REVISIONS
Ø DRAWN BY: JLB DATE: 4-2-07 PREPARED BY: WJO DATE: 4-2-07 REVIEWED BY: SRM DATE: 4-17-07
1 REVISED DWG (aN2) BOUNDARY & REFERENCE DWG. NUMBER DRAWN BY: JLB DATE: 6-12-07 PREPARED BY: WJO DATE: 6-12-07 REVIEWED BY: SRM DATE: 6-14-07

TO ATMOS.

GLAND SEAL STEAM SEE DWG. LR-39218

1" DRAINS TO WASTE

TO HEATING STEAM SYSTEM. SEE DWG LR-39605-1

FROM UNIT#2 HEATING STEAM SUPPLY SEE LR-39605-1 & LR-39225

MAIN STEAM PIPING SEE DWG. LR-39218 (TYP)

1½"WARM-UP BY-PASS.

CAP OFF

HEATER DRAIN PIPINNG SEE DWG. LR-39226 (TYP.)

6-SB-38 FROM SGB FLASH TANK STEAM LINE LR-88740 (A-7)

3" EQUALIZING LINE (TYP.)

FROM 6" WARM UP LINE FOR CONT SEE DWG. LR-39218

2" DRAIN PIPING SEE DWG LR-39226 (TYPICAL)

2" DRAIN TO TRAP SEE DWG LR-39233

FOR CONT SEE # 11 HEATER DRAIN TANK THIS DWG.

FOR CONT SEE DWG LR-39218

1B REHEATER (III/3) 1B MOISTURE SEPARATOR (III/3)

2B REHEATER (III/3) 2B MOISTURE SEPARATOR (III/3)

1A REHEATER (III/3) 1A MOISTURE SEPARATOR (III/3)

2A REHEATER (III/3) 2A MOISTURE SEPARATOR (III/3)

1B REHEATER DRAIN TANK (III/3)

2B REHEATER DRAIN TANK (III/3)

1A REHEATER DRAIN TANK (III/3)

2A REHEATER DRAIN TANK (III/3)

EXTRACTION STOP CHECK VALVE HIGH LEVEL TRIP DEVICE (TYP.)

INSTR TEST CONN SEE DWG LR-39239 (TYP)

HIGH LEVEL CONTROL LINE, SEE DWG LR-39226 (TYP)

SHELL START-UP VENT (TYP)

CHANNEL VENT (TYP)

INSTR TEST CONN SEE DWG LR-39220

1" HEATER DRAIN PUMP DISCHARGE VENTS, SEE DWG. LR-39226

2" HEATER DRAIN PUMP CASING VENTS, SEE DWG LR-39226

CONT-FR• 1B&2B MOISTURE SEPARATOR THIS DWG

CONT-FR• 1B&2B MOISTURE SEPARATOR THIS DWG

2"X3" RELIEF VALVE SET AT 175 PSI

*11 HEATER DRAIN TANK (III/3)

*14A (III/3) FW. HEATER

*14B (III/3) FW. HEATER

*15A (III/3) FW. HEATER

*15B (III/3) FW. HEATER

*13A (III/3) FW. HEATER

*13B (III/3) FW. HEATER

*12A FW HEATER (III/3)

*12B FW HEATER (III/3)

*11A FW HEATER (III/3)

*11B FW HEATER (III/3)

*1A CONDENSER (III/3)

*1B CONDENSER (III/3)

L.P TURBINE (III/3)

H.P. TURBINE (III/3)

¾" CONTROL SECTION (TYP 2 PLACES)

3 X 2½"

1" SHELL DRAINS (TYPICAL)

1" DRAINS TO WASTE ¾" SAMPLE CONN SS-18 SEE DWG. LR-XH-248-1

¾" SAMPLE CONN. SS-24 SEE DWG. LR-XH-248-1

¾" SAMPLE CONN SS-22 SEE DWGLR-XH-248-1

DRAIN TO TRAPS SEE DWG. LR-39233

1" CHANNEL DRAIN (TYP)

1½" VENT BLOWOFF (TYP)

¾" SAMPLE CONN. SS-20 SEE DWG. LR-XH-248-1

¾" SAMPLE CONN SS-17 SEE DWG LR-XH-248-1

¾" SAMPLE CONN SS-16 SEE DWG LR-XH-248-1

¾" SAMPLE CONN SS-15 SEE DWG LR-XH-248-1

¾" SAMPLE CONN SS-21 SEE DWGLR-XH-248-1

¾" SAMPLE CONN. SS-19 SEE DWG. LR-XH-248-1

¾" SAMPLE CONN. SS-23 SEE DWG LR-XH-248-1

TYPICAL VENT & DRAIN PIPING FOR 13A & 13B F.W. HEATERS

TYPICAL VENT & DRAIN PIPING FOR 12A & 12B F.W. HEATERS

TYPICAL VENT & DRAIN PIPING FOR 11A & 11B F.W. HEATERS

TYPICAL VENT & DRAIN PIPING FOR 11A & 11B DRAIN COOLERS

*11A DRAIN COOLER (III/3)

*11B DRAIN COOLER (III/3)

SHELL SAFETY VALVE VENT

1" CHANNEL SAFETY VALVE DISCHARGE

1" CHANNEL VENT

1" SHELL DRAIN

1" CHANNEL DRAIN

SHELL OUTLET

SHELL VENT

OPERATING VENT (TYP.)

START-UP VENT (TYP.)

EXPANSION JOINTS• (TYP.)

FROM SGB FLASH TANK # 11 LR-88740 (A-7)

FOR CONT SEE DWG LR-39218

TO SUMP

TO ATMOS

CONTROL

LC 26802 LC 26803 LC 26804 LC 26805

CV 31139 CV 31140 CV 31141 CV 31142 CV 31167 CV 31168 CV 31169 CV 31170 CV 31171 CV 31172 CV 31173

MV 32337 MV 32338 MV 32339 MV 32340

ES 46471 ES 46473 ES 46472 ES 46474

PI 41267 Ø2 PI 41267 Ø1

P 21052 P 21051

TE-15490 TE-15491

CAP OFF

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

LR - SYSTEMS

TB - TURBINE AND SUPPORT SYSTEMS
CD - CONDENSATE
BL - BLEED STEAM
SM - PLANT SAMPLE SYSTEM
HS - HEATING SYSTEM
FW - FEEDWATER
SB - STEAM GENERATOR BLOWDOWN

LEGEND

1. ◇ DENOTES TIE-IN TO EXISTING SYSTEM
2. (5) THRU (15) DENOTES TURBINE TERMINAL CONNECTIONS.
3. (W) DENOTES FURNISHED BY WESRINGHOUSE CORP. AS DESIGNATED ON FLOW DIAGRAM LR-XH-1-123
4. ✳ DENOTES CONDENSER TERMINAL CONNECTIONS.
5. (23) THRU (68) DENOTES CONDENSER TERMINAL CONNECTIONS.
6. ⊣⊢ DENOTES LIMITS OF QA. TYPES
7. IA, IB, IC, IIB & III DENOTES THE PIPING QA. TYPES
8. (II/3) (III/3) - DENOTES THE EQUIPMENT QA. TYPES / DESIGN CLASS CAT I
9. ✦ DENOTES CATEGORY I VENTILATION ZONE.

REFERENCE PIPING DWG. NO'S
SYSTEM: BLRRD PIPING. NF-39269-1 & NF-39269-2

SYSTEM: HEATER VENT PIPING NF-39279-1 & NF-39279-2

SYSTEM: LEVELTROL, ALARM & GAGE GLASS PIPING NF-39312-2

D-020

REFERENCE NF-39224 REV. X

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	SIGNIFICANT NO.	8630			1	4510	1	
CHECKED		GROUP	1	2	3	4	5	CL	6
PROJECT NO.									
APP'D & CERT.									
FILMED									

LICENSE RENEWAL BOUNDARY DWG
FLOW DIAGRAM UNIT # 1
BLEED STEAM & HEATER VENTS

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

SCALE | REV 1

LR-39224

$$USERNAME$$
$$$$$$SYSTIME$$$$$$$$$$SYDATE$$$$$$
$$$$$$$$$$DESIGNFILE$$$$$$$$$

LR-39224.DGN NSP GENERATION CAD

12

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