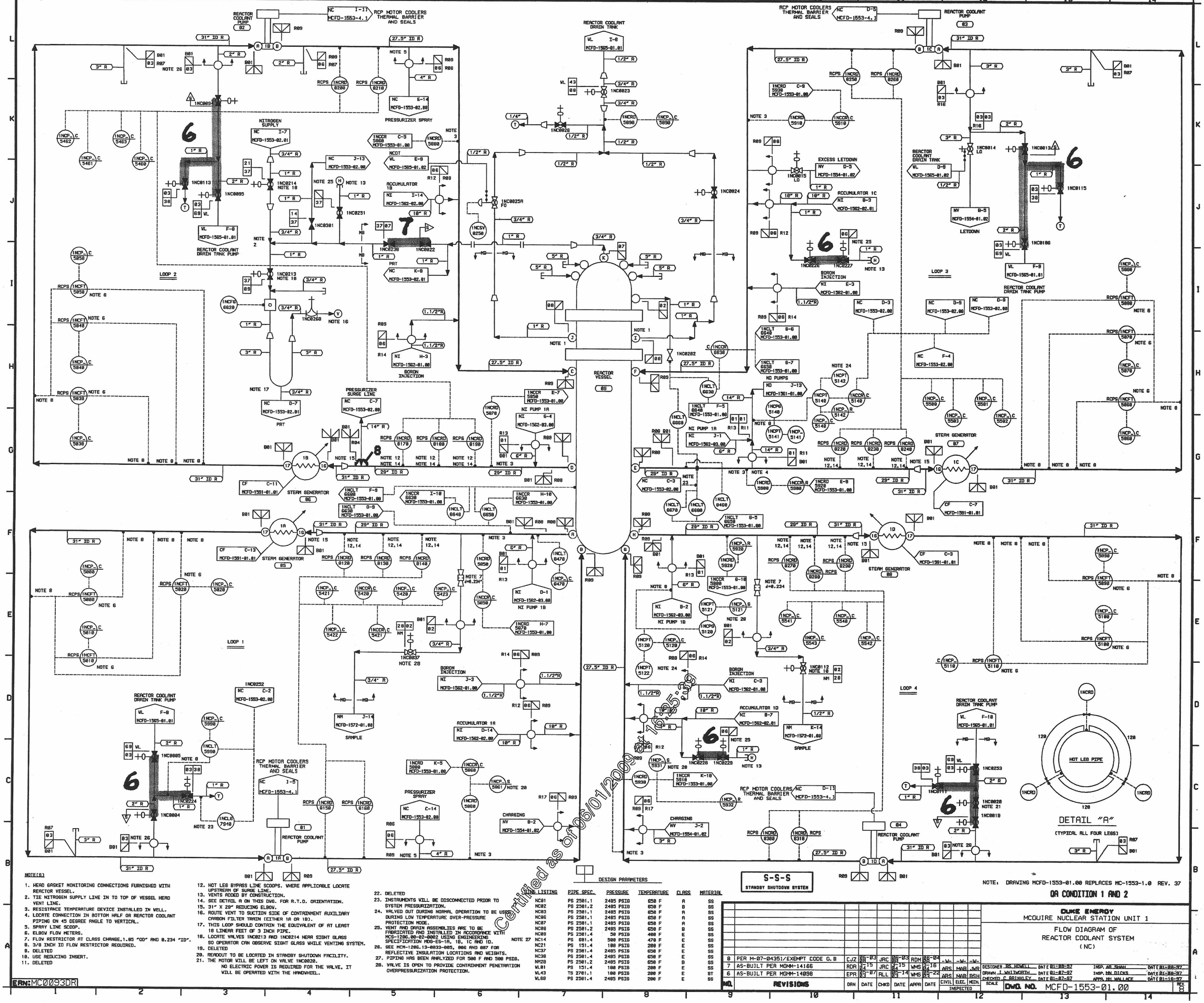

NOTE(S)

1. HEAD GASKET MONITORING CONNECTIONS FURNISHED WITH REACTOR VESSEL.
2. TIE NITROGEN SUPPLY LINE IN TO TOP OF VESSEL HEAD VENT LINE.
3. RESISTANCE TEMPERATURE DEVICE INSTALLED IN WELL.
4. LOCATE CONNECTION IN BOTTOM HALF OR REACTOR COOLANT PIPING ON 45 DEGREE ANGLE TO VERTICAL.
5. SPRAY LINE SCOOP.
6. ELBOW FLOW METERS.
7. FLOW RESTRICTOR AT CLASS CHANGE.1.05 "OD" AND 0.234 "ID".
8. 3/8 INCH ID FLOW RESTRICTOR REQUIRED.
9. DELETED
10. USE REDUCING INSERT.
11. DELETED
12. HOT LEG BYPASS LINE SCOOPS. WHERE APPLICABLE LOCATE UPSTREAM OF SURGE LINE.
13. VENTS ADDED BY CONSTRUCTION.
14. SEE DETAIL A ON THIS DWG. FOR R.T.D. ORIENTATION.
15. 31" X 29" REDUCING ELBOW.
16. ROUTE VENT TO SUCTION SIDE OF CONTAINMENT AUXILIARY CARBON FILTER TRAIN (EITHER 1A OR 1B).
17. THIS LOOP SHOULD CONTAIN THE EQUIVALENT OF AT LEAST 18 LINEAR FEET OF 3 INCH PIPE.
18. LOCATE VALVES 1NC8213 AND 1NC8214 NEAR SIGHT GLASS SO OPERATOR CAN OBSERVE SIGHT GLASS WHILE VENTING SYSTEM.
19. DELETED
20. READOUT TO BE LOCATED IN STANDBY SHUTDOWN FACILITY.
21. THE MOTOR WILL BE LEFT ON VALVE 1NC8020.
    NO ELECTRIC POWER IS REQUIRED FOR THE VALVE. IT WILL BE OPERATED WITH THE HANDWHEEL.
22. DELETED
23. INSTRUMENTS WILL BE DISCONNECTED PRIOR TO SYSTEM PRESSURIZATION.
24. VALVED OUT DURING NORMAL OPERATION TO BE USED DURING LOW TEMPERATURE OVER-PRESSURE PROTECTION MODE.
25. VENT AND DRAIN ASSEMBLIES ARE TO BE FABRICATED AND INSTALLED IN ACCORDANCE WITH MCS-1206.00-82-0002 USING ENGINEERING SPECIFICATION MDS-ES-1A, 1B, 1C AND 1D.
26. SEE MCM-1206.13-0033-005, 006 AND 007 FOR REFLECTIVE INSULATION LOCATIONS AND WEIGHTS.
27. PIPING HAS BEEN ANALYZED FOR 500 F AND 500 PSIG.
28. VALVE IS OPEN TO PROVIDE CONTAINMENT PENETRATION OVERPRESSURIZATION PROTECTION.

DESIGN PARAMETERS

PIPING LISTING	PIPE SPEC.	PRESSURE	TEMPERATURE	CLASS	MATERIAL
NC01	PS 2501.1	2485 PSIG	650 F	A	SS
NC02	PS 2501.2	2485 PSIG	650 F	B	SS
NC03	PS 2501.1	2485 PSIG	650 F	A	SS
NC06	PS 2501.1	2485 PSIG	650 F	A	SS
NC07	PS 2501.1	2485 PSIG	650 F	A	SS
NC08	PS 2501.2	2485 PSIG	650 F	B	SS
NC09	PS 2501.4	50 PSIG	400 F	E	SS
NC14	PS 601.4	500 PSIG	470 F	E	SS
NC21	PS 151.4	100 PSIG	200 F	E	SS
NC37	PS 2501.4	2485 PSIG	650 F	E	SS
NC38	PS 2501.4	2485 PSIG	650 F	E	SS
NM28	PS 2501.2	2485 PSIG	650 F	B	SS
WL01	PS 151.4	100 PSIG	200 F	E	SS
WL43	TS 2701.1	100 PSIG	200 F	E	ST
WL69	PS 2501.4	2485 PSIG	200 F	E	SS

NOTE: DRAWING MCFD-1553-01.00 REPLACES MC-1553-1.0 REV. 37

QA CONDITION 1 AND 2

NO.	REVISIONS	DRN	DATE	CHKD	DATE	APPR	DATE
8	PER M-07-04351/EXEMPT CODE G.8	CJZ	05-03	JRC	05-03	RDM	05-04
7	AS-BUILT PER MDMM-14166	RDR	04-15	JRC	04-15	WMS	04-16
6	AS-BUILT PER MDMM-14098	EPR	03-07	RLL	03-14	WMS	03-25

INSPECTED		
-W-	-W-	-W-
ARS	MAR	JWR
ARS	MAR	RSH
CIVIL	ELEC.	MECH.

DUKE ENERGY
MCGUIRE NUCLEAR STATION UNIT 1

FLOW DIAGRAM OF REACTOR COOLANT SYSTEM (NC)

DESIGNER RS HOWELL	DATE 01-08-97	INSP. AR SHAH	DATE 01-08-97
DRAWN T WHITWORTH	DATE 01-07-97	INSP. MN DICKS	DATE 01-08-97
CHECKED C BRINKLEY	DATE 01-07-97	APPR. MH WALLACE	DATE 01-16-97

SCALE | DWG. NO. MCFD-1553-01.00 | REV 8

ERN: MC0093DR

Certified as of 06/01/2009 16:45:39

D01

Duke Energy Corporation
Relief Request # 09-MN-005
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