DWG. NO. OFD-133A-2.1 REV. 26

FROM LAKE LEVEL INDICATOR — 1CCWPS L-3 OFD-133A-1.1

3CCWPS L-2 OFD-133A-3.1 — TO UNIT 3 DIFFERENTIAL PRESS. SWITCHES

2 CCWPS 8238 — CCW PMP F-3 MTR OIL CLR 2A OFD-128A-2.2 — CCW INTAKE PUMP "2A" 2CCWPU0001

CCW PMP F-7 MTR OIL CLR 2B OFD-128A-2.2 — CCW INTAKE PUMP "2B" 2CCWPU0002

2 CCWPS 8236

CCW PMP F-11 MTR OIL CLR 2C OFD-128A-2.2 — CCW INTAKE PUMP "2C" 2CCWPU0003

CCW PMP F-15 MTR OIL CLR 2D OFD-128A-2.2 — CCW INTAKE PUMP "2D" 2CCWPU0004

2 CCWPS 8238

INTAKE CANAL — INTAKE STRUCTURE

EXTENDED VALVE STEM

2CCW-448 — 2CCW-19 2CCWMU0001 — 2CCW-316 — 2CCWMU0002 2CCW-11 — 2CCW-447 — 2CCW-446 — 2CCW-12 2CCWMU0003 — 2CCW-317 — 2CCW-449 — 2CCWMU0004 2CCW-13

3 CCWLT 8244 B

SEE NOTE 15 — 2 CCWLT 1000 — 2 CCWME 1000 — 2 CCWME 1001 — 2 CCWLT 1001 — 2 CCWME 1002 — 2 CCWLT 1002 — 2 CCWME 1003 — 2 CCWLT 1003

INTAKE STRUCTURE YD — 96" — INTAKE STRUCTURE YD — INTAKE STRUCTURE YD — 96" — INTAKE STRUCTURE YD — INTAKE STRUCTURE YD — 96" — INTAKE STRUCTURE YD — INTAKE STRUCTURE YD — 96" — INTAKE STRUCTURE YD

TO EC SUPPLY — EC I-1 OFD-1170-1.2 — 2CCW-319

EC I-14 OFD-1170-1.2 — FROM EC RETURN — 2CCW-320

18" — 12" — 16"

2CCW-444 — 2CCW-445 — 3/4" — UG — 132"

NOTE 14 — 2CCW-28 — 6" — CONNECTION FOR SSF SUBMERSIBLE PUMP

NOTE 11 2CCW-462 — ESV I-2 OFD-138A-2.1 — TO ESV BUILDING (MANHOLE #9)

NOTE 11 2CCW-463 — ESV E-2 OFD-138A-2.1 — TO ESV BUILDING (MANHOLE #10)

2CCW-464 — 2CCW-465 — 1" — 4"

26

SURGE CONN. TO ATMOSPHERE EXTEND TO A MIN. OF 76 FT. ABOVE MAX. LAKE LEVEL. NORMAL WATER LEVEL IS APPROXIMATELY 817 FT. DURING CCW PUMP OPERATIONS WITH FULL POND.

FROM SSF AUX. SERVICE WTR. — CCW E-12 OFD-133A-2.5 — 12"

CCW J-1 OFD-133A-2.5 — TO SSF AUX. SERVICE WTR. — 18"

NOTE 6 — 24" — EM — 64 — 2

AB — TB — 2 — 1 — 132"

FDW E-1 OFD-121D-1.2 — TO AUX. SERVICE WATER PUMP — 18"

2CCW-38 — 16" — CCW G-2 OFD-133A-3.4 — TO UNIT 3 UNWATERING PUMP — 186"

2CCW-41 NOTE 2 — 42" — 36" — CCW D-13 OFD-133A-1.1 — CROSSOVER FROM UNIT 1

CCW D-11 OFD-133A-3.1 — CROSSOVER TO UNIT 3

CCW L-2 OFD-133A-2.2 — TO CONDENSER "2A"

Certified as of 10/28/2008 at 12:53:06 EC PENDING

Duke Energy Corporation
Relief Request #09-GD-001
Attachment C, Page 5 of 6

D-04

FOR INFORMATION ONLY

SSF RELATED
QA CONDITION 1
QA CONDITION 4

NOTES:

1. OPERATING MODE REPRESENTED BY BOLD LINES= NORMAL CCW INTAKE.
2. THIS VALVE IS REQUIRED TO BE OPEN DURING NORMAL OPERATION TO MEET SINGLE FAILURE REQUIREMENTS.
3. 1/2" THRU 2" SCH.=XS; 2 1/2" THRU 18" SCH.=40; 20" THRU 30" SCH.=STD.
4. PIPING COVERED BY CIVIL/ENVIRONMENTAL DIVISION SPECIFICATION NO. OSS-0181.00-00-0000 AND/OR ITEM NO.126. THIS SPECIFICATION INVOKES ANSI B31.1 AND/OR ASME CODE 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.
5. THE ORIGINAL ISSUE OF THIS DRAWING IS BASED ON PO-133A, REV. 27.
6. APPROXIMATELY 200 FEET OF 16"ø SUCTION PIPE IS ROUTED INSIDE & ON THE BOTTOM OF THE CCW LINE (DOWNSTREAM OF ENTRY POINT)
7. SCH. 140 THRU OUTSIDE WALL PENETRATION, BALANCE OF PIPE SCH.20.
8. SCH. 80 THRU OUTSIDE WALL PENETRATION, BALANCE OF PIPE SCH.20.
9. STAINLESS STEEL (PS-151.4) MAY BE SUBSTITUTED FOR PIPE SIZES 1/2" THRU 6". 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 00-243.00-00-0001.
10. PIPING IS QA1
11. A SHORT PIECE OF 6" CS PIPE IS USED TO TRANSITION BETWEEN SS VENT LINE & CS CCW HEADER. SEE PIPING LAYOUT FOR MATERIAL INFO. ON TRANS. PIECE.
12. THE HEAT TRACED PIPING TEMPERATURE CAN APPROACH THE HIGH DESIGN TEMPERATURE DURING HOT WEATHER, AT THE FLOAT VALVE AND AT THE LOW POINTS. IF A TEMPERATURE CONTROLLER ON THE LOW POINT HEAT TRACE FAILS.
13. QA CONDITION 4
14. ENDS THREADED. PIPE CAP MAY BE INSTALLED FOR FOREIGN MATERIAL EXCLUSION.
15. THESE INSTRUMENTS ARE INACTIVE AND DISCONNECTED PER ONDE-18122.

DESIGN PARAMETERS

LINE NO.	DUKE CLASS	DESIGN PRESS.	DESIGN TEMP.	MATERIAL	PIPE SPEC. NO.	PIPE SCH. NO.	ISI CLASS
1	NOTE 4, 10	—	—	CS	NOTE 4	NOTE 4	C
2	NOTE 4, 13	—	—	CS	NOTE 4	NOTE 4	C
3	F	50 PSIG	100°F	CS(NOTE 9)	150.6(NOTE 9)	NOTE 3	C
4	G	50 PSIG	100°F	CS(NOTE 9)	150.6(NOTE 9)	NOTE 3	C
17	C	35 PSIG	88°F	SS	151.6	NOTE 8	C
18	C	35 PSIG	150°F	SS	151.6	NOTE 8	C
37	G	35 PSIG	100°F	CS	150.6	NOTE 3	-
44	D	50 PSIG	100°F	CS	150.6	SCH. 40	-
45	F	50 PSIG	100°F	SS	301.4	SCH. 80	-
61	F	50 PSIG	100°F/150°F (NOTE 12)	SS	151.4(a1)	SCH. 40	C
62	G	50 PSIG	100°F	SS	151.4	SCH. 40	-
63	G	ATM.	100°F	SS	151.4	SCH. 40	-
64	D	50 PSIG	100°F	CS(NOTE 9)	150.6(NOTE 9)	NOTE 3	-
78	G	50 PSIG	100°F/150°F (NOTE 12)	SS	151.4	SCH. 40	-

DESIGN FLOW

NO.	FLOW
1	177,000 GPM

NO.	REVISIONS	DRN	DATE	CHKD	DATE	APPR	DATE
26	REV. PER OE-11832	JMF	11-8-95	MSI	11-7-95	RDD	11-7-95
25	REV. PER OE-17246	MSI	8-15-95	LER	8-16-95	RBC	8-16-95
24	REV. PER ED. EX. G. 6, PIP 03-01963	DLR	12-27-94	MSI	12-28-94	RBC	1-19-95
23	REV. PER ED. EX. G. 7	LER	8-2-94	MSI	8-2-94	RBC	8-3-94
ORIG.	ORIGINAL DRAWING RETIRED	LER	8-2-94				

	-W-	-W-	JBB
	-W-	-W-	HEH
KQC	-W-	-W-	HEH
CJP	MLM	JBB	

	CIVIL	ELEC.	MECH.
INSPECTED			

DUKE POWER COMPANY
OCONEE NUCLEAR STATION - UNIT 2

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

DESIGNED	DK HARRELSON	DATE 2-17-84	INSP. HO MCKAY DATE 8-1-84
DRAWN	VO OWENS	DATE 2-17-84	INSP. ED BRAMPTON DATE 8-2-84
CHECKED	JB STRINGER	DATE 2-17-84	APPD. BF WADDELL DATE 8-5-84

SCALE

DWG. NO. OFD-133A-2.1 REV. 26

FORM OX0001 S6