BEARING *1 | BEARING *2 | BEARING *3 | BEARING *4 | THRUST BEARING | BEARING *5 | BEARING *6 | TURNING GEAR | BEARING *7 | BEARING *8 | BEARING *9

MAIN LUBE OIL PUMP

H.P. TURBINE | L.P. TURBINE | L.P. TURBINE | GENERATOR | EXCITER

TI 12130 | TI 12131 | TI 12132 | TI 12133 | TI 12200 | TI 12201 | TI 12134 | TI 12135 | TI 12137 | TI 12138 | TI 12202

PS 16116 | PS 16153 | PS 16115 | PS 16114

PI 11217 | PI 11216

LA | LA

DEFOAMING TANK HIGH LEVEL ALARM | DEFOAMING TANK HIGH LEVEL ALARM

2TO-284 | 2TO-310 | 2TO-283

2TO-292 CFV | 2TO-291 CFV | 2TO-290 | 2TO-289 CFV | 2TO-288 CFV | 2TO-287 CFV | 2TO-285 CFV

2TG-201 | 2TG-203 | 2TG-204 | 2TG-202 | 2TG-205 | 2TG-200

TO EH CONTROL DWG NO. 721-J-105-15 AUTO-STOP

C/S | S/S

MAIN LUBE OIL PUMP SUCTION | MAIN LUBE OIL PUMP DISCHARGE

1½" | 2" | 2TO-23-2 | DUPLEX FILTER 269-141 | 2TO-23-3 | 2TO-23-1 | 2½"

FOR CONT SEE DWG. LR-39230 LOCATION (E-5)

4"

GENERATOR BEARING OIL DRAIN LINE LOOP SEAL

2TO-21-4

2TG-209 | 2TG-208

PI 11400 | PI 11401

2TG-215 | 2TG-216 | 2TG-214 | 2TG-211 | 2TG-212 | 2TG-221 | 2TG-218 | 2TG-220 | 2TG-223 | 2TG-222 | 2TG-217 | 2TG-213 | 2TG-219 | 2TG-210

LOW LEVEL ALARM | LA | HYDROGEN SIDE DRAIN REGULATOR

2TG-233 | 2TG-232 | 2TG-231

2TG-234 | 2TG-235 | PI 11219 | TI 12112

CL TB

2TG-241 | 2TG-240 | HYDROGEN SIDE SEAL OIL COOLER | 2TG-239 | 2TO-22-2 | 2TO-22-1 | 2TO-22-3

REMOVABLE SPOOLPIECE

PRESSURE ALARM | PA | PS 16096

2TG-261 | 2TG-237 | 2TG-276

CWR | CWS | SEE NOTE 1 | TBCL

2TG-291 125# | 2TG-280 150# | 2TG-268 | 2TG-279 | 2TG-267 | PI 11562

2TG-262 | 2TG-264 8"Ø | 2TG-265 | 2TG-263 | 2TG-266

AIR SIDE SEAL OIL COOLER | 2TG-251 | 2TG-250 | 2TG-236 | PI 11218 | TI 12111

2TG-247 | 2TG-252 | 2TG-274 | 2TG-273 | DPS 16409 | 2TG-238 | PI 11564 | 2TG-248 | 2TO-22-5 | 2TO-22-6 | 2TO-22-4 | 2TG-275

2TG-249 | 2TG-243 140# | 2TG-242 | 2TG-245 | 2TG-244 | DPS 16410 | 2TG-256 12"ø | 2TG-253

PA | SEAL OIL PRESSURE LOW | PI 11566 | 2TG-254 | 2TG-255 | 150# | 2TG-258 | 2TG-259 | 2TG-260 | 2TG-282 | 2TG-277 | AIR SIDE SEAL OIL PUMP-OFF | 2TG-278 | DPS 16408

HYDROGEN SIDE SEAL OIL PUMP-OFF

LOW LOW LEVEL ALARM | HIGH & LOW LEVEL ALARM | LA 16695 | LA 16631 | LT | LT

PS 16175 *21 SEAL OIL BACK-UP PUMP | 2TO-306 | 2TO-305

PS 16174 | PS 16176 | AC M | DC M | 2TO-296 | 2TO-297 | BEARING LIFT OIL PUMP

2TO-295 | 2TO-18-1 | PS 16177 | TO ATMOS. | 2TO-294 | 2TO-2-1 | 2½" | 120#

2TO-298 | 2TO-299 | *21 TURNING GEAR OIL PUMP | *21 DC EMER. OIL PUMP | 2TO-17-1 | 2TO-314 | S | VAPOR EXTRACTOR

SIGHT GLASS | 2TO-311 | SIGHT GLASS | OVERFLOW SIGHT BOX * | CL TB | 2TO-312 | TBCL | OPERATING OIL LEVEL | 4" | 1" | 2" | 2½" | 2TO-2-3 | 1-6½" | 8" | LOOP SEAL | E OIL RESERVOIR

2TO-13-1 | CWR | CWS | SEE NOTE 1 | SEE NOTE 1

2TO-308 | 2TO-309 | 2TO-301 | 2TO-303 | 2TO-304 | DPST 24009 | 2TO-307 | E.JECTOR | 2TO-300 | F | F

2TO-19-2 | 2TO-19-3 | CWR | CWS | SEE NOTE 1 | SEE NOTE 1 | 2TO-25-1 | LUBE OIL COOLERS | CL TB | TBCL

ADJUSTABLE CHECK VA. | 2TO-302 | OIL RESERVOIR | 2TO-5-2 | 2½"

BOUNDARY OF SEAL OIL SUPPLY UNIT | HYDROGEN SIDE SEAL OIL PUMP | AIR SIDE SEAL OIL PUMP | AIR SIDE SEAL OIL BACKUP PUMP-RUNNING | AIR SIDE SEAL OIL BACKUP PUMP

2TO-14-5 | PI 11807 | 2TO-3-4 | 2TO-21-1 | 2TO-3-5 | PI 11133 | 2TO-3-1 | 2TO-11-2 | *21 | 2TO-3-2 | 2TO-11-1 | 2TO-2-2 | 2TO-21-2 | 2TO-21-3 | 2TO-7-1 | 2" | 2TO-11-3 | *21 TURBINE OIL TRANSFER PUMP | FLOOR DRAIN | 6"

⅜"-140° F CLEAN HOT WATER SUPPLY | 2TO-3-7 | TI 12092 | PI 11478 | FLEXIBLE HOSE | 2TO-3-6 | 2TO-2-4

FROM *21 GEN. BEARING SEAL OIL VAPOR EXTRACTOR FOR CONT. SEE DWG. LR-39230

INLET PUMP | STRAINER | LOCAL PUSHBUTTON STATION & ALARM | DE TB | 2TO-4-1 | 1" | 1½" | 2" | FLOOR DRAIN | 2TO-5-1 | SV-33518 | SIGHT FLOW | FLEXIBLE CONN. | ES 16887 | 2TO-8-1 | ½" WATER TEST | 2TO-12-1

FOR CONT. SEE DWG. LR-39231 | 4" | 3" HOSE BOWL CASING DRAIN TO 5 GAL. DRUM | *21 TURBINE OIL CENTRIFUGAL PURIFIER

6" VALVE EXTENSION TO OPERATING FLOOR REMOTE CONTROL STATION, LOCKING DEVICE AT OPERATING FLOOR DEVICE TO BE LOCKED CLOSED.

6" | FLOOR | ACCESS MANHOLE FOR PORTABLE PUMP | 4" | 6" | 6" | HIGH LEVEL | A 47508-0301 | LA 16654 | ES 19443 | EMERGENCY TURBINE OIL SUMP (LOCATED IN UNIT 2 TURBINE BUILDING SLAB)

NOTE:
1.) FOR CONT. OF COOLING WATER PIPING SEE DWG NF-39217 LOCATION A-7 FOR SEAL OIL COOLERS & LOCATION E-5 FOR TURBINE OIL RESERVOIR OIL COOLERS.

LEGEND
*-DENOTES FURNISHED WITH EQUIPMENT
CFV-CONSTANT FLOW VALVE (KEY LOCKED)

REFERENCE PIPING DWG. NUMBER
SYSTEM: TURBINE OIL PURIFICATION PIPING
*NF-39295-1
*NF-39395-2

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
- XX / YY DENOTES SYSTEM BOUNDARY BREAK

LR - SYSTEM
TB - TURBINE & SUPPORT SYSTEMS
DE - WATER TREATMENT
CL - COOLING WATER

REVISIONS

Ø
DRAWN BY: JLB
DATE: 3-13-07
PREPARED BY: WJO
DATE: 3-13-07
REVIEWED BY: SRM
DATE: 3-13-07

1
REVISED (a)(2) BOUNDARY AND CORRECT PS* FOR 21 VAPOR EXTRACTOR FROM 16174 TO 16177 AND REVISE REFERENCE DWG FROM LR TO NF.
DRAWN BY: JLB
DATE: 7-10-07
PREPARED BY: WJO
DATE: 7-10-07
REVIEWED BY: SRM
DATE: 7-23-07

REFERENCE DWG NF-39231-2 REV N

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		400	2	4400	2	7120
CHECKED		GROUP	1	2	3	4	5	CL	6
PROJECT NO.									
APP'D & CERT.									
FILMED									

LICENSE RENEWAL BOUNDARY DWG
LUBE,LIFT,SEAL OIL & OIL PURIFICATIO
FLOW DIAGRAM GEN & TURB - UNIT #2

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

SCALE | REV 1

LR-39231-2

LR-39231-2.DGN [NOT GENERATION CAD]

$$USERNAME$$
$$$$$$SYTIME$$$$$$$$$$SYDATE$$$$$$
$$$$$$$$$$DESIGNFILE$$$$$$$$$

D-031

LR-39231-2