SAMPLE NO. SS-	237	214	211	210	SEE BELOW						238	234	213	(33)	236	235
SAMPLE SOURCE	HTR DRAIN PUMP DISCH. HEADER	FEEDWATER PUMP SUCTION	2B STEAM GEN. MAIN STEAM LEG	2A STEAM GEN. MAIN STEAM LEG	MOISTURE SEPARATOR DRAINS	FEEDWATER HEATER DRAINS	FEEDWATER HEATER VENTS (STEAM)			DRAIN COOLERS	CONDENSER HOTWELLS AND CROSSOVERS	FEEDWATER INLET TO STEAM GEN.	CONDENSATE PUMP DISCH.	24A & 24B HEATER COMM. INLET	(MIXED BED DEMIN OUTLET)	2B STEAM GENERATOR BLOWDOWN	2A STEAM GENERATOR BLOWDOWN
PRESSURE P.S.I.A. (MIN-MAX)	315	315	720-898	720-898	46-167	14-370	93-370	45-163	1.7-50	29" VAC - 14.7		720-1000	315	315	25-50	720-898	720-898
TEMP - °F (MIN-MAX)	300°	271°-362°	506°-532°	506°-532°	276°-367°	168°-373°	323°-437°	275°-365°	121°-282°	79°-		318°-432°	92	204°-277°	50°-100°	506°-532°	506°-532°
FLOW - ML/MIN	500	500	500	500	500	500	500	500	500	500		1150	2000	1650	1600	1600	1600

REVISIONS

0
DRAWN BY: JLB
DATE: 2-22-07
PREPARED BY: WJO
DATE: 2-22-07
REVIEWED BY: SRM
DATE: 2-22-07

1
ENLARGED BOUNDARY FLAGS AND HIGHLIGHTED PC COOLERS 22, 22A 23, 25, 213, 235, 236, & 238 (all3).
DRAWN BY: JLB
DATE: 8-29-07
PREPARED BY: WJO
DATE: 8-29-07
REVIEWED BY: SRM
DATE: 9-15-07

ROOT VALVES
MANIFOLDS
REMOTE COOLERS
PUMPS AND ACCESSORIES
SAMPLE LINES
PANEL SHUT-OFF VALVES
PRIMARY COOLERS
PRESSURE REGULATING AND DRAG VALVES
GRAB SAMPLES
COLD LAB SECONDARY COOLERS
HOT LAB SECONDARY COOLERS
SPECIFIC CONDUCTIVITY
CATION CONDUCTIVITY
pH
DISSOLVED OXYGEN
HYDRAZINE
PHOSPHATE
DISSOLVED SILICA
BACK PRESSURE REGULATING OR RELIEF VALVES

244 243 242 241 — 2B 2A 2B 2A
230 229 228 227 226 225 — 25B 25A 24B 24A 23B 23A
218 217 216 215 — 25B 25A 24B 24A
224 223 222 221 220 219 — 23B 23A 22B 22A 21B 21A
240 239 248 247 246 245 212 — 21B 21A 1B PT1 1A PT2 1A PT1 1B 2A 1A 2B

M26 44 | M26 43 | M26 42 | M26 41 — M26
M25 30 | M25 29 | M25 28 | M25 27 | M25 26 | M25 25 — M25
M24 18 | M24 17 | M23 16 | M23 15 — M24 / M23
M22 24 | M22 23 | M22 22 | M22 21 | M22 20 | M22 19 — M22
M21 40 | M21 39 | M21 48 | M21 47 | M21 46 | M21 45 | M21 12 — M21

DWG LR-39238 B-10

SS-237 SS-214 SS-211 SS-210 M26
TO PRIMARY COOLERS LISTED ABOVE

PC-22A
95° COMP CLG WTR LR-39246-2 A-10
PT 25 / PC 25 / PS 25 / PRV 45-8 / PRV M25 / DP 25 / CV 25 / SO 25
PT 22 / PC 22 / PS 22 / PRV 45-2 / DP 22 / CV 22 / SO 22
DP 21 / M21-GV-1 / M21-3W-1 / CV 21 / SO 21
2SS-11-1
FW OXYGEN/CPM MONITORING PANEL SEE TECH MANUAL NF-60349-1
DIAPHRAGM PUMP
2SS-4-37
M4
SO 23
SO 238 / SO 234 / SO 213 / SO 236-2 / SO 235-2

TO HOT LAB UNIT #1 COOLER MANIFOLD
FROM HOT LAB UNIT #1 COOLER MANIFOLD
TO UNIT 1 SAMPLE PANEL LR-XH-248-1-1
COMPONENT COOLING SYTEM LR-39246
PRV-95-4
PT 23 / PC 23 / PS 23
PT 238 / PC 238 / PS 238
PT 213 / PC 213 / PS 213
PT 236 / PC 236 / PS 236
PT 235 / PC 235 / PS 235
TO CORROSION MONITOR
PRV 236 / PRV 235

SS-401 JUMPER
M23 SURVEY PANEL
TI M25 / PI M25 / BPV 25 / GV 25
TI M23 / PI M23 / GV 23 / RV M23
TI M22 / PI M22 / GV 22 / BPV 22
TI M21 / PI M21 / GV 21 / BPV 21
COLD LAB SAMPLE SINK B
GV 238 / GV 234 / GV 213
PRV 238 / PRV 234 / PRV 213
SS 33-2
HOT LAB SAMPLE SINK
GV 236 / GV 235
PI 236 / PI 235
TI 235 / FI 235 / CE 235 / CT 235
TI 236 / FI 236 / CE 236 / CT 236
BPV 235 / BPV 236
SV 33-2 / SV 236 / SV 235
21/22 S/G SAMPLE STREAM SELECTOR SWITCH SEE NOTE #1

TO SAMPLE RECOVERY TANK LR-XH-248-1-1
RETURN
CHILLED WATER 76° ± F° FROM COLD LAB CHILLER UNIT LR-XH-248-1-3
SUPPLY
ST 238 / ST 234 / ST 213 / ST 236
SC 238 / SC 234 / SC 213 / SC 236
SS 238 / SS 234 / SS 213 / SS 236

475090505 — MAIN PANEL — CP — H/L — pHT 238 — pHE 238 — FI 238
475030403 — CP — MAIN PANEL — HZI 238 — HZT 238 — HZS 238 — HZE 238 — SO 238-2
475090605 — DEMIN — TI 238 / PI 238 — CCT 234 / CCE 234 — CT 234 / CE 234 / FI 234-2 — DOA 234 / DOT 234 / DOE 234 / FI 234-3 — CFI 238 / CE 238 / CT 238 / CCE 238 / CCT 238
TI 234 / PI 234 — DEMIN
TI 213 / PI 213 — DEMIN
TI 236 — DEMIN
475100605 — MAIN PANEL — CP — H/L — pHT 235/236 — pHE 235/236 — FI 236-2 — HZT 235/236 — FI 236-3 — ST 235/236 — SE 235/236 — FI 236-4
CT 235/236 — CE 235/236 — FI 236-1
BPV 238 — BPV 234 — RV 213 — BPV 22

LR-XH-248-1-1
TO SAMPLE RECOVERY TANK
TO / FROM 121 HOT LAB CHILLED WATER UNIT-1
LR-XH-248-1-3

LEGEND

= SURVEY CONNECTION
= WASTE DRAIN
R = RECOVERY DRAIN
X = DRAG VALVE

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

NOTES:

1. MOUNTED ON UNIT 2 HOT LAB PANEL.

LR - SYSTEMS

CC - COMPONENT COOLING
SM - PLANT SAMPLE SYSTEM

LR-XH-248-1-2

REFERENCE DWG. X-HIAW-248-1-2 REV. 76

VENDOR - LEEDS & NORTHRUP CO.
DWG. # X-PID-3700-104

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 SPNFs.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE _____ REG.NO. _____

DWN CLN	DATE 01-29-92
CHECKED	
PROJECT NO.	
APP'D & CERT.	SEE REV "A"
FILMED	

SIGNIFICANT NO.	8630			100	M430 9070	1	3830
GROUP	1	2	3	4	5	CL	6

LICENSE RENEWAL BOUNDARY DWG
P & ID - UNIT #2
GRAB SAMPLE PANEL & HOT LAB

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

SCALE NONE | REV 1
LR-XH-248-1-2

$$USERNAME$$
$$$$$$SYTIME$$$$$$$$$$SYDATE$$$$$$
$$$$$$$$$$DESIGNFIL$$$$$$$$$$

LR-XH-248-1-2.DGN [MSP GENERATION CAD]