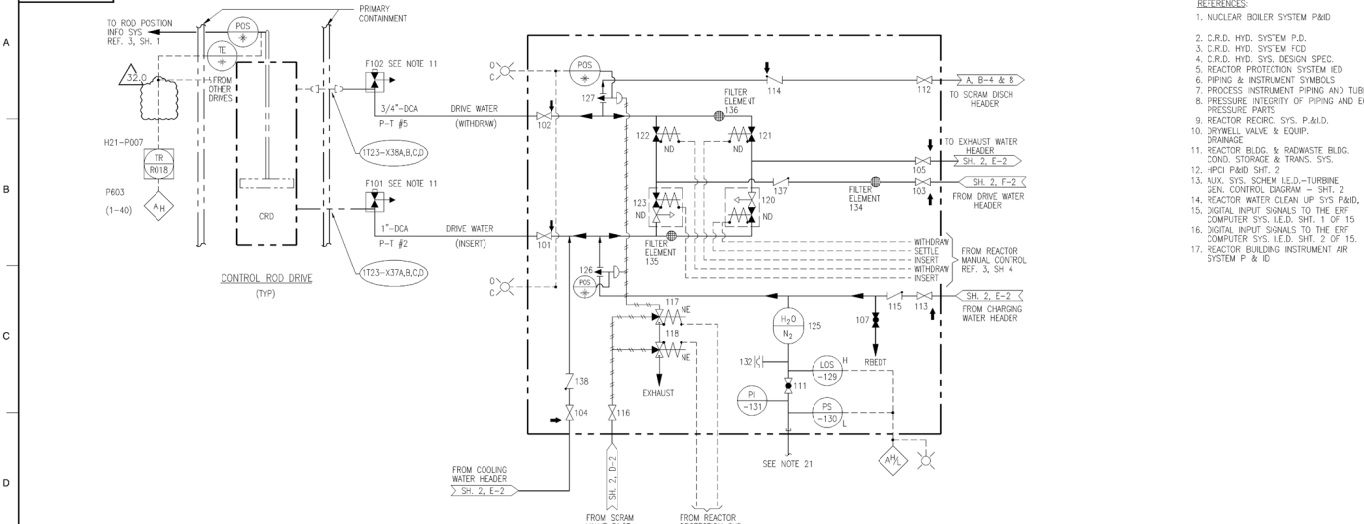
NAME	DESIGN	ISSUES	ISSUES NUMBER	ISSUES
SET	None			
REV	None			
10-502	H-16063			37.0

TABLE 1 FOR ECV TEST CONNECTIONS

REV. NO.	ECV NO.	VALVE A	VALVE B	VALVE C	VALVE D
148-F	F051A	F566A	F570A	F574A	
150-F	F051B	F566B	F570B	F574B	
148-A	F053A	F572A	F576A	F578A	
150-A	F053B	F572B	F576B	F578B	

JLO LDT DEW
 DWG. CATEGORY
 CRITICAL

9091-H

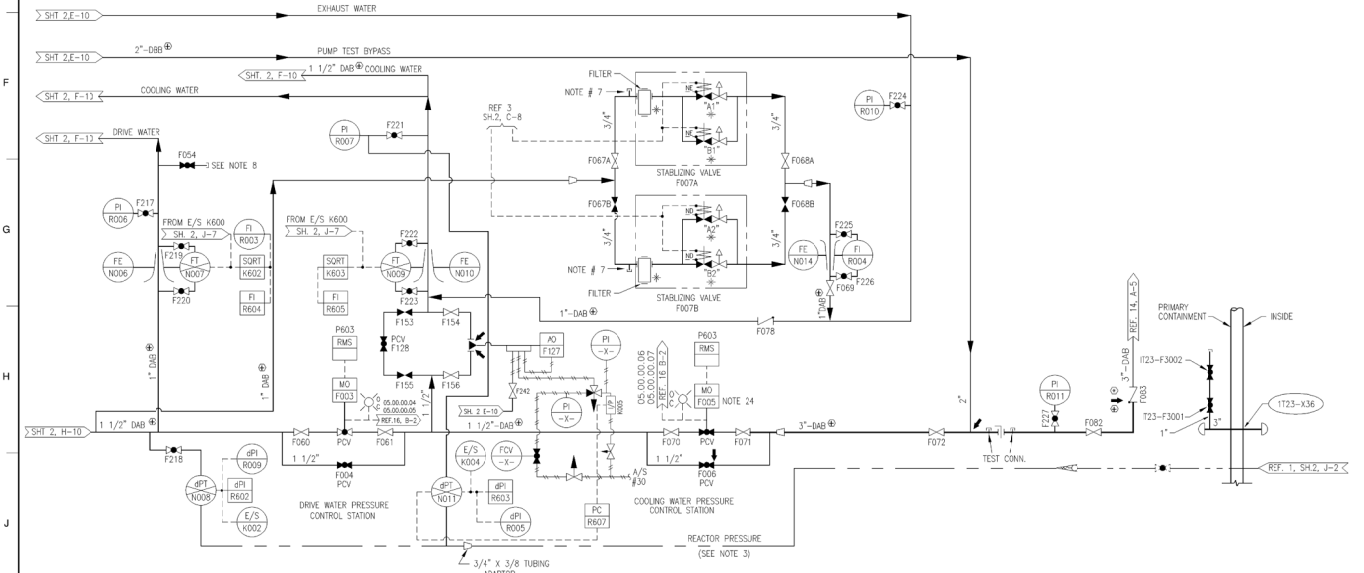


HYDRAULIC CONTROL UNIT - TYPICAL - MPL No. 0001
(HCU PART NUMBERS FOR INFORMATION ONLY)

PRESSURE - TEMPERATURE INDEX				
REF 8 & 10				
P - 1	DESIGN	PEAK	MIN	
INDEX	PSIG	F	PSIG	F
1	230	150	275	125
2	1750	150	1863	150
3	1135	560	1361	560
4	1146	280	1375	280
5	1750	50	2100	535

- REFERENCES:
1. NUCLEAR BOILER SYSTEM P&ID
 2. C.R.D. HYD. SYSTEM P.D.
 3. C.R.D. HYD. SYSTEM P.C.D.
 4. C.R.D. HYD. SYS. DESIGN SPEC.
 5. REACTOR PROTECTION SYSTEM IED
 6. PIPING & INSTRUMENT SYMBOLS
 7. PROCESS INSTRUMENT PIPING AND TUBING SPEC. PRESSURE PARTS
 8. PRESSURE INTEGRITY OF PIPING AND EQUIPMENT
 9. REACTOR REGR. SYS. P&ID
 10. JOWELL VALVE & EQUIP. DRAWING
 11. REACTOR BLDG. & RADWASTE BLDG. COND. STORAGE & TRANS. SYS.
 12. API P&ID SH. 2
 13. AUX. SYS. SCHEM. I.E.D. - TURBINE GEN. CONTROL DIAGRAM - SH. 2
 14. REACTOR WATER CLEAN UP SYS. P&ID, SH. 1
 15. DIGITAL INPUT SIGNALS TO THE CRF COMPUTER SYS. I.E.D. SH. 1 OF 15
 16. DIGITAL INPUT SIGNALS TO THE CRF COMPUTER SYS. I.E.D. SH. 2 OF 15
 17. REACTOR BUILDING INSTRUMENT AIR SYSTEM P & ID

- NOTES:
1. ALL EQUIPMENT AND INSTRUMENTS ARE PREFIXED BY SYSTEM NUMBER C11 UNLESS OTHERWISE NOTED.
 2. VALVE F007A-C CLOSING ON DRIVE INSERT SIGNAL. VALVE F007A-B CLOSING ON DRIVE WITHDRAW SIGNAL, BUT DOES NOT STAY CLOSED DURING SETTLING (G-17).
 3. REACTOR PRESSURE SENSING LINE SENSES P₁ (I-2) & (I-3).
 4. STAB VALVE F007E IS AN ALTERNATE FOR STAB VALVE F007A (H-17).
 5. PROVIDE VENT VALVES WITH CAP ON DISCHARGE SIDE \leftarrow AT ALL SYSTEM HIGH POINTS.
 6. PROVIDE DRAIN VALVES WITH CAP ON DISCHARGE SIDE \leftarrow AT ALL SYSTEM LOW POINTS.
 7. PROVIDED FOR SYSTEM FLUSHING (G & H-17).
 8. AVAILABLE FOR TEMPORARY CONNECTION FOR INSTRUMENT FLUSHING AND PERMANENT PIPING CONNECTIONS TO BE MADE TO THIS VALVE (G-13).
 9. C, R, D NITROGEN AND AIR LINES SHALL BE OF A NON-CORRODING MATERIAL.
 10. SEE DESIGN SPEC. FOR THE REQ'D VOLUME OF SCRAM DISCHARGE VOLUME.
 11. SYSTEM DESIGN IS SHOWN FOR 137 CONTROL ROD DRIVES.
 12. EXCEPT AT POINTS OF CONNECTION WITH APEL SUPPLIED EQUIPMENT, THE PIPING SUPPLIED BY OTHERS SHALL BE SUPPLIED BY OTHERS IF NECESSARY, DUE TO THE PIPING ARRANGEMENT BY OTHERS TO COMPLY WITH THE APEL SYSTEM PROCESS DIAGRAM AND SYSTEM DESIGN SPECIFICATION.
 13. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS SEE THE INSTRUMENT DATA SHEETS LISTED IN THE MPL FOR EACH INSTRUMENT.
 14. DELETED
 15. MULTIPLE ORIFICES CONNECTED IN SERIES; SEE MPL FOR QUANTITY OF ORIFICES REQ'D. VALVE F034 SUPPLEMENTS THE ORIFICES FOR THE REQ'D PRESSURE DROP.
 16. INSTALL CHECK VALVE AND FLUSH CONNECTION AS CLOSE TO THE 4" TEE AS POSSIBLE.
 17. ADJUST NEEDLE VALVE F086 SO THAT THE OUTBOARD VENT AND DRAIN VALVES (F035A & E, F037) FULLY CLOSE AT LEAST FIVE (5) SECONDS AFTER EACH RESPECTIVE INBOARD VENT AND DRAIN VALVE (F034 & D, F011) DURING A FULL CORE SCRAM. ALL VALVES MUST BE FULLY CLOSED IN LESS THAN FORTY-FIVE (45) SECONDS.
 18. ADJUST NEEDLE VALVE F086 SO THAT THE INBOARD VENT AND DRAIN VALVES (F010 A & B, F011) START TO OPEN AT LEAST FIVE (5) SECONDS AFTER EACH RESPECTIVE OUTBOARD VENT AND DRAIN VALVE (F034 & B, F037) UPON RESET OF A FULL CORE SCRAM.
 19. VALVES F009 AND F040 ARE DUAL COIL SOLENOID OPERATED QUICK EXHAUST VALVES. EACH VALVE CONSISTS OF A DUAL COIL 3-WAY SOLENOID OPERATED VALVE AND A 3-WAY QUICK EXHAUST VALVE. WHEN BOTH COILS FOR A GIVEN SOLENOID VALVE ARE DEENERGIZED AIR IS VENTED FROM THE INLET PORT OF THE QUICK EXHAUST VALVE. THIS CAUSES THE QUICK EXHAUST VALVE TO SHUT, THEREBY VENTING AIR VIA LARGE PORTS FROM THE ASSOCIATED VENT AND DRAIN VALVES (F010 A & B, F011, F035 A & E, F037). WHEN EITHER COIL IS ENERGIZED AIR IS SUPPLIED TO THE VENT AND DRAIN VALVES VIA THE SOLENOID VALVE AND A BLEED HOLE IN THE QUICK EXHAUST VALVE DIAPHRAGM.
 20. VALVE C11-F237 IS A GEAR BOX OIL DRAIN VALVE.
 21. ACCUMULATORS CHARGED WITH NITROGEN FROM PORTABLE N₂ CHARGING CART.
 22. \odot DENOTES ALL DOWNGRADED PIPING AND COMPONENTS DOWNSTREAM OF OUTBOARD ISOLATION VALVE 1031-F304 THROUGH VALVES 1031-F035, 1031-F033 AND UP TO VALVE C11-F083, WHICH MAY BE CONSTRUCTED TO ASME SECTION III, CLASS 3 REQUIREMENTS, INSTEAD OF ORIGINAL CONSTRUCTION CODE OF USAS B31.7, CLASS 2.
 23. \oplus DENOTES DOWNGRADED CRD PIPING AND COMPONENTS FROM CRD SUPPLY VALVE F11-F086 AND CONDENSATE SUPPLY VALVE C11-F152 TO CRD RETURN TO RWCU CHECK VALVE C11-F783. CRD MIN FLOW TO PCP TEST LINE, CRD WATER TO RWCU PUMP SEAL CHECK VALVES C31-F208A/B, CRD WATER TO REACTOR PUMP SEAL CHECK VALVES B31-F017A/B AND CRD WATER TO/FROM CRD HYDRAULIC CONTROL UNITS. THIS PIPING MAY BE PROCURED AND INSTALLED IN ACCORDANCE WITH CRD ANSI/ASME B31.1 REQUIREMENTS INSTEAD OF ORIGINAL CONSTRUCTION CODE OF USAS B31.7, CLASS 2.
 24. VALVE F005 IS NORMALLY CLOSED. THIS VALVE IS OPENED ONLY WHEN OPERATIONS WANTS TO DIRECT FLOW TO THE REACTOR VIA THE RWCU SYSTEM.



- ORIG. CLASS SUBST. CLASS
- | | |
|-----|-----|
| DAB | DCE |
| DBB | DEE |
| DCB | DCE |
| HAC | HAE |
| HBC | HEE |
| HEC | HEE |

THIS DWG. DEVELOPED FROM G.E. DWG. NO. 1049478A SH. NO. 1 REV 2

CRTICAL DOCUMENT

C11-1010 Acad2K H16064



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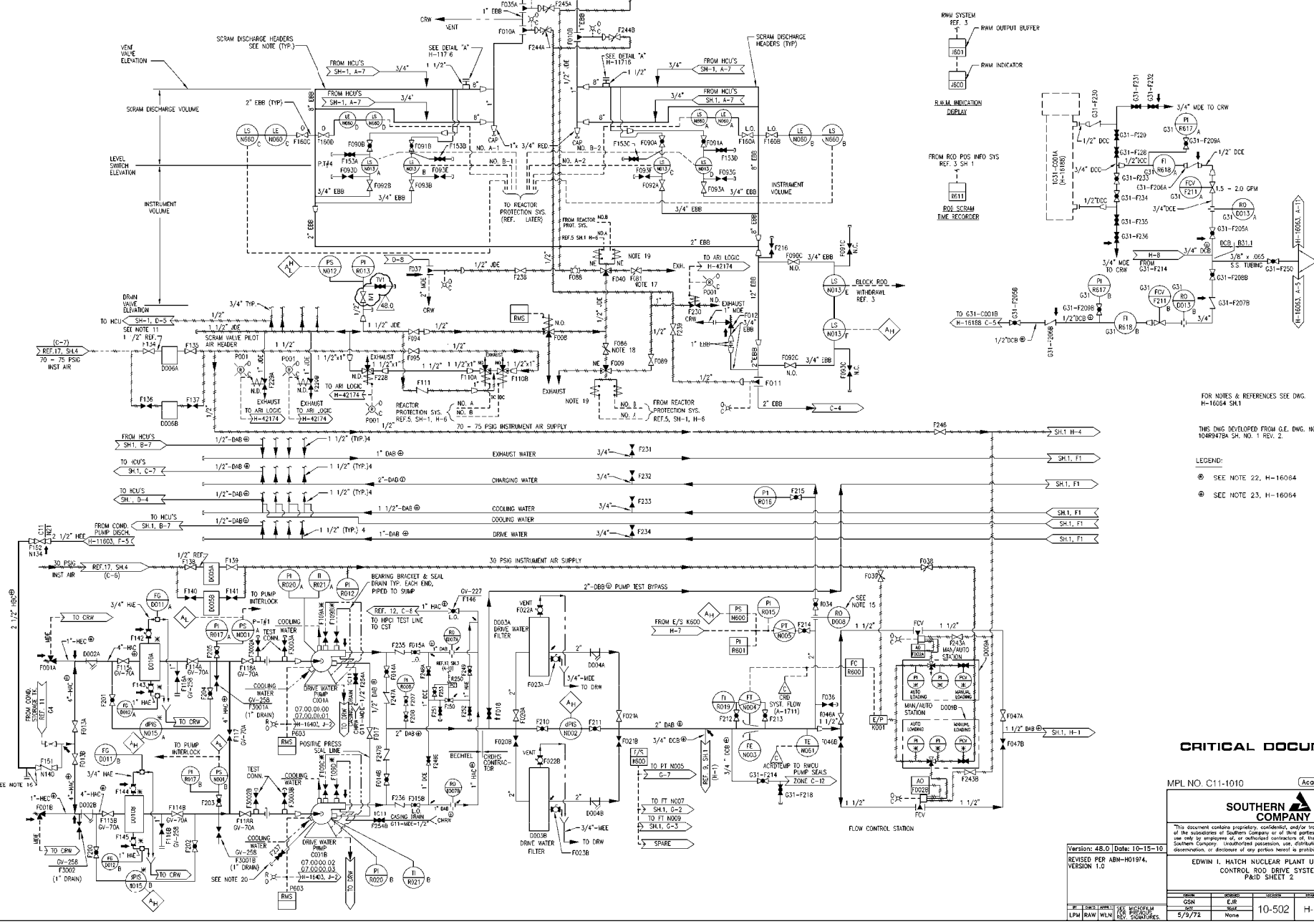
Version: 32.0 Date: 11-8-05
REVISED PER ABN 1051456601-1, VER. 1.0.

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
CONTROL ROD DRIVE SYSTEM
P & ID SHEET 1

NAME	DESIGN	LOCATION	ISSUED NUMBER	ISSUED
GSN	DEF			
ENE	NEP			
5-9-72	None		10-502	H-16064

DRAWING CHECKED: 32.0

SCRAM DISCHARGE VOLUME PIPING



FOR NOTES & REFERENCES SEE DWG. H-16054 SK1

THIS DWG. DEVELOPED FROM S.E. DWG. NO. 1049478A SK1 NO. 1 REV. 2.

LEGEND:

- ⊙ SEE NOTE 22, H-16054
- ⊙ SEE NOTE 23, H-16054

CRITICAL DOCUMENT

MPL NO. C11-1010 Acad2K1_H16085



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EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
CONTROL ROD DRIVE SYSTEM
PAGE SHEET 2

Version: 48.0 Date: 10-15-10
REVISED PER ABN-H0194, VERSION 1.0

REV	DATE	BY	CHKD	APP'D	DESCRIPTION
1	10-502	None	None	None	H-16065 48.0

SEE REF. 1 FOR OTHER PIPING CONNECTED TO VESSEL

NOTES CONT'D

- 26. Φ DENOTES DOWNGRADED CRD PIPING AND COMPONENTS FROM CST SUPPLY VALVE. P11-F000 AND CONDENSATE SUPPLY VALVE. C11-1152 D2 CRD RETURN TO RWCU CHECK VALVE. C11-F081 CRD MIN FLOW TO HPO TEST LINE. CRD WATER TO RWCU PUMP SEAL CHECK VALVES. S31-F050A/B CRD WATER TO RWCU PUMP SEAL CHECK VALVES. S31-F071A/B AND CRD WATER TO RWCU CRD HYDRAULIC CONTROL LINES. THIS PIPING MAY BE PROTECTED AND INSTALLED IN ACCORDANCE WITH ANSI/ISA 63.1.1 REQUIREMENTS INSTEAD OF ORIGINAL CONSTRUCTION CODE OF UGAS E31.7, CLASS 2.

REFERENCES

NO.	DESCRIPTION	REV.	DATE	BY	CHKD.
1.	NUCLEAR BOILER SYSTEM P&ID	SH. 1	02-11-00	H-16062	H-16062
2.	NUCLEAR BOILER SYSTEM P&ID	SH. 2	02-11-00	H-16062	H-16062
3.	REACTOR HEAT REMOVAL SYSTEM P&ID	SH. 1	01-11-00	S25215	S25215
4.	REACTOR HEAT REMOVAL SYSTEM P&ID	SH. 2	01-11-00	S25215	S25215
5.	REACTOR MONITORING SYSTEM P&ID	SH. 1	01-11-00	S25215	S25215
6.	REACTOR RECIRCULATION SYSTEM P&ID	SH. 1	01-11-00	H-16062	H-16062
7.	REACTOR RECIRCULATION SYSTEM P&ID	SH. 2	01-11-00	H-16062	H-16062
8.	REACTOR HEAT REMOVAL SYSTEM P&ID	SH. 2	01-11-00	H-16062	H-16062
9.	DELETED				
10.	REACTOR WATER CLEAN-UP SYSTEM P&ID	SH. 1	03-11-00	H-16188	H-16188
11.	PIPING AND INSTRUMENT SYMBOLS	SH. 2	A41-1000	H-16062	H-16062
12.	PRESSURE INTEGRITY OF PIPING AND EQUIP.		A61-4000	S25212	S25212
13.	PROCESS INSTRUMENTATION OF PIPING AND TUBING		A61-4000	S25233	S25233
14.	INSTRUMENTATION SYMBOLS TO SPS/ERP	SH. 1-7	G11-1000	H-16176	H-16176
15.	CONTROL ROD DRIVE HYD. SYS. P&ID		C11-1100	H-16062	H-16062
16.	SPRING SPEC.		24-0000	H-16062	H-16062
17.	REACTOR SYS. P&ID		140-1000	H-16062	H-16062
18.	SMILING SPEC. P&ID & P.I.D.		P23-1000	H-16062	H-16062
19.	DOWELL VALVE & EQUIP. ISOLATION SYS. P&ID		H-16062	H-16062	H-16062
20.	ANNUNCIATOR SYMBOLS TO SPS/ERP		K75-1000	H-16062	H-16062
21.	DELETED				
22.	DIGITAL INPUT SIGNALS TO THE SPS/ERP COMPUTER SYSTEM I.E.D.	SH. 1 OF 15	K75-1000	H-16040	H-16040
23.	P&ID - HYDROGEN WATER CHEMISTRY CHECK ARREST VERIFICATION SYSTEM		H-11511	H-11511	H-11511
24.	MARK II CONTROL SYSTEM ELEMENTARY DIAGRAMS		S-57302	H-16062	H-16062

NOTES

- 1. ALL EQUIPMENT AND INSTRUMENTS ARE PROVIDED BY SYSTEM NO. B31 UNLESS OTHERWISE NOTED.
- 2. RECIRCULATION LOOP ENCLOSED IN BOX SHALL HAVE PART NUMBERS CORRESPONDING TO ITS RESPECTIVE LINE OR LOOP NUMBER UNLESS OTHERWISE NOTED.
- 3. INSTRUMENT LINE VALVING MUST COMPLY WITH INSTRUMENT PIPING STANDARDS REF. 13.
- 4. RECOMMENDATION CONNECTION TO BE READILY ACCESSIBLE FOR CONVENTION & RAPID CONNECTION OF TEMPORARY PIPING.
- 5. WHERE DV-NUMBERS ARE USED, THE VALVES MUST BE TAGGED WITH THESE NUMBERS. WHERE DV-NUMBERS ARE NOT USED, THE VALVES WILL BE TAGGED WITH THE W.S. NUMBERS.
- 6. CLOSED COOLING WATER SYSTEM TO AND FROM THE RECIRCULATION PUMP SHALL BE AVAILABLE TO CONTRACTOR OPERATION DURING PERIODS OF DRYWELL ISOLATION.
- 7. WHERE THERMOCOUPLES FOR PUMP & MOTORS ARE DESIGNATED A, B, ETC. A & B ARE SPARE ELEMENTS. SPARE ELEMENTS MAY BE USED TO PROVIDE TEMPERATURE INDICATION AS NEEDED.
- 8. LIST OF PUMP & MOTOR ASSEMBLY IDENTIFICATION:
 - TE/LA - MOTOR LOWER BEARING TEMPERATURE
 - TE/UB - MOTOR UPPER BEARING TEMPERATURE
 - TE/LS - MOTOR LOWER BEARING TEMPERATURE
 - TE/US - MOTOR UPPER BEARING TEMPERATURE
 - TE/LM - MOTOR LOWER BEARING TEMPERATURE
 - TE/UM - MOTOR UPPER BEARING TEMPERATURE
 - TE/LC - MOTOR LOWER BEARING TEMPERATURE
 - TE/UC - MOTOR UPPER BEARING TEMPERATURE
 - TE/LR - MOTOR LOWER BEARING TEMPERATURE
 - TE/UR - MOTOR UPPER BEARING TEMPERATURE
 - TE/LD - MOTOR LOWER BEARING TEMPERATURE
 - TE/UD - MOTOR UPPER BEARING TEMPERATURE
 - TE/LN - MOTOR LOWER BEARING TEMPERATURE
 - TE/UN - MOTOR UPPER BEARING TEMPERATURE
 - TE/LP - MOTOR LOWER BEARING TEMPERATURE
 - TE/UP - MOTOR UPPER BEARING TEMPERATURE
 - TE/LQ - MOTOR LOWER BEARING TEMPERATURE
 - TE/UQ - MOTOR UPPER BEARING TEMPERATURE
 - TE/LV - MOTOR LOWER BEARING TEMPERATURE
 - TE/UV - MOTOR UPPER BEARING TEMPERATURE
 - TE/LW - MOTOR LOWER BEARING TEMPERATURE
 - TE/UW - MOTOR UPPER BEARING TEMPERATURE
 - TE/LX - MOTOR LOWER BEARING TEMPERATURE
 - TE/UX - MOTOR UPPER BEARING TEMPERATURE
 - TE/LY - MOTOR LOWER BEARING TEMPERATURE
 - TE/UY - MOTOR UPPER BEARING TEMPERATURE
 - TE/LZ - MOTOR LOWER BEARING TEMPERATURE
 - TE/UZ - MOTOR UPPER BEARING TEMPERATURE
- 9. ALL MOTOR OPERATE AND AIR OPERATED GLOBE VALVES ARE AS UNLESS OTHERWISE NOTED.
- 10. DELETED
- 11. ALL PROTECTIVE RELAYS & INTERLOCKS SHALL BE MOUNTED ON THE 400 VOLT OVERHEAD CUBICLE AND ASST RELAY PANEL.
- 12. DELETED
- 13. THIS TYPE OF BLOCK REPRESENTS A PERMISSIVE CONDITION WHERE THE CONDITIONS INDICATED THEREIN ARE SATISFIED.
- 14. THE WATER DIVIDES FOR PUMP PROTECTION. BOTH OPENING & CLOSING THIS DIVIDING SHALL BE TIME DELAYED 15 SECONDS.
- 15. THE WATER CONTROLLER SWITCHES THE SIGNAL SO THAT AUTOMATIC STOP POINT ADJUSTMENT (FOR PUMP PROTECTION) IS LOCKED IN THE TURBINE CONTROL CAN FUNCTION ONLY WHEN THE WATER CONTROLLER IS IN THE AUTOMATIC MODE.
- 16. EQUIPMENT PARTS ARE ESTIMATED AND PRELIMINARY. ACTUAL VALUES ARE TO BE DETERMINED AT THE TIME OF EQUIPMENT PROCUREMENT.
- 17. THESE SPEED LIMITERS REDUCE RECIRCULATION FLOW IF ANY VESSEL OR PUMP IS NOT RUNNING AND THE LEVEL IN THE REACTOR IS ABOVE THE LOW LEVEL ALARM POINT.
- 18. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS SEE INSTRUMENT DATA SHEET LISTED IN W.P. FOR EACH INSTRUMENT.
- 19. THE DESIGN PRESSURE AND TEMPERATURE RATINGS FOR THE REACTOR PIPING AND EQUIP. ARE SHOWN IN REF. 12 & 16.
- 20. DELETED
- 21. LIGHT BRANCH CONNECTION AS CLOSE AS POSSIBLE AFTER THE GLOBE VALVES. THE EXCESS FLOW CHECK VALVES ARE TO BE INSTALLED AS CLOSE AS POSSIBLE UPSTREAM OF THE BRANCH CONNECTION.
- 22. CLOSED COOLING WATER TO THE MOTOR BEARINGS IS TO SERVE BOTH THE UPPER MOTOR BEARING & THE LOWER MOTOR BEARING. THE RETURN FLOWS ARE JOINED UPSTREAM OF THE TURBINE CONTROL CAN FUNCTION.
- 23. LINES WITH C.E. LINE CLASS DESIGNATIONS (I.E. S3-A-18-2) ARE FURNISHED BY C.E. AND ARE TO BE INSTALLED PER REF. 12.
- 24. NUMBERS WITHIN \square INDICATE ANALOG INPUT NUMBER AS DESCRIBED IN THE FUNCTIONAL DESIGN CRITERIA FOR EMERGENCY RESPONSE FACILITY, TABLE "D" IN ANALOG INPUT NUMBER SUMMARY SHEET.
- 25. FOR PUMP 0201A THE DIGITAL "ON-OFF" SIGNAL INPUT TO THE SPS/ERP COMPUTER IS TAKEN FROM PANEL R22-5001.FE1. FOR PUMP 0201B THE DIGITAL "ON-OFF" SIGNAL INPUT TO THE SPS/ERP COMPUTER IS TAKEN FROM PANEL R22-5002.FE1.

NOTES CONT'D ABOVE

CRITICAL DOCUMENT

THIS DWG. DEVELOPED FROM C.E. DWG. 729 E 6035A, REV. 5.

MPL NO. B31-1010 (ACAD2010) H16066



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EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
REACTOR RECIRCULATION SYSTEM
P. & I. D.

NO.	REVISION	DATE	BY	CHKD.
None	None	None	None	None
10-18-72	None	None	H-16066	59.0

Version: 59.0 Date: 04/05/16

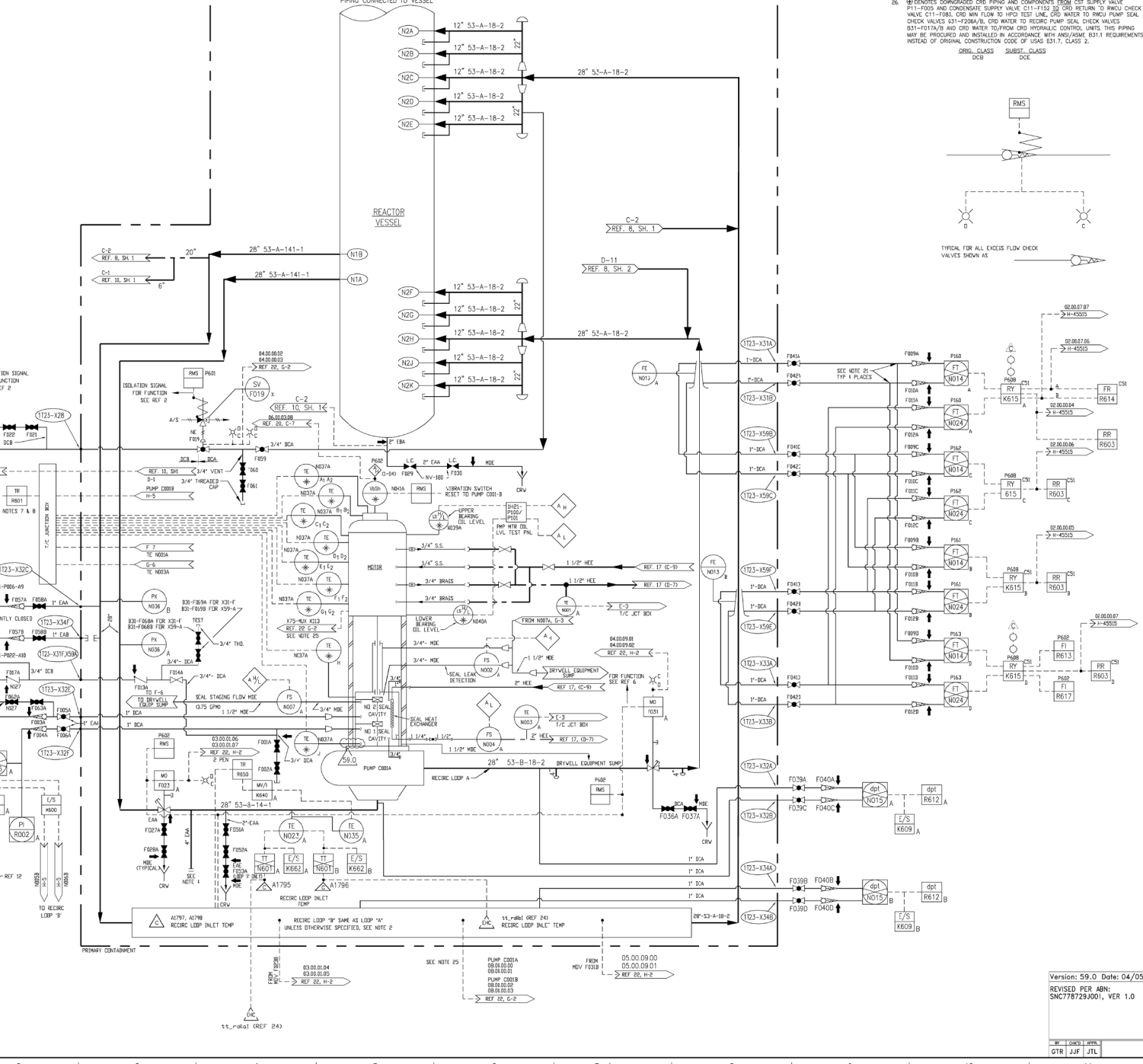
REVISED PER ABR SNCT7872J001, VER 1.0

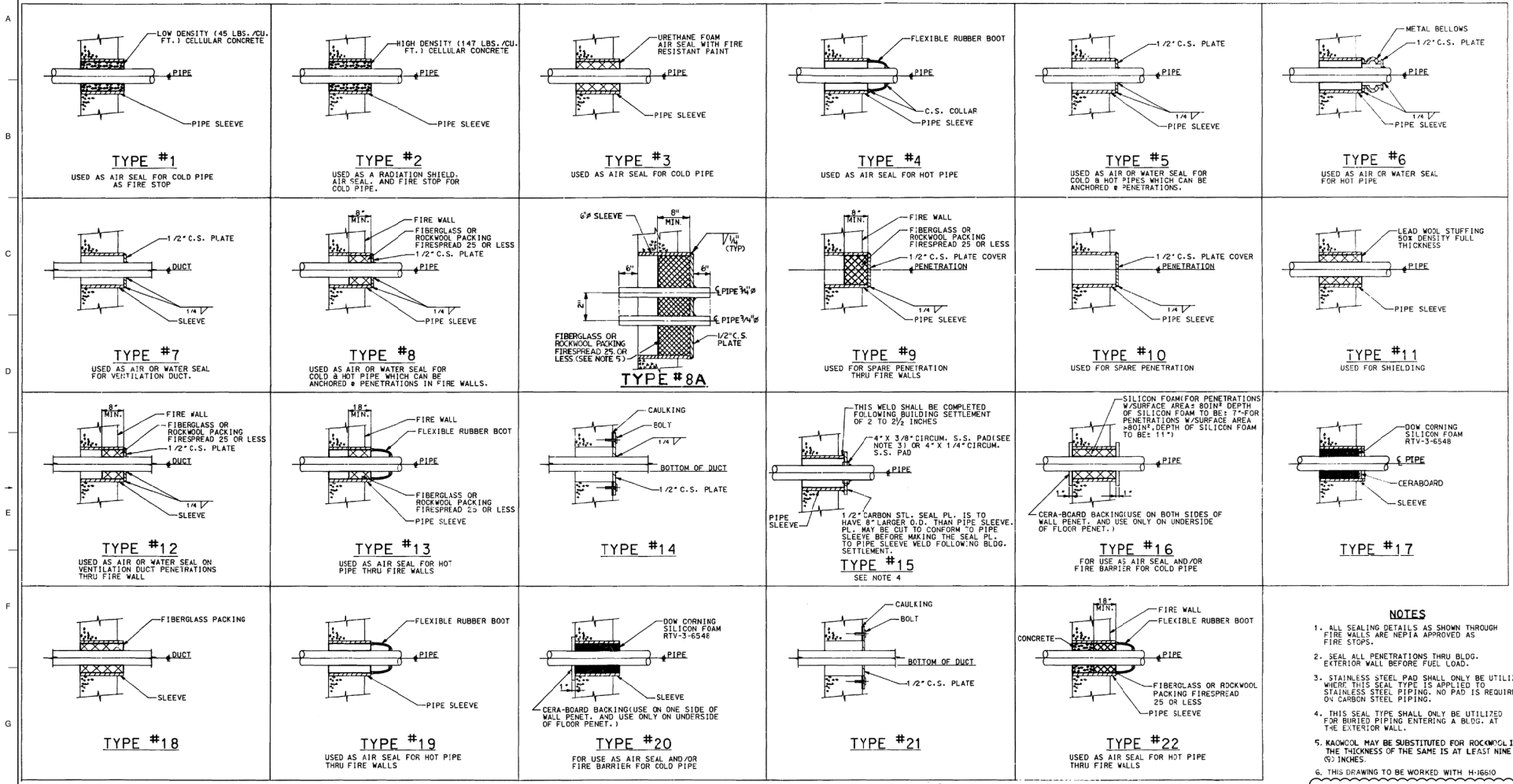
NO.	REVISION	DATE	BY	CHKD.
None	None	None	None	None
10-18-72	None	None	H-16066	59.0

PRESSURE TEMPERATURE INDEX

INDEX	DESIGN	MIN	MAX
1	1150 562	1275 562	
2	1125 562	1266 562	
3	1150 562	1275 562	76
4	130 125		
5	1750 150		

NO.	REVISION	DATE	BY	CHKD.
None	None	None	None	None
10-18-72	None	None	H-16066	59.0





- NOTES**
1. ALL SEALING DETAILS AS SHOWN THROUGH FIRE WALLS ARE NEPIA APPROVED AS FIRE STOPS.
 2. SEAL ALL PENETRATIONS THRU BLDG. EXTERIOR WALL BEFORE FUEL LOAD.
 3. STAINLESS STEEL PAD SHALL ONLY BE UTILIZED WHERE THIS SEAL TYPE IS APPLIED TO STAINLESS STEEL PIPING. NO PAD IS REQUIRED ON CARBON STEEL PIPING.
 4. THIS SEAL TYPE SHALL ONLY BE UTILIZED FOR BURIED PIPING ENTERING A BLDG. AT THE EXTERIOR WALL.
 5. KAOWOOL MAY BE SUBSTITUTED FOR ROCKWOOL IF THE THICKNESS OF THE SAME IS AT LEAST NINE (9) INCHES.
 6. THIS DRAWING TO BE WORKED WITH H-1610
 7. FOR FIRE WALLS, USE DRAWINGS B-1962B AND B-23275 FOR UNIT 1 AND UNIT 2 PENETRATION SEAL DETERMINATION TYPE NOT H-16110.

0VY2000 H16110

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Version: 11.0 Date: 6/26/2014
 REVISED PER ASN-H05574, VER. 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No.1&2
 TYPES OF PENETRATION SEALS FOR PIPE & DUCT

NO.	DATE	BY	CHKD.	APPD.	REASON
1	1-23-84	MBF	JTL		None

REV	NO	DATE	BY	CHKD.	APPD.	REASON
10	502					H-16-10
11	0					11.0

TABLE 3

JET PUMP	ISOLATION VALVE	EFCV
J1	F058B	F059B
J2	F058D	F059D
J3	F058F	F059F
J4	F058H	F059H
J5	F058B	F059B
J6	F058M	F059M
J7	F058P	F059P
J8	F058S	F059S
J9	F058U	F059U
J10	F058D	F059D
J11	F058A	F059A
J12	F058C	F059C
J13	F058E	F059E
J14	F058G	F059G
J15	F058A	F059A
J16	F058L	F059L
J17	F058N	F059N
J18	F058R	F059R
J19	F058T	F059T
J20	F058C	F059C
J21	F058C	F059C

TABLE 4

TYPE T THERMOCOUPLE TAG	NO.
B21-N030A1	B21-N030J2
B21-N030A2	B21-N030J3
B21-N030A3	B21-N030K1
B21-N030B1	B21-N030K2
B21-N030B2	B21-N030K3
B21-N030B3	B21-N030L1
B21-N030D1	B21-N030L2
B21-N030D2	B21-N030L3
B21-N030E1	B21-N030M1
B21-N030E2	B21-N030M2
B21-N030F1	B21-N030M3
B21-N030F2	B21-N030N1
B21-N030F3	B21-N030N2
B21-N030H1	B21-N030N1
B21-N030H2	B21-N030N2
B21-N030H3	B21-N030N1
B21-N030J1	B21-N030N2

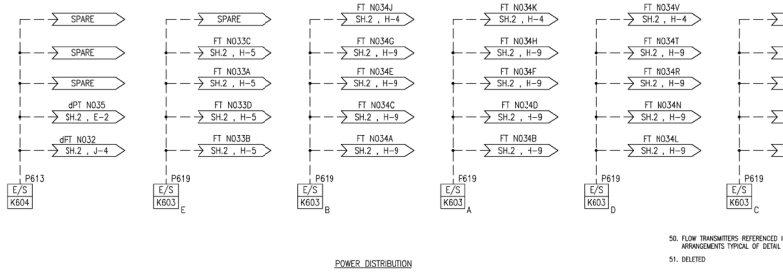
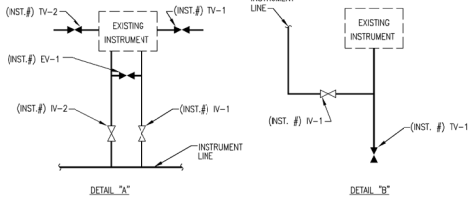
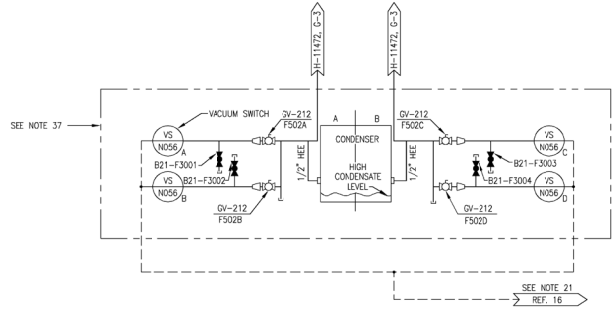
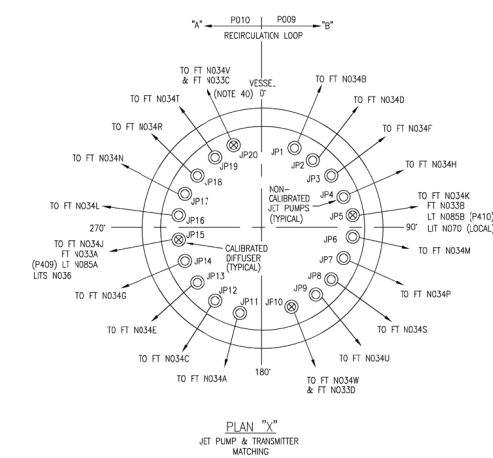


TABLE 2
ELEVATION CORRELATION CHART (SEE NOTE 5)

REFERENCE	(COOL VESSEL) INCHES ABOVE VESSEL ZERO	DESCRIPTION OF TRIPS	INSTRUMENT(S) PROVIDING TRIP	REACTOR VESSEL LEVELS (REF. 25)	INDICATED LEVEL (NOTE 44)
NOZZLE N11A, B, C, D	600.0				
NOZZLE N12A, B	586.25				
FEEDWATER SYSTEM & REACTOR PROTECTION SYSTEM FULL SCALE	577.0	1. TRIP HPCI TURBINE 1. TRIP RCC TURBINE 1. TRIP REACTOR FEED PUMPS 2. CLOSE MAIN TURBINE STOP VALVES	LS N893B LS N893D LS N893A LS N893C C32-FY-K6244-C	8	
FEEDWATER SYSTEM & REACTOR PROTECTION SYSTEM INSTRUMENT ZERO BOTTOM OF DRYER SKIRT	517.0	1. HIGH LEVEL ALARM 1. NORMAL LEVEL 1. LOW LEVEL ALARM	C32-L/PR-R608 FEEDWATER LEVEL CORRECT. SYS C32 C32-L/PR-R608	7 5.6 4	+37.0 +37.0
NOZZLE N11A, B	509.0	1. INITIATE HPCI 2. INITIATE RCC 3. INITIATE ATWS-ARI	LS N892A-D	3	0
REACTOR PROTECTION SYSTEM FULL SCALE	367.0	1. TRIP RECYCLATION PUMPS 2. INITIATE RRR SYSTEM 3. INITIATE CORE SPRAY SYSTEM 4. CONTRIBUTE TO ADS 4. START STANDBY DIESEL 1. CLOSE MSV'S 2. CLOSE MSL DRAIN ISOL VALVES 3. CLOSE REACTOR WATER SAMPLE ISOL VALVES	LS N894A-D LS N891A-D LS N891A-D LS N891A-D LS N891A-D LS N891A-D LS N891A-D	2 1 1 1 1 1	
NOZZLE N12A, B	358.0 356.56	1. CONTAINMENT SPRAY PERMISSIVE	LS N865A, B	0	-203.5



PLAN 'X'
JET PUMP & TRANSMITTER MATCHING

- NOTES - CONTINUED**
- TO BE 1" INSTALLED IN A STRAIGHT RUN OF 12" FEEDWATER PIPE 6'-0" FROM E OF ELBOWS AND LOCATED 30" TO 45" FROM TOPS TO THE VESSEL. NOZZLES ARE EQUAL. TAGS TO MEET ASME PTC 4, 1984 STEAM TURBINE PARR. 4.74. TELEVE WELDS ARE TO BE PROVIDED FURNISHING THE DRYPWELL FOR READY/TEMPORARY PRESSURE TRANSMITTERS DURING START-UP.
 - SOLIDWELD VALVE F113 IS LOCATED IN L.P. CONNECTION OF SENSING LINE TO B21-F3002 AND B21-F3003.
 - COMPUTER INPUT TO SOLIDWELD VALVE FOR AUTOMATIC CONTROL.
 - DELETED.
 - THE AIR ACCUMULATOR AND AIR LINE VALVES ASSOCIATED WITH EACH SATETY RELIEF VALVE ARE ASSIGNED THE SAME SAFETY AS THE SAFETY RELIEF VALVE.
 - FOR TRIP SETTINGS SEE INSTRUMENT SETPOINT INDEX.
 - INITIATE CLOSURE OF RECYCLATION PUMP DISCHARGE VALVE.
 - RRR PERMISSIVE (SHUTDOWN CLOSURE MODE)
 - SCRAM (REF. 19) AND CLOSE PRIMARY CONTAINMENT ISOLATION SYSTEM (PCIS) VALVES EXCEPT FOR THE FOLLOWING:
A) MSV'S
B) MSL DRAIN ISOLATION VALVES
C) REACTOR WATER SAMPLE ISOLATION VALVES
D) RMOU ISOLATION VALVES
 - ALL INSTRUMENTS HAVE VALVE ARRANGEMENTS TYPICAL OF DETAIL 'X'.
 - ALL INSTRUMENTS HAVE VALVE ARRANGEMENTS TYPICAL OF DETAIL 'Y'.
- NOTES:**
- ALL EQUIPMENT & INSTRUMENTS ARE PROVIDED BY M.P. NO. B21 UNLESS OTHERWISE NOTED.
 - STEAM LINES, ISOLATED BY BUNDLES SHALL HAVE PART TAGS CORRESPONDING TO ITS RESPECTIVE LINE NO. UNLESS OTHERWISE NOTED. EXAMPLE: X008 IS ON LINE "Y".
 - WHERE OH-NUMBERS ARE SHOWN THE VALVES ARE TAGGED WITH THESE NUMBERS. WHERE OH-NUMBERS ARE NOT SHOWN THE VALVES ARE TAGGED WITH THE M.P. NUMBER.
 - HIGH POINT VENTS AND LOW POINT DRAINS ARE TO BE PROVIDED WHERE NECESSARY AS PROVIDED BY PHYSICAL HOLDING OF PIPE. HIGH POINT VENTS AND LOW POINT DRAINS TO BE ACCORD BY FIELD AS REQUIRED.
 - LEVEL TAG SETTINGS VERSUS ACTUAL LEVEL OPER UNDER SIAL SHORT IS BARRIED UNLESS:
A. CALIBRATION OF LEVELS AT 100% PWR REACTOR DOME PRESSURE & 133% F. DRYPWELL AIRWATER TEMPERATURE.
B. ΔP-TURBINE PRESSURE DROP AT RATED LOAD=107% HOT WATER.
C. CARRY-OVER CORRECTION (BASED ON 0.3% BY WEIGHT CARRY-OVER)=5.5% CARRY-OVER.
 - FEEDWATER LEVEL SENSOR ERROR BAND ±2% RANGE.
 - SAFEGUARDS LEVEL SENSOR ERROR BAND ±1% TERMINALS.
 - T/C ANTI-JUNCTION BOX LOCALLY MOUNTED (BY OTHERS) EACH 1/2 ANTI-JUNCTION BOX TO HAVE ONE SET OF TERMINALS.
 - DELETED.
 - AN EXPANSION LID SHALL BE PROVIDED IN INSTRUMENT SENSING LINE BETWEEN THE DRYER SKIRT AND THE WATER-TIGHT PENETRATION SEAL THROUGH BOTTOM OF REACTOR WELL. THE EXPANSION LID & PIPING INSULATION SHALL BE DESIGNED TO ALLOW FOR MAXIMUM CHANGE OF VESSEL LENGTH WITH TEMPERATURE TO AVOID OVERSTRESSING THE PIPING ON THE SEAL OF DAMAGE TO THE INSULATION AROUND THE VESSEL.
 - FOR LOCATION & IDENTIFICATION OF INSTRUMENTS SEE INSTRUMENT DATA SHEET LISTED IN M.P. FOR EACH INSTRUMENT.
 - ALL RELIEF AND SAFETY VALVE PLOTT AND DISCHARGE THERMOCOUPLES SHALL BE CONNECTED TO TEMPERATURE RECORDER RE-14.
 - INSTRUMENTS, INSTRUMENT PIPING AND WELDING MUST COMPLY WITH THE REQUIREMENTS OF REF. 15.
 - ALL WATER AND SOLIDWELD OPERATED VALVES ARE NORMAL AC UNLESS OTHERWISE NOTED.
 - LINES TO DIFFERENTIAL PRESSURE TRANSMITTERS SHOULD BE AS SHORT AS PRACTICABLE.
 - INSTALL TEMPERATURE EQUALIZING COLUMN AND LEVEL INSTRUMENT PIPING AS DIRECTED BY ISODORS INSTALLATION DRAWING.
 - ALARMS ASSOCIATED WITH THE SYSTEM INITIATED BY THE REACTOR PROTECTION SYSTEM OR ISODORS SYSTEM LEVEL AND PRESSURE SWITCHES ARE SHOWN ON THE PAID FOR THE INSTRUMENTAL SYSTEM.
 - TRIP RCC AND HPCI TURBINES ON HIGH LEVEL (REF. 13 & 15)
 - SEE NOTE 47
 - CORE SPRAY AND RRR SYSTEM VALVE OPENING PERMISSIVE (REF. 14 & 17)
 - INITIATE CLOSURE OF RMOU ISOLATION VALVES, START SIBT SYSTEM (REF. 1 & 2), INITIATE CLOSURE OF REACTOR BUILDING VENT SYSTEM DAMPERS, AND INITIATE CLOSURE OF REF FLOOR VENT SYSTEM DAMPERS (REF. 1 & 2).
 - INITIATE IPCI SYSTEM (REF. 13), RDC SYSTEM (REF. 15)
 - INITIATE CLOSURE OF MAIN STEAM LINE ISOLATION VALVES (REF. 16)
 - CONTRIBUTE TO AUTO BLOWDOWN (REF. 14). INITIATE CORE SPRAY (REF. 17) RRR SYSTEM (REF. 14) AND START STANDBY DIESEL GENERATOR (REF. 15)
 - WATER TIGHT ANTI-JUNCTION BOX TO BE LOCATED INSIDE DRYPWELL.
 - SHOWER HEAD & HOSE MOUNTS SHALL BE INTERLOCKED WITH REACTOR PUMP AND VALVES TO ADD INPUTS WHEN BOTH PUMPS ARE RUNNING AND THEIR DISCHARGE VALVES ARE OPEN OR SUBTRACT ONE INPUT WHEN THE DISCHARGE VALVE IS CLOSED.
 - NOZZLES AA & AB MAY BE INTERCHANGED.
 - TYPICAL FOR ALL (16) NON-CALIBRATED JET PUMPS EXCEPT FOR AGREEMENT LETTER SUPPLIES. FOR LETTER SUPPLY ASSIGNMENT SEE PLAN "Y" AND TABLE 3.
 - TYPICAL FOR ALL (6) CALIBRATED JET PUMPS EXCEPT FOR AGREEMENT LETTER SUPPLIES. FOR LETTER SUPPLY ASSIGNMENT SEE PLAN "Y" AND TABLE 3.
 - CONTAINMENT SPRAY HOSE RRR INTERLOCK (REF. 14).
 - REACTOR PROTECTION SYS. SCRAM SIGNAL (REF. 16).
 - RRR INTERLOCK (P.O. MODE) (REF. 14).
 - LS N855A & LS N855B SHALL CORRESPOND TO POST ACCIDENT CONDITIONS (P12 F REACTOR & DRYPWELL)
 - INSTRUMENTS READ FULL SCALE WHEN JET PUMPS ARE IN OPERATION.
 - RECYCLATION LINES TO HOTWELL TO COMPLY WITH REF. 20, WATER QUALITY SECTION 7.
 - SAMPLE PROVIDED) AND FEEDWATER SAMPLE STATION TO COMPLY WITH REF. 20, WATER SAMPLING SECTION 8.
 - ALTERNATE TRIP SET ON FEEDWATER FLOW ELEVATION.
 - TRIP REACTOR PUMP (REF. 21).
 - LOW CONDENSER VACUUM SWITCHES CONNECTED THROUGH SEPARATE CALIBRATION VALVE TO OPPOSITE SIDES OF THE CONDENSER WERE THE HIGH CONDENSER LEVEL. THE VACUUM SWITCHES MUST BE ACCESSIBLE DURING PLANT OPERATIONS.
 - AN OPENING (1/4" MIN.) IS TO BE PROVIDED WITHIN THE PRIMARY CONTAINMENT IN EACH INSTRUMENT LINE WHICH CONNECTS TO THE REACTOR CONTAINMENT PRESSURE BOUNDARY.

- FLOW TRANSMITTERS REFERENCED IN PLAN X HAVE VALVE ARRANGEMENTS TYPICAL OF DETAIL 'X'.
- DELETED.
- SHOWER HEAD & HOSE MOUNTS SHALL BE INTERLOCKED WITH REACTOR PUMP AND VALVES TO ADD INPUTS WHEN BOTH PUMPS ARE RUNNING AND THEIR DISCHARGE VALVES ARE OPEN OR SUBTRACT ONE INPUT WHEN THE DISCHARGE VALVE IS CLOSED.
- NOZZLES AA & AB MAY BE INTERCHANGED.
- TYPICAL FOR ALL (16) NON-CALIBRATED JET PUMPS EXCEPT FOR AGREEMENT LETTER SUPPLIES. FOR LETTER SUPPLY ASSIGNMENT SEE PLAN "Y" AND TABLE 3.
- TYPICAL FOR ALL (6) CALIBRATED JET PUMPS EXCEPT FOR AGREEMENT LETTER SUPPLIES. FOR LETTER SUPPLY ASSIGNMENT SEE PLAN "Y" AND TABLE 3.
- CONTAINMENT SPRAY HOSE RRR INTERLOCK (REF. 14).
- REACTOR PROTECTION SYS. SCRAM SIGNAL (REF. 16).
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- LS N855A & LS N855B SHALL CORRESPOND TO POST ACCIDENT CONDITIONS (P12 F REACTOR & DRYPWELL)
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- SAMPLE PROVIDED) AND FEEDWATER SAMPLE STATION TO COMPLY WITH REF. 20, WATER SAMPLING SECTION 8.
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- AN OPENING (1/4" MIN.) IS TO BE PROVIDED WITHIN THE PRIMARY CONTAINMENT IN EACH INSTRUMENT LINE WHICH CONNECTS TO THE REACTOR CONTAINMENT PRESSURE BOUNDARY.

THIS DWG. DEVELOPED FROM G.E. DWG. NO. 7295615BA REV.5, SH. 1 & 2.

FOR REFERENCES SEE DWG. H-16062 (SH. 1) WORK THIS DRAWING WITH H-16062 (SH. 1) AND H-16063 (SH. 2).

CRITICAL DOCUMENT

MPL NO. B21-1010 ACAD2000 H16145

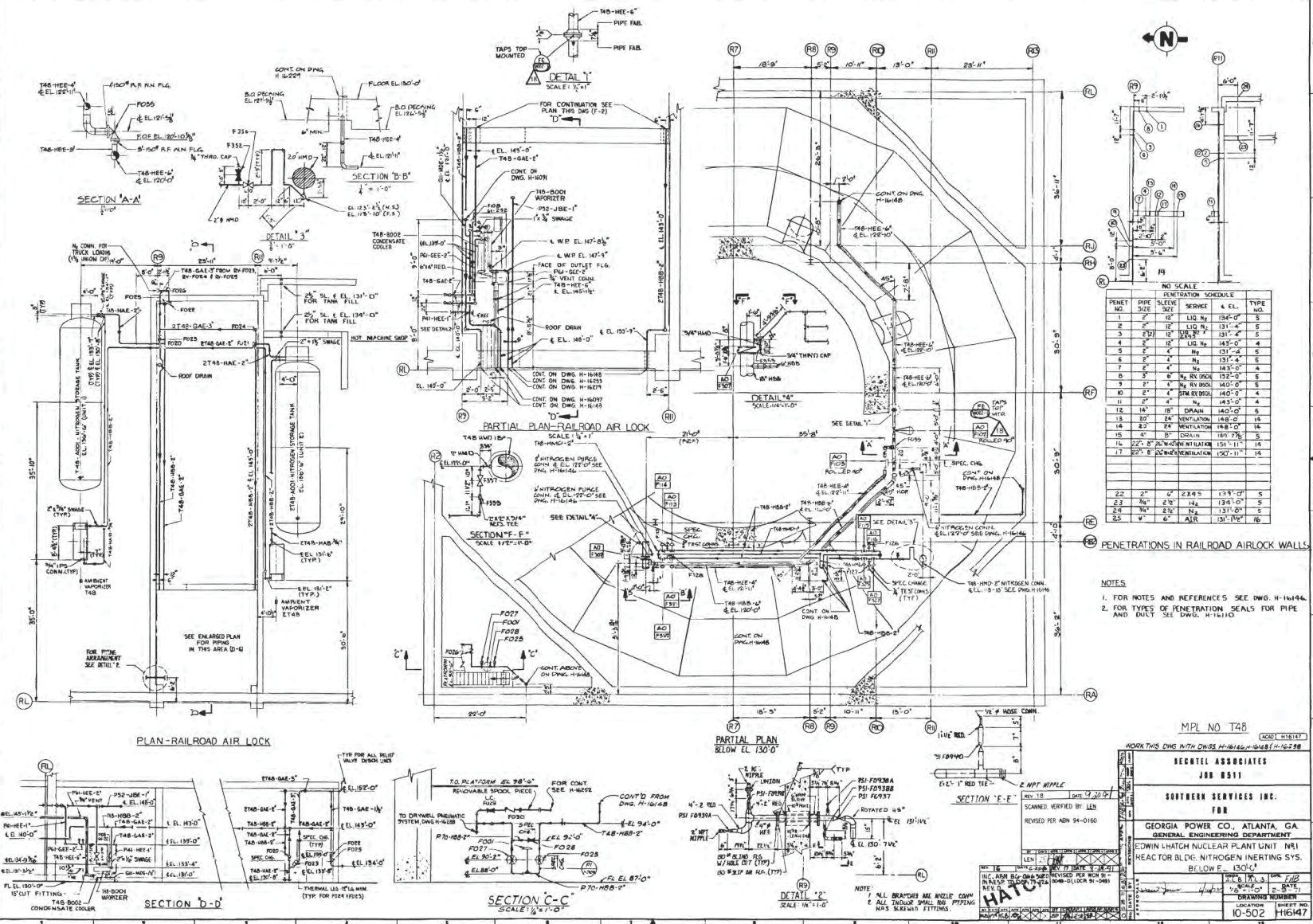


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Version: 18.0 Date: 11-17-14
REVISED PER ASN-H00333, VER.1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
BOILER SYSTEM P&ID
SHEET 3

NO.	DATE	BY	CHKD	APP'D	LOCATION	DRAWING NUMBER	ORIGINAL
1	11-17-14	JCP	JAF	JTL	None	H-16-45	18.0



NO SCALE

PNET NO	PIPE SIZE	SERVICE	4. E.L.	TYPE
1	2"	LIG	134'-0"	3
2	2"	LIG	131'-4"	5
3	2"	LIG	131'-4"	5
4	2"	LIG	143'-0"	4
5	2"	LIG	131'-4"	5
6	2"	LIG	131'-4"	5
7	2"	LIG	143'-0"	4
8	2"	LIG	132'-0"	5
9	2"	LIG	140'-0"	4
10	2"	LIG	140'-0"	4
11	2"	LIG	143'-0"	4
12	1 1/2"	DRAIN	140'-0"	5
13	2"	VENTILATION	148'-0"	16
14	2"	VENTILATION	148'-0"	16
15	4"	DRAIN	149'-7 1/2"	5
16	2 1/2"	VENTILATION	151'-11"	16
17	2 1/2"	VENTILATION	150'-11"	16
22	2"	LIG	134'-0"	3
23	2"	LIG	134'-0"	3
24	2"	LIG	131'-0"	5
25	4"	AIR	131'-0"	16

PENETRATIONS IN RAILROAD AIRLOCK WALLS

- NOTES
1. FOR NOTES AND REFERENCES SEE DWG. H-164146.
 2. FOR TYPES OF PENETRATION SEALS FOR PIPE AND DUCT SEE DWG. H-164110.

MPL NO T28

WORK THIS ONE WITH DWGS H-164146, H-164147, H-164148, H-164149

REGULTE ASSOCIATES
JOB #511

SOUTHERN SERVICES INC.
FBI

GEORGIA POWER CO., ATLANTA, GA.
GENERAL ENGINEERING DEPARTMENT

EDWIN LATCH NUCLEAR PLANT UNIT NRS1
REACTOR BLDG. NITROGEN INERTING SYS.
BELOW E. 130'-0"

DATE: 11/13/68
DRAWN: J. S. [unclear]
CHECKED: [unclear]
SCALE: AS SHOWN

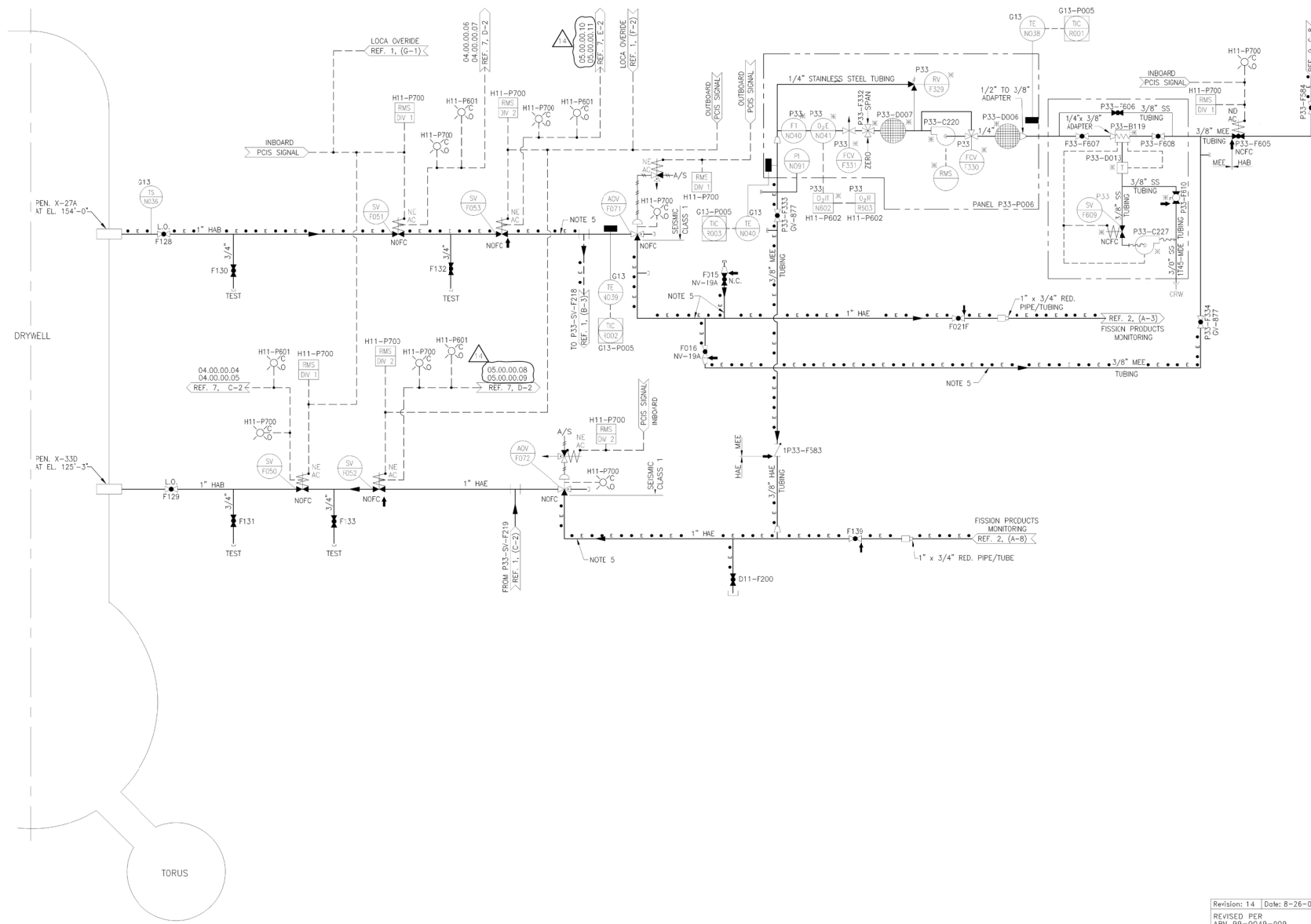
REVISIONS:

NO. 13	DATE: 11/13/68	BY: [unclear]	DESCRIPTION: [unclear]
NO. 14	DATE: 11/13/68	BY: [unclear]	DESCRIPTION: [unclear]
NO. 15	DATE: 11/13/68	BY: [unclear]	DESCRIPTION: [unclear]
NO. 16	DATE: 11/13/68	BY: [unclear]	DESCRIPTION: [unclear]

DRAWING NUMBER: 10-502
SHEET NO: 11/167

- NOTES:
1. ALL EQUIPMENT AND INSTRUMENT NUMBERS ARE TO BE PRECEDED BY MPL D11, UNLESS OTHERWISE NOTED.
 2. DELETED
 3. * : FURNISHED WITH ASSOCIATED EQUIPMENT
 4. • e • : DENOTES ELECTRICAL HEAT TRACING.
 5. THIS LINE TO BE ELECTRICALLY HEAT TRACED AND INSULATED WITH 1" FIBERGLASS INSULATION TO MAINTAIN A TEMP. OF 110° F.

- REFERENCES:
- | TITLE | MPL NO | DWG NO |
|---|-----------|---------|
| 1. SCHEMATIC DIAGRAM POST ACCIDENT REACTOR COOLANT AND CONTAINMENT ATMOSPHERE SAMPLING SYSTEM | 2P33-1010 | H-26384 |
| 2. FISSION PRODUCTS MONITORING SYSTEM P.&I.D., SHEET NO. 2 | D11-1010 | H-16274 |
| 3. DELETED | | |
| 4. SAMPLE LINE ROUTING REACTOR & RADWASTE BLDG. BELOW EL. 130'-0" | | H-16553 |
| 5. SAMPLE LINE ROUTING REACTOR & RADWASTE BLDGS. EL. 130'-0" | | H-16554 |
| 6. SAMPLE LINE ROUTING REACTOR & RADWASTE BLDGS. EL. 158'-0" | | H-16556 |
| 7. DIGITAL INPUT SIGNALS TO THE ERF COMPUTER SYSTEM I.E.D. SHEET 2 OF 15 | X75-1010 | H-16404 |
| 8. PROCESS RADIATION MONITORING SYSTEM P.&I.D. SHEET 4. | | H-16566 |
| 9. PRIMARY CONTAINMENT ATMOSPHERE H*2 | | H-16276 |



CRITICAL DOCUMENT

MPL NO. D11-1020 Acad2K | H16173

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EDWIN I. HATCH NUCLEAR PLANT No. 1
FISSION PRODUCTS MONITORING SYSTEM P&I.D.
SHEET No. 1

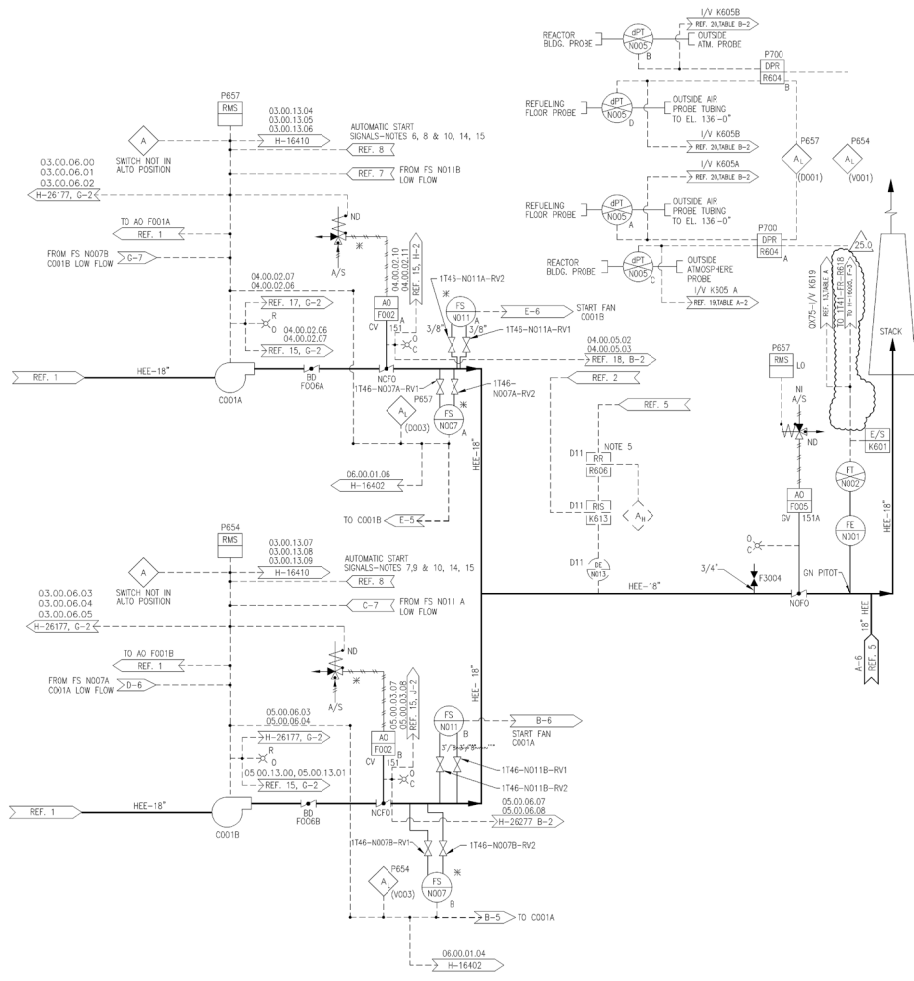
REV	DATE	BY	CHKD	APP'D	REASON
1	5-28-82	S. RITZ	WAL		

REVISION 14 | DATE: 8-26-03
REVISED PER ABN 99-0049-009.

NO.	ISSUED	REVISED	REASON	DATE
10-502				

JDK CMM DEW

TORUS



NOTES
FOR NOTES AND REFERENCES NOT SHOWN
SEE DWG. H-16020.

REFERENCES
1 - STANDBY GAS TREATMENT SYSTEM PROCESS FLOW AND P. & I.D. SHEET NO. 1

CRITICAL DOCUMENT

MPL NO. T46-101C ACAD2K R16174



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Version: 25.0 | Date: 9-12-06

REVISED PER
ABN-H00192, VER. 1.0

EDWIN I. HATCH NUCLEAR PLANT UNIT No. 1
STANDBY GAS TREATMENT SYSTEM
P. & I.D. - SH. NO. 2

DATE	ISSUED	LOGIC	ISSUED NUMBER	ISSUED
C.I.	A.N.			
1/20/72	None			

W Lock JLD SEE MICROFILM ELC DEW FOR PREVIOUS REVISIONS

10-502 H-16174 25.0

DRAWING CATEGORY: CRITICAL