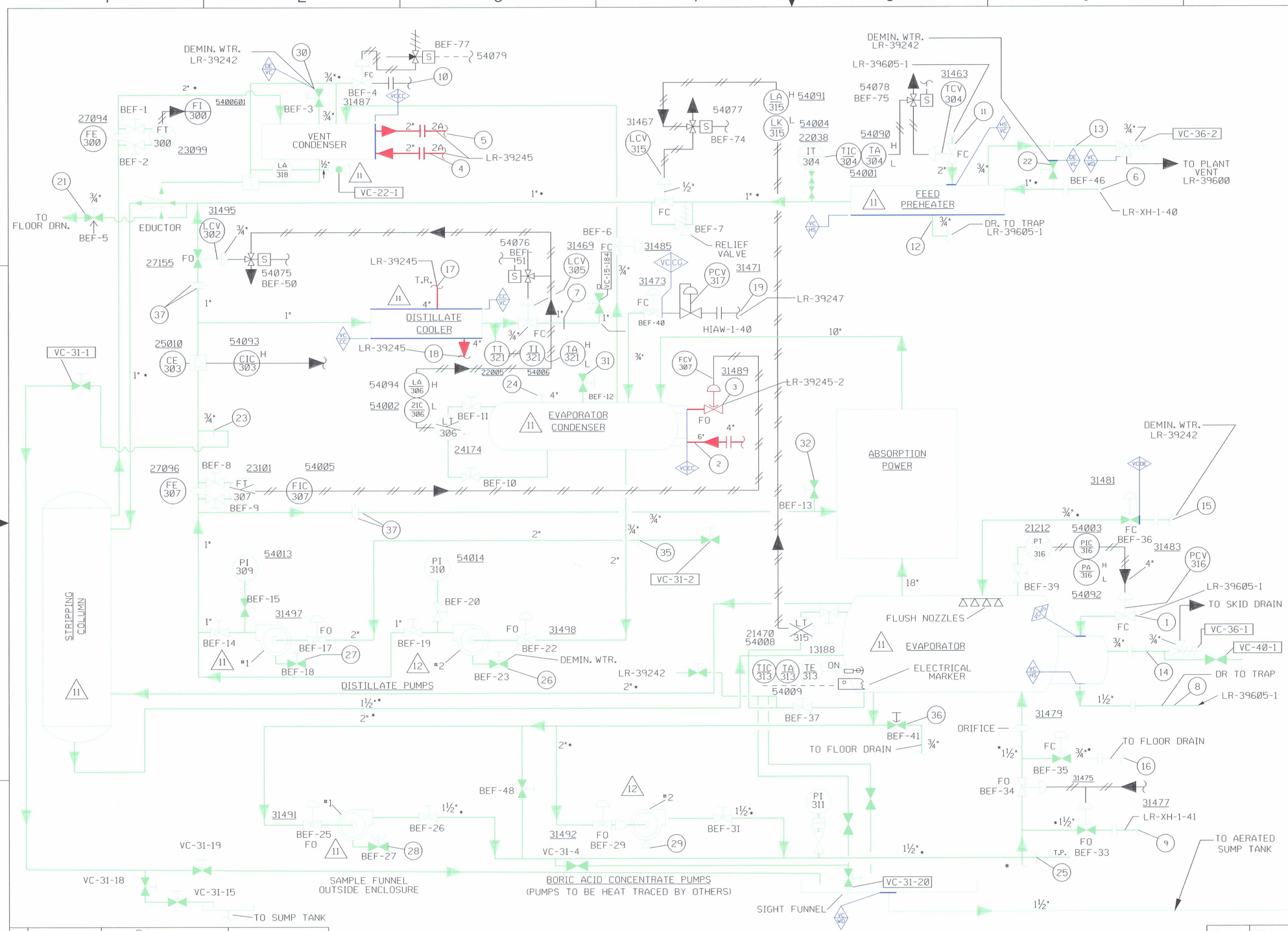

ITEM	DESCRIPTION
1	EVAP. STEAM INLET
2	EVAP. COND. COOLING WATER INLET
3	EVAP. COND. COOLING WATER OUTLET
4	VENT COND. COOLING WATER INLET
5	VENT COND. COOLING WATER OUTLET
6	FEED INLET
7	DISTILLATE OUTLET
8	CONDENSATE OUTLET
9	CONCENTRATED BORIC ACID OUTLET
10	CONDENSER VENT (TO VENT HEADER)
11	FEED PREHEATER STEAM INLET
12	FEED PREHEATER STEAM OUTLET
13	FEED PREHEATER VENT (TO PLANT)
14	EVAP. CHAMBER VENT (TO PLANT VENT)
15	EVAP. FLUSH INLET
16	EVAP. DRAIN
17	DIST. COOLING WATER INLET
18	DIST. COOLING WATER OUTLET
19	NITROGEN SUPPLY
21	DRAIN CONNECTION - ¾" (SYSTEM)
22	FLUSH CONNECTION - ¾" (FEED PRE-HTR.)
23	DISTILLATE SAMPLE LINE - ¾" (OUT)
24	RUPTURE DISC (SIZE BASED ON "D" PSIG. BACK
25	CONCENTRATES SAMPLE ONE OUT ⅜ TUBING
26	DRAIN CONNECTION - ¾" (DISTILLATE PUMP #2)
27	DRAIN CONNECTION - ¾" (DISTILLATE PUMP #1)
28	DRAIN CONNECTION - ¾" (CONCENTRATE PUMP #1)
29	DRAIN CONNECTION - ¾" (CONCENTRATE PUMP #2)
30	FLUSH CONNECTION - ¾" (VENT COND.)
31	FLUSH CONNECTION - ¾" (EVAP COND.)
32	FLUSH CONNECTION - ¾" (ABSORPTION TOWER)
35	DISTILLATE SAMPLE LINE -¾" (IN)
36	DRAIN CONNECTIN -¾" (SUB TUBE EVAP.)
37	ORIFICE FLANGE TAPS (PLUGGED)

NOTES

1. LINES HEAT TRACED BY OTHERS.
2. * ALL LINES MARKED "*" ARE CLASS 131R. THIS IS A DESIGNATION ONLY & NO ADDITIONAL INSPECTION HAS BEEN PERFORMED ON THIS PIPING. ALL OTHER PIPE IS CLASS 131.
3. SYSTEM LOGIC DEALING WITH SOLENOID VALVES CAN BE FOUND ON THE APPROPRIATE ELECTRICAL OR PNEUMATIC DIAGRAMS.
4. SOLENOID AIR SUPPLY VALVE ACTION (FO)

ENERGIZED	ON	OPEN
DEENERGIZED	ON	CLOSED
ENERGIZED	OFF	OPEN
DEENERGIZED	OFF	OPEN

"FAIL OPEN" REFERS TO AIR FAILURE ONLY (NOT ELECTRICAL FAILURE)

5. BLOCKED PORT ON SOLENOID INDICATES NORMAL MODE OF OPERATION.
6. PIPING/EQUIPMENT DESIGN CLASS 3, QA TYPE III

LR-SYSTEMS

DE - WATER TREATMENT
VC - CHEMICAL AND VOLUME CONTROL
CC - COMPONENT COOLING
HS - HEATING SYSTEM
WD - WASTE DISPOSAL
CG - MISCELLANEOUS GAS

LR - LEGEND

- IN SCOPE FOR LR PER 10 CFR 54.4(a)(1) 10 CFR 54.4(a)(3)
- IN SCOPE FOR LR PER 10 CFR 54.4(a)(2)
- OUT OF SCOPE
- DENOTES SYSTEM BOUNDARY BREAK

REFERENCE XH-1-405 REV. L

REVISIONS

0	DRAWN BY: JLB DATE: 8-1-07 PREPARED BY: RAB DATE: 8-1-07 REVIEWED BY: SRM DATE: 8-1-07
1	ADDED CG TO LR SYSTEMS LEGEND, REVISED BOUNDARY FLAG LOCATIONS, & REVISED DWG LINKS TO LR. DRAWN BY: JLB DATE: 8-30-07 PREPARED BY: WJI DATE: 8-30-07 REVIEWED BY: SRM DATE: 9-14-07
2	REVISED (a)(2)/OUT OF SCOPE BOUNDARY DRAWN BY: JLB DATE: 10-05-07 PREPARED BY: WJI DATE: 10-05-07 REVIEWED BY: SRM DATE: 10-08-07

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

DWN	DATE
S.O. NO.	
VENDOR NO.	
Q.A. TYPE	
SIZE	

SIGNIFICANT NO.	8630		750	1	M290 9071	1	9300
GROUP	1	2	3	4	5	CL	6

LICENSE RENEWAL BOUNDARY DWG
BORIC ACID EVAP. & GAS STRIPPER
FLOW DIAGRAM

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

SCALE NTS | REV 2
LR-XH- 1-405

LR-XH-1-405.DGN NSP GENERATION CAD

LR-XH- 1-405