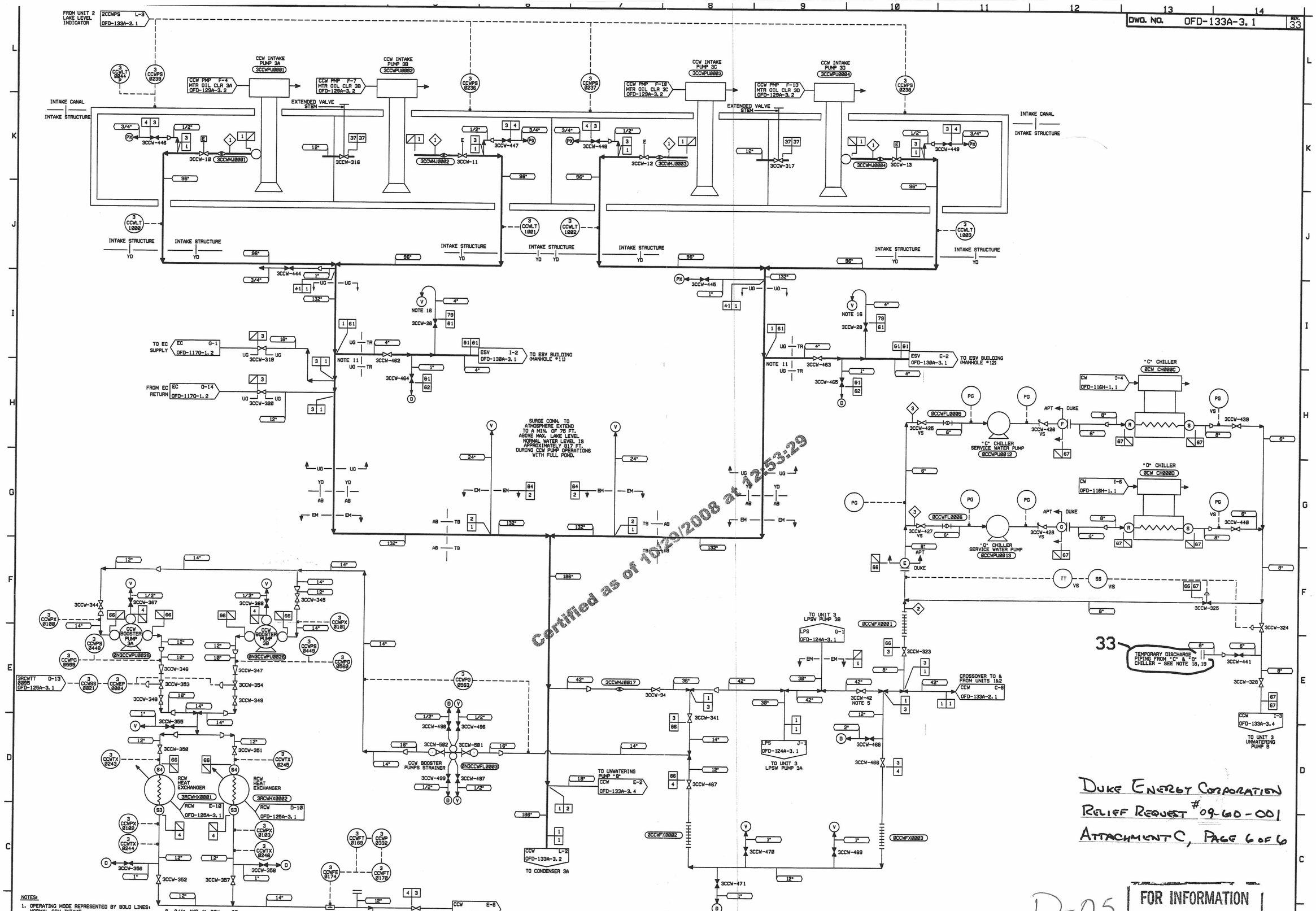

Certified as of 10/29/2008 at 12:53:29

DUKE ENERGY CORPORATION
RELIEF REQUEST #09-60-001
ATTACHMENT C, PAGE 6 OF 6

D-05

FOR INFORMATION ONLY

NOTES:

1. OPERATING MODE REPRESENTED BY BOLD LINES: NORMAL CCW INTAKE.
2. 1/2" THRU 2" SCH. = XS
   2 1/2" THRU 18" SCH. = 40
   12" THRU 24" SCH. = STD
3. PIPING COVERED BY CIVIL/ENVIRONMENTAL DIVISION SPECIFICATION NO.OSS-0101.00-00-0000 AND/OR ITEM NO.128. THIS SPECIFICATION INVOKES AWWA C200 FOR FABRICATION WHICH INVOKES AWWA M11 FOR DESIGN. AS AN ALTERNATIVE TO THESE STANDARDS, ANSI B31.1 MAY BE USED FOR "SMALL" BRANCH CONNECTIONS. IN SUCH A CASE, THE CONNECTION SHOULD BE TREATED AS CLASS F PIPING. QA CONDITION 1 PIPING IS TO BE REPAIRED IN ACCORDANCE WITH THE REQUIREMENTS OF OCONEE CLASS F AND QA CONDITION 4 PIPING IS TO BE REPAIRED IN ACCORDANCE WITH THE REQUIREMENTS OF OCONEE CLASS D.
4. THE ORIGINAL ISSUE OF THIS DRAWING IS BASED ON PO-133B, REV. 28.
5. THIS VALVE IS REQUIRED TO BE OPEN DURING NORMAL OPERATION TO MEET SINGLE FAILURE REQUIREMENTS.
6. STAINLESS STEEL (PS-151.4) SHOULD BE SUBSTITUTED FOR PIPE SIZES 1/2" THRU 6".
7. RAISED FACE FLANGES MAY BE USED WHEN FLAT FACED FLANGES ARE NOT REQUIRED FOR EQUIPMENT, VALVES,ETC. CONNECTIONS.
8. 3/4" AND 1" SCH. = 80
9. THE CW SYSTEM PORTION OF THIS DRAWING IS MAIN-TAINED AS COMMERCIAL AIR CONDITIONING. INSTRUMENTS AND CONTROLS ARE GENERALLY DOCUMENTED IN MANUFACTURERS LITERATURE. REPLACEMENT PARTS WILL BE LIKE OR APPROVED SUBSTITUTE.
10. STAINLESS STEEL (PS-301.4) SHOULD BE SUBSTITUTED FOR THIS APPLICATION.
11. A SHORT PIECE OF 4" CS PIPE IS USED TO TRANSITION BETWEEN SS VENT LINE & CS CCW HEADER. SEE PIPING LAYOUT FOR MATERIAL INFO. ON TRANS. PIECE.
12. 100°F = NON-HEAT TRACED PIPING
    150°F = HEAT TRACED PIPING
13. QA CONDITION 1
14. QA CONDITION 4
15. PIPING HAS BEEN REVIEWED PER SEISMIC MARGIN METHODOLOGY. SEE OSC-6571.
16. ENDS THREADED TO ALLOW ROTAMETER ATTACHMENT DURING PERIODIC TESTING.
17. EXISTING PIPING MAY BE OF AUSTENITIC STAINLESS STEEL MATERIAL OR OF CARBON STEEL TO THE APPLICABLE "PS" INDICATED. PIPING ENGINEERING APPROVAL IS REQUIRED PRIOR TO ANY CHANGE OF THE EXISTING MATERIAL. SEE NOTE 24 IN APPENDIX C, MATERIAL REQUIREMENTS, OF OS-243.00-00-0001.
18. SEE PIPING LAYOUT DRAWINGS O-2400AA, O-2400Q AND O-2407E FOR PIPING CONNECTIONS.
19. WHEN TEMPORARY PIPING IS INSTALLED, DESIGN PRESSURE IS 60 PSIG.

33

DESIGN PARAMETERS

LINE NO.	DUKE CLASS	DESIGN PRESS.	DESIGN TEMP.	MATERIAL	PIPE SPEC. NO.	PIPE SCH. NO.	ISI CLASS
1	NOTE 3, 13	—	—	CS	NOTE 3	NOTE 3	C
2	NOTE 3, 14	—	—	CS	NOTE 3	NOTE 3	-
3	F	50 PSIG	100°F	CS (NOTE 6, 17)	150.6 (NOTE 6)	NOTE 2	C
4	D	50 PSIG	100°F	CS (NOTE 6, 17)	150.6 (NOTE 6, 7)	NOTE 2	-
9	D	100 PSIG	100°F	CS (NOTE 6, 17)	150.6 (NOTE 6, 7)	NOTE 2	-
37	D	35 PSIG	100°F	CS	150.6	NOTE 2	-
41	F	50 PSIG	100°F	CS (NOTE 16, 17)	300.4 (NOTE 16)	NOTE 8	C
44	D	50 PSIG	100°F	CS	150.6	SCH. 40	-
61	F	50 PSIG	100°F/150°F (NOTE 12)	SS	151.4(a)	SCH. 40	C
62	D	50 PSIG	100°F	SS	151.4	SCH. 40	-
64	D	50 PSIG	100°F	CS (NOTE 6, 17)	150.6 (NOTE 6)	NOTE 2	-
66	G (NOTE 15)	50 PSIG	100°F	CS (NOTE 6, 17)	150.6 (NOTE 6, 7)	NOTE 2	-
67	G (NOTE 15)	100 PSIG	100°F	CS (NOTE 6, 17)	150.6 (NOTE 6, 7)	NOTE 2	-
78	G	ATM.	100°F	SS	151.4(a)	SCH. 40	-
79	G	50 PSIG	100°F/150°F (NOTE 12)	SS	151.4(a)	SCH. 40	-

DESIGN FLOW

NO.	FLOW
1	177,000 GPM
2	1,200 GPM
3	600 GPM

NO.	REVISIONS	DRN	DATE	CHKD	DATE	APPR	DATE	CIVIL	ELEC.	MECH.
								INSPECTED		
33	REV. PER OD300679	LER	5-23-86	MSI	5-23-86	RDD	5-23-86	-W-	-W-	HEH
32	REV. PER ED. EX. G.13	MSI	10-28-85	LER	10-28-85	RBC	11-1-85	-W-	-W-	HEH
31	REV. PER OE-17246	MSI	6-15-85	LER	6-16-85	RBC	6-16-85	-W-	-W-	HEH
30	REV. PER ED. EX. G. 6, PIP 03-01963	DLR	12-20-84	MSI	12-20-84	RBC	1-19-85	KQC	-W-	HEH
ORIG	ORIGINAL DRAWING RETIRED	DLR	12-20-84							

QA CONDITION 4
QA CONDITION 1

DUKE POWER COMPANY
OCONEE NUCLEAR STATION - UNIT 3

FLOW DIAGRAM OF
CONDENSER CIRCULATING WATER SYSTEM
(CCW INTAKE PUMPS DISCHARGE)

DESIGNER HARBELSON DATE 9-12-84 INSP. HD MCKAY DATE 9-27-84
DRAWN WD OWENS DATE 9-12-84 INSP. RC HELMS DATE 9-28-84
CHECKED JB STRINGER DATE 9-12-84 APPR. BF WARDELL DATE 9-28-84
SCALE DWG. NO. OFD-133A-3.1 REV. 33

ERN: OX000LSB