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SOUTHERN COMPANY
Energy to Serve Your World℠

July 11, 2003

Docket Nos.: 50-321
50-366

NL-03-1380

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant
Third 10-Year Interval Inservice Testing Program,
Submittal of Relief Requests RR-V-18

Ladies and Gentlemen:

On July 11, 2001, Southern Nuclear Operating Company (SNC) submitted Inservice Testing (IST) Program Relief Request RR-V-17 (ref. HL-6103). This relief request proposed disassembly, visual examination, and manual full-stroke exercising of certain check valves during normal operation instead of during refueling outages as required by the ASME OM Code, 1990 Edition, paragraph ISTC 4.5.4(c). The NRC responded with a Safety Evaluation (SE) dated October 16, 2001 (TAC NOS. MB2401 and MB2402). In this SE, relief was denied for High Pressure Coolant Injection (HPCI) System check valves 1E41-F045 and 2E41-F045. The Staff said the justification for these valves did not provide sufficient information to reach a safety or risk determination with regard to the leak testing experience and leak tightness reliability of the associated isolation valves and the potential consequences of a loss of isolation capability during disassembly.

SNC has re-evaluated the HPCI system configuration and has developed a new relief request, RR-V-18 for these valves only. Relief Request RR-V-18 includes additional provisions for isolation and leakrate testing to address NRC staff concerns. SNC is confident that conformance with the proposed valve isolations and leakrate testing provisions will provide an adequate level of safety to support check valve disassembly, visual examination, and manual full-stroke exercising during normal operation in conjunction with a HPCI system maintenance outage. Therefore, approval of Relief Request RR-V-18 is requested in accordance with 10 CFR 50.55a(a)(3)(i).

Note that a copy of each Unit's Piping and Instrumentation Diagram (P&ID) for the HPCI system is included to assist with NRC staff review of this relief request.

A047

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

Louis Sumner

H. L. Sumner, Jr.

HLS/IL/daj

Enclosures: 1. Relief Request RR-V-18
2. HPCI System drawings

cc: Southern Nuclear Operating Company
Mr. J. D. Woodard, Executive Vice President
Mr. G. R. Frederick, General Manager – Plant Hatch
Document Services RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. S. D. Bloom, NRR Project Manager – Hatch
Mr. D. S. Simpkins, Senior Resident Inspector – Hatch

Enclosure 1

Edwin I. Hatch Nuclear Plant, Units 1 and 2
Inservice Inspection Program

Relief Request RR-V-18

Edwin I. Hatch Nuclear Plant, Units 1 and 2
Inservice Inspection Program
Relief Request RR-V-18

SYSTEM(S): High Pressure Coolant Injection System (HPCI - E41)

COMPONENTS:

Unit 1	MPL	ASME CLASS	SIZE
	1E41-F045	2	16"
Unit 2	MPL	ASME CLASS	SIZE
	2E41-F045	2	16"

CATEGORY: C

ASME CLASS: 2

TEST REQUIREMENT:

ASME OM Code, 1990 Edition, paragraph ISTC 4.5.4(c) allows disassembly every refueling outage to verify operability of check valves as an alternative to the exercising requirements of paragraphs ISTC 4.5.4(a) and (b).

REQUIREMENT FOR WHICH RELIEF IS REQUESTED:

Relief is requested from the ASME OM Code requirement that check valve disassembly be performed only during a refueling outage.

BASIS FOR RELIEF:

NRC Generic Letter (GL) 89-04, Position 2, provides guidance for the grouping of check valves and sample disassembly as an alternative to the OM Code, subsection ISTC requirements. GL 89-04, Position 2, paragraph 2.b states: ".....Since this frequency differs from the Code required frequency, this deviation must be specifically noted in the IST program." The above listed check valves are specifically identified in the existing Hatch IST program for application of the guidelines of GL 89-04, Position 2. Each check valve is scheduled for disassembly, visually examination, and manual full-stroke exercising each refueling outage. Therefore, the regulatory guidance and the OM Code requirements, associated with check valve disassembly, are incorporated into the existing Hatch IST program.

These check valves are located in the respective unit's HPCI pump suction from the suppression pool. The HPCI pump suction is normally aligned to the Condensate Storage Tank (CST) during normal operation and the system is provided with automatic controls which swap the suction to the suppression pool should CST level fall below a specific set-point or on suppression pool high level. The suction line from the suppression pool is provided with two motor operated valves (MOVs) between the suppression pool and check valve 1/2E41-F045, and one MOV between the check valve and the CST suction line. These MOVs provide for normal isolation and the system automatic swap feature. Neither MOV (1/2E41-F042 or F051) from the suppression pool is required to be leakrate tested in accordance with 10 CFR 50 Appendix J because the plant licensing basis assumes the suppression pool to remain water filled post accident. The MOV downstream from the check valve (1/2E41-F041) is not required to be leakrate tested to satisfy any code or regulatory requirements. Reference attached drawings H-16332 and H-26020 for Units 1 and 2, respectively.

BASIS FOR RELIEF (continued):

In order to isolate check valve 1/2E41-F045 for disassembly, SNC will close and disable both MOVs (1/2E41-F042 and F051) on the suppression pool side of the check valve and the MOV (1/2E41-F041) on the CST side of the check valve. Closing and disabling these valves provides a high level of confidence that the check valve is adequately isolated from the suppression pool and the CST to prevent any significant leakage and ensures that inadvertent operation, while the check valve is disassembled, does not occur. Additionally, SNC will perform a leakrate type test of the valve 1/2E41-F041 (CST MOV) at least once each cycle. This leakrate type test will be performed at containment accident pressure and the acceptance criteria of the ASME OM Code, 1990 Edition, paragraph ISTC 4.3.3(e)(1) (i.e., 0.5D gal/min or 5 gal/min, whichever is less) will be utilized for evaluation of leakrate test data. The disassembly procedure also includes requirements for maintenance personnel to ensure the check valve is adequately isolated before complete removal of the valve cover plate (bonnet). No disassembly will be attempted unless the above leakage rate test criteria are satisfied.

Additionally, the Code of Federal Regulations, Title 10, Part 50, paragraph 65(a)(4) (i.e., 10 CFR 50.65(a)(4)) requires Licensees to assess and manage the increase of risk that may result from proposed maintenance activities. SNC complies with the 10 CFR 50.65(a)(4) requirements at Plant Hatch via the application of a safety related procedure governing maintenance scheduling. This procedure dictates the requirements for risk evaluations as well as the necessary levels of action required for risk management in each case. The procedure also controls operation of the on-line risk monitoring system which is based on the Hatch Probabilistic Risk Assessment (PRA). In addition, this procedure provides methods for risk assessing maintenance activities for components not directly in the Hatch Probabilistic Safety Assessment (PSA) model. With the use of risk evaluation for virtually all aspects of nuclear plant operation, SNC has initiated efforts to accomplish additional maintenance, surveillance, and testing activities during normal operation. Planned activities are evaluated utilizing risk insights to determine the impact on safe operation of the plant and the ability to maintain associated safety margins. Individual system components, a system train, or a complete system may be planned to be out-of-service to allow maintenance, or other activities, during normal operation.

All activities associated with disassembly of the listed check valves are performed in accordance with plant procedures which meet 10 CFR 50.65(a)(4) requirements. These procedures provide detailed instructions for the pre-disassembly leakrate test of the isolation MOVs, and disassembly, visual examination, and full-stroke exercising of the respective check valve. Closing and disabling the isolation MOVs will be controlled in accordance with site administrative control procedures. Additionally, considerations for corrective actions are factored into the planning process. Therefore, the use of risk assessment, MOV closure, and leakrate testing to ensure check valve isolation prior to disassembly during normal operation, provides an acceptable level of quality and safety and is thus authorized by 10 CFR 50.55a(3)(i).

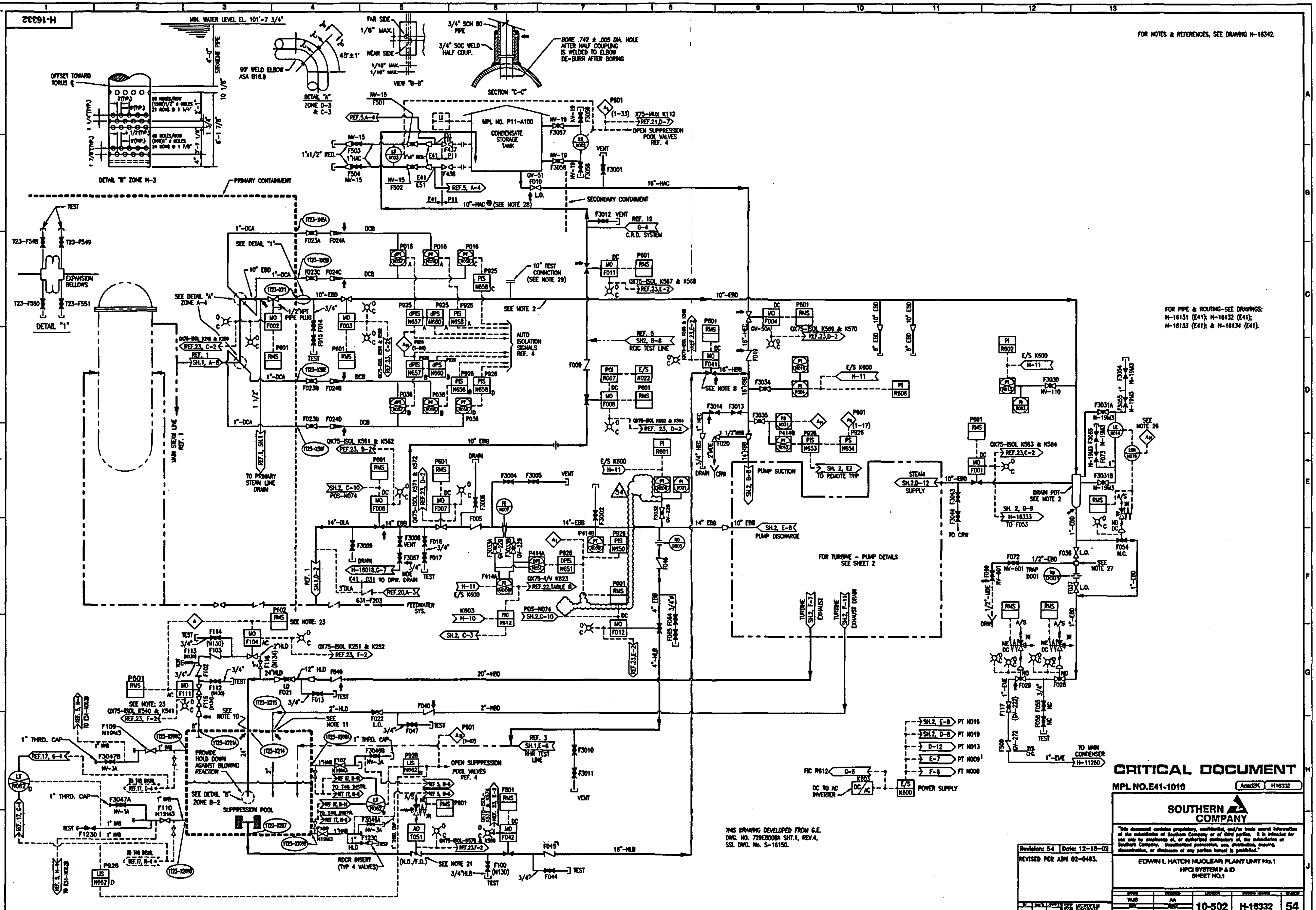
ALTERNATE TESTING:

Check valve disassembly, visual examination, and manual exercising will continue to be performed utilizing the guidance contained in NRC GL 89-04, Position 2. However, such disassembly, visual examination, and manual exercising will be performed during normal operation, in conjunction with appropriate system outages, or during refueling outages. Check valve disassembly during normal plant operation will be managed in accordance with the requirements of 10 CFR 50.65(a)(4) in conjunction with the isolation and leakrate testing described above.

Enclosure 2

Edwin I. Hatch Nuclear Plant, Units 1 and 2
Inservice Inspection Program

Unit 1 HPCI System P&ID H-16332
and
Unit 2 HPCI System P&ID H-26020



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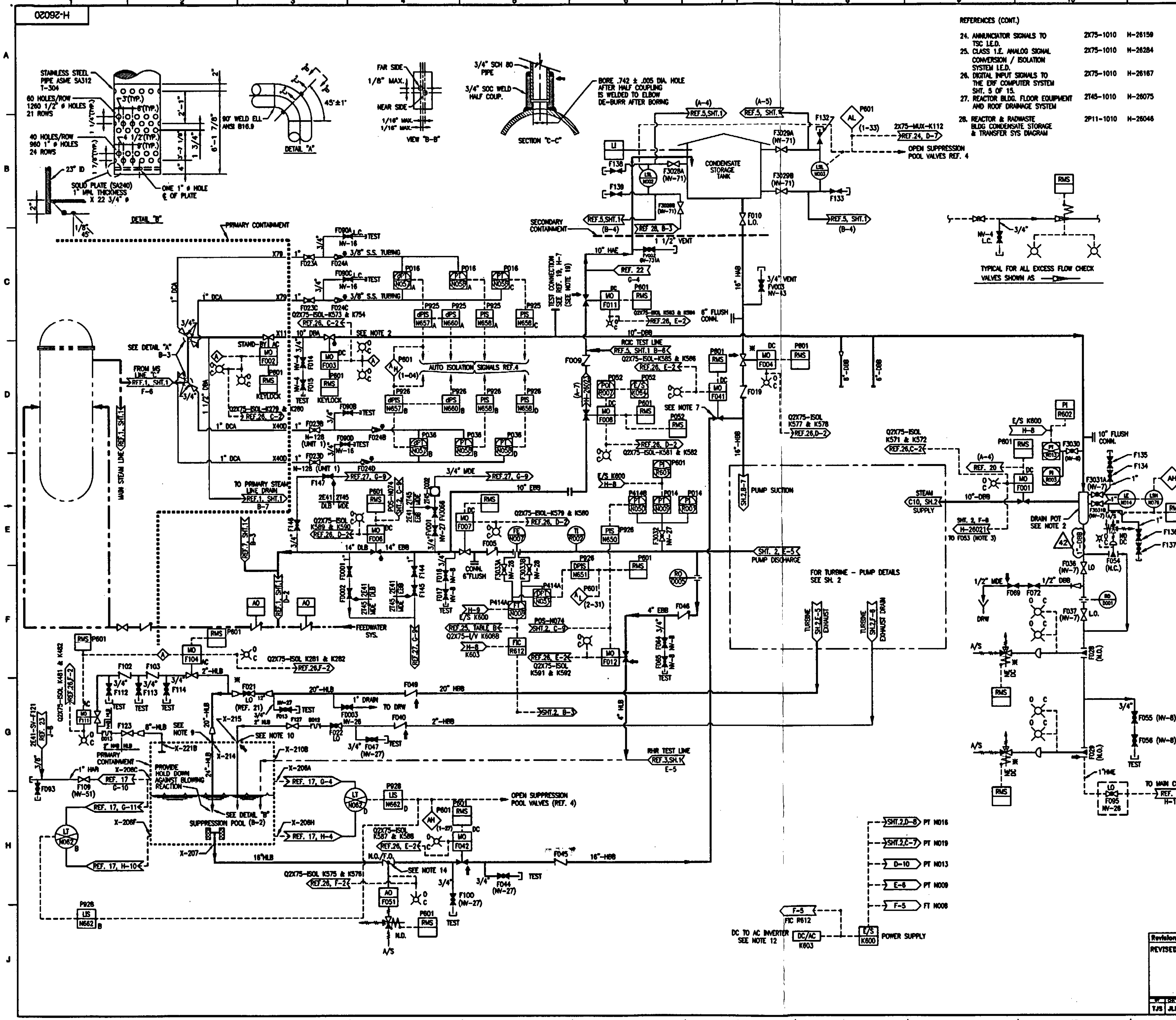

REFERENCES (CONT.)

24. ANNUNCIATOR SIGNALS TO TSC I.E.D.	2X75-1010	H-26159
25. CLASS 1.E. ANALOG SIGNAL CONVERSION / ISOLATION SYSTEM I.E.D.	2X75-1010	H-26284
26. DIGITAL INPUT SIGNALS TO THE ERF COMPUTER SYSTEM SHT. 5 OF 15.	2X75-1010	H-26167
27. REACTOR BLDG. FLOOR EQUIPMENT AND ROOF DRAINAGE SYSTEM	2T45-1010	H-26075
28. REACTOR & RADWASTE BLDG CONDENSATE STORAGE & TRANSFER SYS DIAGRAM	2P11-1010	H-26046

NOTES:

1. EQUIPMENT & INSTRUMENTS ARE PREFIXED BY MPL NO. 2E41 UNLESS OTHERWISE NOTED.
2. LINE TO SLOPE DOWN FROM POINT OF CONNECTION TO MAIN STEAM LINE TO THE DRAIN POT AHEAD OF THE TURBINE WITH NO POCKETS. LOCATE DRAIN POT AND VALVE F001 AS CLOSE AS POSSIBLE TO TURBINE INLET WITH VALVE VERTICAL.
3. VALVE F053 IS NORMALLY CLOSED. IF F053 IS OPENED, AN AUTO CLOSE SIGNAL IS SENT TO VALVE F053 WHEN VALVE F001 STARTS TO OPEN.
4. INSTRUMENT LINE VALVING MUST COMPLY WITH REF. 11.
5. CHEMICAL CLEANING CONNECTIONS, VALVES, ETC. IF REQUIRED ARE TO BE PROVIDED AS NECESSARY.
6. ANY ADDITIONAL HIGH POINT VENTS AND LOW POINT DRAINS TO BE ADDED BY FIELD AS REQUIRED.
7. LOCATE VALVE F041 AS CLOSE AS POSSIBLE TO PUMP SUCTION LINE FROM CONDENSATE STORAGE TANK.
8. FOR INTERLOCKING REQUIREMENTS SEE FUNCTIONAL CONTROL DIAGRAM REF 4.
9. PENETRATION LOCATION TO BE ABOVE MAXIMUM EXPECTED WATER LEVEL, WITH PIPING EXTENDED 4 FT. BELOW LOW WATER LEVEL.
10. PENETRATION LOCATION TO BE MAXIMUM 3 FT. ABOVE NORMAL WATER LEVEL, WITH PIPING EXTENDED 4 FT. BELOW LOW WATER LEVEL.
11. THE BAROMETRIC CONDENSER AND VACUUM TANK SHALL BE LOCATED SO THAT ITS WATER LEVEL IS BELOW THE BOTTOM OF THE TURBINE EXHAUST.
12. "AC" POWER FOR HPCI INSTRUMENTS SHALL BE DERIVED FROM THE PLANT "DC" POWER SYSTEM, VIA AN INVERTER. THE "DC" SOURCE IS TO BE SEPARATE FROM THAT WHICH SUPPLIES THE RCIC SYSTEM.
13. PIPING SHOWN IN PHANTOM TO BE ARRANGED AND SUPPLIED BY TURBINE VENDOR.
14. VALVE F051 SHALL BE LOCATED A MAXIMUM OF SIX FEET FROM THE NOZZLE OF THE TORUS, WITH ADEQUATE CLEARANCE FOR OPERATION OF THE VALVE AND VALVE OPERATOR.
15. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS SEE INSTRUMENT DATA SHEET LISTED IN MPL FOR EACH INSTRUMENT.
16. FLUSHING CONNECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH MPL ITEM NO. 2A61-4020 SEC 9. TEMPORARY STRAINER SCREENS SHALL BE PROVIDED ON THE SUCTION SIDE OF ALL PUMPS IN ACCORDANCE WITH MPL ITEM NO. 2A61-4020 SEC 9.
17. VALVES ON THIS DWG. ARE NUMBERED FD001 THRU FD020 FOR DRAIN VALVES FV001 THRU FV010 FOR VENT VALVES.
18. DELETED
19. FLANGE BOLTS TO BE TORQUED PER VENDOR MANUAL S-55914 IF SUPERBOLTS ARE USED.

REFERENCES		MPL. NO.	SSI NO.
1. NUCLEAR BOILER SYS. P & ID	SHT 1	2B21-1010	H-26000
	SHT 2		H-26001
2. NUCLEAR BOILER SYS. FCD		2B21-1030	S25154
3. RHR SYS. P & ID	SHT 1	2E11-1010	H-26014
	SHT 2		H-26015
4. HPCI SYS. FCD		2E41-1030	
5. RCIC SYS. P & ID	SHT 1	2E51-1010	H-26023
	SHT2		H-26024
6. NUCLEAR BOILER LEAK DETECTION SYS. SPEC.		2A61-4040	S25280
7. REACTOR WATER CLEANUP SYS. P & ID	SHT 1	2G31-1010	H-26036
	SHT 2		H-26037
8. TURBINE CONTROLS DIAGRAM		2E41-C002	S25339
9. TURBINE OUTLINE DRAWING		2E41-C002	S25573
10. PLANT REQUIREMENTS		2A61-4020	S25706
11. PROCESS INSTRUMENT PIPING & TUBING INSTALLATION SPEC.		2A61-4070	S25323
12. PIPING & INSTRUMENT SYMBOLS		A42-1010	S15051
13. PRESSURE INTEGRITY OF PIPING & EQUIP PRESSURE PARTS		2A61-4030	S25112
14. HPCI SYS. DESIGN SPEC.		2E41-4010	S25187
15. HPCI SYS. PD		2E41-1020	S25176
16. REACTOR BLDG. VENT. SYS. P.F.D.		2T41-1020	H-26069
17. PRIMARY CONTAINMENT PURGE & INERTING SYS. P&I.D.		2T48-1020	H-26084
18. MSR & HEATER VENTS & SHELL DRAINS SYS. P & ID SHT. 2		2N22-1010	H-21024
19. AUX STEAM P & ID		2P61-1010	H-26083
20. SAFEGUARD EQUIP. EMER. COOLING SYS. P & ID		2T41-1010	H-26071
21. EQUIP. & VALVE DRAINAGE P & ID		2T45-1030	H-26077
22. CRD P & ID		2C11-1010	H-26007
23. SCHEMATIC DIAGRAM FOR POST ACCIDENT REACTOR COOLANT AND CONTAINMENT ATMOSPHERE SAMPLING SYS. HNP-1 & 2.		2P33-1010	H-26384

THIS DWG. DEVELOPED FROM G.E. DWG. NO. 761E230BA, REV. 2

CRITICAL DOCUMENT

MPL NO. 2E41-1010 | Acad2K | H26020

SOUTHERN COMPANY

Revision: 42 | Date: 5-24-02

REVISED PER ABN 02-0179.

TJS | JLR | RKC | SEE MICROFILM FOR PREVIOUS REV. SIGNATURES

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

KMI	AA	10-502	H-26020	42
5-11-72	None			

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