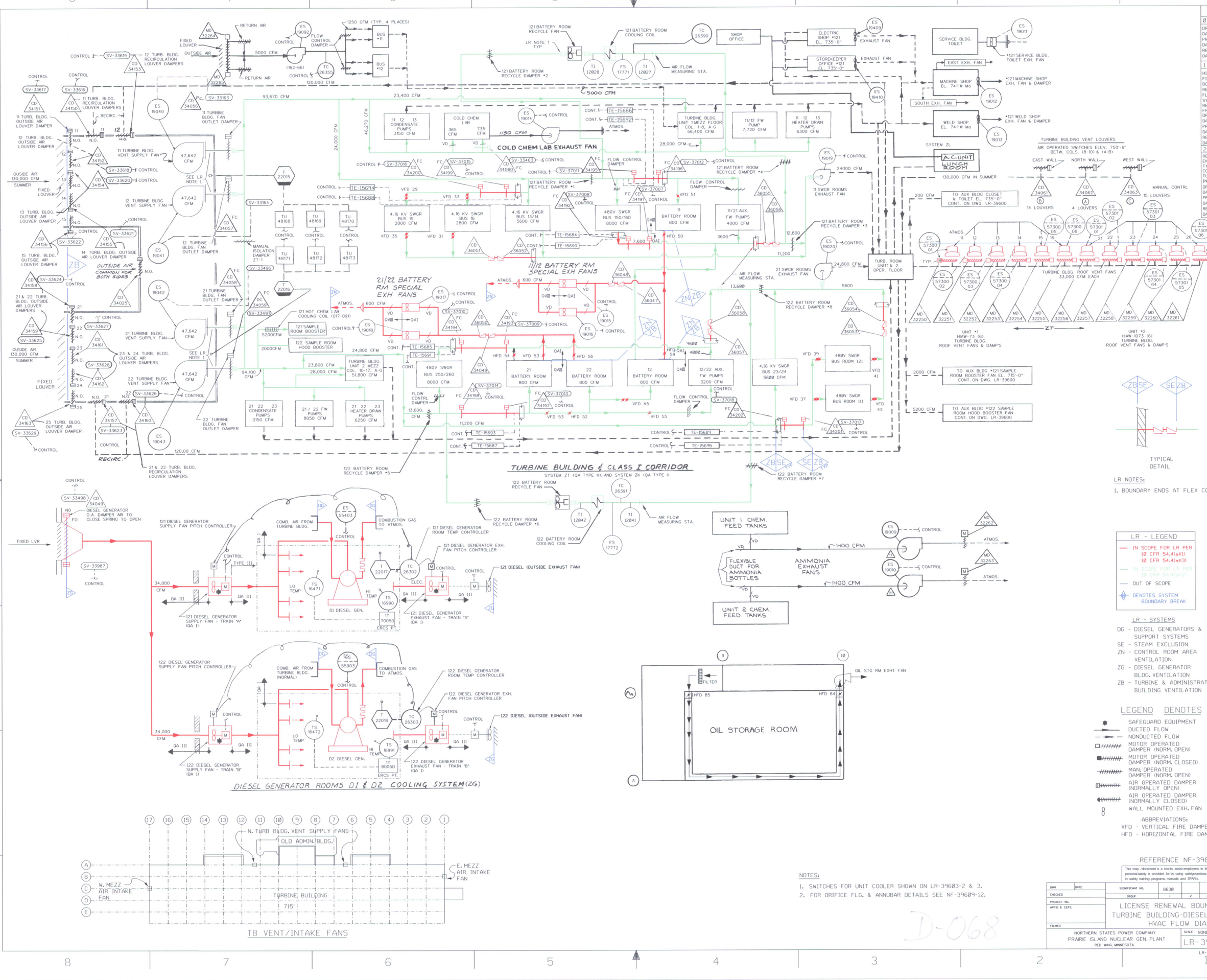
RETURN AIR
FIXED LOUVER
OUTSIDE AIR
5000 CFM
FLOW CONTROL DAMPER
1250 CFM (TYP. 4 PLACES)
BUS #11
BUS #12
120,000 CFM
11 TURB. BLDG. RECIRCULATION LOUVER DAMPERS
12 TURB. BLDG. RECIRCULATION LOUVER DAMPERS
11 TURB. BLDG. OUTSIDE AIR LOUVER DAMPER
12 TURB. BLDG. OUTSIDE AIR LOUVER DAMPER
13 TURB. BLDG. OUTSIDE AIR LOUVER DAMPER
15 TURB. BLDG. OUTSIDE AIR LOUVER DAMPER
14 TURB. BLDG. OUTSIDE AIR LOUVER DAMPER
OUTSIDE AIR COMMON FOR BOTH SIDES
21 & 22 TURB. BLDG. OUTSIDE AIR LOUVER DAMPERS
23 & 24 TURB. BLDG. OUTSIDE AIR LOUVER DAMPERS
25 TURB. BLDG. OUTSIDE AIR LOUVER DAMPER
OUSIDE AIR 130,000 CFM SUMMER
FIXED LOUVER
11 TURBINE BLDG. VENT SUPPLY FAN
12 TURBINE BLDG. VENT SUPPLY FAN
21 TURBINE BLDG. VENT SUPPLY FAN
22 TURBINE BLDG. VENT SUPPLY FAN
47,642 CFM
SEE LR NOTE 1
11 TURBINE BLDG. FAN OUTLET DAMPER
12 TURBINE BLDG. FAN OUTLET DAMPER
21 TURBINE BLDG. FAN OUTLET DAMPER
22 TURBINE BLDG. FAN OUTLET DAMPER
MANUAL ISOLATION DAMPER ZT-1
21 & 22 TURB. BLDG. RECIRCULATION LOUVER DAMPERS
RECIRC.
93,670 CFM
23,400 CFM
46,270 CFM
24,000 CFM
94,100 CFM
23,800 CFM
28,000 CFM
24,800 CFM
13,600 CFM
11,200 CFM
120,00 CFM
5000 CFM
(162-66)
121 BATTERY ROOM RECYCLE FAN
LR NOTE 1 TYP
121 BATTERY ROOM RECYCLE DAMPER #2
121 BATTERY ROOM COOLING COIL
AIR FLOW MEASURING STA.
SHOP OFFICE
ELECTRIC SHOP #121 EL. 735'-0"
STOREKEEPER OFFICE #121 EL. 735'-0"
EXHAUST FAN
SERVICE BLDG. TOILET
#121 SERVICE BLDG. TOILET EXH. FAN
EAST EXH. FAN
MACHINE SHOP EL. 741'@ Mo
#121 MACHINE SHOP EXH. FAN & DAMPER
SOUTH EXH. FAN
WELD SHOP EL. 741'@ Mo
#121 WELD SHOP EXH. FAN & DAMPER
SYSTEM ZL
A.C. UNIT LUNCH ROOM
130,000 CFM IN SUMMER
TURBINE BUILDING VENT LOUVERS
AIR OPERATED SWITCHES ELEV. 750'-6" BETW. COLS. (B-10) & (A-B)
EAST WALL
NORTH WALL
WEST WALL
14 LOUVERS
4 LOUVERS
15 LOUVERS
MANUAL CONTRL
TURBINE BLDG. ROOF VENT FANS 33,000 CFM EACH
UNIT #1 HIAW-73 (6) TURBINE BLDG. ROOF VENT FANS & DAMP'S
UNIT #2 HIAW-1073 (6) TURBINE BLDG. ROOF VENT FANS & DAMP'S
TURB. ROOM UNIT1 & 2 OPER. FLOOR
11 SWGR ROOMS EXHAUST FAN
21 SWGR ROOMS EXHAUST FAN
AIR FLOW MEASURING STA.
TO AUX BLDG CLOSET & TOILET EL. 735'-0" CONT. ON DWG. LR-39600
TO AUX BLDG #121 SAMPLE ROOM BOOSTER FAN EL. 715'-0" CONT. ON DWG. LR-39600
TO AUX BLDG #122 SAMPLE ROOM HOOD BOOSTER FAN CONT. ON DWG. LR-39600
2000 CFM
5200 CFM
200 CFM
24000 CFM
24,800 CFM
12,800
11,200
3600
7,600
5600
9600
4000
13,600
TYPICAL DETAIL
COLD CHEM LAB EXHAUST FAN
1150 CFM
11/12 BATTERY RM SPECIAL EXH FANS
21/22 BATTERY RM SPECIAL EXH FANS
600 CFM
11 12 13 CONDENSATE PUMPS 3150 CFM
COLD CHEM LAB 365 CFM 735 CFM
TURBINE BLDG. UNIT 1 MEZZ FLOOR COL. 1-8, A-G 56,400 CFM
11/12 FW PUMP 7,720 CFM
11 12 13 HEATER DRAIN PUMPS 6300 CFM
4.16 KV SWGR BUS 15 2800 CFM
4.16 KV SWGR BUS 16 2800 CFM
4.16 KV SWGR BUS 13/14 5600 CFM
480V SWGR BUS 150/160 8000 CFM
11 BATTERY ROOM 800 CFM
11/21 AUX. FW PUMPS 4000 CFM
480V SWGR BUS 250/260 8000 CFM
21 BATTERY ROOM 800 CFM
22 BATTERY ROOM 800 CFM
12 BATTERY ROOM 800 CFM
12/22 AUX. FW PUMPS 3200 CFM
4.16 KV SWGR BUS 23/24 5600 CFM
480V SWGR BUS ROOM 121
480V SWGR BUS ROOM 111
21 22 23 CONDENSATE PUMPS 3150 CFM
21/22 FW PUMPS 8050 CFM
21 22 23 HEATER DRAIN PUMPS 6250 CFM
121 SAMPLE ROOM BOOSTER
122 SAMPLE ROOM HOOD BOOSTER
121 HOT CHEM LAB COOLING COIL (017-091)
5200CFM
2000CFM
TURBINE BLDG. UNIT 2 MEZZ COL 10-17, A-G 51,800 CFM
122 BATTERY ROOM RECYCLE DAMPER #1
121 BATTERY ROOM RECYCLE DAMPER #3
121 BATTERY ROOM RECYCLE DAMPER #4
122 BATTERY ROOM RECYCLE DAMPER #8
122 BATTERY ROOM RECYCLE DAMPER #5
122 BATTERY ROOM RECYCLE DAMPER #6
122 BATTERY ROOM RECYCLE DAMPER #7
TURBINE BUILDING & CLASS I CORRIDOR
SYSTEM ZT (QA TYPE III), AND SYSTEM ZK (QA TYPE I)
122 BATTERY ROOM RECYCLE FAN
122 BATTERY ROOM COOLING COIL
122 BATTERY ROOM RECYCLE DAMPER #6
AIR FLOW MEASURING STA.
TC 26390
TC 26391
TI 12028
FS 17771
TI 12027
TI 12042
TI 12041
FS 17772
TE-15686
TE-15692
TE-15694
TE-15688
TE-15684
TE-15690
TE-15685
TE-15691
TE-15693
TE-15687
TE-15689
TE-15695
VFD 29
VFD 33
VFD 51
VFD 35
VFD 31
VFD 50
VFD 54
VFD 53
VFD 56
VFD 59
VFD 39
VFD 41
VFD 37
VFD 43
VFD 45
VFD 55
VFD 53
HFD 52
HFD 54
HFD 56
HFD 59
QA I
QA II
QA III
ATMOS.
VD
CONTROL
FLOW CONTROL DAMPER
TU 48168
TU 48169
TU 48170
TU 48171
TU 48172
TU 48173
T 22015
T 22016
ES 19040
ES 19041
ES 19042
ES 19043
ES 19014
ES 19017
ES 19018
ES 19015
ES 19016
ES 19019
ES 19020
ES 19409
ES 19410
ES 19011
ES 19012
ES 19013
ES 19009
ES 19010
ES 57300 01
ES 57300 02
ES 57300 03
ES 57300 04
ES 57300 05
ES 57300 06
ES 57301 01
ES 57301 02
ES 57301 03
ES 57301 04
ES 57301 05
ES 57301 06
MD 32250
MD 32251
MD 32252
MD 32253
MD 32254
MD 32255
MD 32256
MD 32257
MD 32258
MD 32259
MD 32260
MD 32261
MD 32262
MD 32263
ZB
ZB/SE
SE/ZB
ZN
ZN/ZB
ZT
ZG
ZK
REVISIONS
Ø
DRAWN BY: JLB
DATE: 8-3-Ø7
PREPARED BY: RAB
DATE: 8-3-Ø7
REVIEWED BY: SRM
DATE: 8-22-Ø7
1
HIGHLIGHTED DAMPERS & FIREDAMPERS, ENLARGED BOUNDARY FLAGS, REMOVED, REVISED & ADDED BOUNDARY FLAGS, ADDED ZB TO LR - SYSTEMS LEGEND, AND REVISED ZB FLOW PATH FROM (a)(1) TO (a)(2).
DRAWN BY: JLB
DATE: 9-6-Ø7
PREPARED BY: WJI
DATE: 9-6-Ø7
REVIEWED BY: SRM
DATE: 9-14-Ø7
2
REMOVED LR NOTE 2, ENHANCED LR NOTE 1, ADDED TYP LR NOTE 1 @ FLEX. CONN., REVISED ZB DESCRIP., TURB BLDG ROOF VENT FANS IN SCOPE (a)(3).
DRAWN BY: JLB
DATE: 12-5-Ø7
PREPARED BY: WJO
DATE: 12-5-Ø7
REVIEWED BY: SRM
DATE: 12-11-Ø7
LR NOTES:
1. BOUNDARY ENDS AT FLEX CONN. (MM).
LR - LEGEND
IN SCOPE FOR LR PER 10 CFR 54.4(a)(1)
IN SCOPE FOR LR PER 10 CFR 54.4(a)(2)
OUT OF SCOPE
DENOTES SYSTEM BOUNDARY BREAK
LR - SYSTEMS
DG - DIESEL GENERATORS & SUPPORT SYSTEMS
SE - STEAM EXCLUSION
ZN - CONTROL ROOM AREA VENTILATION
ZG - DIESEL GENERATOR BLDG. VENTILATION
ZB - TURBINE & ADMINISTRATION BUILDING VENTILATION
LEGEND DENOTES
SAFEGUARD EQUIPMENT
DUCTED FLOW
NONDUCTED FLOW
MOTOR OPERATED DAMPER (NORM. OPEN)
MOTOR OPERATED DAMPER (NORM. CLOSED)
MAN. OPERATED DAMPER (NORM. OPEN)
AIR OPERATED DAMPER (NORMALLY OPEN)
AIR OPERATED DAMPER (NORMALLY CLOSED)
WALL MOUNTED EXH. FAN
ABBREVIATIONS:
VFD - VERTICAL FIRE DAMPER
HFD - HORIZONTAL FIRE DAMPER
NOTES:
1. SWITCHES FOR UNIT COOLER SHOWN ON LR-39603-2 & 3.
2. FOR ORIFICE FLG. & ANNUBAR DETAILS SEE NF-39609-12.
REFERENCE NF-39601 REV. 77
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.
LICENSE RENEWAL BOUNDARY DWG
TURBINE BUILDING-DIESEL GENERATOR HVAC FLOW DIAGRAM
NORTHERN STATES POWER COMPANY
PRAIRIE ISLAND NUCLEAR GEN. PLANT
RED WING, MINNESOTA
SCALE NONE
REV 2
LR-39601
LR-39601.DGN MSP GENERATION CAD
D-068

CONTROL
SV-33498
CD 34049
NO
FO
DIESEL GENERATOR O.A. DAMPER AIR TO CLOSE SPRING TO OPEN
FIXED LVR
SV-33987
CONTROL
ZG
121 DIESEL GENERATOR SUPPLY FAN PITCH CONTROLLER
COMB. AIR FROM TURBINE BLDG.
ES 55403
DG
COMBUSTION GAS TO ATMOS.
121 DIESEL GENERATOR ROOM TEMP CONTROLLER
121 DIESEL GENERATOR EXH. FAN PITCH CONTROLLER
121 DIESEL (OUTSIDE EXHAUST FAN)
CONTROL
TYPE III
34,000 CFM
QA III
LO TEMP
HI TEMP
TS 16471
TS 16990
T 22017
TC 26302
ELEC.
D1 DIESEL GEN.
1Y 7005D
ERCS PT.
121 DIESEL GENERATOR SUPPLY FAN - TRAIN "A" (QA I)
121 DIESEL GENERATOR EXHAUST FAN - TRAIN "A" (QA I)
122 DIESEL GENERATOR SUPPLY FAN PITCH CONTROLLER
COMB. AIR FROM TURBINE BLDG. (NORMAL)
ES 55903
122 DIESEL GENERATOR ROOM TEMP CONTROLLER
122 DIESEL GENERATOR EXH. FAN PITCH CONTROLLER
122 DIESEL (OUTSIDE EXHAUST FAN)
TS 16472
TS 16991
T 22018
TC 26303
D2 DIESEL GEN.
1Y 8005D
122 DIESEL GENERATOR SUPPLY FAN - TRAIN "B" (QA I)
122 DIESEL GENERATOR EXHAUST FAN - TRAIN "B" (QA I)
DIESEL GENERATOR ROOMS D1 & D2 COOLING SYSTEM (ZG)

UNIT 1 CHEM. FEED TANKS
FLEXIBLE DUCT FOR AMMONIA BOTTLES
AMMONIA EXHAUST FANS
1400 CFM
1400 CFM
UNIT 2 CHEM. FEED TANKS
ES 19009
ES 19010
CONTROL
ATMOS.
MD 32262
MD 32263

9
10
FILTER
OIL STG RM EXHT FAN
HFD 85
HFD 84
OIL STORAGE ROOM

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
N. TURB BLDG. VENT SUPPLY FANS
OLD ADMIN. BLDG.
A
B
C
D
E
W. MEZZ AIR INTAKE FAN
E. MEZZ AIR INTAKE FAN
TURBINE BUILDING
715'
TB VENT/INTAKE FANS