Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247
402/636-2000

September 3, 1991
LIC-91-234R

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

References:
1. Docket No. 50-285
2. Letter from NRC (W. C. Walker) to OPPD (W. G. Gates) dated May 7, 1991
3. Letter from OPPD (W. G. Gates) to NRC (Document Control Desk) dated July 1, 1991

Gentlemen:

SUBJECT: Elevated Ambient Air Temperature Effect on Fort Calhoun Station (FCS) Emergency Diesel Generator (EDG) Performance

As requested by the NRC in Reference 2, Omaha Public Power District (OPPD) is providing additional information about the effect of elevated ambient air temperatures on the performance of Fort Calhoun Station's EDGs. In Reference 3, OPPD asked for additional time to respond to allow for the completion of engineering analysis EA-FC-90-062 Revision 2.

Engineering analysis EA-FC-90-062 Revision 2 analyzed the effect of several improvements to the EDGs intended to enhance performance under elevated ambient air temperature conditions. This analysis concludes that the maximum outdoor ambient air temperature at which the FCS EDGs can power the engineered safety feature (ESF) loads is 110°F. In addition to forwarding a copy of engineering analysis EA-FC-90-062 Revision 2, this submittal contains the following two enclosures.

Enclosure 1: OPPD response to 16 items identified by the NRC in Reference 2 as requiring additional information. Please note that due to EDG improvements, the information on the EDG engine/exciter temperature limits contained in engineering analysis EA-FC-90-062 Revision 0 does not represent current EDG engine/exciter capabilities.

Enclosure 2: A brief description of engineering analysis EA-FC-90-062 revisions 0, 1 and 2. Enclosure 2 also lists EDG improvements intended to enhance hot weather performance of the EDGs and discusses the results of recent hot weather testing.

OPPD has established an ambient outdoor air temperature upper limit for DG-1 and DG-2 of 110°F as measured at the FCS weather tower. This limit is based on the findings of engineering analysis EA-FC-90-062 Revision 2 and subsequent DG-1 and DG-2 testing conducted in June 1991 and August 1991 respectively.

If you should have any questions, please call.

Sincerely,

W. G. Gates

W. G. Gates
Division Manager
Nuclear Operations

WGG/sel

Enclosures

c: LeBoeuf, Lamb, Leiby & MacRae
R. D. Martin, NRC Regional Administrator, Region IV
W. C. Walker, NRC Project Manager
R. P. Mullikin, NRC Senior Resident Inspector

Enclosure 1

Additional Information Request on Report EA-FC-90-062, Revision 0

Additional Information Request on Report EA-FC-90-062, Revision 0

The information requested is provided and/or discussed below:

Request 1: Provide the identification (names) of the equipment corresponding to the TAG numbers which appear on the LOCA load listing for both EDGs.

Response: The requested identifications are contained in Attachment 1.

Request 2: Discuss the basis for establishing the uncertainty (i.e., using the value of 0.22 instead of 0.72) of the datalogger (see page 19 of the text).

Response: The smaller uncertainty of 0.22°F was used based on OPPD testing of the datalogger. These tests are documented in attachment 8.35 (of EA-FC-90-C52 Rev. 0). Please note that the thermocouple uncertainty is a significant part of the calculation. A 0.72°F uncertainty would yield an overall uncertainty of 4.025°F or a 0.055°F change, which is not considered significant.

Request 3: With regard to the tests described in Section 8.27, provide:

a. The load applied to the EDG during each test,
b. A discussion of how the outside ambient temperatures (temperatures as listed in summary test data sheet 8.27-15) were established for these tests, and
c. The representation of the "ambient air temperature #1 left and right" as listed on the test data sheets.

Response:

a. Per assumption 3 the loads were per DG surveillance testing and would be approximately 2500 KW.

b. The outside ambient air temperatures are not documented as to where the readings were taken. As noted on page 8.27-16 of Rev. 0, either Auxiliary Building rooftop or weather tower indication would be valid.

c. The ambient air temperatures are the air temperatures 4 feet off the floor on the left and right side of the engine near the radiator support structure.

Request 4: Provide the rationale for the inconsistency in the ambient temperatures listed on the data sheets, specifically for the DG-1 test dated June 25, 1990:

a. 8.28-1 - @ 1600 Temperature 22.4°C/72.32°F is indicated as hand written on top of sheet,
b. 8.28-1 - column data point (14-19) shows range of temperature from 85.9°-88.8°F. 8.6-2 identifies column 14-19 as "Measured Outside Ambient," and
c. 8.28-3 - Surveillance Test Data Sheet dated June 25, 1990 records temperatures at three points during the 3.5 hour run to be 87°F, 90°F and 89°F.

Response: a. The source of this temperature has not been determined. It was not used as an input to the analysis.

b&c. The difference between the datalogger ambient and surveillance test ambient is that the datalogger is the average of 6 points at 6 locations while those temperatures recorded during the surveillance test are a hand held measurement taken at a single location. Weather tower temperature readings are not readily available to test personnel filling out the data sheet until printed off the ERF computer at a later time.

Request 5: Discuss why jacket water temperatures (5.7°F in and 7.6°F out) would vary between data record sheets 8.28-1 and 8.28-3.

Response: The difference in temperature is a result of the datalogger measurements using thermocouples attached to the pipe while the surveillance test used a local indicator in a thermowell. The datalogger values were considered to be low and non-conservative. The local indicator was used in the analysis as a more conservative temperature measurement.

Request 6: Discuss why the data recorded in column "JWO Engine Gauge" of test data sheet 8.6-2 is inconsistent with actual readings shown on test data sheet 8.28-3.

Response: Actual readings from 8.28-3 are consistent with 8.6-2. Some data is different because the datalogger collected input every 10 minutes while the analysis was performed every 15 minutes. The points are therefore interpolated data points, causing the difference.

Request 7: With regard to the turbo air temperatures as recorded in test data sheet 8.6-4, provide the rationale for the inconsistency of the recorded values with the mathematical values, i.e.:

	Turbo Intake	Turbo In & Delta Trb	Delta Trb
a)	91.0	110.4 (recorded) 91.0 + 22.33 = 113.3 (mathematical)	22.33
b)	100.2	118.1 (recorded) 100.2 + 20.94 = 120.96 (mathematical)	20.94

Response: The mathematical model includes a conservative application of instrument uncertainty. Please see Explanation 4 on page 8.6-4 of EA-FC-90-062 Rev. 0.

Request 8: Describe what the Parameters 2A and 2B listed in test data sheet 8.5-11 are/represent.

Response: EA-FC-90-091 Rev. 0 also utilized test data obtained from the 6/25/90 diesel run. Attachment 8.9, pg. 22 of 24 (Attachment 2) of that analysis has a list and description of data acquisition points. Items 2A and 2B are noted as "jacket water outlet from radiator core number one" and "core number two", respectively. These temperatures

represent jacket water (JW) temperatures upstream of the lube oil cooler and were obtained to aid in determining impact of the L.O. cooler on JW temperatures.

Request 9: Test data sheet 8.6-2 identifies load to the "90% of full load." Is this 90% of rated load for 1/2 hour, 4 hour, or 2000 hours limit (2853, 2800, or 2654; respectively)?

Response: The value is 90% of approximately 2500 KW which is the monthly DG surveillance test load.

Request 10: Test run of 8.9-11 was stopped before temperature equilibrium was reached (turbine-inlet temperature was still climbing), provide justification for the use of the test results as valid data.

Response: Specified DG-2 test (run 6/13/90) was a standard monthly surveillance test, run for approximately one hour. Attachment 8.9 (Calculation FC05486), Reference 2 (EA-FC-89-026, Assumption 2) states that engineering judgement assumes data acquired during these one hour runs remain relatively constant and have a high degree of repeatability (see Attachment 3). This test focused primarily on JW temperature data, and admittedly does not adequately address turbocharger inlet temperature.

Tests performed subsequent to the 6/13/90 test and used in later analysis were modified and expanded to address all operating environment parameters, with due consideration given to turbocharger inlet air temperature rise over time.

Request 11: Describe how the load was applied during various test runs and why the same loads were not applied.

Request 12: The duration of tests varied, provide the basis for establishing the duration of each test.

Response: 11 and 12 The testing was done using the diesel generator surveillance which has a limit of no greater than 2500 KW + 5.0%. Actual loads may vary as long as the lower limit of 2500 KW is met. An indicator of how loads were applied could be found by monitoring the generator load indicator (Item 20 of surveillance test data sheets included within EA-FC-90-062, Rev. 0). An indicator load of 2.5 represents an unloaded generator running at 900 rpm. An indicated load of 7.6 represents an approximate generator load of 2500 kW. The test duration was carried beyond the minimum one hour time limit until data trends were stabilized as judged during the time of the test.

Request 13: Provide the unloading profile for the test 8.11-2 (DG-2 test dated July 17, 1990).

Response: This information is provided in Attachment 4. The profile is in terms of current and not kW. As stated in the response to items 11 and 12 above, the loading and unloading profile can be interpreted by utilizing the generator load indicator data.

Request 14: The turbo inlet temperature shown in column 51-59 of test data sheet 8.28-2 has two separate readings displayed for each of the established time intervals, discuss the need to have two separate readings and what determined the application of which reading was to be used on test data sheet 8.6-4.

Response: The upper numbers in columns 51-59 were used for turbo inlet temperature. The other numbers were not used in the analysis. Points 51-59 represent the nine air intakes to the turbochargers.

Request 15: Describe the purpose for introducing the supply/exhaust blower operation during the run dated July 16, 1990 (Glycol) and why this procedure was not duplicated in the run of July 17, 1990 (water + inhibitor).

Response: The purpose of introducing the VA-52 supply/exhaust blower operation during the test was to determine its impact on the operating environment within the diesel bay. Definite temperature stratification had been noted in the room and it was decided to determine what benefits or detriments would be realized by the "mixing" of the air induced by fan operation. The location and orientation of these blowers does not allow for total air change within the room, but only a local mixing action. The "off" mode of operation appeared to be the least detrimental to environmental conditions in and around the exciter cabinet and turbocharger inlet. The procedure was not duplicated on 7/17/90 as the type of engine coolant has no bearing on the effects of fan operation on the room environment. Introduction of blower operation could have been performed on any one test to obtain the desired data.

Request 16: Provide for our review the tests performed with "Glycol" in the JW system of DG-1 as described in OPPD letter dated September 12, 1990.

Response: Testing performed September 25, 1990 with glycol as the engine coolant was performed as a standard monthly surveillance test (see Attachment 5). A negligible effect on engine cooling performance was noted. At the time of the September 25, 1990 surveillance test, radiator fouling was a dominant factor in the heat transfer from the coolant to the air and masked heat transfer efficiency comparisons between 50/50 glycol solutions and treated water as a coolant media. Further evaluation of test results and analysis of predicted heat transfer rates has led to development of carefully structured tests that measure diesel jacket water system heatup rates, temperatures relative to diesel loads, radiator fan flows and room temperatures that accurately monitor diesel performance at elevated ambient temperatures. This formed the basis for the decision to utilize treated water as the engine coolant for hot weather operation. Treated water has been evaluated as a superior coolant media for elevated ambient temperature conditions, but is not satisfactory for low temperature conditions due to freezing concerns. OPPD is currently evaluating system modifications that would be required to improve cooling system performance to allow continual (year round) glycol usage.

Attachment 1

DG LOCA Load Supplied Equipment Tag Numbers

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/2b

RELATED SYSTEMS:

AC-RW
EE-4A
EE-4B
FW-AFW
RC
SI-LP

COMMENTS:
NO COMMENTS

TAG NUMBER: AC-10C
EQUIPMENT NAME: RAW WATER PUMP "C" MOTOR
LOCATION: INTK BLDG, ELEV 985', COL CC/103
BREAKER NUMBER: 1A3-10
SYSTEM: AC-RW
FAILURE MODE:

TAG NUMBER: T1B-3A
EQUIPMENT NAME: FEEDER TO XFMR T1B-3A FOR 480V BUS 1B3A
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: 1A3-11
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: T1B-3B
EQUIPMENT NAME: FEEDER TO XFMR T1B-3B FOR 480V BUS 1B3B
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: 1A3-12
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: T1B-3C
EQUIPMENT NAME: FEEDER TO XFMR T1B-3C FOR 480V BUS 1B3C
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: 1A3-13
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 4.16KV BREAKER FOR FUTURE TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL C/2b
BREAKER NUMBER: 1A3-14
SYSTEM: EE-4A
FAILURE MODE:

TAG NUMBER: T1B-3D
EQUIPMENT NAME: SWITCHYARD MISCELLANEOUS POWER TRANSFORMER
LOCATION: SWITCH YARD, WEST OF PLANT
BREAKER NUMBER: 1A3-15
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: FW-6
EQUIPMENT NAME: MOTOR DRIVEN AUXILIARY FEEDWATER PUMP MOTOR
LOCATION: AUX BLDG. ROOM 19, COL C/4a
BREAKER NUMBER: 1A3-16
SYSTEM: FW-AFW
FAILURE MODE:

TAG NUMBER: RC-3C
EQUIPMENT NAME: REACTOR COOLANT PUMP "C" (LOOP 2A) MOTOR
LOCATION: CONT BLDG, ELEV 994', COL 12
BREAKER NUMBER: 1A3-5
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: T1C-3A
EQUIPMENT NAME: MISCELLANEOUS LIGHTING AND POWER TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: 1A3-6
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: SI-1A
EQUIPMENT NAME: LOW PRESSURE SAFETY INJECTION PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 21, COL U/6c
BREAKER NUMBER: 1A3-7
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: AC-10A
EQUIPMENT NAME: RAW WATER PUMP "A" MOTOR
LOCATION: INTK BLDG, ELEV 985', COL CC/104
BREAKER NUMBER: 1A3-9
SYSTEM: AC-RW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL D/2b

RELATED SYSTEMS:

AC-RW
CW
EE-4A
EE-4B
FW
FW-CD
FW-HVD
RC
SI-LP

COMMENTS:
NO COMMENTS

TAG NUMBER: T1B-4A
EQUIPMENT NAME: FEEDER TO XFMR T1B-4A FOR 480V BUS 1B4A
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: 1A4-10
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: AC-10B
EQUIPMENT NAME: RAW WATER PUMP "B" MOTOR
LOCATION: INTK BLDG, ELEV 985', COL CC/104
BREAKER NUMBER: 1A4-11
SYSTEM: AC-RW
FAILURE MODE:

TAG NUMBER: AC-10D
EQUIPMENT NAME: RAW WATER PUMP "D" MOTOR
LOCATION: INTK BLDG, ELEV 985', COL CC/103
BREAKER NUMBER: 1A4-12
SYSTEM: AC-RW
FAILURE MODE:

TAG NUMBER: SI-1B
EQUIPMENT NAME: LOW PRESSURE SAFETY INJECTION PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 22, COL T/8a
BREAKER NUMBER: 1A4-14
SYSTEM: SI-LP
FAILURE MODE:

TAC NUMBER: T1C-4A
EQUIPMENT NAME: MISCELLANEOUS POWER AND LIGHTING TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: 1A4-15
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: RC-3D
EQUIPMENT NAME: REACTOR COOLANT PUMP "D" (LOOP 2B) MOTOR
LOCATION: CONT BLDG, ELEV 994', COL 9
BREAKER NUMBER: 1A4-16
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: CW-1C
EQUIPMENT NAME: CIRCULATING WATER PUMP "C" MOTOR
LOCATION: INTK BLDG, ELEV 985', COL DD/105
BREAKER NUMBER: 1A4-3
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: FW-5C
EQUIPMENT NAME: HEATER DRAIN PUMP "C" MOTOR
LOCATION: TURB BLDG, ELEV 991', COL TB/7
BREAKER NUMBER: 1A4-4
SYSTEM: FW-HVD
FAILURE MODE:

TAG NUMBER: FW-4C
EQUIPMENT NAME: STEAM GENERATOR FEED PUMP "C" MOTOR
LOCATION: TURB BLDG, ELEV 995', COL TB/8
BREAKER NUMBER: 1A4-5
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: FW-2C
EQUIPMENT NAME: CONDENSATE PUMP "C" MOTOR
LOCATION: TURB BLDG, ELEV 995', COL TE/3
BREAKER NUMBER: 1A4-6
SYSTEM: FW-CD
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 4.16KV BREAKER FOR FUTURE TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL D/2b
BREAKER NUMBER: 1A4-7
SYSTEM: EE-4A
FAILURE MODE:

TAG NUMBER: T1B-4C
EQUIPMENT NAME: FEEDER TO XFMR T1B-4C FOR 480V BUS 1B4C
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: 1A4-8
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: T1B-4B
EQUIPMENT NAME: FEEDER TO XFMR T1B-4B FOR 480V BUS 1B4B
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: 1A4-9
SYSTEM: EE-4B
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/6d

RELATED SYSTEMS:

CH
EE-5
SI-HP
VA-CON

COMMENTS:
NO COMMENTS

TAG NUMBER: SI-2A
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 21, COL U/6c
BREAKER NUMBER: 1B3A-1
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: MCC-3A1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3A1
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: 1B3A-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-3A2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3A2
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: 1B3A-3
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: CH-1A
EQUIPMENT NAME: CHARGING PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 6, COL U/6e
BREAKER NUMBER: 1B3A-4
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: MCC-3A3
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3A3
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: 1B3A-5
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-3A4
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3A4
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: 1B3A-6
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-3A
EQUIPMENT NAME: CONTAINMENT CARBON FAN "A" MOTOR
LOCATION: CONT BLDG, ELEV 1060', COL 1
BREAKER NUMBER: 1B3A-7
SYSTEM: VA-CON
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/6d

RELATED SYSTEMS:

CA
EE-4B
HE
SI-HP

COMMENTS:
NO COMMENTS

TAG NUMBER: CA-1C
EQUIPMENT NAME: AIR COMPRESSOR "C" MOTOR
LOCATION: AUX BLDG, ROOM 19, COL C/2b
BREAKER NUMBER: 1B3A-4A-2
SYSTEM: CA
FAILURE MODE:

TAG NUMBER: HE-1
EQUIPMENT NAME: CONTAINMENT CRANE MOTOR
LOCATION: CONT BLDG, ELEV 1045', COL 10
BREAKER NUMBER: 1B3A-4A-3
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: SI-2C
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION PUMP "C" MOTOR
LOCATION: AUX BLDG, ROOM 21, COL U/8a
BREAKER NUMBER: 1B3A-4A-4
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 480V BREAKER (300 A TRIP)
LOCATION: AUX BLDG, ROOM 56, COL C/6d
BREAKER NUMBER: 1B3A-4A-5
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 480V BREAKER (600 A TRIP)
LOCATION: AUX BLDG, ROOM 56, COL C/6d
BREAKER NUMBER: 1B3A-4A-6
SYSTEM: EE-4B
FAILURE MODE:

SOURCE BUS - 1B4A
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL D/6d

RELATED SYSTEMS:

AC-CCW
CW
EE-5
FW-CE
PS

COMMENTS:
NO COMMENTS

TAG NUMBER: AC-3B
EQUIPMENT NAME: COMPONENT COOLING WATER PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 69, COL N/8a
BREAKER NUMBER: 1B4A-1
SYSTEM: AC-CCW
FAILURE MODE:

TAG NUMBER: MCC-4A1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4A1
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: 1B4A-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-4A2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4A2
LOCATION: AUX BLDG, ROOM 26, COL Q/7a
BREAKER NUMBER: 1B4A-3
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: FW-8B
EQUIPMENT NAME: CONDENSER EVACUATION VACUUM PUMP "B" MOTOR
LOCATION: TURB BLDG, ELEV 1014', COL TE/3
BREAKER NUMBER: 1B4A-4
SYSTEM: FW-CE
FAILURE MODE:

TAG NUMBER: CW-3B
EQUIPMENT NAME: SCREEN WASH PUMP "B" STARTING EQUIPMENT
LOCATION: INTK BLDG, ELEV 985', COL DD/105
BREAKER NUMBER: 1B4A-5
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: PNL-MS
EQUIPMENT NAME: 480V AC FEEDER TO SECURITY BUILDING PWR PANEL MS
LOCATION: SECURITY BUILDING
BREAKER NUMBER: 1B4A-6
SYSTEM: PS
FAILURE MODE:

TAG NUMBER: MCC-4A3
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4A3
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: 1B4A-7
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS - 1B3B
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/5b

RELATED SYSTEMS:

AC-CCW
CW
DW
EE-4B
EE-5
VA

COMMENTS:
NO COMMENTS

TAG NUMBER: CW-3A
EQUIPMENT NAME: SCREEN WASH PUMP "A" STARTING EQUIPMENT
LOCATION: TURB BLDG, ELEV 985', COL DD/105
BREAKER NUMBER: 1B3B-1
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MCC-3B1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3B1
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: 1B3B-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 480V BREAKER (500 A TRIP)
LOCATION: AUX BLDG, ROOM 56, COL C/5b
BREAKER NUMBER: 1B3B-3
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: AC-3A
EQUIPMENT NAME: COMPONENT COOLING WATER PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 69, COL N/7a
BREAKER NUMBER: 1B3B-4
SYSTEM: AC-CCW
FAILURE MODE:

TAG NUMBER: MCC-3B2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3B2
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: 1B3B-5
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-3B3
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3B3
LOCATION: INTK BLDG, ELEV 1001.5', COL CC/101
BREAKER NUMBER: 1B3B-6
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-121 (TO BE INSTALLED UNDER PM-FC-85-0048)
EQUIPMENT NAME: BOOSTER FAN FOR RAD AREA EXHAUST FANS VA-40A/B
LOCATION: AUX BLDG, ROOM 69, COL T/8a
BREAKER NUMBER: 1B3B-7
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: DW-16A
EQUIPMENT NAME: VACUUM DEAERATOR PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 69, COL U/6e
BREAKER NUMBER: 1B3B-8
SYSTEM: DW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/5b

RELATED SYSTEMS:

CH
FW-CE
HE
SI-CS
VA-CON

COMMENTS:
NO COMMENTS

TAG NUMBER: FW-8C
EQUIPMENT NAME: CONDENSER EVACUATION VACUUM PUMP "C" MOTOR
LOCATION: TURB BLDG, ELEV 1014', COL TE/4
BREAKER NUMBER: 1B3B-4B-2
SYSTEM: FW-CE
FAILURE MODE:

TAG NUMBER: SI-3C
EQUIPMENT NAME: CONTAINMENT SPRAY PUMP "C" MOTOR
LOCATION: AUX BLDG, ROOM 22, COL T/6c
BREAKER NUMBER: 1B3B-4B-3
SYSTEM: SI-CS
FAILURE MODE:

TAG NUMBER: VA-7D
EQUIPMENT NAME: CONTAINMENT AIR COOLING FAN "7D" MOTOR
LOCATION: CONT BLDG, ELEV 1045', COL 14
BREAKER NUMBER: 1B3B-4B-4
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: CH-1C
EQUIPMENT NAME: CHARGING PUMP "C" MOTOR
LOCATION: AUX BLDG, ROOM 6, COL U/6e
BREAKER NUMBER: 1B3B-4B-5
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: HE-2
EQUIPMENT NAME: REFUELING AREA CRANE MOTOR
LOCATION: AUX BLDG, ROOM 69, COL T/7a
BREAKER NUMBER: 1B3B-4B-6
SYSTEM: HE
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL D/5b

RELATED SYSTEMS:

CA
DW
EE-4B
EE-5
SI-CS

COMMENTS:
NO COMMENTS

TAG NUMBER: SI-3B
EQUIPMENT NAME: CONTAINMENT SPRAY PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 22, COL T/6c
BREAKER NUMBER: 1B4B-1
SYSTEM: SI-CS
FAILURE MODE:

TAG NUMBER: MCC-4B1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4B1
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: 1B4B-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 480V BREAKER (250 A TRIP)
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: 1B4B-3
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: CA-1B
EQUIPMENT NAME: AIR COMPRESSOR "B" MOTOR
LOCATION: AUX BLDG, ROOM 19, COL C/1a
BREAKER NUMBER: 1B4B-4
SYSTEM: CA
FAILURE MODE:

TAG NUMBER: MCC-4B2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4B2
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: 1B4B-5
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-4B3
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4B3
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: 1B4B-6
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE 480V BREAKER (300 A TRIP)
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: 1B4B-7
SYSTEM: EE-4B
FAILURE MODE:

TAG NUMBER: DW-46B
EQUIPMENT NAME: VACUUM DEAERATOR PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 69, COL U/6e
BREAKER NUMBER: 1B4B-8
SYSTEM: DW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/4a

RELATED SYSTEMS:

CA
EE
EE-5
FW-CE
HE
SI-CS

COMMENTS:
NO COMMENTS

TAG NUMBER: MCC-3C1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3C1
LOCATION: AUX BLDG, ROOM 57, COL D/3a
BREAKER NUMBER: 1B3C-1
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-3C2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3C2
LOCATION: AUX BLDG, ROOM 26, COL Q/7a
BREAKER NUMBER: 1B3C-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: T1C-3B
EQUIPMENT NAME: OUTDOOR LIGHTING & PWR XFMR FOR PNLS LP-20 & LP-21
LOCATION: TRANSFORMER YARD, SOUTH OF TURB BDG
BREAKER NUMBER: 1B3C-3
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: T1B-3C-1
EQUIPMENT NAME: 13.8KV/480V EMERGENCY POWER TRANSFORMER
LOCATION: TRANSFORMER YARD, SOUTH OF TURB BDG
BREAKER NUMBER: 1B3C-4
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MCC-3C3
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3C3
LOCATION: SERVICE BUILDING
BREAKER NUMBER: 1B3C-5
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SI-3A
EQUIPMENT NAME: CONTAINMENT SPRAY PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 21, COL U/6c
BREAKER NUMBER: 1B3C-6
SYSTEM: SI-CS
FAILURE MODE:

TAG NUMBER: HE-3
EQUIPMENT NAME: TURBINE ROOM CRANE MOTOR
LOCATION: TURB BLDG, ELEV 1036', COL B/1
BREAKER NUMBER: 1B3C-7
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: CA-1A
EQUIPMENT NAME: AIR COMPRESSOR "A" MOTOR
LOCATION: AUX BLDG, ROOM 19, COL C/1a
BREAKER NUMBER: 1B3C-8
SYSTEM: CA
FAILURE MODE:

TAG NUMBER: FW-8A
EQUIPMENT NAME: CONDENSER EVACUATION VACUUM PUMP "A" MOTOR
LOCATION: TURB BLDG, ELEV 1014', COL TE/3
BREAKER NUMBER: 1B3C-9
SYSTEM: FW-CE
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL C/4a

RELATED SYSTEMS:

AC-CCW
EE-5
VA-CON

COMMENTS:
NO COMMENTS

TAG NUMBER: MCC-3C4C-1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3C4C-1
LOCATION: TURB BLDG, ELEV 1011', COL TC/8
BREAKER NUMBER: 1B3C-4C-1
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-3C4C-2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 3C4C-2
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: 1B3C-4C-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-7C
EQUIPMENT NAME: CONTAINMENT AIR COOLING FAN "7C" MOTOR
LOCATION: CONT BLDG, ELEV 1045', COL 1
BREAKER NUMBER: 1B3C-4C-3
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: AC-3C
EQUIPMENT NAME: COMPONENT COOLING WATER PUMP "C" MOTOR
LOCATION: AUX BLDG, ROOM 69, COL N/8a
BREAKER NUMBER: 1B3C-4C-4
SYSTEM: AC-CCW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 56, COL D/4a

RELATED SYSTEMS:

CH
EE-5
SI-HP
VA-CON

COMMENTS:
NO COMMENTS

TAG NUMBER: MCC-4C1
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4C1
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: 1B4C-2
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-4C2
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4C2
LOCATION: AUX BLDG, ROOM 4, COL Q/6b
BREAKER NUMBER: 1B4C-3
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MCC-4C3
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4C3
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: 1B4C-4
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SI-2B
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 22, COL T/8a
BREAKER NUMBER: 1B4C-5
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: CH-1B
EQUIPMENT NAME: CHARGING PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 6, COL U/6e
BREAKER NUMBER: 1B4C-6
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: MCC-4C4
EQUIPMENT NAME: 480V MOTOR CONTROL CENTER 4C4
LOCATION: INTK BLDG, ELEV 1001.5', COL CC/101
BREAKER NUMBER: 1B4C-7
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-3B
EQUIPMENT NAME: CONTAINMENT CARBON FAN "B" MOTOR
LOCATION: CONT [illegible]DG, ELEV 1060', COL 14
BREAKER NUMBER: 1B4C-8
SYSTEM: VA-CON
F[illegible]JRE MODE:

SOURCE BUS - MCC-3A1
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG, ROOM 57, COL D/4a

RELATED SYSTEMS:

EE
EE-5
FW
RC
SI-HP
SI-LP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A2L) IS FED BY MPP-1C3A-1, CABLE 9486.

TAG NUMBER: HCV-1103
EQUIPMENT NAME: FEEDWATER CNTL TO STEAM GEN "A" OUTLET ISO VALVE
LOCATION: AUX BLDG, ROOM 81, COL D/5b
BREAKER NUMBER: MCC-3A1-A01
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: *RC-3C-SPACE-HTR
EQUIPMENT NAME: REACTOR COOLANT PUMP RC-3C MOTOR SPACE HEATER
LOCATION: CONT BLDG, ELEV 994', COL 12
BREAKER NUMBER: MCC-3A1-A03
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: RC-3C-1
EQUIPMENT NAME: REACTOR COOLANT OIL LIFT PUMP "C"
LOCATION: CONT BLDG, ELEV 994', COL 12
BREAKER NUMBER: MCC-3A1-A04
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: EE-4S
EQUIPMENT NAME: INVERTER "1" (EE-8P) BYPASS 480/120V TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL C/7a
BREAKER NUMBER: MCC-3A1-A2R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *HTRS-BNK1-GRP1
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #1 GROUP #1
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3A1-B01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK1-GRP1
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #1 GROUP #1 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3A1-B02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *HTRS-BNK1-GRP2
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #1 GROUP #2
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3A1-C01
SYSTEM: RC
FAILURE MODE.

TAG NUMBER: *FUSES-BNK1-GRP2
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #1 GROUP #2 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3A1-C02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *HTRS-BNK1-GRP3
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #1 GROUP #3
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3A1-D01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK1-GRP3
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #1 GROUP #3 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3A1-D02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: HCV-317
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 2A
LOCATION: CONT BLDG, ELEV 1013', COL 9
BREAKER NUMBER: MCC-3A1-E01
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: HCV-331
EQUIPMENT NAME: LOW PRESSURE SAFETY INJECTION MOV TO LOOP 2A
LOCATION: CONT BLDG, ELEV 1013', COL 9
BREAKER NUMBER: MCC-3A1-E02
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: *T1B-3A-CLG-FANS
EQUIPMENT NAME: TRANSFORMER T1B-3A FORCED COOLING FANS
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: MCC-3A1-E03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: HCV-1385
EQUIPMENT NAME: MAIN FEEDWATER ISOLATION TO STEAM GEN "B"
LOCATION: AUX BLDG, ROOM 81, COL D/5b
BREAKER NUMBER: MCC-3A1-E04
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: HCV-314
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 1A
LOCATION: CONT BLDG, ELEV 1013', COL 4
BREAKER NUMBER: MCC-3A1-F01
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: HCV-2954
EQUIPMENT NAME: SAFETY INJECT TANK SI-6C DISCHARGE ISOLATION VALVE
LOCATION: CONT BLDG, ELEV 1013', COL 8/9
BREAKER NUMBER: MCC-3A1-F02
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-3A1-F03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-3A1-F04
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 4, COL Q/7a

RELATED SYSTEMS:

AC-ESP
CH
DW
EE-5
SI-CS
SI-HP
VA-CON
VD-SMP
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE F03) IS FED BY MPP-1C3A-16, CABLE 9401.

TAG NUMBER: WD-14A
EQUIPMENT NAME: SPENT REGENT PUMP "A"
LOCATION: AUX BLDG, ROOM 73, COL Q/7a
BREAKER NUMBER: MCC-3A2-A02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: DW-43A
EQUIPMENT NAME: DEAERATED WATER BOOSTER PUMP "A"
LOCATION: AUX BLDG, ROOM 69, COL U/5d
BREAKER NUMBER: MCC-3A2-A03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: MCC-3A2-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-34
EQUIPMENT NAME: SPENT RESIN PUMP
LOCATION: AUX BLDG, ROOM 28, COL U/5a
BREAKER NUMBER: MCC-3A2-B01
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-12A
EQUIPMENT NAME: CAUSTIC PUMP "A"
LOCATION: AUX. BLDG, ROOM 4, COL U/6a
BREAKER NUMBER: MCC-3A2-B02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-26A
EQUIPMENT NAME: AUXILIARY BUILDING SUMP TANK PUMP "A"
LOCATION: AUX BLDG, ROOM 23, COL Q/8a
BREAKER NUMBER: MCC-3A2-B03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: MCC-3A2-B04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMEER: WD-40A
EQUIPMENT NAME: AUXILIARY BUILDING (ROOM 22) SUMP PUMP "A"
LOCATION: AUX BLDG, ROOM 22, COL T/8a
BREAKER NUMBER: MCC-3A2-C01
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-41A
EQUIPMENT NAME: AUXILIARY BUILDING (ROOM 23) SUMP PUMP "A"
LOCATION: AUX BLDG, ROOM 23, COL Q/8a
BREAKER NUMBER: MCC-3A2-C02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-27A
EQUIPMENT NAME: AUXILIARY BUILDING (ROOM 21) SUMP PUMP "A"
LOCATION: AUX BLDG, ROOM 21, COL U/8a
BREAKER NUMBER: MCC-3A2-C03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: MCC-3A2-C04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-5A
EQUIPMENT NAME: WASTE HOLDUP PUMP "A"
LOCATION: AUX BLDG, ROOM 7, COL T/7b
BREAKER NUMBER: MCC-3A2-D01
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-6
EQUIPMENT NAME: WASTE HOLDUP RECIRCULATION PUMP
LOCATION: AUX BLDG, ROOM 7, COL U/7b
BREAKER NUMBER: MCC-3A2-D02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: VD-18A
EQUIPMENT NAME: STRESSING TUNNEL SUMP PUMP "A"
LOCATION: CONTAINMENT STRESSING GALLERY
BREAKER NUMBER: MCC-3A2-D03
SYSTEM: VD-SMP
FAILURE MODE:

TAG NUMBER: HCV-308
EQUIPMENT NAME: CHARGING PUMP DISCHARGE TO HPSI ISOLATION VALVE
LOCATION: AUX BLDG, ROOM 13, COL P/7a
BREAKER NUMBER: MCC-3A2-D04
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: MCC-3A2-E01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: HCV-383-3
EQUIPMENT NAME: CONTAINMENT SUMP ISOLATION VALVE
LOCATION: AUX BLDG, ROOM 23, COL P/7a
BREAKER NUMBER: MCC-3A2-E02
SYSTEM: SI-CS
FAILURE MODE:

TAG NUMBER: LCV-218-3
EQUIPMENT NAME: CHARGING PUMP SUCTION FROM SIWRT VALVE
LOCATION: AUX BLDG, ROOM 7, COL U/7b
BREAKER NUMBER: MCC-3A2-E03
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: LCV-218-2
EQUIPMENT NAME: VCT OUTLET LOW LEVEL ISOLATION VALVE
LOCATION: AUX BLDG, ROOM 29, COL U/6a
BREAKER NUMBER: MCC-3A2-E04
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: MCC-3A2-F01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/7a
BREAKER NUMBER: MCC-3A2-F02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-81A
EQUIPMENT NAME: HYDROGEN ANALYZER PUMP "A" MOTOR
LOCATION: AUX BLDG, ROOM 59, COL N/6b
BREAKER NUMBER: MCC-3A2-F04
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: AC-5A
EQUIPMENT NAME: STORAGE POOL RECIRCULATION PUMP "A"
LOCATION: AUX BLDG, ROOM 5, COL T/5d
BREAKER NUMBER: MCC-3A2-F05
SYSTEM: AC-ESP
FAILURE MODE:

SOURCE BUS - MCC-3A3
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG, ROOM 4A, COL L/8a

RELATED SYSTEMS:

EE-5
WD-G
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A5L) IS FED BY MPP-1C3A-16, CABLE 9431.

TAG NUMBER: WD-28A
EQUIPMENT NAME: WASTE GAS COMPRESSOR "A"
LOCATION: AUX BLDG, ROOM 16, COL L/9
BREAKER NUMBER: MCC-3A3-A02
SYSTEM: WD-G
FAILURE MODE:

TAG NUMBER: WD-16A
EQUIPMENT NAME: HOTEL WASTE PUMP "A"
LOCATION: AUX BLDG, ROOM 10, COL P/9
BREAKER NUMBER: MCC-3A3-A03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-A5R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-39A
EQUIPMENT NAME: CONCENTRATE TANK CHEM PUMP "A"
LOCATION: AUX BLDG, ROOM 9A, COL Q/8a
BREAKER NUMBER: MCC-3A3-B02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-23A
EQUIPMENT NAME: MONITOR WASTE TANK PUMP "A"
LOCATION: AUX BLDG, ROOM 10, COL P/9
BREAKER NUMBER: MCC-3A3-B03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B1L
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B1R
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS - MCC-3A3
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG, ROOM 4A, COL L/8a

RELATED SYSTEMS:

EE-5
WD-G
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A5L) IS FED BY MPP-1C3A-16, CABLE 9431.

TAG NUMBER: WD-28A
EQUIPMENT NAME: WASTE GAS COMPRESSOR "A"
LOCATION: AUX BLDG, ROOM 16, COL L/9
BREAKER NUMBER: MCC-3A3-A02
SYSTEM: WD-G
FAILURE MODE:

TAG NUMBER: WD-16A
EQUIPMENT NAME: HOTFL WASTE PUMP "A"
LOCATION: AUX BLDG, ROOM 10, COL P/9
BREAKER NUMBER: MCC-3A3-A03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-A5R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-39A
EQUIPMENT NAME: CONCENTRATE TANK CHEM PUMP "A"
LOCATION: AUX BLDG, ROOM 9A, COL Q/8a
BREAKER NUMBER: MCC-3A3-B02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-23A
EQUIPMENT NAME: MONITOR WASTE TANK PUMP "A"
LOCATION: AUX BLDG, ROOM 10, COL P/9
BREAKER NUMBER: MCC-3A3-B03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B1L
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-3A3-B1R
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS LOCATION:
TURB BLDG, ELEV 1011', COL TE/8 3

RELATED SYSTEMS:

CW
EE
EE-5
FW
FW-TB
HE
ST
VA
VA-TB
VD-SMP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE D01) IS FED BY MPP-1, CABLE 843.

TAG NUMBER: VA-34
EQUIPMENT NAME: COMPUTER ROOM HUMIDIFIER
LOCATION:
BREAKER NUMBER:
SYSTEM: VA
FAILURE MODE: 3

TAG NUMBER: *XFMR-AUX-FEED-1
EQUIPMENT NAME: TRANSFORMER AUXILIARY POWER FEEDER NO. 1
LOCATION: TRANSFORMER YARD, SOUTH OF TURB BDG
BREAKER NUMBER: MCC-3A4-A02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *TURB-ROLL-UP-DR
EQUIPMENT NAME: TURBINE BUILDING TRUCK DOCK ROLL-UP DOOR
LOCATION: TURB BLDG, ELEV 1014.5', COL A/1
BREAKER NUMBER: MCC-3A4-A03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-171
EQUIPMENT NAME: TSC COMPUTER ROOM AIR CONDITIONING UNIT
LOCATION: TECH SUPPORT CENTER, COMPUTER ROOM
BREAKER NUMBER: MCC-3A4-A04
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3A4-A05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3A4-A06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-151A
EQUIPMENT NAME: TURBINE BUILDING VENTILATION FAN "A"
LOCATION: AUX BLDG, ROOM 82, COL K/1a
BREAKER NUMBER: MCC-3A4-A07
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: FW-30A
EQUIPMENT NAME: STEAM GENERATOR PUMP "A" OIL PUMP
LOCATION: TURB BLDG, ELEV 990', COL TE/9
BREAKER NUMBER: MCC-3A4-B01
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: HCV-1150A
EQUIPMENT NAME: FEED PUMP "A" DISCHARGE ISOLATION VALVE
LOCATION: TURB BLDG, ELEV 997', COL TE/8
BREAKER NUMBER: MCC-3A4-B02
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3A4-B03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-87
EQUIPMENT NAME: SWITCHGEAR SIDE "A" AIR HANDLING UNIT
LOCATION: AUX BLDG, ROOM 56, COL C/4a
BREAKER NUMBER: MCC-3A4-B04
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: VA-89
EQUIPMENT NAME: SWITCHGEAR SIDE "A" CONDENSING UNIT
LOCATION: AUX BLDG, ELEV 1007.5', COL M/1a
BREAKER NUMBER: MCC-3A4-B05
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: ST-4A
EQUIPMENT NAME: GAS BOOSTER ON STEAM PACKING EXHAUSTER "A"
LOCATION: TURB BLDG, ELEV 1016', COL TB/3
BREAKER NUMBER: MCC-3A4-C01
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: MOV-D1
EQUIPMENT NAME: STEAM PACKING EXHAUSTER DISCHARGE REGULATING VALVE
LOCATION: TURB BLDG, ELEV 1017', COL TB/3
BREAKER NUMBER: MCC-3A4-C02
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: VD-1A
EQUIPMENT NAME: TURBINE BUILDING SUMP PUMP "A"
LOCATION: TURB BLDG, ELEV 990', COL A/3
BREAKER NUMBER: MCC-3A4-C03
SYSTEM: VD-SMP
FAILURE MODE:

TAG NUMBER: HE-13
EQUIPMENT NAME: AIR COMPRESSOR HOIST
LOCATION: AUX BLDG, ROOM 19, COL C/8a
BREAKER NUMBER: MCC-3A4-C04
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: ST-6A
EQUIPMENT NAME: STATOR COOLER PUMP "A"
LOCATION: TURB BLDG, ELEV 1014', COL TC/1
BREAKER NUMBER: MCC-3A4-D01
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: VA-166A
EQUIPMENT NAME: AUX STEAM CONDENSATE RETURN PUMP A FROM VENT COILS
LOCATION: AUX BLDG, ROOM 82, COL F/1a
BREAKER NUMBER: MCC-3A4-D02
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: MOV-A-A1
EQUIPMENT NAME: CONDENSER A UPPER INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TB/4
BREAKER NUMBER: MCC-3A4-D03
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-A-A5
EQUIPMENT NAME: CONDENSER A UPPER INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TB/5
BREAKER NUMBER: MCC-3A4-D04
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-A-C3
EQUIPMENT NAME: CONDENSER A LOWER BACKWASH INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TB/4
BREAKER NUMBER: MCC-3A4-D05
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-A-C7
EQUIPMENT NAME: CONDENSER A LOWER BACKWASH INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TB/5
BREAKER NUMBER: MCC-3A4-D06
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: VA-165A
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "A"
LOCATION: TURB BLDG, ELEV 1088', COL TC/8
BREAKER NUMBER: MCC-3A4-E01
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: VA-165C
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "C"
LOCATION: TURB BLDG, ELEV 1088', COL TC/15
BREAKER NUMBER: MCC-3A4-E02
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: VA-165E
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "E"
LOCATION: TURB BLDG, ELEV 1088', COL TB/9
BREAKER NUMBER: MCC-3A4-E03
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: VA-165G
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "G"
LOCATION: TURB BLDG, ELEV 1088', COL TB/4
BREAKER NUMBER: MCC-3A4-E04
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: MOV-A-B2
EQUIPMENT NAME: CONDENSER A LOWER BACKWASH DISCHARGE VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/4
BREAKER NUMBER: MCC-3A4-E05
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-A-B6
EQUIPMENT NAME: CONDENSER A LOWER BACKWASH DISCHARGE VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/5
BREAKER NUMBER: MCC-3A4-E06
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-A-D4
EQUIPMENT NAME: CONDENSER A LOWER OUTLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/4
BREAKER NUMBER: MCC-3A4-E07
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-A-D8
EQUIPMENT NAME: CONDENSER A LOWER OUTLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/5
BREAKER NUMBER: MCC-3A4-E08
SYSTEM: CW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 57, COL D/4a

3

RELATED SYSTEMS:

DG
EE
EE-5
FH
RC
RM
SI-HP
SI-LP
VA
VA-AUX
VA-CON
VA-CR
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE E3L) IS FED BY M P-1C3A-1, CABLE 9462. PANEL MPP-1C3A-1 (LOCATED AT CUBICLE A02) IS FED BY BUS 1C3A, CABLE A715.

TAG NUMBER: VA-63A
EQUIPMENT NAME: CONTROL ROOM EMERGENCY AIR SUPPLY FAN
LOCATION: AUX BLDG, ROOM 81, COL J/5B EL 1050
BREAKER NUMBER:
SYSTEM: VA
FAILURE MODE:

3

TAG NUMBER: VA-64A
EQUIPMENT NAME: CONTROL ROOM EMERGENCY SUPPLY FILTER HEATER
LOCATION: AUX BLDG, ROOM 81, COL J/6A EL 1036
BREAKER NUMBER:
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: W-1C
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1015', COL 3
BREAKER NUMBER: MCC-3B1-A01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-2C
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1015', COL 10
BREAKER NUMBER: MCC-3B1-A01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-1C3A-1
EQUIPMENT NAME: 30-POLE DISTRIBUTION PANEL (FED BY BUS 1C3A CB-1)
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-3B1-A02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-338B
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1013', COL 13
BREAKER NUMBER: MCC-3B1-A2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-338C
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1013', COL 13
BREAKER NUMBER: MCC-3B1-A2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-338D
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 994', COL 13
BREAKER NUMBER: MCC-3B1-A2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-338E
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1013', COL 12
BREAKER NUMBER: MCC-3B1-A2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *HTRS-BNKP1-GRP6
EQUIPMENT NAME: PROPORTIONAL HEATERS CONTROL BANK #P1, GROUP #6
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3B1-B01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNKP1-GRP6
EQUIPMENT NAME: PROPORTIONAL HEATERS CNTL BANK #P1, GROUP #6 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3B1-B02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: VA-63
EQUIPMENT NAME: CONTROL ROOM EMERGENY AIR SUPPLY FAN
LOCATION: AUX BLDG, ROOM 81, COL J/5b
BREAKER NUMBER: MCC-3B1-C01
SYSTEM: VA-CR
FAILURE MODE:

TAG NUMBER: WD-2A
EQUIPMENT NAME: REACTOR COOLANT DRAIN TANK PUMP "A"
LOCATION: CONT BLDG, ELEV 994', COL 5/6
BREAKER NUMBER: MCC-3B1-C03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: VA-12A
EQUIPMENT NAME: NUCLEAR DETECTOR WELL COOLING UNIT "A" FAN
LOCATION: CONT BLDG, ELEV 994', COL 1
BREAKER NUMBER: MCC-3B1-C04
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: EE-8C
EQUIPMENT NAME: 125V DC BATTERY CHARGER NO. 1
LOCATION: AUX BLDG, ROOM 56, COL C/8a
BREAKER NUMBER: MCC-3B1-C2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE BREAKER (SOON TO BE USED FOR VA-64 FANS)
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-3B1-C2R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-45A
EQUIPMENT NAME: NON-RAD AREA FRESH AIR SUPPLY UNIT "A" FAN
LOCATION: AUX BLDG, ROOM 81, COL D/3a
BREAKER NUMBER: MCC-3B1-D01
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: VA-41
EQUIPMENT NAME: NON-RADIATION AREA ROOF EXHAUST FAN
LOCATION: AUX BLDG, ROOM 81, COL C/3a
BREAKER NUMBER: MCC-3B1-D02
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: *RC-3A-SPACE-HTR
EQUIPMENT NAME: REACTOR COOLANT PUMP RC-3A MOTOR SPACE HEATER
LOCATION: CONT BLDG, ELEV 994', COL 6
BREAKER NUMBER: MCC-3B1-D03
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: RC-3A-1
EQUIPMENT NAME: REACTOR COOLANT OIL LIFT PUMP "A"
LOCATION: CONT BLDG, ELEV 994', COL 6
BREAKER NUMBER: MCC-3B1-D04
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: VA-46A
EQUIPMENT NAME: CONTROL ROOM AIR CONDITIONING UNIT "A"
LOCATION: AUX BLDG, ROOM 81, COL J/6d
BREAKER NUMBER: MCC-3B1-E01
SYSTEM: VA-CR
FAILURE MODE:

TAG NUMBER: *T1B-3B-CLG-FANS
EQUIPMENT NAME: TRANSFORMER T1B-3B FORCED COOLING FANS
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: MCC-3B1-E04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: WD-3A
EQUIPMENT NAME: CONTAINMENT SUMP PUMP "A"
LOCATION: CONT BLDG, ELEV 994', COL 1/2
BREAKER NUMBER: MCC-3B1-E05
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: FH-2A
EQUIPMENT NAME: CONTAINMENT FUEL TRANSFER TILTING MACHINE
LOCATION: CONT BLDG, ELEV 1039', COL 7
BREAKER NUMBER: MCC-3B1-E2L
SYSTEM: FH
FAILURE MODE:

TAG NUMBER: VA-71A
EQUIPMENT NAME: BATTERY ROOM NO. 1 EXHAUST FAN
LOCATION: AUX BLDG, ROOM 53, COL D/9
BREAKER NUMBER: MCC-3B1-E2R
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: EE-4N
EQUIPMENT NAME: INVERTER "A" (EE-8N) BYPASS 480/120V TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL C/6d
BREAKER NUMBER: MCC-3B1-E3R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-2A
EQUIPMENT NAME: CONTROL ELEMENT DRIVE MOTOR COOLING FAN "A"
LOCATION: CONT BLDG, ELEV 1045', REACTOR HD
BREAKER NUMBER: MCC-3B1-F01
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-3B1-F02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: HCV-327
EQUIPMENT NAME: LOW PRESSURE SAFETY INJECTION MOV TO LOOP 1B
LOCATION: CONT BLDG, ELEV 1013', COL 5
BREAKER NUMBER: MCC-3B1-F03
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: HCV-348
EQUIPMENT NAME: SHUT DOWN COOLING LOOP ISOLATION MOV
LOCATION: CONT BLDG, ELEV 994', COL 10
BREAKER NUMBER: MCC-3B1-F04
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-3B1-G01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: HCV-311
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 1B
LOCATION: CONT BLDG, ELEV 1013', COL 5
BREAKER NUMBER: MCC-3B1-G05
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: EE-15
EQUIPMENT NAME: IMPRESSED-CURRENT CATHODIC PROTECTION SYSTEM
LOCATION: OUTSIDE, NEAR SE CORNER OF AUX BLDG
BREAKER NUMBER: MCC-3B1-G2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: ATA-D2
EQUIPMENT NAME: DIESEL GEN D2 480V AUTO XFER SWITCH (EMERG FEEDER)
LOCATION: AUX BLDG, ROOM 64, COL D/2b
BREAKER NUMBER: MCC-3B1-G2R
SYSTEM: DG
FAILURE MODE:

TAG NUMBER: VA-52A
EQUIPMENT NAME: DIESEL AREA EXHAUST FAN "A"
LOCATION: AUX BLDG, ROOM 63, COL D/1a
BREAKER NUMBER: MCC-3B1-G3L
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: FH-1
EQUIPMENT NAME: CONTAINMENT REFUELING MACHINE AND CCTV
LOCATION: CONT BLDG, ELEV 1039', COL 6/7
BREAKER NUMBER: MCC-3B1-G3R
SYSTEM: FH
FAILURE MODE:

TAG NUMBER: EE-22
EQUIPMENT NAME: ROD DRIVE CONTROL SYSTEM CABINET
LOCATION: AUX BLDG, ROOM 56, COL G/4a
BREAKER NUMBER: MCC-3B1-G4L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: ATA-D1
EQUIPMENT NAME: DIESEL GEN D1 480V AUTO XFER SWITCH (NORM FEEDER)
LOCATION: AUX BLDG, ROOM 63, COL D/1a
BREAKER NUMBER: MCC-3B1-G4R
SYSTEM: DG
FAILURE MODE:

TAG NUMBER: RM-050/051
EQUIPMENT NAME: RADIATION DETECTOR CONTMT/STACK GAS/AIR PARTICLES
LOCATION: AUX BLDG, ROOM 69, COL P/7a
BREAKER NUMBER: MCC-3B1-H01
SYSTEM: RM
FAILURE MODE:

TAG NUMBER: HCV-150
EQUIPMENT NAME: PRESSURIZER RELIEF ISO MOTOR OPERATED VALVE
LOCATION: CONT BLDG, ELEV 1045', COL 6
BREAKER NUMBER: MCC-3B1-H02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: HCV-2914
EQUIPMENT NAME: SAFETY INJECT TANK SI-6A DISCHARGE ISOLATION VALVE
LOCATION: CONT BLDG, ELEV 1013', COL 5/6
BREAKER NUMBER: MCC-3B1-H03
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: HCV-320
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 2B
LOCATION: CONT BLDG, ELEV 1013', COL 11
BREAKER NUMBER: MCC-3B1-H04
SYSTEM: SI-HP
FAILURE MODE:

SOURCE BUS - MCC-3B2
PAGE 1

SOURCE BUS LOCATION:
TURB BLDG, ELEV 1011', COL TE/8

RELATED SYSTEMS:

AC-TPC
CF
EE
EE-5
LO
TS-EHC
VA-TB
VD
VD-VP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE C01) IS FED BY MPP-1, CABLE 844.

TAG NUMBER: EE-2G-1A
EQUIPMENT NAME: ISOLATED PHASE BUS COOLING FAN MOTOR
LOCATION: TURB BLDG, ELEV 1011', COL TD/3
BREAKER NUMBER: MCC-3B2-AC2
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: LO-7
EQUIPMENT NAME: LUBRICATING OIL STORAGE TANK HEATERS
LOCATION: TURB BLDG, ELEV 996', COL TE/1
BREAKER NUMBER: MCC-3B2-A03
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3B2-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-151C
EQUIPMENT NAME: TURBINE BUILDING VENTILATION FAN "C"
LOCATION: AUX BLDG, ROOM 82, COL D/1a
BREAKER NUMBER: MCC-3B2-A05
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3B2-B01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3B2-B02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3B2-B03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: AC-9A
EQUIPMENT NAME: BEARING WATER PUMP "A"
LOCATION: TURB BLDG, ELEV 993', COL TE/2
BREAKER NUMBER: MCC-3B2-B04
SYSTEM: AC-TPC
FAILURE MODE:

TAG NUMBER: EHC-3A
EQUIPMENT NAME: HYDRAULIC FLUID PRESSURE PUMP "A"
LOCATION: TURB BLDG, ELEV 994', COL TD/7
BREAKER NUMBER: MCC-3B2-C01
SYSTEM: TS-EHC
FAILURE MODE:

(3)

TAG NUMBER: *WR-500A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1036', COL B/7
BREAKER NUMBER: MCC-3B2-C02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-500B
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1036', COL B/4
BREAKER NUMBER: MCC-3B2-C02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: CF-7A
EQUIPMENT NAME: PHOSPHATE FEED PUMP "A"
LOCATION: TURB BLDG, ELEV 1014', COL A/5
BREAKER NUMBER: MCC-3B2-C03
SYSTEM: CF
FAILURE MODE:

TAG NUMBER: CF-4
EQUIPMENT NAME: AMINE FEED PUMP
LOCATION: TURB BLDG, ELEV 1013', COL A/5
BREAKER NUMBER: MCC-3B2-C04
SYSTEM: CF
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TE/8
BREAKER NUMBER: MCC-3B2-C1A
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-158A
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "A"
LOCATION: TURB BLDG, ELEV 1095', COL TC/8
BREAKER NUMBER: MCC-3B2-D01
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158C
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "C"
LOCATION: TURB BLDG, ELEV 1095', COL TC/6
BREAKER NUMBER: MCC-3B2-D02
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158E
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "E"
LOCATION: TURB BLDG, ELEV 1095', COL TC/4
BREAKER NUMBER: MCC-3B2-D03
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158G
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "G"
LOCATION: TURB BLDG, ELEV 1095', COL TC/2
BREAKER NUMBER: MCC-3B2-D04
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VD-7A
EQUIPMENT NAME: VACUUM PRIMING PUMP "A"
LOCATION: TURB BLDG, ELEV 992', COL A/3
BREAKER NUMBER: MCC-3B2-D05
SYSTEM: VD-VP
FAILURE MODE:

TAG NUMBER: VD-5A
EQUIPMENT NAME: CONDENSATE RETURN PUMP "A"
LOCATION: TURB BLDG, ELEV 991', COL A/2
BREAKER NUMBER: MCC-3B2-D06
SYSTEM: VD
FAILURE MODE:

TAG NUMBER: VA-158H
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "H"
LOCATION: TURB BLDG, ELEV 1095', COL TE/8
BREAKER NUMBER: MCC-3B2-E01
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158K
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "K"
LOCATION: TURB BLDG, ELEV 1095', COL TE/6
BREAKER NUMBER: MCC-3B2-E02
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158M
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "M"
LOCATION: TURB BLDG, ELEV 1095', COL TE/4
BREAKER NUMBER: MCC-3B2-E03
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: LO-6
EQUIPMENT NAME: LUBRICATING OIL TRANSFER PUMP
LOCATION: TURB BLDG, ELEV 991', COL TE/1
BREAKER NUMBER: MCC-3B2-E04
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: CF-5
EQUIPMENT NAME: HYDRAZINE FEED PUMP
LOCATION: TURB BLDG, ELEV 1013', COL A/5
BREAKER NUMBER: MCC-3B2-E05
SYSTEM: CF
FAILURE MODE:

TAG NUMBER: LO-2
EQUIPMENT NAME: TURBINE-GEN LUBRICATING OIL CONDITIONING UNIT
LOCATION: TURB BLDG, ELEV 994', COL TE/1
BREAKER NUMBER: MCC-3B2-E06
SYSTEM: LO
FAILURE MODE:

SOURCE BUS LOCATION:
INTK BLDG, ELEV 1007', COL CC/101

RELATED SYSTEMS:

AC-RW
CW
EE
EE-5
FP
HE
SW
VD-SMP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A3A) IS FED BY LTG PANEL LP-18.

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-3B3-A01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SW-2A
EQUIPMENT NAME: SEAL WATER PUMP "A" FOR CIRC WATER PUMPS CW-1A,B,C
LOCATION: INTK BLDG, ELEV 987', COL CC/105
BREAKER NUMBER: MCC-3B3-A02
SYSTEM: SW
FAILURE MODE:

TAG NUMBER: FP-6A
EQUIPMENT NAME: FIRE PUMP "1A" STRAINER
LOCATION: INTK BLDG, ELEV 1010', COL CC/102
BREAKER NUMBER: MCC-3B3-A03
SYSTEM: FP
FAILURE MODE:

TAG NUMBER: AC-12A
EQUIPMENT NAME: RAW WATER PUMP STRAINER "A"
LOCATION: INTK BLDG, ELEV 994', COL BB/102
BREAKER NUMBER: MCC-3B3-A04
SYSTEM: AC-RW
FAILURE MODE:

TAG NUMBER: HCV-1911
EQUIPMENT NAME: TRASH RACK BACKWASH LINE ISOLATION VALVE
LOCATION: INTK BLDG, ELEV 999', COL DD/103
BREAKER NUMBER: MCC-3B3-A05
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-2E
EQUIPMENT NAME: CIRCULATING WATER INTAKE TRAVELING SCREEN #3
LOCATION: INTK BLDG, ELEV 1012', COL AA/104
BREAKER NUMBER: MCC-3B3-B01
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-14A
EQUIPMENT NAME: SLUICE GATE ON TRAVELING SCREEN "A" INLET
LOCATION: INTK BLDG, ELEV 974', COL AA/102
BREAKER NUMBER: MCC-3B3-B02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-14C
EQUIPMENT NAME: SLUICE GATE ON TRAVELING SCREEN "C" INLET
LOCATION: INTK BLDG, ELEV 974', COL AA/103
BREAKER NUMBER: MCC-3B3-B03
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-14E
EQUIPMENT NAME: SLUICE GATE ON TRAVELING SCREEN "E" INLET
LOCATION: INTK BLDG, ELEV 974', COL AA/104
BREAKER NUMBER: MCC-3B3-B04
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-2C
EQUIPMENT NAME: CIRCULATING WATER INTAKE TRAVELING SCREEN #2
LOCATION: INTK BLDG, ELEV 1012', COL AA/103
BREAKER NUMBER: MCC-3B3-C01
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-15A
EQUIPMENT NAME: CIRCULATING WATER PUMP "A" SLUICE GATE
LOCATION: INTK BLDG, ELEV 970', COL CC/104
BREAKER NUMBER: MCC-3B3-C02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: HCV-1905A
EQUIPMENT NAME: CIRCULATING WATER PUMP DISCHARGE VALVE "A"
LOCATION: INTK BLDG, ELEV 996', COL DD/102
BREAKER NUMBER: MCC-3B3-C03
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-3B3-C04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: CW-4A
EQUIPMENT NAME: SCREENWASH SEAL WATER PUMP "A"
LOCATION: INTK BLDG, ELEV 987', COL DD/105
BREAKER NUMBER: MCC-3B3-C05
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-2A
EQUIPMENT NAME: CIRCULATING WATER INTAKE TRAVELING SCREEN #1
LOCATION: INTK BLDG, ELEV 1012', COL AA/102
BREAKER NUMBER: MCC-3B3-D01
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-17
EQUIPMENT NAME: RECIRCULATION TUNNEL SLUICE GATE
LOCATION: INTK BLDG, ELEV 974', COL AA/105
BREAKER NUMBER: MCC-3B3-D02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: T1C-3C
EQUIPMENT NAME: LIGHTING TRANSFORMER (FEEDS LP-18 AT CUBICLE E04)
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-3B3-D03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VD-2A
EQUIPMENT NAME: INTAKE STRUCTURE SUMP PUMP "A"
LOCATION: INTK BLDG, ELEV 974', COL DD/103
BREAKER NUMBER: MCC-3B3-E01
SYSTEM: VD-SMP
FAILURE MODE:

TAG NUMBER: HE-5
EQUIPMENT NAME: INTAKE STRUCTURE CRANE
LOCATION: INTK BLDG, ELEV 1031', COL BB/105
BREAKER NUMBER: MCC-3B3-E02
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-3B3-E03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: LP-18
EQUIPMENT NAME: 30 CKT LIGHTING PANEL, FED BY T1C-3C (CUBICLE D03)
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-3B3-E04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-609A
EQUIPMENT NAME: INTAKE STRUCTURE 480V WELDING RECEPTACLE
LOCATION: INTK BLDG, ELEV 1007', COL BB/101
BREAKER NUMBER: MCC-3B3-E3A
SYSTEM: EE
FAILURE MODE:

SOURCE BUS - MCC-4A1
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG, ROOM 57, COL D/4a

3

RELATED SYSTEMS:

DG
EE
EE-5
HE
MS
RC
SI-HP
SI-LP
VA
VA-AUX
VA-CON
VA-CR
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A04) IS FED BY MPP-1C3A-1, CABLE 9496A.

TAG NUMBER: VA-64B
EQUIPMENT NAME: CONTROL ROOM AIR FILTER HEATER
LOCATION: AUX BLDG, ROOM 81, COL J/6A EL 1036
BREAKER NUMBER:
SYSTEM: VA
FAILURE MODE:

3

TAG NUMBER: *RC-3B-SPACE-HTR
EQUIPMENT NAME: REACTOR COOLANT PUMP RC-3B MOTOR SPACE HEATER
LOCATION: CONT BLDG, ELEV 994', COL 3
BREAKER NUMBER: MCC-4A1-A01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: EE-22
EQUIPMENT NAME: ROD DRIVE CONTROL SYSTEM CABINET
LOCATION: AUX BLDG, ROOM 56, COL G/4a
BREAKER NUMBER: MCC-4A1-A02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: ATA-D1
EQUIPMENT NAME: DIESEL GEN D1 480V AUTO XFER SWITCH (EMERG FEEDER)
LOCATION: AUX BLDG, ROOM 63, COL D/1a
BREAKER NUMBER: MCC-4A1-A03
SYSTEM: DG
FAILURE MODE:

TAG NUMBER: EE-4T
EQUIPMENT NAME: INVERTER "2" (EE-8Q) BYPASS 480/120V TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: MCC-4A1-A05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: RC-3B-1
EQUIPMENT NAME: REACTOR COOLANT OIL LIFT PUMP "B"
LOCATION: CONT BLDG, ELEV 994', COL 3
BREAKER NUMBER: MCC-4A1-A06
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: EE-36
EQUIPMENT NAME: VALVE LAPPING MACHINE
LOCATION: AUX BLDG, ROOM 71, COL J1/5b
BREAKER NUMBER: MCC-4A1-A07
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *HTRS-BNKP2-GRP7
EQUIPMENT NAME: PROPORTIONAL HEATERS CONTROL BANK #P2, GROUP #7
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4A1-B01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNKP2-GRP7
EQUIPMENT NAME: PROPORTIONAL HEATERS CNTL BANK #P2, GROUP #7 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4A1-B02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: VA-12B
EQUIPMENT NAME: NUCLEAR DETECTOR WELL COOLING UNIT "B" FAN
LOCATION: CONT BLDG, ELEV 994', COL 14
BREAKER NUMBER: MCC-4A1-C01
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: EE-8D
EQUIPMENT NAME: 125V DC BATTERY CHARGER NO. 2
LOCATION: AUX BLDG, ROOM 56, COL C/8a
BREAKER NUMBER: MCC-4A1-C02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE BREAKER (SOON TO BE USED FOR VA-64 FANS)
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-4A1-C03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: HCV-1041C
EQUIPMENT NAME: STEAM GENERATOR "A" MAIN STEAM BYPASS VALVE
LOCATION: AUX BLDG, ROOM 81, COL D/4a
BREAKER NUMBER: MCC-4A1-C04
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: HCV-151
EQUIPMENT NAME: PRESSURIZER RELIEF ISO MOTOR OPERATED VALVE
LOCATION: CONT BLDG, ELEV 1045', COL 5/6
BREAKER NUMBER: MCC-4A1-C05
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: VA-46B
EQUIPMENT NAME: CONTROL ROOM AIR CONDITIONING UNIT "B"
LOCATION: AUX BLDG, ROOM 81, COL J/6d
BREAKER NUMBER: MCC-4A1-D01
SYSTEM: VA-CR
FAILURE MODE:

TAG NUMBER: WD-2B
EQUIPMENT NAME: REACTOR COOLANT DRAIN TANK PUMP "B"
LOCATION: CONT BLDG, ELEV 994', COL 5/6
BREAKER NUMBER: MCC-4A1-D02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: HCV-315
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 1A
LOCATION: CONT BLDG, ELEV 1013', COL 2/3
BREAKER NUMBER: MCC-4A1-D03
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: HCV-318
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 2A
LOCATION: CONT BLDG, ELEV 1013', COL 8/9
BREAKER NUMBER: MCC-4A1-D04
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: VA-45B
EQUIPMENT NAME: NON-RAD AREA FRESH AIR SUPPLY UNIT "B" FAN
LOCATION: AUX BLDG, ROOM 81, COL D/3a
BREAKER NUMBER: MCC-4A1-E01
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: VA-52B
EQUIPMENT NAME: DIESEL AREA EXHAUST FAN "B"
LOCATION: AUX BLDG, ROOM 64, COL D/2b
BREAKER NUMBER: MCC-4A1-E02
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: VA-71B
EQUIPMENT NAME: BATTERY ROOM NO. 2 EXHAUST FAN
LOCATION: AUX BLDG, ROOM 53, COL D/9a
BREAKER NUMBER: MCC-4A1-E03
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: HE-7B
EQUIPMENT NAME: AUXILIARY BUILDING ELEVATOR
LOCATION: AUX BLDG, ROOM 51, COL F/8a
BREAKER NUMBER: MCC-4A1-E04
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: ATA-D2
EQUIPMENT NAME: DIESEL GEN D2 480V AUTO XFER SWITCH (NORM FEEDER)
LOCATION: AUX BLDG, ROOM 64, COL D/2b
BREAKER NUMBER: MCC-4A1-E05
SYSTEM: DG
FAILURE MODE:

TAG NUMBER: W-1S
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 19, COL D/2b
BREAKER NUMBER: MCC-4A1-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-2S
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 19, COL D/2b
BREAKER NUMBER: MCC-4A1-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-3S
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 56, COL D/3a
BREAKER NUMBER: MCC-4A1-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-4S
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 56, COL D/2
BREAKER NUMBER: MCC-4A1-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-5S
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: MCC-4A1-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: WD-3B
EQUIPMENT NAME: CONTAINMENT SUMP PUMP "B"
LOCATION: CONT BLDG, ELEV 994', COL 13/14
BREAKER NUMBER: MCC-4A1-E07
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: VA-2B
EQUIPMENT NAME: CONTROL ELEMENT DRIVE MOTOR COOLING FAN "B"
LOCATION: CONT BLDG, ELEV 1045', REACTOR HD
BREAKER NUMBER: MCC-4A1-F01
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: *T1B-4A-CLG-FANS
EQUIPMENT NAME: TRANSFORMER T1B-4A FORCED COOLING FANS
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: MCC-4A1-F02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: HCV-2934
EQUIPMENT NAME: SAFETY INJECT TANK SI-6B DISCHARGE ISOLATION VALVE
LOCATION: CONT BLDG, ELEV 1013', COL 1
BREAKER NUMBER: MCC-4A1-F03
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: HCV-329
EQUIPMENT NAME: LOW PRESSURE SAFETY INJECTION MOV TO LOOP 1A
LOCATION: CONT BLDG, ELEV 1013', COL 2/3
BREAKER NUMBER: MCC-4A1-F04
SYSTEM: SI-LP
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 26, COL Q/7a

RELATED SYSTEMS:

AI
CH
DW
EE
FH
FW-BD
HE
RM
VA-AUX
VA-CON
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A2L) IS FED BY MPP-1C3A-16, CABLE 9422A.

TAG NUMBER: DW-41B
EQUIPMENT NAME: PRIMARY WATER BOOSTER PUMP "B"
LOCATION: AUX BLDG, ROOM 69, COL U/6e
BREAKER NUMBER: MCC-4A2-A01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: RM-060
EQUIPMENT NAME: IODINE VENTILATION STACK MONITOR
LOCATION: AUX BLDG, ROOM 69, COL P/7a
BREAKER NUMBER: MCC-4A2-A03
SYSTEM: RM
FAILURE MODE:

TAG NUMBER: VA-32B
EQUIPMENT NAME: CONTAINMENT PURGE AIR DISCHARGE UNIT "B"
LOCATION: AUX BLDG, ROOM 69, COL N/7e
BREAKER NUMBER: MCC-4A2-A04
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: *AUX-ROLL-UP-DOOR
EQUIPMENT NAME: LOCAL STARTER FOR SMALL WEST ROLL-UP DOOR
LOCATION: AUX BLDG, ROOM 26, COL U/6e
BREAKER NUMBER: MCC-4A2-A2R
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: FW-34B
EQUIPMENT NAME: STEAM GENERATOR BLOWDOWN TANK TRANSFER PUMP "B"
LOCATION: AUX BLDG, ROOM 13, COL N/7a
BREAKER NUMBER: MCC-4A2-B01
SYSTEM: FW-BD
FAILURE MODE:

TAG NUMBER: MPP-6
EQUIPMENT NAME: HOT SHOP MISC POWER PANEL
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MCC-4A2-B03A
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-123
EQUIPMENT NAME: LAUNDRY ROOM AIR CONDITIONING CONDENSER
LOCATION: OUTSIDE, ON NORTH SIDE OF AUX BLDG
BREAKER NUMBER: MCC-4A2-B03B
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: EE-29B
EQUIPMENT NAME: LAUNDRY ROOM DRYER NO. 2
LOCATION: AUX BLDG, ROOM 42, COL P/8a
BREAKER NUMBER: MCC-4A2-B04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-24B
EQUIPMENT NAME: CONTAINMENT PURGE AIR SUPPLY UNIT "B"
LOCATION: AUX BLDG, ROOM 69, COL P/7a
BREAKER NUMBER: MCC-4A2-B05
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: FH-2B
EQUIPMENT NAME: SPENT FUEL TRANSFER MACHINE CONSOLE
LOCATION: AUX BLDG, ROOM 3, COL T/4b
BREAKER NUMBER: MCC-4A2-B2L
SYSTEM: FH
FAILURE MODE:

TAG NUMBER: FH-12
EQUIPMENT NAME: SPENT FUEL BRIDGE
LOCATION: SPENT FUEL POOL
BREAKER NUMBER: MCC-4A2-B2R
SYSTEM: FH
FAILURE MODE:

TAG NUMBER: VA-80B
EQUIPMENT NAME: HYDROGEN PURGE BLOWER "B"
LOCATION: AUX BLDG, ROOM 59, COL P/6c
BREAKER NUMBER: MCC-4A2-C01
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: WD-8B
EQUIPMENT NAME: NEUTRALIZATION STACK MONITOR "B"
LOCATION: AUX BLDG, ROOM 9A, COL Q/8a
BREAKER NUMBER: MCC-4A2-C03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: CH-4B
EQUIPMENT NAME: BORIC ACID PUMP "B"
LOCATION: AUX BLDG, ROOM 26, COL T/6a
BREAKER NUMBER: MCC-4A2-C04
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: FH-14
EQUIPMENT NAME: NEW FUEL ELEVATOR PANEL
LOCATION: SPENT FUEL POOL
BREAKER NUMBER: MCC-4A2-C2L
SYSTEM: FH
FAILURE MODE:

TAG NUMBER: HE-10
EQUIPMENT NAME: DEBORATING DEMINERALIZING AREA CRANE
LOCATION: AUX BLDG, ROOM 69, COL T/7a
BREAKER NUMBER: MCC-4A2-C2R
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: VA-35B
EQUIPMENT NAME: AUXILIARY BUILDING AIR SUPPLY UNIT "B"
LOCATION: AUX BLDG, ROOM 69, COL Q/8a
BREAKER NUMBER: MCC-4A2-D01
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: VA-40B
EQUIPMENT NAME: AUXILIARY BUILDING RADIOACTIVE EXHAUST UNIT "B"
LOCATION: AUX BLDG, ROOM 69, COL P/8a
BREAKER NUMBER: MCC-4A2-D03
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: AI-102/103
EQUIPMENT NAME: GAS STRIPPER AND WASTE EVAPORATION PANEL
LOCATION: AUX BLDG, ROOM 4, COL N/8a
BREAKER NUMBER: MCC-4A2-D2L
SYSTEM: AI
FAILURE MODE:

TAG NUMBER: VA-67
EQUIPMENT NAME: AUX BLDG LAB AREA AIR COND FAN AND COOLING COILS
LOCATION: AUX BLDG, ROOM 40, COL N/8a
BREAKER NUMBER: MCC-4A2-D2R
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: VA-68
EQUIPMENT NAME: AUX BLDG LAB AREA AIR COND FAN AND COOLING COILS
LOCATION: AUX BLDG, ROOM 52, COL N/9
BREAKER NUMBER: MCC-4A2-D2R
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: VA-69
EQUIPMENT NAME: AUX BLDG LAB AREA AIR COND FAN AND COOLING COILS
LOCATION: AUX BLDG, ROOM 43, COL N/8a
BREAKER NUMBER: MCC-4A2-D2R
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: EE-16
EQUIPMENT NAME: WASTE DISPOSAL HEAT TRACING SYS (PANEL AI-182-NP6)
LOCATION: AUX BLDG, ROOM 26, COL T/5d
BREAKER NUMBER: MCC-4A2-E01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: HCV-258
EQUIPMENT NAME: BORIC ACID STRORAGE OUTLET ISOLATION TANK MOV
LOCATION: AUX BLDG, ROOM 26, COL T/6a
BREAKER NUMBER: MCC-4A2-E02
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: EE-30
EQUIPMENT NAME: MASK DRYER
LOCATION: AUX BLDG, ROOM 42, COL P/8a
BREAKER NUMBER: MCC-4A2-E03A
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-81B
EQUIPMENT NAME: HYDROGEN ANALYZER PUMP "B" MOTOR
LOCATION: AUX BLDG, ROOM 59, COL N/6b
BREAKER NUMBER: MCC-4A2-E03B
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: EE-37
EQUIPMENT NAME: ULTRASONIC CLEANER PANEL
LOCATION: AUX BLDG, ROOM 59, COL J1/6e
BREAKER NUMBER: MCC-4A2-E03C
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: FW-52
EQUIPMENT NAME: RESIN TRANSFER PUMP ON STM GEN BLOWDOWN PROCESS
LOCATION: AUX BLDG, ROOM 20, COL G/4a
BREAKER NUMBER: MCC-4A2-E04
SYSTEM: FW-BD
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 26, COL U/5a

RELATED SYSTEMS:

EE
EE-5
PW
SL
WD-S

COMMENTS:
NO COMMENTS

TAG NUMBER: 4A3-2
EQUIPMENT NAME: 120/240V DISTRIBUTION PANEL
LOCATION: AUX BLDG, ROOM 26, COL U/2d
BREAKER NUMBER: MCC-4A3-A02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: PW-7
EQUIPMENT NAME: AUXILIARY BUILDING HOT WATER HEATER
LOCATION: AUX BLDG, ROOM 69, COL L/9
BREAKER NUMBER: MCC-4A3-A03
SYSTEM: PW
FAILURE MODE:

TAG NUMBER: WD-36
EQUIPMENT NAME: WASTE SOLIDS BALER
LOCATION: AUX BLDG, ROOM 27, COL U/5a
BREAKER NUMBER: MCC-4A3-A04
SYSTEM: WD-S
FAILURE MODE:

TAG NUMBER: *CASK-DCON-RM-HTR
EQUIPMENT NAME: CASK DECONTAMINATION ROOM HEATER
LOCATION: AUX BLDG, ROOM 68
BREAKER NUMBER: MCC-4A3-A05
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-A06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-A07
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-A08
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *DRUM-ROLLER
EQUIPMENT NAME: DRUM ROLLER
LOCATION: AUX BLDG, ROOM 27, COL U/3b
BREAKER NUMBER: MCC-4A3-B01
SYSTEM: WD-S
FAILURE MODE:

TAG NUMBER: SL-51
EQUIPMENT NAME: STEAM GEN SAMPLE SYSTEM CHILLER
LOCATION:
BREAKER NUMBER: MCC-4A3-B02
SYSTEM: SL
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-B02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-B03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-B04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-B05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-B06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-B07
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-C01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-C02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *PORT-SPACE-HTR
EQUIPMENT NAME: PORTABLE SPACE HEATER NEAR BORIC ACID TANKS
LOCATION: AUX BLDG, ROOM 26
BREAKER NUMBER: MCC-4A3-C03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-C04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-C05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-C06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-D01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-D03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: 4A3-1
EQUIPMENT NAME: 120/240V DISTRIB. PANEL (LOCATED IN CUBICLE D04)
LOCATION: AUX BLDG, ROOM 26, COL U/5a
BREAKER NUMBER: MCC-4A3-D05
SYSTEM: EE
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 57, COL D/3a

RELATED SYSTEMS:

AE
CA
EE
EE-5
RC

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A4L) IS FED BY MPP-1C3A-1, CABLE 9496.

TAG NUMBER: PCV-102-1
EQUIPMENT NAME: PRESSURIZER PRESSURE POWER RELIEF VALVE
LOCATION: CONT BLDG, ELEV 1045', COL 5/6
BREAKER NUMBER: MCC-3C1-A01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *T1B-3C-CLG-FANS
EQUIPMENT NAME: TRANSFORMER T1B-3C FORCED COOLING FANS
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: MCC-3C1-A05
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: EE-8E
EQUIPMENT NAME: 125V DC BATTERY CHARGER NO. 3
LOCATION: AUX BLDG, ROOM 56, COL C/8a
BREAKER NUMBER: MCC-3C1-A2L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *AUX-ROOF-DISC-SW
EQUIPMENT NAME: AUX BUILDING ROOF DISCONNECT SWITCH (STRESS TEST)
LOCATION: AUXILIARY BUILDING ROOF
BREAKER NUMBER: MCC-3C1-A2R
SYSTEM: AE
FAILURE MODE:

TAG NUMBER: CA-4
EQUIPMENT NAME: COMPRESSED AIR DRYER, REACTIVATED HEATER, COOLER
LOCATION: AUX BLDG, ROOM 19, COL C/2b
BREAKER NUMBER: MCC-3C1-A3L
SYSTEM: CA
FAILURE MODE:

TAG NUMBER: *STRESSING-DIS-SW
EQUIPMENT NAME: STRESSING GALLERY DISCONNECT SWITCH (STRESS TEST)
LOCATION: CONTAINMENT STRESSING GALLERY
BREAKER NUMBER: MCC-3C1-A3R
SYSTEM: AE
FAILURE MODE:

TAG NUMBER: EE-4Q
EQUIPMENT NAME: INVERTER "C" (EE-8K) BYPASS 480/120V TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL C/6d
BREAKER NUMBER: MCC-3C1-A4R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *HTRS-BNK2-GRP4
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #2 GROUP #4
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3C1-B01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK2-GRP4
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #2 GROUP #4 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3C1-B02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *HTRS-BNK2-GRP5
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #2 GROUP #5
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3C1-C01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK2-GRP5
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #2 GROUP #5 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-3C1-C02
SYSTEM: RC
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 26, COL Q/7a

RELATED SYSTEMS:

AC-SFP
CH
DW
EE
EE-5
FW-BD
VA-AUX
VA-CON
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE D01) IS FED BY MPP-1C3A-16, CABLE 9422. PANEL MPP-1C3A-16 (LOCATED AT CUBICLE F01) IS FED BY BUS 1C3A, CABLE A712.

TAG NUMBER: DW-41A
EQUIPMENT NAME: PRIMARY WATER BOOSTER PUMP "A"
LOCATION: AUX BLDG, ROOM 69, COL U/6e
BREAKER NUMBER: MCC-3C2-A01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: VA-32A
EQUIPMENT NAME: CONTAINMENT PURGE AIR DISCHARGE UNIT "A"
LOCATION: AUX BLDG, ROOM 69, COL N/7a
BREAKER NUMBER: MCC-3C2-A02
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: VA-40A
EQUIPMENT NAME: AUXILIARY BUILDING RADIOACTIVE EXHAUST UNIT "A"
LOCATION: AUX BLDG, ROOM 69, COL Q/8a
BREAKER NUMBER: MCC-3C2-A03
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: FW-34A
EQUIPMENT NAME: STEAM GENERATOR BLOWDOWN TANK TRANSFER PUMP "A"
LOCATION: AUX BLDG, ROOM 13, COL N/7a
BREAKER NUMBER: MCC-3C2-B01
SYSTEM: FW-BD
FAILURE MODE:

TAG NUMBER: VA-24A
EQUIPMENT NAME: CONTAINMENT PURGE AIR SUPPLY UNIT "A"
LOCATION: AUX BLDG, ROOM 69, COL P/6c
BREAKER NUMBER: MCC-3C2-B02
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: VA-40C
EQUIPMENT NAME: AUXILIARY BUILDING RADIOACTIVE EXHAUST UNIT "C"
LOCATION: AUX BLDG, ROOM 69, COL P/8a
BREAKER NUMBER: MCC-3C2-B03
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: HCV-265
EQUIPMENT NAME: BORIC ACID STORAGE TANK OUTLET ISO MOV CH-11A
LOCATION: AUX BLDG, ROOM 26, COL U/6e
BREAKER NUMBER: MCC-3C2-C01
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: HCV-268
EQUIPMENT NAME: EMERGENCY BORATION MOV
LOCATION: AUX BLDG, ROOM 26, COL U/6e
BREAKER NUMBER: MCC-3C2-C02
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: WD-10
EQUIPMENT NAME: PH SAMPLING PUMP MOTOR
LOCATION: AUX BLDG, ROOM 9A, COL Q/8a
BREAKER NUMBER: MCC-3C2-C03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: VA-80A
EQUIPMENT NAME: HYDROGEN PURGE BLOWER "A"
LOCATION: AUX BLDG, ROOM 59, COL P/7a
BREAKER NUMBER: MCC-3C2-C04
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: CH-4A
EQUIPMENT NAME: BORIC ACID PUMP "A"
LOCATION: AUX BLDG, ROOM 26, COL T/6a
BREAKER NUMBER: MCC-3C2-D02
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: CH-12
EQUIPMENT NAME: BORIC ACID BATCHING TANK HEATERS
LOCATION: AUX BLDG, ROOM 69, COL U/8a
BREAKER NUMBER: MCC-3C2-D03
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: AC-13A
EQUIPMENT NAME: FUEL TRANSFER CANAL DRAIN PUMP "A"
LOCATION: AUX BLDG, ROOM 24, COL T/3b
BREAKER NUMBER: MCC-3C2-D04
SYSTEM: AC-SFP
FAILURE MODE:

TAG NUMBER: EE-23
EQUIPMENT NAME: CVCS HEAT TRACING SYSTEM (PANEL AI-182-NP5)
LOCATION: AUX BLDG, ROOM 26, COL T/5d
BREAKER NUMBER: MCC-3C2-E01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-35A
EQUIPMENT NAME: AUXILIARY BUILDING AIR SUPPLY UNIT "A"
LOCATION: AUX BLDG, ROOM 69, COL Q/8a
BREAKER NUMBER: MCC-3C2-E02
SYSTEM: VA-AUX
FAILURE MODE:

TAG NUMBER: WD-8A
EQUIPMENT NAME: NEUTRALIZATION TRANSFER PUMP "A"
LOCATION: AUX BLDG, ROOM 9A, COL Q/8a
BREAKER NUMBER: MCC-3C2-E04
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: EE-28A
EQUIPMENT NAME: LAUNDRY ROOM WASHER NO. 1
LOCATION: AUX BLDG, ROOM 42, COL P/8a
BREAKER NUMBER: MCC-3C2-E3L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: EE-29A
EQUIPMENT NAME: LAUNDRY ROOM DRYER NO. 1
LOCATION: AUX BLDG, ROOM 42, COL P/8a
BREAKER NUMBER: MCC-3C2-E3R
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-1C3A-16
EQUIPMENT NAME: 30-POLE DISTRIBUTION PANEL (FED BY BUS 1C3A CB-14)
LOCATION: AUX BLDG, ROOM 26, COL Q/7a
BREAKER NUMBER: MCC-3C2-F01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-4A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 26, COL T/5d
BREAKER NUMBER: MCC-3C2-F02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-5A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 26, COL J1/7a
BREAKER NUMBER: MCC-3C2-F02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-6A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 26, COL T/6a
BREAKER NUMBER: MCC-3C2-F02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-7A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 26, COL U/2d
BREAKER NUMBER: MCC-3C2-F02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 26, COL Q/7a
BREAKER NUMBER: MCC-3C2-F1A
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS - MCC-3C3
PAGE 1

SOURCE BUS LOCATION:
SERV BLDG, ROOM 323, COL SB/8

RELATED SYSTEMS:

EE-5
VA
VA-TB

COMMENTS:
MOTOR CONTROL CENTER FOR I & C SHOP.

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: SERV BLDG, ROOM 323, COL SB/8
BREAKER NUMBER: MCC-3C3-A02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-159B
EQUIPMENT NAME: SERVICE BUILDING NORTH AIR CONDITIONING UNIT
LOCATION: SERV BLDG, ROOM 321, COL SB/8
BREAKER NUMBER: MCC-3C3-A03
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-159A
EQUIPMENT NAME: SERVICE BUILDING SOUTH AIR CONDITIONING UNIT
LOCATION: SERV BLDG, ROOM 321, COL SB/8
BREAKER NUMBER: MCC-3C3-A04
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: SERV BLDG, ROOM 323, COL SB/8
BREAKER NUMBER: MCC-3C3-A05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: SERV BLDG, ROOM 323, COL SB/8
BREAKER NUMBER: MCC-3C3-A06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: SERV BLDG, ROOM 323, COL SB/8
BREAKER NUMBER: MCC-3C3-A07
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: SERV BLDG, ROOM 323, COL SB/8
BREAKER NUMBER: MCC-3C3-A08
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: SERV BLDG, ROOM 323, COL SB/8
BREAKER NUMBER: MCC-3C3-B01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-180
EQUIPMENT NAME: SERVICE BUILDING EXHAUST FAN #2
LOCATION: SERV BLDG, ROOM 321, COL SA/8
BREAKER NUMBER: MCC-3C3-B02
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: VA-179
EQUIPMENT NAME: SERVICE BUILDING EXHAUST FAN #1
LOCATION: SERV BLDG, ROOM 321, COL SA/8
BREAKER NUMBER: MCC-3C3-B03
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: VA-181
EQUIPMENT NAME: SERVICE BUILDING SUPPLY FAN #1
LOCATION: SERV BLDG, ROOM 321, COL SA/8
BREAKER NUMBER: MCC-3C3-B04
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: VA-182
EQUIPMENT NAME: SERVICE BUILDING SUPPLY FAN #2
LOCATION: SERV BLDG, ROOM 321, COL SA/8
BREAKER NUMBER: MCC-3C3-B05
SYSTEM: VA
FAILURE MODE:

SOURCE BUS LOCATION:
TURB BLDG, ELEV 1011', COL TC/8

RELATED SYSTEMS:

EE
EE-5
FW-CD
LO
MS
ST

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A03) IS FED BY MPP-1, CABLE 845.

TAG NUMBER: EE-55
EQUIPMENT NAME: FEED TO MCC-3C4C-3 VIA EE-55 TRANSFER SWITCH
LOCATION:
BREAKER NUMBER: A02U
SYSTEM: EE
FAILURE MODE:

3

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-A02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-A05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-A06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: MOV-SV1
EQUIPMENT NAME: MOTOR OPERATED DRAIN VALVE FOR STOP VALVE SV-1
LOCATION: TURB BLDG, ELEV 1000', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-B02
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: MOV-CV2
EQUIPMENT NAME: STEAM DRAIN VALVE FOR MAIN STM CNTL VALVE CV-1
LOCATION: TURB BLDG, ELEV 1000', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-B03
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: LO-8
EQUIPMENT NAME: AC MOTOR SUCTION OIL PUMP
LOCATION: TURB BLDG, ELEV 1011', COL TE/7
BREAKER NUMBER: MCC-3C4C-1-B04
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: MOV-SV3
EQUIPMENT NAME: MOTOR OPERATED DRAIN VALVE FOR STOP VALVE SV-2
LOCATION: TURB BLDG, ELEV 1000', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-C02
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: MOV-CV4
EQUIPMENT NAME: STEAM DRAIN VALVE FOR MAIN STM CNTL VALVE CV-2
LOCATION: TURB BLDG, ELEV 1000', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-C03
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: LO-3
EQUIPMENT NAME: TURNING GEAR OIL PUMP
LOCATION: TURB BLDG, ELEV 1011', COL TE/7
BREAKER NUMBER: MCC-3C4C-1-C04
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: MOV-SV5
EQUIPMENT NAME: MOTOR OPERATED DRAIN VALVE FOR STOP VALVE SV-3
LOCATION: TURB BLDG, ELEV 1000', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-D02
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: MOV-S1
EQUIPMENT NAME: MOTOR OPERATED STEAM SEAL FEED VALVE
LOCATION: TURB BLDG, ELEV 1032', COL TC/7x
BREAKER NUMBER: MCC-3C4C-1-D03
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: LO-14A
EQUIPMENT NAME: BEARING LIFT PUMP MOTOR "A"
LOCATION: TURB BLDG, ELEV 1013', COL TE/8
BREAKER NUMBER: MCC-3C4C-1-D04
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: LO-12C
EQUIPMENT NAME: SEAL OIL VACUUM PUMP
LOCATION: TURB BLDG, ELEV 992', COL TC/2
BREAKER NUMBER: MCC-3C4C-1-D05
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: MOV-SV7
EQUIPMENT NAME: MOTOR OPERATED DRAIN VALVE FOR STOP VALVE SV-4
LOCATION: TURB BLDG, ELEV 1000', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-E02
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: MOV-S2
EQUIPMENT NAME: STEAM SEAL FEED VALVE BYPASS
LOCATION: TURB BLDG, ELEV 1029', COL TC/7x
BREAKER NUMBER: MCC-3C4C-1-E03
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: LO-14B
EQUIPMENT NAME: BEARING LIFT PUMP MOTOR "B"
LOCATION: TURB BLDG, ELEV 1013', COL TE/8
BREAKER NUMBER: MCC-3C4C-1-E04
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: EHC-9
EQUIPMENT NAME: HYDRAULIC FLUID FILTER PUMP
LOCATION: TURB BLDG, ELEV 992', COL TD/7x
BREAKER NUMBER: MCC-3C4C-1-E05
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: MOV-CV
EQUIPMENT NAME: STEAM DRAIN VALVE BEFORE CV SEAT
LOCATION: TURB BLDG, ELEV 998', COL TD/7
BREAKER NUMBER: MCC-3C4C-1-F02
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: MOV-B
EQUIPMENT NAME: STEAM PACKING UNLOADING VALVE BYPASS
LOCATION: TURB BLDG, ELEV 1027', COL TC/7x
BREAKER NUMBER: MCC-3C4C-1-F03
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: LO-14C
EQUIPMENT NAME: BEARING LIFT PUMP MOTOR "C"
LOCATION: TURB BLDG, ELEV 1013', COL TE/8
BREAKER NUMBER: MCC-3C4C-1-F04
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: LO-5
EQUIPMENT NAME: TURBINE OIL RESERVOIR VAPOR EXTRACTOR
LOCATION: TURB BLDG, ELEV 1012', COL TE/7
BREAKER NUMBER: MCC-3C4C-1-F05
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: RCV-978
EQUIPMENT NAME: MOTOR OPERATED RADIATION ISOLATION VALVE (AUX STM)
LOCATION: TURB BLDG, ELEV 1013', COL TC/7
BREAKER NUMBER: MCC-3C4C-1-G02
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: MOV-EHS
EQUIPMENT NAME: CONDENSER SPRAY WATER SUPPLY BYPASS
LOCATION: TURB BLDG, ELEV 1015', COL TE/3
BREAKER NUMBER: MCC-3C4C-1-G03
SYSTEM: FW-CD
FAILURE MODE:

TAG NUMBER: LO-12A
EQUIPMENT NAME: MAIN SEAL OIL PUMP
LOCATION: TURB BLDG, ELEV 991', COL TD/2
BREAKER NUMBER: MCC-3C4C-1-G04
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL TC/8
BREAKER NUMBER: MCC-3C4C-1-G05
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS - MCC-3C4C-2
PAGE 1

SOURCE BUS LOCATION:
TURB BLDG, ELEV 1011', COL A/8

RELATED SYSTEMS:

AC
AI-NI
AS
AS-AB
CL
DW
EE
EE-5
FO-AB
FP
HE
PW

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE G01) IS FED BY MPP-2, CABLE 872.

TAG NUMBER: HE-29
EQUIPMENT NAME: WATER TREATMENT HOIST
LOCATION: TURB BLDG RM 206 COL SA/5 EL 1035
BREAKER NUMBER:
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: DW-17B
EQUIPMENT NAME: ALUM FEEDER "B" DRIVE MOTOR & VIBRATOR
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-A01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-17D
EQUIPMENT NAME: ALUM FEEDER "B" MIXER MOTOR
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-A02
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-18A
EQUIPMENT NAME: DUST COLLECTOR FOR ALUM ELEVATOR
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-A03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-19B
EQUIPMENT NAME: ALUM FEED PUMP "B"
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-A04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-20A
EQUIPMENT NAME: COAGULANT AGITATOR MOTOR
LOCATION: SERV BLDG, ROOM 109, COL SB/9
BREAKER NUMBER: MCC-3C4C-2-A05
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: MCC-3C4C-2-A06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: DW-17A
EQUIPMENT NAME: ALUM FEEDER "A" DRIVE MOTOR & VIBRATOR
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-B01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-17C
EQUIPMENT NAME: ALUM FEEDER "A" MIXER MOTOR
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-B02
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-18
EQUIPMENT NAME: DEMIN WATER CHEMICAL FEED ALUM ELEVATOR
LOCATION: SERV BLDG, ROOM 206, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-B03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-19A
EQUIPMENT NAME: ALUM FEED PUMP "A"
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-B04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-20
EQUIPMENT NAME: COAGULANT AID FEED PUMP
LOCATION: SERV BLDG, ROOM 109, COL SA/9
BREAKER NUMBER: MCC-3C4C-2-B05
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: MCC-3C4C-2-B06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: DW-12B
EQUIPMENT NAME: LIME FEEDER "B" DRIVE MOTOR AND VIBRATOR
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-C01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-12D
EQUIPMENT NAME: LIME FEEDER "B" MIXER MOTOR
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-C02
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-13A
EQUIPMENT NAME: DUST COLLECTOR FOR LIME ELEVATOR
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-C03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-16B
EQUIPMENT NAME: LIME FEED PUMP "B"
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-C04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-14A
EQUIPMENT NAME: LIME FEED ELEVATOR DUST COLLECTOR
LOCATION: SERV BLDG, ROOM 206, COL SB/7
BREAKER NUMBER: MCC-3C4C-2-C05
SYSTEM: AI-NI
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: MCC-3C4C-2-C06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: DW-12A
EQUIPMENT NAME: LIME FEEDER "A" DRIVE MOTOR AND VIBRATOR
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-D01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-12C
EQUIPMENT NAME: LIME FEEDER "A" MIXER MOTOR
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-D02
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-13
EQUIPMENT NAME: DEMIN WATER CHEMICAL FEED LIME ELEVATOR
LOCATION: SERV BLDG, ROOM 206, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-D03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-16A
EQUIPMENT NAME: LIME FEED PUMP "A"
LOCATION: SERV BLDG, ROOM 109, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-D04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: AC-16
EQUIPMENT NAME: STANDBY FEED AND DEMIN WATER PUMP
LOCATION: TURB BLDG, ELEV 994', COL A/5
BREAKER NUMBER: MCC-3C4C-2-D05
SYSTEM: AC
FAILURE MODE:

TAG NUMBER: DW-1A
EQUIPMENT NAME: PRESIDEMENTATION UNIT MIXER
LOCATION: SERV BLDG, ROOM 206, COL SB/9
BREAKER NUMBER: MCC-3C4C-2-E01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-37B
EQUIPMENT NAME: ACID REGENERANT PUMP "B"
LOCATION: SERV BLDG, ROOM 206, COL SA/6
BREAKER NUMBER: MCC-3C4C-2-E02
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-33B
EQUIPMENT NAME: CAUSTIC REGENERANT PUMP "B"
LOCATION: SERV BLDG, ROOM 206, COL SA/6
BREAKER NUMBER: MCC-3C4C-2-E03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-31B
EQUIPMENT NAME: CAUSTIC TRANSFER PUMP "B"
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-E04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: MCC-3C4C-2-E05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: DW-25
EQUIPMENT NAME: DEMIN WATER RECYCLE PUMP
LOCATION: SERV BLDG, ROOM 206, COL SA/6
BREAKER NUMBER: MCC-3C4C-2-E06
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-5A
EQUIPMENT NAME: CLARIFIER-SOFTNER UNIT MIXER
LOCATION: SERV BLDG, ROOM 206, COL SB/8
BREAKER NUMBER: MCC-3C4C-2-F01
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-37A
EQUIPMENT NAME: ACID REGENERANT PUMP "A"
LOCATION: SERV BLDG, ROOM 206, COL SA/5
BREAKER NUMBER: MCC-3C4C-2-F02
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-33A
EQUIPMENT NAME: CAUSTIC REGENERANT PUMP "A"
LOCATION: SERV BLDG, ROOM 206, COL SA/5
BREAKER NUMBER: MCC-3C4C-2-F03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-31A
EQUIPMENT NAME: CAUSTIC TRANSFER PUMP "A"
LOCATION: SERV BLDG, ROOM 109, COL SA/8
BREAKER NUMBER: MCC-3C4C-2-F04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-26A
EQUIPMENT NAME: CARBON DIOXIDE FEED BOOSTER PUMP "A"
LOCATION: SERV BLDG, ROOM 206, COL SB/6
BREAKER NUMBER: MCC-3C4C-2-F05
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-9
EQUIPMENT NAME: FILTER BACKWASH PUMP
LOCATION: SERV BLDG, ROOM 109, COL SB/7
BREAKER NUMBER: MCC-3C4C-2-F06
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: MCC-3C4C-2-G02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: DW-35
EQUIPMENT NAME: ACID TRANSFER PUMP
LOCATION: OUTDOORS, EAST SIDE OF SERV BLDG
BREAKER NUMBER: MCC-3C4C-2-G03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-26B
EQUIPMENT NAME: CARBON DIOXIDE FEED BOOSTER PUMP "B"
LOCATION: SERV BLDG, ROOM 206, COL SB/7
BREAKER NUMBER: MCC-3C4C-2-G04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: FP-5
EQUIPMENT NAME: JOCKEY FIRE PUMP
LOCATION: TURB BLDG, ELEV 992', COL A/6
BREAKER NUMBER: MCC-3C4C-2-G05
SYSTEM: FP
FAILURE MODE:

TAG NUMBER: DW-23
EQUIPMENT NAME: SAMPLING PUMP
LOCATION: SERV BLDG, ROOM 109, COL SB/8
BREAKER NUMBER: MCC-3C4C-2-G06
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL A/8
BREAKER NUMBER: MCC-3C4C-2-H01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *WR-688A
EQUIPMENT NAME: SERVICE BUILDING 480V WELDING RECEPTACLE
LOCATION: SERV BLDG, ROOM 109, COL SA/5
BREAKER NUMBER: MCC-3C4C-2-H02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-688C
EQUIPMENT NAME: SERVICE BUILDING 480V WELDING RECEPTACLE
LOCATION: SERV BLDG, ROOM 109, COL SA/5
BREAKER NUMBER: MCC-3C4C-2-H02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: DW-8B
EQUIPMENT NAME: BOOSTER PUMP "B"
LOCATION: SERV BLDG, ROOM 109, COL SB/7
BREAKER NUMBER: MCC-3C4C-2-H03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-40B
EQUIPMENT NAME: DEMINERALIZED WATER TRANSFER PUMP "B"
LOCATION: SERV BLDG, ROOM 109, COL SB/6
BREAKER NUMBER: MCC-3C4C-2-H04
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: PW-4
EQUIPMENT NAME: SERVICE BUILDING HOT WATER HEATER
LOCATION: TURB BLDG, ELEV 992', COL TA/1
BREAKER NUMBER: MCC-3C4C-2-J01
SYSTEM: PW
FAILURE MODE:

TAG NUMBER: FO-11A/B
EQUIPMENT NAME: AUXILIARY BOILER AS-1 FUEL OIL PUMPS
LOCATION: SERV BLDG, ROOM 109, COL SB/5
BREAKER NUMBER: MCC-3C4C-2-J02
SYSTEM: FO-AB
FAILURE MODE:

TAG NUMBER: AS-3A/3B
EQUIPMENT NAME: BOILER FEED PUMPS "A" AND "B"
LOCATION: SERV BLDG, ROOM 109, COL SB/6
BREAKER NUMBER: MCC-3C4C-2-J03
SYSTEM: AS-AB
FAILURE MODE:

TAG NUMBER: AS-16
EQUIPMENT NAME: AUXILIARY BOILER FORCED DRAFT FAN
LOCATION: SERV BLDG, ROOM 109, COL SB/5
BREAKER NUMBER: MCC-3C4C-2-J04
SYSTEM: AS
FAILURE MODE:

TAG NUMBER: DW-8A
EQUIPMENT NAME: BOOSTER PUMP "A"
LOCATION: SERV BLDG, ROOM 109, COL SB/7
BREAKER NUMBER: MCC-3C4C-2-J05
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: DW-40A
EQUIPMENT NAME: DEMINERALIZED WATER TRANSFER PUMP "A"
LOCATION: SERV BLDG, ROOM 109, COL SB/6
BREAKER NUMBER: MCC-3C4C-2-J06
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: HE-7A
EQUIPMENT NAME: SERVICE BUILDING ELEVATOR
LOCATION: SERVICE BLDG, COL A/1
BREAKER NUMBER: MCC-3C4C-2-K02
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: HE-4
EQUIPMENT NAME: MACHINE SHOP CRANE
LOCATION: SERV BLDG, ROOM 105, COL A/5
BREAKER NUMBER: MCC-3C4C-2-K03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-27
EQUIPMENT NAME: pH NEUTRALIZATION MISCELLANEOUS POWER PANEL
LOCATION: NEUTRALIZATION BLDG, NEAR SE CORNER
BREAKER NUMBER: MCC-3C4C-2-K04
SYSTEM: CL
FAILURE MODE:

3

TAG NUMBER: MPP-26
EQUIPMENT NAME: MACHINE SHOP DISTRIBUTION PANEL
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MCC-3C4C-2-K06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-689A
EQUIPMENT NAME: SERVICE BUILDING 480V WELDING RECEPTACLE
LOCATION: SERV BLDG, ROOM 109, COL SB/4
BREAKER NUMBER: MCC-3C4C-2-K07
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-689C
EQUIPMENT NAME: SERVICE BUILDING 480V WELDING RECEPTACLE
LOCATION: SERV BLDG, ROOM 109, COL A/4
BREAKER NUMBER: MCC-3C4C-2-K07
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-690B
EQUIPMENT NAME: SERVICE BUILDING 480V WELDING RECEPTACLE
LOCATION: SERV BLDG, ROOM 109, COL SB/7
BREAKER NUMBER: MCC-3C4C-2-K08
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-690D
EQUIPMENT NAME: SERVICE BUILDING 480V WELDING RECEPTACLE
LOCATION: SERV BLDG, ROOM 206, COL SA/7
BREAKER NUMBER: MCC-3C4C-2-K08
SYSTEM: EE
FAILURE MODE:

SOURCE BUS LOCATION
TURBINE BUILDING

RELATED SYSTEMS:

EE
FO
VA

COMMENTS:
NO COMMENTS

TAG NUMBER: EE-56
EQUIPMENT NAME: FEED TO EE-57 & JW-5 VIA TRANSFORMER EE-56
LOCATION:
BREAKER NUMBER:
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-720
EQUIPMENT NAME: STARTUP FEEDWATER PUMP VENTILATION FAN
LOCATION:
BREAKER NUMBER: 1F
SYSTEM: VA
FAILURE MODE:

3

TAG NUMBER: VA-721
EQUIPMENT NAME: STARTUP FEEDWATER PUMP VENTILATION FAN
LOCATION:
BREAKER NUMBER: 1H
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: FO-37
EQUIPMENT NAME: STARTUP FEEDWATER PUMP FUEL OIL TRANSFER PUMP
LOCATION: SERV BLDG, ROOM 109, COL SA/4 1008'
BREAKER NUMBER: 1K
SYSTEM: FO
FAILURE MODE:

SOURCE BUS - MCC-4B1
PAGE 1

3

SOURCE BUS LOCATION:
AUX BLDG, ROOM 57, COL D/4a

RELATED SYSTEMS:

E
E-5
E
R

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A03) IS FED BY MPP-1C3A-1, CABLE 9486A.

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 57, COL D/4a
BREAKER NUMBER: MCC-4B1-A01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: PCV-102-2
EQUIPMENT NAME: PRESSURIZER PRESSURE POWER RELIEF VALVE
LOCATION: CONT BLDG, ELEV 1045', COL 5/6
BREAKER NUMBER: MCC-4B1-A02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *T1B-4B-CLG-FANS
EQUIPMENT NAME: TRANSFORMER T1B-4B FORCED COOLING FANS
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: MCC-4B1-A05
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-339B
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1013', COL 4
BREAKER NUMBER: MCC-4B1-A4L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-339C
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 994', COL 4
BREAKER NUMBER: MCC-4B1-A4L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-339D
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1013', COL 5
BREAKER NUMBER: MCC-4B1-A4L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-339E
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1013', COL 5
BREAKER NUMBER: MCC-4B1-A4L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-339F
EQUIPMENT NAME: CONTAINMENT 480V WELDING RECEPTACLE
LOCATION: CONT BLDG, ELEV 1045', COL 3
BREAKER NUMBER: MCC-4B1-A4L
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: HE-30
EQUIPMENT NAME: CONTAINMENT EQUIPMENT HATCH AREA CRANE
LOCATION: CONT BLDG, ELEV 1013', COL 4
BREAKER NUMBER: MCC-4B1-A4L
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: EE-4P
EQUIPMENT NAME: INVERTER "B" (EE-8J) BYPASS 480/120V TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: MCC-4B1-A4R
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *HTRS-BNK3-GRP8
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #3 GROUP #8
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4B1-B01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK3-GRP8
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #3 GROUP #8 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4B1-B02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *HTRS-BNK3-GRP9
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #3 GROUP #9
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4B1-C01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK3-GRP9
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #3 GROUP #9 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4B1-C02
SYSTEM: RC
FAILURE MODE:

SOURCE BUS - MCC-4B2
PAGE 1

SOURCE BUS LOCATION:
TURB BLDG, ELEV 1011', COL TD/8

RELATED SYSTEMS:

AC-TPC
CF
CW
EE
EE-5
FW
FW-TB
RM
ST
VA
VA-TB
VD-SMP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE D01) IS FED BY MPP-2, CABLE 870.

TAG NUMBER: *XFMR-AUX-FEED-2
EQUIPMENT NAME: TRANSFORMER AUXILIARY POWER FEEDER NO. 2
LOCATION: TRANSFORMER YARD, SOUTH OF TURB BDG
BREAKER NUMBER: MCC-4B2-A02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-88
EQUIPMENT NAME: SWITCHGEAR SIDE "B" AIR HANDLING UNIT
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: MCC-4B2-A03
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4B2-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: RE-057
EQUIPMENT NAME: CONDENSER OFFGAS RADIATION MONITOR ELEMENT
LOCATION: TURB BLDG, ELEV 1040', COL B/3
BREAKER NUMBER: MCC-4B2-A05
SYSTEM: RM
FAILURE MODE:

TAG NUMBER: VA-151B
EQUIPMENT NAME: TURBINE BUILDING VENTILATION FAN "B"
LOCATION: AUX BLDG, ROOM 82, COL F/1a
BREAKER NUMBER: MCC-4B2-A06
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: FW-30B
EQUIPMENT NAME: STEAM GENERATOR PUMP "B" OIL PUMP
LOCATION: TURB BLDG, ELEV 990', COL TC1/9
BREAKER NUMBER: MCC-4B2-B01
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: HCV-1150B
EQUIPMENT NAME: FEED PUMP "B" DISHCARGE ISOLATION VALVE
LOCATION: TURB BLDG, ELEV 998', COL TD/8
BREAKER NUMBER: MCC-4B2-B02
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: CF-6
EQUIPMENT NAME: AMINE OR HYDRAZINE STANDBY FEED PUMP
LOCATION: TURB BLDG, ELEV 1013', COL A/4
BREAKER NUMBER: MCC-4B2-B03
SYSTEM: CF
FAILURE MODE:

TAG NUMBER: VA-90
EQUIPMENT NAME: SWITCHGEAR SIDE "B" CONDENSING UNIT
LOCATION: AUX BLDG, ELEV 1007.5', COL M/1a
BREAKER NUMBER: MCC-4B2-B04
SYSTEM: VA
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4B2-B05
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: ST-4B
EQUIPMENT NAME: GAS BOOSTER ON STEAM PACKING EXHAUSTER "B"
LOCATION: TURB BLDG, ELEV 1016', COL TB/3
BREAKER NUMBER: MCC-4B2-C01
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: MOV-D2
EQUIPMENT NAME: STEAM PACKING EXHAUSTER DISCHARGE REGULATING VALVE
LOCATION: TURB BLDG, ELEV 1017', COL TB/3
BREAKER NUMBER: MCC-4B2-C02
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: VD-1B
EQUIPMENT NAME: TURBINE BUILDING SUMP PUMP "B"
LOCATION: TURB BLDG, ELEV 990', COL A/3
BREAKER NUMBER: MCC 4B2-C03
SYSTEM: VD-SMP
FAILURE MODE.

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4B2-C04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: AC-9B
EQUIPMENT NAME: BEARING WATER PUMP "B"
LOCATION: TURB BLDG, ELEV 993', COL TE/2
BREAKER NUMBER: MCC-4B2-D01
SYSTEM: AC-TPC
FAILURE MODE:

TAG NUMBER: VA-166B
EQUIPMENT NAME: AUX STEAM CONDENSATE RETURN PUMP B FROM VENT COILS
LOCATION: AUX BLDG, ROOM 82, COL F/1a
BREAKER NUMBER: MCC-4B2-D02
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: MOV-B-A1
EQUIPMENT NAME: CONDENSER B UPPER INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TB/5
BREAKER NUMBER: MCC-4B2-D03
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-B-A5
EQUIPMENT NAME: CONDENSER B UPPER INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/6
BREAKER NUMBER: MCC-4B2-D04
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-B-C3
EQUIPMENT NAME: CONDENSER B LOWER BACKWASH INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TB/5
BREAKER NUMBER: MCC-4B2-D05
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-B-C7
EQUIPMENT NAME: CONDENSER B LOWER BACKWASH INLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/6
BREAKER NUMBER: MCC-4B2-D06
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: VA-165B
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "B"
LOCATION: TURB BLDG, ELEV 1088', COL TC/7
BREAKER NUMBER: MCC-4B2-E01
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: VA-165D
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "D"
LOCATION: TURB BLDG, ELEV 1088', COL TC/2
BREAKER NUMBER: MCC-4B2-E02
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: VA-165F
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "F"
LOCATION: TURB BLDG, ELEV 1088', COL TB/7
BREAKER NUMBER: MCC-4B2-E03
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: VA-165H
EQUIPMENT NAME: TURBINE BUILDING UNIT HEATER "H"
LOCATION: TURB BLDG, ELEV 1088', COL TB/2
BREAKER NUMBER: MCC-4B2-E04
SYSTEM: FW-TB
FAILURE MODE:

TAG NUMBER: MOV-B-B2
EQUIPMENT NAME: CONDENSER B LOWER BACKWASH DISCHARGE VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/5
BREAKER NUMBER: MCC-4B2-E05
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-B-B6
EQUIPMENT NAME: CONDENSER B LOWER BACKWASH DISCHARGE VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/6
BREAKER NUMBER: MCC-4B2-E06
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-B-D4
EQUIPMENT NAME: CONDENSER B LOWER OUTLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/5
BREAKER NUMBER: MCC-4B2-E07
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: MOV-B-D8
EQUIPMENT NAME: CONDENSER B LOWER OUTLET VALVE
LOCATION: TURB BLDG, ELEV 990', COL TC/6
BREAKER NUMBER: MCC-4B2-E08
SYSTEM: CW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 4A, COL L/8a

RELATED SYSTEMS:

EE
EE-5
FW-BD
HE
WD-G
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE A01) IS FED BY MPP-1C3A-16, CABLE 9431A.

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-4B3-A02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-28B
EQUIPMENT NAME: WASTE GAS COMPRESSOR "B"
LOCATION: AUX BLDG, ROOM 16, COL L/9
BREAKER NUMBER: MCC-4B3-A03
SYSTEM: WD-G
FAILURE MODE:

TAG NUMBER: WD-16B
EQUIPMENT NAME: HOTEL WASTE PUMP "B"
LOCATION: AUX BLDG, ROOM 10, COL P/9
BREAKER NUMBER: MCC-4B3-A04
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: FW-51
EQUIPMENT NAME: BLOWDOWN DEWATERING PUMP AFTER SPENT RESIN HOLD
LOCATION: AUX BLDG, ROOM 20, COL G/4a
BREAKER NUMBER: MCC-4B3-A05
SYSTEM: FW-BD
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-4B3-A06
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: AUX BLDG, ROOM 4A, COL L/8a
BREAKER NUMBER: MCC-4B3-B02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-39B
EQUIPMENT NAME: CONCENTRATE TANK CHEM PUMP "B"
LOCATION: AUX BLDG, ROOM 9A, COL Q/8a
BREAKER NUMBER: MCC-4B3-B03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-23B
EQUIPMENT NAME: MONITOR WASTE TANK PUMP "B"
LOCATION: AUX BLDG, ROOM 10, COL P/9
BREAKER NUMBER: MCC-4B3-B04
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: HE-9
EQUIPMENT NAME: FILTER AREA CRANE
LOCATION: AUX BLDG, ROOM 4, COL P/7b
BREAKER NUMBER: MCC-4B3-B05
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: HE-27
EQUIPMENT NAME: STEAM GENERATOR BLOWDOWN FILTER HOIST
LOCATION: AUXILIARY BUILDING
BREAKER NUMBER: MCC-4B3-B06
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: W-1A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 4, COL E/7a
BREAKER NUMBER: MCC-4B3-B07
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-2A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 4, COL T/5d
BREAKER NUMBER: MCC-4B3-B07
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: W-3A
EQUIPMENT NAME: AUXILIARY BLDG 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 4, COL S/7a
BREAKER NUMBER: MCC-4B3-B07
SYSTEM: EE
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 57, COL D/4a

RELATED SYSTEMS:

EE
EE-5
FW
FW-1FW
MS
RC
SI-HP
SI-LP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE F04) IS FED BY MPP-1C3A-1, CABLE 9462A.

TAG NUMBER: *HTRS-BNK4-GRP10
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #4 GROUP #10
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4C1-A01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK4-GRP10
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #4 GRP #10 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4C1-A02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *HTRS-BNK4-GRP11
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #4 GROUP #11
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4C1-B01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK4-GRP11
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #4 GRP #11 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4C1-B02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *HTRS-BNK4-GRP12
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #4 GROUP #12
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4C1-C01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: *FUSES-BNK4-GRP12
EQUIPMENT NAME: PRESSURIZER BACK-UP HEATERS BANK #4 GRP #12 FUSES
LOCATION: CONT BLDG, COL 6 (RC-4)
BREAKER NUMBER: MCC-4C1-C02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: HCV-312
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 1B
LOCATION: CONT BLDG, ELEV 1013', COL 5/6
BREAKER NUMBER: MCC-4C1-D01
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: HCV-333
EQUIPMENT NAME: LOW PRESSURE SAFETY INJECTION MOV TO LOOP 2B
LOCATION: CONT BLDG, ELEV 1013', COL 12/13
BREAKER NUMBER: MCC-4C1-D02
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: HCV-1104
EQUIPMENT NAME: FEEDWATER CNTL TO STEAM GEN "B" OUTLET ISO VALVE
LOCATION: AUX BLDG, ROOM 81, COL D/5b
BREAKER NUMBER: MCC-4C1-D03
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: *T1B-4C-CLG-FANS
EQUIPMENT NAME: TRANSFORMER T1B-4C FORCED COOLING FANS
LOCATION: AUX BLDG, ROOM 56, COL D/5b
BREAKER NUMBER: MCC-4C1-D04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: HCV-321
EQUIPMENT NAME: HIGH PRESSURE SAFETY INJECTION MOV TO LOOP 2B
LOCATION: CONT BLDG, ELEV 1013', COL 13
BREAKER NUMBER: MCC-4C1-E01
SYSTEM: SI-HP
FAILURE MODE:

TAG NUMBER: HCV-2974
EQUIPMENT NAME: SAFETY INJECT TANK SI-6D DISCHARGE ISOLATION VALVE
LOCATION: CONT BLDG, ELEV 1013', COL 13/14
BREAKER NUMBER: MCC-4C1-E02
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: HCV-1384
EQUIPMENT NAME: MAIN AND AUX FEEDWATER SYS CROSS CONNECTION VALVE
LOCATION: AUX BLDG, ROOM 81, COL D/5b
BREAKER NUMBER: MCC-4C1-E03
SYSTEM: FW-1FW
FAILURE MODE:

TAG NUMBER: HCV-1385
EQUIPMENT NAME: MAIN FEEDWATER ISOLATION TO STEAM GEN "A"
LOCATION: AUX BLDG, ROOM 81, COL G/4a
BREAKER NUMBER: MCC-4C1-E04
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: *RC-3D-SPACE-HTR
EQUIPMENT NAME: REACTOR COOLANT PUMP RC-3D MOTOR SPACE HEATER
LOCATION: CONT BLDG, ELEV 994', COL 9
BREAKER NUMBER: MCC-4C1-F01
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: RC-3D-1
EQUIPMENT NAME: REACTOR COOLANT OIL LIFT PUMP "D"
LOCATION: CONT BLDG, ELEV 994', COL 9
BREAKER NUMBER: MCC-4C1-F02
SYSTEM: RC
FAILURE MODE:

TAG NUMBER: HCV-1042C
EQUIPMENT NAME: STEAM GENERATOR "B" MAIN STEAM BYPASS VALVE
LOCATION: AUX BLDG, ROOM 81, COL G/4a
BREAKER NUMBER: MCC-4C1-F03
SYSTEM: MS
FAILURE MODE:

TAG NUMBER: EE-4R
EQUIPMENT NAME: INVERTER "D" (EE-8L) BYPASS 480/120V TRANSFORMER
LOCATION: AUX BLDG, ROOM 56, COL D/6d
BREAKER NUMBER: MCC-4C1-F05
SYSTEM: EE-5
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 4, COL Q/6b

RELATED SYSTEMS:

AC-SFP
CH
DW
EE
EE-5
HE
RM
SI-CS
SI-LP
SL-PAS
VA
VD-SMP
WD-L

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE E05) IS FED BY MCC-1C3A-16, CABLE 9412.

TAG NUMBER: VA-C3B
EQUIPMENT NAME: CONTROL ROOM EMERGENCY AIR SUPPLY FAN
LOCATION: AUX BLDG, ROOM 81, COL J/5B EL 1050
BREAKER NUMBER:
SYSTEM: VA
FAILURE MODE:

(3)

TAG NUMBER: WD-14B
EQUIPMENT NAME: SPENT REGENT PUMP "B"
LOCATION: AUX BLDG, ROOM 23, COL P/7a
BREAKER NUMBER: MCC-4C2-A02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: DW-43B
EQUIPMENT NAME: DEAERATED WATER BOOSTER PUMP "B"
LOCATION: AUX BLDG, ROOM 69, COL U/5d
BREAKER NUMBER: MCC-4C2-A03
SYSTEM: DW
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/6b
BREAKER NUMBER: MCC-4C2-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/6b
BREAKER NUMBER: MCC-4C2-B01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-12B
EQUIPMENT NAME: CAUSTIC PUMP "B"
LOCATION: AUX BLDG, ROOM 4, COL U/6a
BREAKER NUMBER: MCC-4C2-B02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-26B
EQUIPMENT NAME: AUXILIARY BUILDING SUMP TANK PUMP "B"
LOCATION: AUX BLDG, ROOM 23, COL Q/8a
BREAKER NUMBER: MCC-4C2-B03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/6b
BREAKER NUMBER: MCC-4C2-B04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-40B
EQUIPMENT NAME: AUXILIARY BUILDING (ROOM 22) SUMP PUMP "B"
LOCATION: AUX BLDG, ROOM 22, COL T/8a
BREAKER NUMBER: MCC-4C2-C01
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-41B
EQUIPMENT NAME: AUXILIARY BUILDING (ROOM 23) SUMP PUMP "B"
LOCATION: AUX BLDG, ROOM 23, COL Q/8a
BREAKER NUMBER: MCC-4C2-C02
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: WD-27B
EQUIPMENT NAME: AUXILIARY BUILDING (ROOM 21) SUMP PUMP "B"
LOCATION: AUX BLDG, ROOM 21, COL U/8a
BREAKER NUMBER: MCC-4C2-C03
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/6b
BREAKER NUMBER: MCC-4C2-C04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: WD-5B
EQUIPMENT NAME: WASTE HOLDUP PUMP "B"
LOCATION: AUX BLDG, ROOM 7, COL T/7b
BREAKER NUMBER: MCC-4C2-D01
SYSTEM: WD-L
FAILURE MODE:

TAG NUMBER: SI-28
EQUIPMENT NAME: WASTE GAS PUMP DRAIN TANK (POST ACCIDENT SAMPLING)
LOCATION: AUX BLDG, ROOM 60, COL Q/7a
BREAKER NUMBER: MCC-4C2-D02
SYSTEM: SL-PAS
FAILURE MODE:

TAG NUMBER: VD-18B
EQUIPMENT NAME: STRESSING TUNNEL SUMP PUMP "B"
LOCATION: CONTAINMENT STRESSING GALLERY
BREAKER NUMBER: MCC-4C2-D03
SYSTEM: VD-SMP
FAILURE MODE:

TAG NUMBER: SL-30
EQUIPMENT NAME: RECIRC PUMP GAS DILUTION (POST ACCIDENT SAMPLING)
LOCATION: AUX BLDG, ROOM 16, COL L/9
BREAKER NUMBER: MCC-4C2-D04
SYSTEM: SL-PAS
FAILURE MODE:

TAG NUMBER: HCV-347
EQUIPMENT NAME: SHUTDOWN COOLING FROM LOOP 2 CONTMT ISO VALVE
LOCATION: AUX BLDG, ROOM 13, COL P/7a
BREAKER NUMBER: MCC-4C2-E01
SYSTEM: SI-LP
FAILURE MODE:

TAG NUMBER: HCV-383-4
EQUIPMENT NAME: CONTAINMENT SUMP ISOLATION VALVE
LOCATION: AUX BLDG, ROOM 23, COL P/7a
BREAKER NUMBER: MCC-4C2-E02
SYSTEM: SI-CS
FAILURE MODE:

TAG NUMBER: MPP-20
EQUIPMENT NAME: 120/240V MISC POWER PANEL (VIA XFMR EE-12)
LOCATION: AUX BLDG, ROOM 47, COL L/8a
BREAKER NUMBER: MCC-4C2-E03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: CH-13
EQUIPMENT NAME: BORIC ACID BLENDING TEE
LOCATION: AUX BLDG, ROOM 69, COL U/8a
BREAKER NUMBER: MCC-4C2-E04
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: CH-3
EQUIPMENT NAME: MOTOR CONTROLLED METERING PUMP
LOCATION: AUX BLDG, ROOM 4, COL U/5d
BREAKER NUMBER: MCC-4C2-E06
SYSTEM: CH
FAILURE MODE:

TAG NUMBER: AC-13B
EQUIPMENT NAME: FUEL TRANSFER CANAL DRAIN PUMP "B"
LOCATION: AUX BLDG, ROOM 24, COL T/3b
BREAKER NUMBER: MCC-4C2-F01
SYSTEM: AC-SFP
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: AUX BLDG, ROOM 4, COL Q/6b
BREAKER NUMBER: MCC-4C2-F02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: HE-8
EQUIPMENT NAME: DRUMMING AREA CRANE
LOCATION: AUX BLDG, ROOM 27, COL U/3b
BREAKER NUMBER: MCC-4C2-F03
SYSTEM: HE
FAILURE MODE:

TAG NUMBER: RM-061/062
EQUIPMENT NAME: CONTAINMENT RADIATION MONITORING PUMP
LOCATION: AUX BLDG, ROOM 69, COL P/7a
BREAKER NUMBER: MCC-4C2-F04
SYSTEM: RM
FAILURE MODE:

SOURCE BUS - MCC-4C2
PAGE 5

TAG NUMBER: AC-5B
EQUIPMENT NAME: STORAGE POOL RECIRCULATION PUMP "B"
LOCATION: AUX BLDG, ROOM 5, COL T/5d
BREAKER NUMBER: MCC-4C2-F05
SYSTEM: AC-SFP
FAILURE MODE:

SOURCE BUS LOCATION:
TURB BLDG, ELEV 1011', COL TD/8

RELATED SYSTEMS:

CF
EE
EE-5
FW
ST
TS-EHC
VA-TB
VD
VD-VP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE B01) IS FED BY MPP-2, CABLE 871.

TAG NUMBER: EE-2G-1B
EQUIPMENT NAME: ISOLATED PHASE BUS COOLING FAN MOTOR
LOCATION: TURB BLDG, ELEV 1011', COL TD/3
BREAKER NUMBER: MCC-4C3-A02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: SPARE STARTER
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4C3-A03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4C3-A04
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: VA-151D
EQUIPMENT NAME: TURBINE BUILDING VENTILATION FAN "D"
LOCATION: AUX BLDG, ROOM 82, COL C/1a
BREAKER NUMBER: MCC-4C3-A05
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: EHC-3B
EQUIPMENT NAME: HYDRAULIC FLUID PRESSURE PUMP "B"
LOCATION: TURB BLDG, ELEV 994', COL TD/7
BREAKER NUMBER: MCC-4C3-B01
SYSTEM: TS-EHC
FAILURE MODE:

5

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4C3-B02
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: *WR-599A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL TB/6X
BREAKER NUMBER: MCC-4C3-B03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-599C
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL TB/6X
BREAKER NUMBER: MCC-4C3-B03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-599D
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1036', COL A/7
BREAKER NUMBER: MCC-4C3-B03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-600A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL TB1/3X
BREAKER NUMBER: MCC-4C3-B04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-600C
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL TB1/3X
BREAKER NUMBER: MCC-4C3-B04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-600E
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL TB/3
BREAKER NUMBER: MCC-4C3-B04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE FOR 100A BREAKER
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4C3-B1A
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: ST-6B
EQUIPMENT NAME: STATOR COOLER PUMP "B"
LOCATION: TURB BLDG, ELEV 1013', COL TC/1
BREAKER NUMBER: MCC-4C3-C01
SYSTEM: ST
FAILURE MODE:

TAG NUMBER: *WR-601A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL TC3/1X
BREAKER NUMBER: MCC-4C3-C02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-601C
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL TC3/1X
BREAKER NUMBER: MCC-4C3-C02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-602A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL TE1/3X
BREAKER NUMBER: MCC-4C3-C03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-602C
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL TE1/3X
BREAKER NUMBER: MCC-4C3-C03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-603A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL B/6X
BREAKER NUMBER: MCC-4C3-C04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-603C
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL B/6X
BREAKER NUMBER: MCC-4C3-C04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-158B
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "B"
LOCATION: TURB BLDG, ELEV 1095', COL TC/7
BREAKER NUMBER: MCC-4C3-D01
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158J
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "J"
LOCATION: TURB BLDG, ELEV 1095', COL TE/7
BREAKER NUMBER: MCC-4C3-D02
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158D
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "D"
LOCATION: TURB BLDG, ELEV 1095', COL TC/5
BREAKER NUMBER: MCC-4C3-D03
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158L
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "L"
LOCATION: TURB BLDG, ELEV 1095', COL TE/5
BREAKER NUMBER: MCC-4C3-D04
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VD-7B
EQUIPMENT NAME: VACUUM PRIMING PUMP "B"
LOCATION: TURB BLDG, ELEV 992', COL A/3
BREAKER NUMBER: MCC-4C3-D05
SYSTEM: VD-VP
FAILURE MODE:

TAG NUMBER: VD-5B
EQUIPMENT NAME: CONDENSATE RETURN PUMP "B"
LOCATION: TURB BLDG, ELEV 991', COL A/2
BREAKER NUMBER: MCC-4C3-D06
SYSTEM: VD
FAILURE MODE:

TAG NUMBER: VA-158F
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "F"
LOCATION: TURB BLDG, ELEV 1095', COL TC/3
BREAKER NUMBER: MCC-4C3-E01
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158N
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "N"
LOCATION: TURB BLDG, ELEV 1095', COL TE/3
BREAKER NUMBER: MCC-4C3-E02
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: VA-158P
EQUIPMENT NAME: TURBINE ROOM ROOF VENT "P"
LOCATION: TURB BLDG, ELEV 1095', COL TE/2
BREAKER NUMBER: MCC-4C3-E03
SYSTEM: VA-TB
FAILURE MODE:

TAG NUMBER: EHC-8A & EHC-8B
EQUIPMENT NAME: HYDRAULIC FLUID POWER UNIT HEATERS
LOCATION: TURB BLDG, ELEV 990', COL TE/8
BREAKER NUMBER: MCC-4C3-E04
SYSTEM: TS-EHC
FAILURE MODE:

3

TAG NUMBER: CF-7B
EQUIPMENT NAME: PHOSPHATE FEED PUMP "B"
LOCATION: TURB BLDG, ELEV 1014', COL A/5
BREAKER NUMBER: MCC-4C3-E05
SYSTEM: CF
FAILURE MODE:

TAG NUMBER: *WR-598A
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL TD/8X
BREAKER NUMBER: MCC-4C3-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-598C
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 1011', COL TD/8X
BREAKER NUMBER: MCC-4C3-E06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-598E
EQUIPMENT NAME: TURBINE BLDG 480V WELDING RECEPTACLE
LOCATION: TURB BLDG, ELEV 990', COL TB/8
BREAKER NUMBER: MCC-4C3-E06
SYSTEM: EF
FAILURE MODE:

TAG NUMBER: FW-30C
EQUIPMENT NAME: STEAM GENERATOR PUMP "C" OIL PUMP
LOCATION: TURB BLDG, ELEV 990', COL TB1/9
BREAKER NUMBER: MCC-4C3-F01
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: HCV-1150C
EQUIPMENT NAME: FEED PUMP "C" DISCHARGE ISOLATION VALVE
LOCATION: TURB BLDG, ELEV 994', COL TC/9
BREAKER NUMBER: MCC-4C3-F02
SYSTEM: FW
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: TURB BLDG, ELEV 1011', COL TD/8
BREAKER NUMBER: MCC-4C3-F03
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: ST-14
EQUIPMENT NAME: TURBINE GENERATOR TURNING GEAR
LOCATION: TURB BLDG, ELEV 1042', COL TC/3
BREAKER NUMBER: MCC-4C3-F04
SYSTEM: ST
FAILURE MODE:

SOURCE BUS - MCC-4C4
PAGE 1

SOURCE BUS LOCATION:
INTK BLDG, ELEV 1007', COL CC/101

RELATED SYSTEMS:

AC-RW
CW
EE
EE-5
FP
SW
VA-INT
VD-SMP

COMMENTS:
SUPPLY BREAKER FOR MOTOR SPACE HEATERS (LOCATED AT CUBICLE D02) IS FED BY LTG PANEL LP-19.

TAG NUMBER: CW-2B
EQUIPMENT NAME: CIRCULATING WATER PUMP DISCHARGE VALVE #1
LOCATION: INTK BLDG, ELEV 1012', COL AA/103
BREAKER NUMBER: MCC-4C4-A01
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-7
EQUIPMENT NAME: SCREEN WASH PUMP STRAINER
LOCATION: INTK BLDG, ELEV 977', COL DD/104
BREAKER NUMBER: MCC-4C4-A02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: LP-19
EQUIPMENT NAME: 30 CKT LIGHTING PANEL, FED BY T1C-4B (CUBICLE B03)
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-4C4-A03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: CW-2D
EQUIPMENT NAME: CIRCULATING WATER PUMP DISCHARGE VALVE #2
LOCATION: INTK BLDG, ELEV 1012', COL AA/104
BREAKER NUMBER: MCC-4C4-B01
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-2F
EQUIPMENT NAME: CIRCULATING WATER PUMP DISCHARGE VALVE #3
LOCATION: INTK BLDG, ELEV 1012', COL AA/105
BREAKER NUMBER: MCC-4C4-B02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: T1C-4B
EQUIPMENT NAME: LIGHTING TRANSFORMER (FEEDS LP-1) AT CUBICLE A03)
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-4C4-B03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: CW-14B
EQUIPMENT NAME: SLUICE GATE ON TRAVELING SCREEN "B" INLET
LOCATION: INTK BLDG, ELEV 974', COL AA/103
BREAKER NUMBER: MCC-4C4-C01
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-14D
EQUIPMENT NAME: SLUICE GATE ON TRAVELING SCREEN "D" INLET
LOCATION: INTK BLDG, ELEV 974', COL AA/104
BREAKER NUMBER: MCC-4C4-C02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-14F
EQUIPMENT NAME: SLUICE GATE ON TRAVELING SCREEN "F" INLET
LOCATION: INTK BLDG, ELEV 974', COL AA/105
BREAKER NUMBER: MCC-4C4-C03
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: HCV-1905C
EQUIPMENT NAME: CIRCULATING WATER PUMP DISCHARGE VALVE "C"
LOCATION: INTK BLDG, ELEV 996', COL DD/104
BREAKER NUMBER: MCC-4C4-C04
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: SW-2B
EQUIPMENT NAME: SEAL WATER PUMP "B" FOR CIRC WATER PUMPS CW-1A,B,C
LOCATION: INTK BLDG, ELEV 987', COL CC/105
BREAKER NUMBER: MCC-4C4-D01
SYSTEM: SW
FAILURE MODE:

TAG NUMBER: *WR-609C
EQUIPMENT NAME: INTAKE STRUCTURE 480V WELDING RECEPTACLE
LOCATION: INTK BLDG, ELEV 1007', COL AA/105
BREAKER NUMBER: MCC-4C4-D03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: CW-4B
EQUIPMENT NAME: SCREENWASH SEAL WATER PUMP "B"
LOCATION: INTK BLDG, ELEV 987', COL CC/105
BREAKER NUMBER: MCC-4C4-D04
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: VD-2B
EQUIPMENT NAME: INTAKE STRUCTURE SUMP PUMP "B"
LOCATION: INTK BLDG, ELEV 974', COL DD/103
BREAKER NUMBER: MCC-4C4-D05
SYSTEM: VD-SMP
FAILURE MODE:

TAG NUMBER: FP-6B
EQUIPMENT NAME: FIRE PUMP "1B" STRAINER
LOCATION: INTK BLDG, ELEV 1010', COL CC/105
BREAKER NUMBER: MCC-4C4-D06
SYSTEM: FP
FAILURE MODE:

TAG NUMBER: AC-12B
EQUIPMENT NAME: RAW WATER PUMP STRAINER "B"
LOCATION: INTK BLDG, ELEV 994', COL BB/104
BREAKER NUMBER: MCC-4C4-D07
SYSTEM: AC-RW
FAILURE MODE:

TAG NUMBER: VA-185
EQUIPMENT NAME: UPPER CW PUMP BEARINGS COOLING AIR BLOWER
LOCATION: INTK BLDG, ELEV 1010', COL DD/103
BREAKER NUMBER: MCC-4C4-DA6
SYSTEM: VA-INT
FAILURE MODE:

TAG NUMBER: SPACE
EQUIPMENT NAME: EMPTY CUBICLE
LOCATION: INTK BLDG, ELEV 1007', COL CC/101
BREAKER NUMBER: MCC-4C4-E01
SYSTEM: EE-5
FAILURE MODE:

TAG NUMBER: HCV-1905B
EQUIPMENT NAME: CIRCULATING WATER PUMP DISCHARGE VALVE "B"
LOCATION: INTK BLDG, ELEV 996', COL DD/103
BREAKER NUMBER: MCC-4C4-E02
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-15B
EQUIPMENT NAME: CIRCULATING WATER PUMP "B" SLUICE GATE
LOCATION: INTK BLDG, ELEV 970', COL CC/104
BREAKER NUMBER: MCC-4C4-E03
SYSTEM: CW
FAILURE MODE:

TAG NUMBER: CW-15C
EQUIPMENT NAME: CIRCULATING WATER PUMP "C" SLUICE GATE
LOCATION: INTK BLDG, ELEV 970', COL CC/103
BREAKER NUMBER: MCC-4C4-E04
SYSTEM: CW
FAILURE MODE:

SOURCE BUS LOCATION:
AUX BLDG, ROOM 67, COL U/4b

RELATED SYSTEMS:

EE
VA-CON

COMMENTS:
NO COMMENTS

TAG NUMBER: *WR-357
EQUIPMENT NAME: HOT SHOP 480V WELDING RECEPTACLE
LOCATION: AUX BLDG, ROOM 67, COL U/3b
BREAKER NUMBER: MPP-6-01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-10001
EQUIPMENT NAME: HOT SHOP 480V WELDING RE CLE
LOCATION: AUX BLDG, ROOM 69
BREAKER NUMBER: MPP-6-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 15 AMP SPARE BREAKER
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MPP-6-03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: LP-22-XFMR
EQUIPMENT NAME: HOT SHOP 480/240V TRANSFORMER FOR LTG PANEL LP-22
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MPP-6-04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-76
EQUIPMENT NAME: CONTMT PURGE AIR DISHCARGE LOW-FLOW FAN (7.5 hp)
LOCATION: AUX BLDG, ROOM 69, COL N/7a
BREAKER NUMBER: MPP-6-05
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 15 AMP SPARE BREAKER
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MPP-6-06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-77
EQUIPMENT NAME: CONTMT PURGE AIR DISHCARGE LOW-FLOW FAN (3.0 hp)
LOCATION: AUX BLDG, ROOM 69, COL N/7a
BREAKER NUMBER: MPP-6-07
SYSTEM: VA-CON
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 15 AMP SPARE BREAKER
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MPP-6-08
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *DRILL-PRESS
EQUIPMENT NAME: HOT SHOP DRILL PRESS
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MPP-6-09
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *LATHE
EQUIPMENT NAME: HOT SHOP LATHE
LOCATION: AUX BLDG, ROOM 67, COL U/4b
BREAKER NUMBER: MPP-6-10
SYSTEM: EE
FAILURE MODE:

SOURCE BUS LOCATION:
TSC BLDG, ELEV 1004', COL A2/3A

RELATED SYSTEMS:

EE
VA-TSC

COMMENTS:
NO COMMENTS

TAG NUMBER: SPARE
EQUIPMENT NAME: 20 AMP SPARE BREAKER
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-12-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-178
EQUIPMENT NAME: HVAC EQUIPMENT ROOM UNIT HEATER
LOCATION: TSC BLDG, ELEV 1004', COL F/1
BREAKER NUMBER: MPP-12-03
SYSTEM: VA-TSC
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 20 AMP SPARE BREAKER
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-12-04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-176
EQUIPMENT NAME: CORRIDOR FAN UNIT HEATER
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-12-05
SYSTEM: VA-TSC
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 15 AMP SPARE BREAKER
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-12-06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-175
EQUIPMENT NAME: UPS ROOM UNIT HEATER
LOCATION: TSC BLDG, ELEV 1004', COL A2/3
BREAKER NUMBER: MPP-12-07
SYSTEM: VA-TSC
FAILURE MODE:

SOURCE BUS - MPP-14
PAGE 1

SOURCE BUS LOCATION:
TSC BLDG, ELEV 1004', COL B/4

RELATED SYSTEMS:

EE
VA-TSC

COMMENTS:
NO COMMENTS

TAG NUMBER: EE-27
EQUIPMENT NAME: UPS SYSTEM NORMAL FEEDER
LOCATION: TSC BLDG, ELEV 1004', COL B/3
BREAKER NUMBER: MPP-14-01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-15
EQUIPMENT NAME: TSC 120/208V MISC POWER PANEL (VIA XFMR T1C-7B)
LOCATION: TSC BLDG, ELEV 1004', COL B/4
BREAKER NUMBER: MPP-14-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: LP-27
EQUIPMENT NAME: TSC DIESEL ROOM LIGHTING PANEL (VIA XFMR T1C-6B)
LOCATION: TSC BLDG, ELEV 1004', COL B/4
BREAKER NUMBER: MPP-14-03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-13
EQUIPMENT NAME: TSC 120/208V MISC POWER PANEL (VIA XFMR T1C-8B)
LOCATION: TSC BLDG, ELEV 1004', COL B/4
BREAKER NUMBER: MPP-14-04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: VA-106
EQUIPMENT NAME: HVAC CONDENSER FANS AND COMPRESSOR MOTOR
LOCATION: TSC ROOF, COL 2/D
BREAKER NUMBER: MPP-14-05
SYSTEM: VA-TSC
FAILURE MODE:

TAG NUMBER: VA-109
EQUIPMENT NAME: HVAC CHARCOAL FILTER FAN (ROOM 25)
LOCATION: TSC BLDG, ELEV 1004', COL 2/D
BREAKER NUMBER: MPP-14-06
SYSTEM: VA-TSC
FAILURE MODE:

TAG NUMBER: VA-177
EQUIPMENT NAME: DIESEL GENERATOR ROOM UNIT HEATER
LOCATION: TSC BLDG, ELEV 1004', COL A2/4
BREAKER NUMBER: MPP-14-07
SYSTEM: VA-TSC
FAILURE MODE:

TAG NUMBER: VA-107
EQUIPMENT NAME: HVAC AIR HANDLING UNIT (MECH EQUIP. ROOM)
LOCATION: TSC BLDG, ELEV 1004', COL 2/D
BREAKER NUMBER: MPP-14-08
SYSTEM: VA-TSC
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 50 AMP SPARE BREAKER
LOCATION: TSC BLDG, ELEV 1004' OL B/4
BREAKER NUMBER: MPP-14-09
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: T1C-10B
EQUIPMENT NAME: UPS SYSTEM ALTERNATE FEEDER
LOCATION: TSC BLDG, ELEV 1004', COL B1/3
BREAKER NUMBER: MPP-14-10
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: T1C-9B
EQUIPMENT NAME: TRANSFORMER FOR BRUNNING PRINTER
LOCATION: TSC BLDG, ELEV 1004', COL B/3A
BREAKER NUMBER: MPP-14-11
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 70 AMP SPARE BREAKER
LOCATION: TSC BLDG, ELEV 1004', COL B/4
BREAKER NUMBER: MPP-14-12
SYSTEM: EE
FAILURE MODE:

SOURCE BUS LOCATION:
TSC BLDG, ELEV 1004', COL A/3A

RELATED SYSTEMS:

EE

COMMENTS:
NO COMMENTS

TAG NUMBER: MPP-14
EQUIPMENT NAME: TSC 480V MISC POWER PANEL (VIA XFER SW EE-25A)
LOCATION: TSC BLDG, ELEV 1004', COL B/4
BREAKER NUMBER: MPP-16-01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-13813A
EQUIPMENT NAME: TECH SUPPORT CENTER 480V WELDING RECEPTACLE
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-16-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *WR-13813C
EQUIPMENT NAME: TECH SUPPORT CENTER 480V WELDING RECEPTACLE
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-16-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 100 AMP SPARE BREAKER
LOCATION: TSC BLDG, ELEV 1004', COL A/3A
BREAKER NUMBER: MPP-16-03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-28
EQUIPMENT NAME: TSC 120/240 MPP FOR TRAILERS #9 AND #11
LOCATION: TSC BLDG, ELEV 1004', WEST WALL
BREAKER NUMBER: MPP-16-04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-12
EQUIPMENT NAME: TECH SUPPORT CENTER 480V MISC POWER PANEL
LOCATION: TSC BLDG, ELEV 1004', COL A2/3A
BREAKER NUMBER: MPP-16-05
SYSTEM: EE
FAILURE MODE:

SOURCE BUS LOCATION:
OUTDOORS, NEAR MAINTENANCE SHOP

RELATED SYSTEMS:

EE

COMMENTS:
NO COMMENTS

TAG NUMBER: MPP-9
EQUIPMENT NAME: MAINTENANCE SHOP 480V MISCELLANEOUS POWER PANEL
LOCATION: MAINT SHOP, ELEV 1007', COL MJ/13
BREAKER NUMBER: MPP-17-01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-16
EQUIPMENT NAME: TECH SUPPORT CENTER 480V MISCELLANEOUS POWER PANEL
LOCATION: TSC BLDG, ELEV 1004', COL A/3A
BREAKER NUMBER: MPP-17-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: MPP-30
EQUIPMENT NAME: MAINT SHOP 480V MISC POWER PANEL (MR-FC-86-115)
LOCATION: MAINTENANCE SHOP, ELEV 1007'
BREAKER NUMBER: MPP-17-03
SYSTEM: EE
FAILURE MODE:

SOURCE BUS - MPP-26
PAGE 1

SOURCE BUS LOCATION:
SERV BLDG, ROOM 105, COL SB/4

RELATED SYSTEMS:

EE

COMMENTS:
NO COMMENTS

TAG NUMBER: *DISHWASHER
EQUIPMENT NAME: SERVICE BUILDING CAFETERIA DISHWASHER
LOCATION: SERV BLDG, ROOM 320, COL A/7
BREAKER NUMBER: MPP-26-01
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 15 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-02
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *TRAILER-XFMR
EQUIPMENT NAME: 50 KVA TRANSFORMER FOR TRAILERS #15 AND #16
LOCATION: SERVICE BUILDING
BREAKER NUMBER: MPP-26-03
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 10 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-04
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 30 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-05
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 40 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-06
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 30 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-07
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *DRILL-PRESS
EQUIPMENT NAME: SERVICE BLDG DRILL PRESS (DISCONNECTED AT FAR END)
LOCATION: SERVICE BUILDING, ROOM 105
BREAKER NUMBER: MPP-26-08
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 20 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-09
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *NRC-OFFICES-A/C
EQUIPMENT NAME: SERVICE BLDG NRC OFFICES AIR CONDITIONING UNIT
LOCATION: SERVICE BUILDING, ELEV 1007.5'
BREAKER NUMBER: MPP-26-10
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *OFFICES
EQUIPMENT NAME: SERVICE BUILDING FIRST FLOOR OFFICES
LOCATION: SERVICE BUILDING, ELEV 1007.5'
BREAKER NUMBER: MPP-26-11
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 50 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-12
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: SPARE
EQUIPMENT NAME: 50 AMP SPARE BREAKER
LOCATION: SERV BLDG, ROOM 105, COL SB/4
BREAKER NUMBER: MPP-26-13
SYSTEM: EE
FAILURE MODE:

TAG NUMBER: *LOBBY-HTR
EQUIPMENT NAME: SERVICE BUILDING LOBBY HEATER
LOCATION: SERVICE BUILDING, ROOM 100
BREAKER NUMBER: MPP-26-14
SYSTEM: EE
FAILURE MODE:

SOURCE BUS - ATA-D1
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG ROOM 63 EL. 1013' COL D/1A

RELATED SYSTEMS:

DG
FO
LO
SA

COMMENTS:
DIESEL GEN D1 480V AUTO XFER SWITCH

TAG NUMBER: FO-4A&4B-1-M
EQUIPMENT NAME: FUEL OIL TRANSFER PUMP NO 1 & 2
LOCATION: AUX BLDG, ROOM 63, COL K/1a EL 1012
BREAKER NUMBER:
SYSTEM: FO
FAILURE MODE:

TAG NUMBER: JW-2-1
EQUIPMENT NAME: IMMERSION HEATER FOR DG-1
LOCATION: AUX BLDG, ROOM 63 COL K/1a EL 1009
BREAKER NUMBER:
SYSTEM: DG
FAILURE MODE:

3

TAG NUMBER: LO-33-1-M
EQUIPMENT NAME: LUBE OIL CIRCULATING PUMP FOR DG-1
LOCATION: AUX BLDG, ROOM 63, COL K/1a EL 1009
BREAKER NUMBER:
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: LO-40-1-M
EQUIPMENT NAME: TURBO LUBE OIL CIRC PUMP
LOCATION: AUX BLDG, ROOM 63, COL F/1a EL 1008
BREAKER NUMBER:
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: SA-1-1-M1
EQUIPMENT NAME: AIR COMPRESSOR NO 1 FOR DG-1
LOCATION: AUX BLDG, ROOM 63, COL D/1a EL 1020
BREAKER NUMBER:
SYSTEM: SA
FAILURE MODE:

SOURCE BUS - ATA-D1
PAGE 2

TAG NUMBER: SA-2-1-M
EQUIPMENT NAME: AIR COMPRESSOR NO 2
LOCATION: AUX BLDG, ROOM 63 COL D/1a EL 1020
BREAKER NUMBER:
SYSTEM: SA
FAILURE MODE:

SOURCE BUS - ATA-D2
PAGE 1

SOURCE BUS LOCATION:
AUX BLDG RM 64 EL 1013' COL D/2A

RELATED SYSTEMS:

DG
FO
LO
SA

COMMENTS:
DIESEL GEN D2 480V AUTO XFER SWITCH

TAG NUMBER: FO-4A&4B-2-M
EQUIPMENT NAME: FUEL OIL TRANSFER PUMP NO 1 & 2
LOCATION: AUX BLDG, ROOM 64, COL K/2b EL 1012
BREAKER NUMBER:
SYSTEM: FO
FAILURE MODE:

TAG NUMBER: JW-2-2
EQUIPMENT NAME: IMMERSION HEATER FOR DG-2
LOCATION: AUX BLDG, ROOM 64, COL K/2b EL 1009
BREAKER NUMBER:
SYSTEM: DG
FAILURE MODE:

TAG NUMBER: LO-33-2-M
EQUIPMENT NAME: LUBE OIL CIRCULATING PUMP FOR DG-2
LOCATION: AUX BLDG, ROOM 64, COL K/2b EL 1009
BREAKER NUMBER:
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: LO-40-2-M
EQUIPMENT NAME: TURBO LUBE OIL CIRC PUMP
LOCATION: AUX BLDG, ROOM 64, COL F/1a EL 1008
BREAKER NUMBER:
SYSTEM: LO
FAILURE MODE:

TAG NUMBER: SA-1-2-M1
EQUIPMENT NAME: AIR COMPRESSOR NO 1 FOR DG-2
LOCATION: AUX BLDG, ROOM 64, COL D/2b EL 1020
BREAKER NUMBER:
SYSTEM: SA
FAILURE MODE:

SOURCE BUS - ATA-D2
PAGE 2

TAG NUMBER: SA-2-2-M
EQUIPMENT NAME: AIR COMPRESSOR NO 2
LOCATION: AUX BLDG, ROOM 64, COL D/2b EL 1020
BREAKER NUMBER:
SYSTEM: SA
FAILURE MODE:

3

Attachment 2

PROPOSED LOCATION FOR DATA ACQUISITION POINTS

	Temperature Measurement Locations:	Thermocouple Length (in ft.)
1.	Jacket water inlet to radiator (6" dia.) †	
2.	Jacket water outlet from radiator (6" dia.) (RAD. CORE #1 & #2) †	110
3a.	Air inlet to radiator (west end)	115
3b.	Air inlet to radiator (northeast end)	115
3c.	Air inlet to radiator (southeast end)	120
3d.	Air inlet to radiator (east end)	115
3e.	Air inlet to radiator (southeast end)	105
3f.	Air inlet to radiator (southwest end)	105
4a.	Air outlet from radiator (south port - bottom of duct)	115
4b.	Air outlet from radiator (center port - bottom of duct)	
4c.	Air outlet from radiator (north port - bottom of duct)	
5a.	Air outdoor ambient at inlet damper	
5b.	Air outdoor ambient at inlet damper	80
5c.	Air outdoor ambient at inlet damper	90
5d.	Air outdoor ambient at inlet damper	95
5e.	Air outdoor ambient at inlet damper	100
5f.	Air outdoor ambient at inlet damper	105
6a.	Air indoor ambient at 4' above floor (southeast corner)	110
6b.	Air indoor ambient at 4' above floor (southeast center)	65
6c.	Air indoor ambient at 4' above floor (southwest center)	70
6d.	Air indoor ambient at 4' above floor (southwest corner)	90
6e.	Air indoor ambient at 4' above floor (northwest corner)	110
6f.	Air indoor ambient at 4' above floor (northwest center)	125
6g.	Air indoor ambient at 4' above floor (northwest center)	105
6h.	Air indoor ambient at 4' above floor (northwest corner)	85
6j.	Air indoor ambient at 12' above floor (southeast corner)	80
6k.	Air indoor ambient at 12' above floor (southeast center)	75
6l.	Air indoor ambient at 12' above floor (southwest center)	80
6m.	Air indoor ambient at 12' above floor (southwest corner)	100
6n.	Air indoor ambient at 12' above floor (northwest corner)	120
6p.	Air indoor ambient at 12' above floor (northwest center)	110
6q.	Air indoor ambient at 12' above floor (northwest center)	115
6r.	Air indoor ambient at 12' above floor (northwest corner)	95
7.	Jacket water inlet to pump #1 (6" dia.) †	90
8.	Jacket water inlet to pump #2 (6" dia.) †	95
9.	Jacket water inlet to ASCE valve (6" dia.) †	95
10.	Jacket water outlet from aftercooler #1 (1 1/2" dia.) †	100
11.	Jacket water outlet from aftercooler #2 (1 1/2" dia.) †	80
12.	Air inlet/outlet for VS-HER ventilation fan	85
13a.	Air indoor ambient by Main Control Cabinet 3' above floor (east)	90
13b.	Air indoor ambient by Main Control Cabinet 3' above floor (south)	75
13c.	Air indoor ambient by Main Control Cabinet 3' above floor (west)	65
13d.	Air indoor ambient by Main Control Cabinet 3' above floor (north)	65
13e.	Air indoor ambient by Main Control Cabinet 8' above floor (east)	75
13f.	Air indoor ambient by Main Control Cabinet 8' above floor (south)	80
13g.	Air indoor ambient by Main Control Cabinet 8' above floor (west)	70
13h.	Air indoor ambient by Main Control Cabinet 8' above floor (north)	70
14.	Air inlet to generator blower	90
15.	Air outlet from generator blower	85
	† NOTE: INSULATION COVERAGE REQUIRED PER ATTACHED SKETCH.	70

20. JACKET WATER OUTLET FROM ADIATOR CORE NUMBER ONE †
28. JACKET WATER OUTLET FROM RADIATOR CORE NUMBER TWO †

* NOTE: DATA LOGGER HOOK-UP NOT REQUIRED/LOCAL MEASURES ONLY

Attachment 3

ASSUMPTIONS

1. The diesel generator thermostatic control (AMOT) valve functions as designed and calibrated and is wide open above approximately 190 °F jacket water outlet temperature. Recent calibration data supports this.

2. Engineering judgment indicates that sufficient consistency of temperature data collected occurs within the one-hour loaded runs of ST-ESF-6, because the temperature differences utilized in this calculation remain relatively constant, within the accuracy of the instrumentation, from one diesel run to another for a given diesel. Since temperature differences are being utilized instead of raw data, statistical errors are minimized. The data collected reveals a high degree of repeatability.

3. The diesel loading conditions of ~2500 KW during ST-ESF-6 are representative of post-accident loading conditions. This is supported by the peak loading described in calculation FC03382 of 2518.3 KW for DG-1 and 2473.8 KW for DG-2.

4. For the tested KW load and outdoor ambient temperatures, the diesel generator cooling system has reached maximum capacity for the "as-built" configuration and jacket water follows increasing outdoor ambient temperature in a linear fashion. Empirical data collected to date supports this assumption in the temperature ranges observed.

5. For the temperature ranges being examined, the effects on generator electrical characteristics such as efficiency and power factor were not considered. This is allowed by the fact that the data was collected for a given electrical output irrespective of generator characteristics.

6. The effects of other ambient conditions such as barometric pressure, humidity, or wind conditions can be neglected. This is supported by the consistency of temperature differentials between engine parameters and outdoor ambient under a variety of atmospheric conditions throughout the data collecting.

ANALYSIS

Background

During the summer of 1989, as outdoor ambient temperatures increased, the diesel generators began to experience temperature problems. System Engineering began to collect additional temperature data during the monthly diesel surveillance tests in order to determine the root cause of

Attachment 4

file:diesel1
This is for DG-2 (7-17-90) 2000hr. derated curve.
Cold engine start at 103 degrees F outside ambient.
Engine start at 15:50, loaded to 2425 KW at 16:02.

TIME SEC.	Time	JWO Engine Gauge	Turbo Intake Ch. 51-59	Measured Outside Amb. Ch. 14-19	Graphed Ambient	JWO + DeltaG	Turbo In + DeltaTrb	DeltaG	DeltaTrb	%DERATE	DERATE KW	Calc. Profile KW	VA-52A STATUS
	16:00	164.0	96.0	89.0	103	178.1	112.9	14.1	16.94	1.000	2654.0		OFF
0	(16:02)	166.8	96.8	89.0	103	180.9	113.7	14.1	16.94	1.000	2654.0	2457.7	|
100		169.1	97.5	89.0	103	183.3	114.4	14.1	16.94	1.000	2654.0	2457.7	|
780	16:15	185.0	107.0	88.0	103	200.1	119.9	15.1	17.94	0.918	2437.3	2431.4	|
1680	16:30	188.0	105.0	89.0	103	202.1	121.9	14.1	16.94	0.913	2422.8	2396.5	|
2000		189.4	106.1	89.4	103	203.2	122.7	13.8	16.58	0.911	2417.7	2384.1	|
2580	16:45	192.0	108.0	90.0	103	205.1	123.9	13.1	15.94	0.907	2408.3	2384.1	|
3480	17:00	193.0	110.0	90.0	103	206.1	125.9	13.1	15.94	0.902	2393.9	2384.1	|
3740		193.3	109.4	90.0	103	206.4	125.4	13.1	15.94	0.904	2398.1	2384.1	|
3740		193.3	109.4	90.0	103	206.4	125.4	13.1	15.94	0.904	2398.1	2148.5	|
4380	17:15	194.0	108.0	90.0	103	207.1	123.9	13.1	15.94	0.907	2408.3	2148.5	|
5280	17:30	195.0	110.0	89.0	103	209.1	125.9	14.1	16.94	0.899	2386.6	2148.5	|
6180	17:45	195.0	110.0	90.0	103	208.1	125.9	13.1	15.94	0.902	2393.9	2148.5	|
7080	18:00	196.0	111.0	90.0	103	209.1	126.9	13.1	15.94	0.899	2386.5	2148.5	|
7980	18:15	196.0	114.0	90.0	103	209.1	129.9	13.1	15.94	0.891	2364.9	2148.5	|
8880	18:30	195.0	113.0	90.0	103	208.1	128.9	13.1	15.94	0.894	2372.1	2148.5	|
9780	18:45	195.0	112.0	90.0	103	208.1	127.9	13.1	15.94	0.897	2379.4	2148.5	|
10680	19:00	195.0	112.0	90.0	103	208.1	127.9	13.1	15.94	0.897	2379.4	2148.5	|
11580	19:15	194.0	112.0	90.0	103	207.1	127.9	13.1	15.94	0.897	2379.4	2148.5	|
12480	19:30	192.0	112.0	89.0	103	206.1	128.9	14.1	16.94	0.894	2372.1	2148.5	|
13380	19:45	186.0	110.0	88.0	103	201.1	127.9	15.1	17.94	0.897	2379.4	2148.5	|
14280	20:00	183.0	111.0	88.0	103	198.1	128.9	15.1	17.94	0.894	2372.1	2148.5	\/

EXPLANATION:

1. An empty cell in the TIME column signifies that the JWO Engine Gauge, Turbo Intake, and Ambient Temp. were linearly interpolated between the higher and lower points.
2. JWO Engine Gauge data was taken at 10 min. intervals. Where the measured value does not occur at a 15 min. interval, the next higher reading was used (conservative).
3. DeltaG = Graphed Ambient - Measured Outside Ambient + 1.62 - 1.5; Accounts for instrument uncertainties.
4. DeltaTrb = Graphed Ambient - Measured Outside Ambient + 1.62 + 1.32; Accounts for instrument uncertainties.
5. %DERATE is obtained from the EMD derating curve (attachment 8.2).
6. DERATE KW is %DERATE multiplied by 2654KW (the base 2000hr. KW rating @90 degrees F air intake).
7. Calc. Profile KW is the KW loading based on OPPD calc. #FC03382, Rev. 1.
8. The graph begins where TIME SEC. = 0.

ATTACHMENT 8.
PAGE 5 OF 15

DG-2 7-17-90
FAN OFF ENTIRE RUN

1916 LOAD REDUCED TO 2400 KW
1935 " " " 2150 KW

FORT CALHOUN STATION
SURVEILLANCE TEST
START 1550
WATER W/ INHIBITOR
9 Hours

ATTACHMENT 8
(DG-2 PERFORMANCE MONITORING)

Item No.	Parameter	Units	0 1550	5 1600	10 1610	15 1620	20 1630	25 1640	30 1650	35 1700	40 1710	45 1720	50 1730	55 1740	60 1750	65 1800	70 1810	75 1820	80 1830	85 1840
16	Outside Air Temp Weather Tower	°F																		
17	Engine Tach Panel AI-133A	RPM	X	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
18 77	Generator Current Panel AI-133A	Amps	X	0	400	395	390	400	400	390	390	395	400	395	395	400	400	400	400	400
19 74	Generator Voltage Panel AI-133A	Volts	X	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150	4150
20	Generator Load Indicator (Local)	0-10	X	2.5	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
21	Jacket Water Inlet Temp (Engine Panel)	°F	115	164	172	175	178	179	181	182	181	183	183	185	183	184	183	184	183	184
22A 71	Jacket Water Outlet Temp (Engine Panel)	°F	128	164	181	185	188	191	192	193	193	195	195	195	195	196	195	196	195	196
23	Fuel Oil Pressure No. 1 (Engine Panel)	psig	X	74	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
24	Fuel Oil Pressure No. 2 (Engine Panel)	psig	X	74	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
25	Turbo Exhaust Stack Pressure (Eng. Pnl)	$"H_2O$	X	1.6	3.0	1.0	0.6	0.3	0.3	0.2	0.2	0.2	0	0.1	0	0.1	0.1	0	0	0
26	Lube Oil Pump Disch Pressure (Eng. Pnl)	psig	X	97	86	83	81	80	80	80	79	78	78	78	78	78	78	78	78	78
27	Jacket Water Pump Disch Press (Engine Panel)	psig																		
28	Lube Oil Cooler Outlet Temp (Local)	°F	114	168	185	188	192	194	194	195	195	196	196	196	196	196	196	196	196	197
29	Fuel Oil Well Tank Level (Local)	%																		
30	Turbo Lube Oil Pressure (Local)	psig	30	85	82	80	77	77	77	77	77	75	75	75	75	75	75	75	75	75

EA-FC-90-062
Rev. 0
ATTACHMENT 8.31-5

FORT CALHOUN STATION
SURVEILLANCE TEST
7-17-90 06-2
J Kuna

OP-ST-DG-0002
PAGE 100 OF 104

ATTACHMENT 8
(DG-2 PERFORMANCE MONITORING)

Page 3 of 4

Item No.	Parameter	Units	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
				1850	1900	1910	1920		1930	1940	1950	2000								
16	Outside Air Temp Weather Tower	°F																		
(17)	Engine Tach Panel AI-133A	RPM	X	900	900	900	900	900	900	900	900									
(18)	Generator Current Panel AI-133A	Amps	X	390	340	390	380	365	325	325	325									
(19)	Generator Voltage Panel AI-133A	Volts	X	4150	4150	4150	4150	4150	4150	4150	4150									
(20)	Generator Load Indicator (Local)	0-10	X	7.6	7.6	7.6	7.4	7.5	7.0	7.0	7.0									
(21)	Jacket Water Inlet Temp (Engine Panel)	°F		183	183	183	182	180	175	174	173									
(21A)	Jacket Water Outlet Temp (Engine Panel)	°F		195	195	195	193	192	187	184	183									
(22)	Fuel Oil Pressure No. 1 (Engine Panel)	psig	X	64	64	64	64	64	65	65	65									
(23)	Fuel Oil Pressure No. 2 (Engine Panel)	psig	X	64	64	64	64	64	66	66	66									
(24)	Turbo Exhaust Stack Pressure (Eng. Pnl)	$"H_2O$	X	0	0	0	0	0	0	0	0									
(25)	Lube Oil Pump Disch Pressure (Eng. Pnl)	psig	X	78	78	78	79	80	83	84	85									
27	Jacket Water Pump Disch Press (Engine Panel)	psig																		
(28)	Lube Oil Cooler Outlet Temp (Local)	°F		196	196	196	195	194	190	187	186									
29	Fuel Oil Vault Tank Level (Local)	%																		
(30)	Turbo Lube Oil Pressure (Local)	psig		75	75	75	74	77	80	81	82									

Attachment 5

ATTACHMENT 8
(DG-1 PERFORMANCE MONITORING)

9-25-90
R Conway

Item No.	Parameter	Units	0	5	10	15	20 1500	25	30 1510	35	40 1520	45	50 1530	55	60 1540	65	70 1550	75	80 1600	85
1	Generator Blower Intake Temp *	°F	X																	
2	Generator Blower Outlet Temp *	°F	X																	
3	Engine Air Intake Temp Filter #1 *	°F	X																	
4	Engine Air Intake Temp Filter #2 *	°F					93													
5	Engine Air Intake Temp Filter #3 *	°F	X																	
6	Engine Air Intake Temp Filter #4 *	°F	X																	
7	Engine Air Intake Temp Filter #5 *	°F					96													
8	Engine Air Intake Temp Filter #6 *	°F	X																	
9	Engine Air Intake Temp Filter #7 *	°F	X																	
10	Engine Air Intake Temp Filter #8 *	°F					96													
11	Engine Air Intake Temp Filter #9 *	°F	X																	
12	Radiator Air Intake Temp NORTH *	°F																		
13	Radiator Air Intake Temp SOUTH *	°F																		
14	Room Ambient Air Temp NORTH *	°F																		
15	Room Ambient Air Temp SOUTH *	°F																		

* See Figure 2 for handheld temperature measurement locations.

Operator Gene Riggs
Engine Start at 1424

Redis

FORT CALHOUN STATION
SURVEILLANCE TEST

At 1610 hrs. Measured at opening in south wall.

OP-ST-DG-0002
PAGE 100 OF 104

9-25-90

ATTACHMENT 8
(DG-2 PERFORMANCE MONITORING)

Item No.	Parameter	Units	0 (1445)	5	10	15	20	25	30	35	40	45	50 (1530)	55	60 (1545)	65	70	75	80 (1600)	85 (1615)
16	Outside Air Temp Weather Tower	°F	87 *	~~84~~	~~84~~	~~84~~		~~84~~		~~84~~			~~85~~			92 *				90 x
17	Engine Tach Panel AI-133A	RPM	x	900		900		900		900			900			900			900	900
18	Generator Current Panel AI-133A	Amps	x	390		390		385		385			380			350			350	350
19	Generator Voltage Panel AI-133A	Volts	x	4100		4100		4200		4200			4100			4200			4200	4200
20	Generator Load Indicator (Local)	0-10	x	7.8		7.8		7.8		7.8			7.8			7.8			7.8	7.8
21	Jacket Water Inlet Temp (Engine Panel)	°F		170	173	175	176	177	178	178			180			180			180	180
22	Jacket Water Outlet Temp (Engine Panel)	°F		180	184	186	187	188	189	189			191			191			191	191
23	Fuel Oil Pressure No. 1 (Engine Panel)	psig	x	95		98		98		100			100			>100			>100	>100
24	Fuel Oil Pressure No. 2 (Engine Panel)	psig	x	74		74		74		74			74			74			74	74
25	Turbo Exhaust Stack Pressure (Eng. Pnl)	"H_2O	x	<0		<0		<0		<0			<0			<0			<0	<0
26	Lube Oil Pump Disch Pressure (Eng. Pnl)	psig	x	82		79		77		76			76			75			76	76
27	Jacket Water Pump Disch Press (Engine Panel)	psig		70		70		70		70			70			70			70	70
28	Lube Oil Cooler Outlet Temp (Local)	°F		186		192		195		196			197			198			198	198
29	Fuel Oil Wall Tank Level (Local)	x			83	[illegible]	72		63	[illegible]			[illegible]	40					92	
30	Turbo Lube Oil Pressure (Local)	psig		80		79		78		78			75			75			75	75

* measured outside at 90° F

x inlet 164° F

EA-90-091, REV.0
ATTACHMENT 8.18
PAGE 2 OF 3

P.02

R1 Replace

FC/OP-ST/07A

ATTACHMENT 8
(DG-2 PERFORMANCE MONITORING)

Page 4 of 4

Item No.	Parameter	Units	0	5	10	15	1500 20	25	1510 30	35	40	45	50	55	60	65	70	75	80	85
31	Primary Air Regulator Press*	psig																		
32	Secondary Air Regulator Press*	psig																		
33	~~MANOMETER~~ NORTH					:														
34	~~Manf~~ Lower left corner of	Exciter							87											
35																				
36																				
37	Temp At																			
38	Inlet Opening in Wall		at 1610 hrs							90°F										
39																				
40	Temp inside exhaust duct																			
41	at south test port. 12" insertion												165°F							
42																				
43																				

Starting Air Regulator Pressure to be 180 ± 10 psig.

Completed by Rick Rowing Date/Time 7-25-90/1620
System Engineer

1400 - 87°F

1640 - 90°F

EA-90-091, REV.0
ATTACHMENT 8, 18
PAGE 3 OF 3

OPPD-SYSTEM ENGINEE

P.03

C/OP-ST/07A

R1

Enclosure 2

Fort Calhoun Station (FCS)
Emergency Diesel Generator (EDG) Upper Temperature
Operating Limits - EA-FC-90-062 Summary

Fort Calhoun Station (FCS)
Emergency Diesel Generator (EDG) Upper Temperature
Operating Limits - EA-FC-90-062 Summary

Engineering Analysis EA-FC-90-062, Rev. 0 established the maximum outdoor ambient air temperatures at which the EDGs could be expected to provide power to engineered safety features (ESF) loads. This would assure safe reactor shutdown should a design basis event requiring diesel generator response occur.

Revision 1 to this analysis was prepared to incorporate changes in ESF loads on the generators and the results of engine jacket water outlet gauge post-test calibrations (which impacted the operating limits).

Subsequent to the issuance of EA-FC-90-062, Rev. 1, modifications and maintenance tasks performed on the EDGs have yielded improved performance.

A summary of these improvements is as follows:

1. Straightening and Steam Cleaning of Radiator Core Cooling Fins

   Post-cleaning air flow and temperature data were gathered and provided to the radiator vendor (along with other engine performance parameters) for the preparation of an expected performance analysis. The analysis predicted that jacket water temperatures could be maintained at or below the desired temperature of 208°F even when radiator inlet air temperatures were several degrees warmer than the 110°F established goal.

2. Changing Jacket Water From 50/50 Ethylene Glycol to Treated Water

   This change improved the heat transfer properties of the engine coolant and reduced mechanical work load on the engine's water pumps. A reduced load of 180 HP (per MWK Power Systems) nets a 130 KW increase in gross generator KW output, at the same operating temperature.

3. Installation of Exciter Cabinet Cooling Units

   Air conditioning units were installed to protect sensitive electrical components within the exciter cabinets from degradation due to high temperatures. The current configuration now allows for reliable diesel operation at outdoor ambient air temperatures above 110°F.

EA-FC-90-062, Rev. 2 (issued 6/14/91) was prepared to establish upper operating temperature limits for the diesel generators based upon analysis of the above improvements. Extensive use of vendor supplied technical information along with data from past diesel tests allowed OPPD to establish the new temperature limits for the diesel generators.

FCS Emergency Diesel Generator Upper Temperature
Operating Limits - EA-FC-90-062 Summary
(Continued)

DG-1 Testing

DG-1 was tested on June 26, 1991, with the outdoor ambient air temperature reaching 96°F during the test.

The ΔT between the outdoor ambient air temperature and the jacket water outlet temperature closely correlated with the radiator vendor's expected performance analysis.

The test instruments utilized for the DG-1 test were more accurate (less instrument uncertainty introduced) than those used for the testing that supported the Rev. 0 analysis. Post-test calibration of the jacket water outlet gauge and functional checks on the hand-held platinum digital thermometer showed excellent accuracy.

Conclusions drawn by EA-FC-90-062, Rev. 2 are considered accurate, yet conservative.

DG-2 Testing

DG-2 was tested on August 27, 1991, with the outdoor ambient air temperature reaching 89°F during the test.

Preliminary review of the test data correlates well with engineering analysis EA-FC-90-062 Rev. 2. Expected performance projections for the jacket water system and turbocharger inlet temperatures were met during the test. Testing substantiated the assumptions and conclusions of engineering analysis EA-90-062 Rev. 2.

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