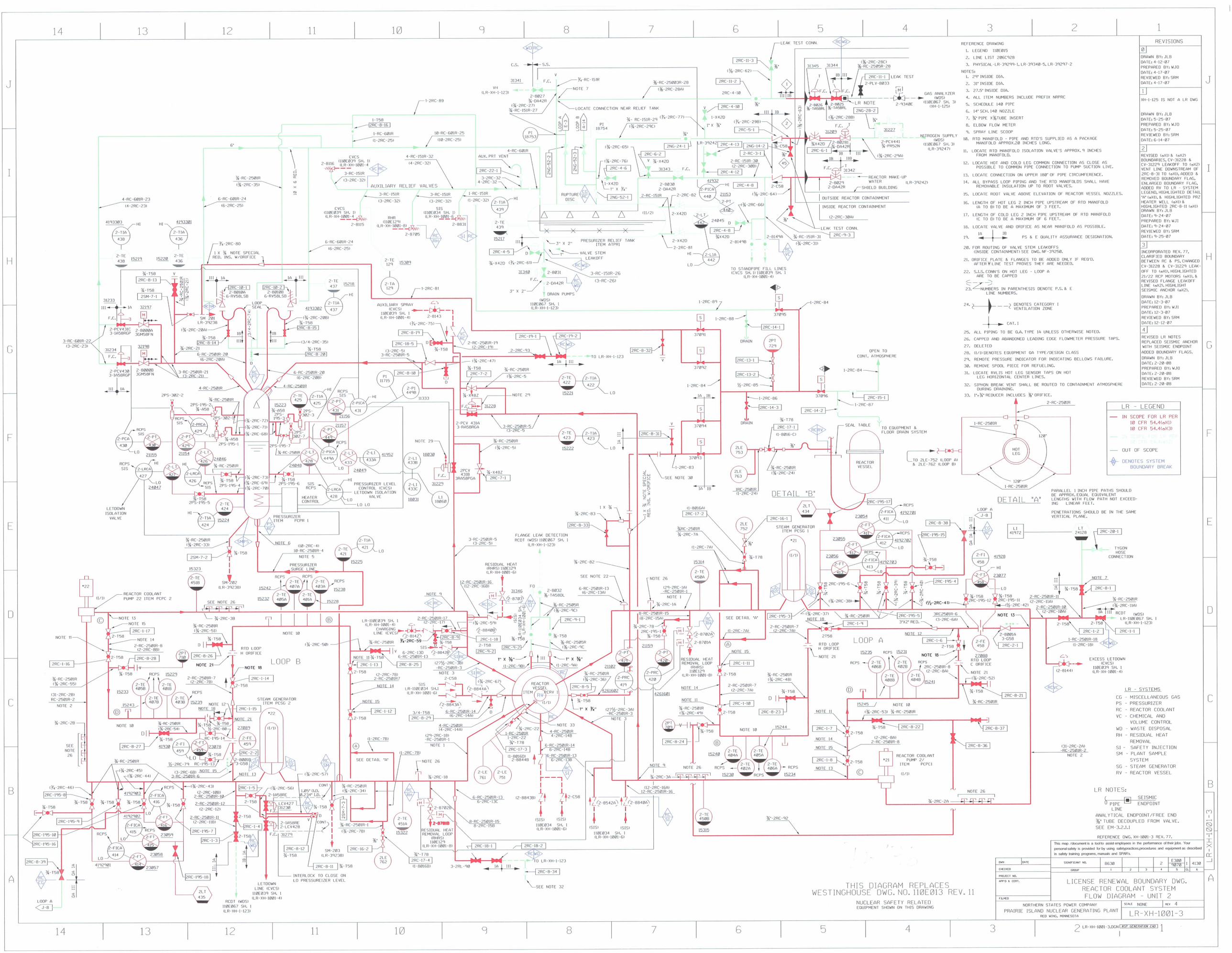

REFERENCE DRAWING

1. LEGEND 110E015
2. LINE LIST 206C928
3. PHYSICAL-LR-39299-1, LR-39340-5, LR-39297-2

NOTES:

1. 29" INSIDE DIA.
2. 31" INSIDE DIA.
3. 27.5" INSIDE DIA.
4. ALL ITEM NUMBERS INCLUDE PREFIX NRPRC
5. SCHEDULE 140 PIPE
6. 14" SCH. 140 NOZZLE
7. ¾" PIPE X ¾"TUBE INSERT
8. ELBOW FLOW METER
9. SPRAY LINE SCOOP
10. RTD MANIFOLD - PIPE AND RTD'S SUPPLIED AS A PACKAGE MANIFOLD APPROX.20 INCHES LONG.
11. LOCATE RTD MANIFOLD ISOLATION VALVE'S APPROX. 9 INCHES FROM MANIFOLD.
12. LOCATE HOT AND COLD LEG COMMON CONNECTION AS CLOSE AS POSSIBLE TO COMMON PIPE CONNECTION TO PUMP SUCTION LINE.
13. LOCATE CONNECTION ON UPPER 180° OF PIPE CIRCUMFERENCE.
14. ALL BYPASS LOOP PIPING AND THE RTD MANIFOLDS SHALL HAVE REMOVABLE INSULATION UP TO ROOT VALVES.
15. LOCATE ROOT VALVE ABOVE ELEVATION OF REACTOR VESSEL NOZZLES.
16. LENGTH OF HOT LEG 2 INCH PIPE UPSTREAM OF RTD MANIFOLD (A TO B) TO BE A MAXIMUM OF 3 FEET.
17. LENGTH OF COLD LEG 2 INCH PIPE UPSTREAM OF RTD MANIFOLD (C TO D) TO BE A MAXIMUM OF 6 FEET.
18. LOCATE VALVE AND ORIFICE AS NEAR MANIFOLD AS POSSIBLE.
19. IA — IB PS & E QUALITY ASSURANCE DESIGNATION.
20. FOR ROUTING OF VALVE STEM LEAKOFFS (INSIDE CONTAINMENT) SEE DWG. NF-39250.
21. ORIFICE PLATE & FLANGES TO BE ADDED ONLY IF REQ'D. AFTER W LINE TEST PROVES THEY ARE NEEDED.
22. S.I.S. CONN'S ON HOT LEG - LOOP A ARE TO BE CAPPED
23. NUMBERS IN PARENTHESIS DENOTE P.S. & E LINE NUMBERS.
24. DENOTES CATEGORY I VENTILATION ZONE
25. CAT. I
26. ALL PIPING TO BE Q.A. TYPE IA UNLESS OTHERWISE NOTED.
27. CAPPED AND ABANDONED LEADING EDGE FLOWMETER PRESSURE TAPS.
28. DELETED
29. (I/I) DENOTES EQUIPMENT QA TYPE/DESIGN CLASS
30. REMOTE PRESSURE INDICATOR FOR INDICATING BELLOWS FAILURE.
31. REMOVE SPOOL PIECE FOR REFUELING.
32. LOCATE RVLIS HOT LEG SENSOR TAPS ON HOT LEG HORIZONTAL CENTER LINES.
33. SIPHON BREAK VENT SHALL BE ROUTED TO CONTAINMENT ATMOSPHERE DURING DRAINING.
34. 1"x¾" REDUCER INCLUDES ¾" ORIFICE.

PARALLEL 1 INCH PIPE PATHS SHOULD BE APPROX. EQUAL EQUIVALENT LENGTHS WITH FLOW PATH NOT EXCEEDING LINEAR FEET.

PENETRATIONS SHOULD BE IN THE SAME VERTICAL PLANE.

LR - LEGEND

- IN SCOPE FOR LR PER 10 CFR 54.4(a)(1)
- IN SCOPE FOR LR PER 10 CFR 54.4(a)(3)
- OUT OF SCOPE
- DENOTES SYSTEM BOUNDARY BREAK

LR - SYSTEMS

- CG - MISCELLANEOUS GAS
- PS - PRESSURIZER
- RC - REACTOR COOLANT
- VC - CHEMICAL AND VOLUME CONTROL
- WD - WASTE DISPOSAL
- RH - RESIDUAL HEAT REMOVAL
- SI - SAFETY INJECTION
- SM - PLANT SAMPLE SYSTEM
- SG - STEAM GENERATOR
- RV - REACTOR VESSEL

LR NOTES:

PIPE — SEISMIC ENDPOINT LINE

ANALYTICAL ENDPOINT/FREE END

¾" TUBE DECOUPLED FROM VALVE. SEE EM-3.2.1.1

REFERENCE DWG. XH-1001-3 REV. 77.

REVISIONS

0
DRAWN BY: JLB
DATE: 4-12-07
PREPARED BY: WJO
DATE: 4-17-07
REVIEWED BY: SRM
DATE: 4-17-07

1
XH-1-125 IS NOT A LR DWG

DRAWN BY: JLB
DATE: 5-25-07
PREPARED BY: WJO
DATE: 5-25-07
REVIEWED BY: SRM
DATE: 6-14-07

2
REVISED (a)(1) & (a)(2) BOUNDARIES, CV-31228 & CV-31229 LEAKOFF TO (a)(2) VENT LINE DOWNSTREAM OF 2RC-8-31 TO (a)(1), ADDED & REMOVED BOUNDARY FLAG, ENLARGED BOUNDARY FLAG, ADDED RV TO LR - SYSTEM LEGEND, HIGHLIGHTED DETAIL 'A' (a)(1), & HIGHLIGHTED PRZ HEATER WELL (a)(1) & HIGHLIGHTED 2RC-8-11 (a)(1)
DRAWN BY: JLB
DATE: 9-24-07
PREPARED BY: WJI
DATE: 9-24-07
REVIEWED BY: SRM
DATE: 9-25-07

3
INCORPORATED REV. 77, CLARIFIED BOUNDARY BETWEEN RC & PS, CHANGED CV-31228 & CV-31229 LEAK-OFF TO (a)(1), HIGHLIGHTED 21/22 RCP MOTORS (a)(1), & REVISED FLANGE LEAKOFF LINE (a)(2), HIGHLIGHT SEISMIC ANCHOR (a)(2).
DRAWN BY: JLB
DATE: 12-3-07
PREPARED BY: WJI
DATE: 12-3-07
REVIEWED BY: SRM
DATE: 12-12-07

4
REVISED LR NOTES REPLACED SEISMIC ANCHOR WITH SEISMIC ENDPOINT ADDED BOUNDARY FLAGS.
DRAWN BY: JLB
DATE: 2-20-08
PREPARED BY: WJO
DATE: 2-20-08
REVIEWED BY: SRM
DATE: 2-20-08

This map /document is a tool to assist employees in the performance of their jobs. Your personal safety is provided for by using safetypractices,procedures and equipment as described in safety training programs, manuals and SPAR's.

THIS DIAGRAM REPLACES WESTINGHOUSE DWG. NO. 110E013 REV. 11

NUCLEAR SAFETY RELATED
EQUIPMENT SHOWN ON THIS DRAWING

DWN	DATE	SIGNIFICANT NO.	8630			2	E300 9870	1	4130
CHECKED		GROUP	1	2	3	4	5	CL	6
PROJECT NO.									
APPD & CERT.									
FILMED									

LICENSE RENEWAL BOUNDARY DWG.
REACTOR COOLANT SYSTEM
FLOW DIAGRAM - UNIT 2

NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GENERATING PLANT
RED WING, MINNESOTA

SCALE NONE | REV 4

LR-XH-1001-3

LR-XH-1001-3.DGN [WSP GENERATION CAD]