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NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

January 25, 1983

Mr. Harold R. Denton
Director, Office of Nuclear
Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

In the Matter of
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station Unit 2
Docket No. 50-410

Dear Mr. Denton:

Niagara Mohawk Power Corporation hereby tenders its application for an operating license for Nine Mile Point Nuclear Station Unit 2 in accordance with 10CFR2.101(a)(2), 10CFR50.30(c)(2), 10CFR73.55 and 10CFR2.790. This submittal consists of the following:

1.	License Application (General Information and Affidavit) -	10 copies (3 originals)
2.	Final Safety Analysis Report -	15 sets
3.	Environmental Report -	20 sets
4.	Physical Security Plan -	6 copies
5.	Certain figures from FSAR Section 6A -	6 sets

Items 4 and 5 are materials for which proprietary status is being requested. These are being transmitted separately. The Physical Security Plan includes the Safeguards Contingency Plan. The Guard Training and Qualification Plan is the same as Nine Mile Point Unit 1 and has been approved by the NRC, but not submitted with this tendering.

Very truly yours,

C. V. Mangan
Vice President
Nuclear Licensing & Engineering

Enclosures

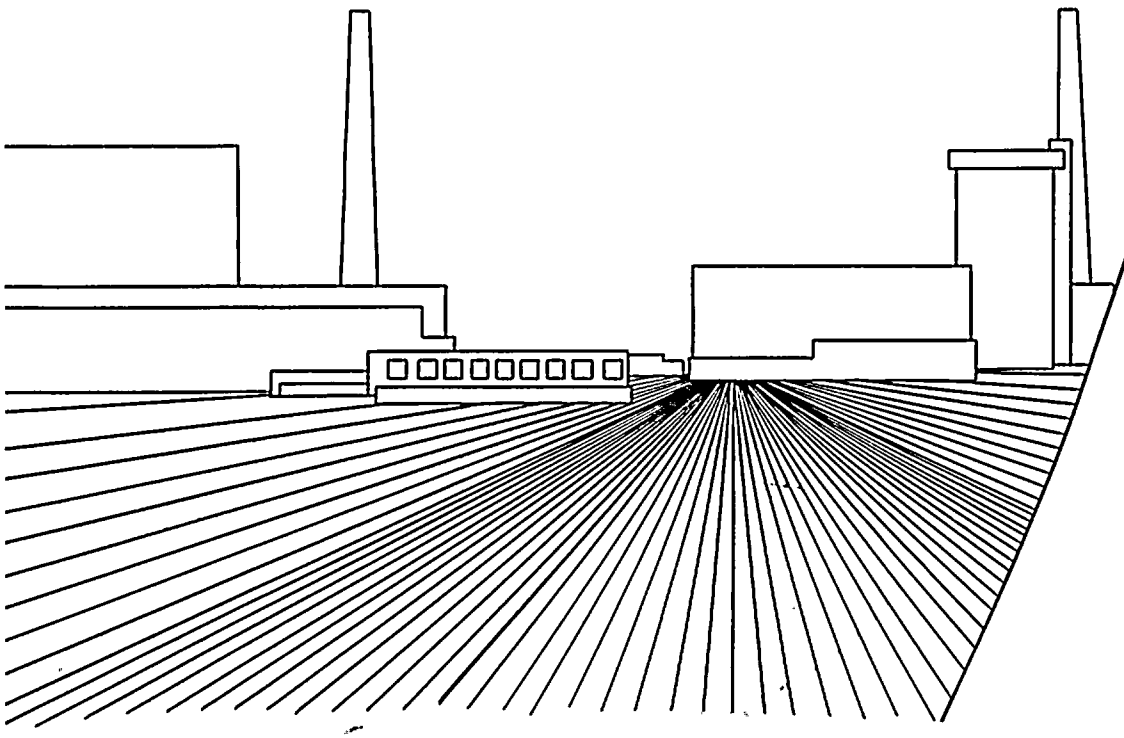
8 Rids See Attached Dist Codes

FINAL SAFETY ANALYSIS REPORT

NINE MILE POINT NUCLEAR STATION — UNIT 2

FAILURE MODES AND EFFECTS ANALYSIS

NIAGARA MOHAWK



BOOK 1

FAILURE MODES AND EFFECTS ANALYSIS

TABLE OF CONTENTS

SECTION 1

INTRODUCTION

This report documents the failure modes and effects analyses (FMEA) that were performed on Nine Mile Point Unit 2 balance-of-plant (BOP) and balance-of-plant/nuclear steam supply system interface (BOP/NSSS) safety-related instrumentation and control (I&C) and electrical power supply and distribution systems. The objective of the analysis is to verify that these systems meet the single failure criterion of IEEE-279-1971, Requirement 4.2, and IEEE-308-1974, Requirement 4.8. The method of analysis is derived from application of IEEE-379 as supplemented by Regulatory Guide 1.53 The method described and the detailed results of the FMEA are included in this report. A cross-index is provided between the FMEA and appropriate safety analysis, figures, and drawings in the Unit 2 FSAR for information. A list of FMEAs contained in this report is provided in Appendix A. A list of tables and reference documents is presented in Table 4-1.

SECTION 2

SUMMARY

This report verifies that the single-failure criterion of IEEE-279-1971, Requirement 4.2, and IEEE-308-1974, Requirement 4.8, have been met in the design of those BOP and BOP/NSSS safety-related instrumentation and control, process system active components, and electrical power supply and distribution systems for which a FMEA has been completed and included in this report, except for the systems noted otherwise in the FMEA. The design was evaluated to determine whether compensating features were available to ensure the safety function. Where no compensating feature was identified, the design is being corrected. The FMEAs will be revised to reflect the compensating feature and/or corrected design and reported by amendment.

This report documents the failure modes and effects analyses (FMEA) that were performed on the Unit 2 balance-of-plant (BOP) and balance-of-plant/nuclear steam supply system interface (BOP/NSSS), safety-related instrumentation and control (I&C), and electrical power supply and distribution systems.

Safety functions for each of these systems were identified. Each failure that could prevent a required safety action has been considered. A fault tree was then constructed for each of these systems and analyzed for compliance with the single-failure criterion. Where single failures that caused loss of the system safety function were identified, the design was evaluated to determine whether compensating features were available to provide the function. Where no compensating feature was identified, a system design modification was initiated, which was in turn analyzed for compliance. The fault tree was then translated into a computer-readable format, and a computer was used to confirm the fault tree analysis. The output of the computer, included in this report, is the FMEA which is a detailed record of each component of a system analyzed, its mode(s) of failure considered, the method by which its failure is detected, and the effect upon the system of its failure.

The FMEA is auditable through the referenced SAR section, figures, and drawings in the Unit 2 FSAR. A cross-index between the FMEA and the references is included. Revisions made to the references after completion of the FMEA will be examined and reported by amendment.

At the date of this report, work on the FMEA was ongoing. Four systems yet to be analyzed are listed in Table 4-1. The FMEA of these systems will be reported by amendment.

SECTION 3

DEFINITIONS

The following definitions establish the meanings of words in the context of their use in this report:

Failure Termination of the ability of an item to perform its required function.

Detectable Failure Failures that will be identified through periodic testing or will be revealed by alarm or anomalous indication. Component failures which are detected at the channel or system level are detectable failures.

Operator Error A single incorrect or omitted action by a human operator attempting to perform a safety-related manipulation.

Periodic Test Test performed at scheduled intervals to detect failures and verify operability.

Protective Action The initiation of a signal or operation of equipment within the protection system or protective action system for the purpose of accomplishing a protective function in response to a station condition having reached a limit specified in the design basis.

1. Protective action at the channel level is the initiation of a signal by a single channel when the sensed variable or variables reaches a specified limit.

2. Protective action at the system level is the operation of sufficient actuated equipment including the appropriate auxiliary supporting features to accomplish a protective function. Examples of protective actions at the system level are: rapid insertion of control rods, closing of primary containment isolation valves, and operation of core spray.

Protection System The electrical and mechanical devices (from measured process variables to protective action system input terminals) involved in generating those signals associated with the protective functions. These signals include those that initiate reactor trip, engineered safety features (for example, primary containment isolation, core

spray, safety injection, pressure reduction, and air cleaning) and auxiliary supporting features.

Protective Action System The electrical and mechanical equipment (from the protection system output to and including the actuated equipment-to-process coupling) that performs a protective action when it receives a signal from the protection system.

Protective Function The completion of those protective actions at the system level required to maintain plant condition within the allowable limits established for a design basis event (for example, reduce power, isolate primary containment, or cool the core).

Safety system The collection of systems required to ensure:

1. The integrity of the reactor coolant pressure boundary.

2. The capability to shut down the reactor and maintain it in a safe shutdown condition.

3. The capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to guideline exposures of 10CFR100.

SECTION 4

DESCRIPTION OF ANALYSIS

4.1 PURPOSE

The purpose of the analysis was 1) to identify all component failures that could defeat the protective function, 2) to verify that such failures are detectable, and 3) to verify that the systems comply with the single-failure criterion.

4.2 SCOPE

The scope of the analysis was as follows:

1. The FMEA has been performed down to the component level. As used here, components are such items as coils, switches, and relay contacts, fuses, and transformers. As a result, the failure mechanisms are fundamental, and have been classified into two categories: mechanical and electrical. Mechanical covers such causes as dirt, heat, moisture, vibration, and corrosion. 'Electrical' covers such causes as open circuit, short circuit, interference, i.e., noise, electromagnetic coupling, and grounding. Passive component failures are not included in this analysis. Passive component failures include failures of pipes, tanks, air accumulators, heat exchangers, air cooling coils, cable, and cable trays.

2. The systems analyzed were the BOP and BOP/NSSS portions of safety-related I&C and electrical power systems, including protective systems, systems actuated or controlled by protective systems, and auxiliary or supporting systems that must be operable for the protective systems and systems actuated to perform their safety-related functions.

   The scope of the emergency core cooling system (ECCS) FMEAs of Appendix A was limited to verifying that the independence of these diverse and redundant systems is maintained for the BOP active components and essential interfaces between the BOP and NSSS.

   The list of analyzed systems and reference documents is presented in Table 4-1. Safety analyses may be found in the FSAR paragraphs

listed. Appropriate piping and instrumentation diagrams (P&IDs) and control logic can be found in the FSAR figures listed. The referenced elementary diagrams for each system and one-line diagrams can be found in the drawing package (FSAR Section 1.7.1).

4.3 METHOD

The method of analysis used was a combination of fault tree construction and computer programmed failure analysis as follows:

1. Each safety-related system and/or function was identified.

2. Using the system description, flow diagrams, logic diagrams, elementary diagrams, one-line diagrams, and piping and instrument diagrams, the logical sequence of component failures required to cause the failure of the safety-related system and/or function was established.

3. For each system, a fault tree sketch was drawn. The single most undesired event or failed state, called the top event, was the starting point. Failure events that lead directly to the top event and their logic gates (i.e., AND, OR) form the next lower level of the fault tree. For each of these failure events, a branch of the fault tree was created which consisted of actuated components (for example, circuit breaker, pump, valve) and the process repeated, defining the next lower levels of failures leading directly to the failures defined in the previous step. This process was repeated to a fundamental fault event, which is established as one that would not be dissected further. In this study, fundamental faults stopped with a coil, contact, fuse, operator error, or source of protective action (for example, signal sensor).

4. All paths or routes for each fault tree sketch were next examined for any single component failures leading to the top event. Where a single failure that caused a loss of the system safety function was identified, the design was evaluated to determine whether compensating features were available to provide the function. Where no compensating feature was identified, a system design modification was initiated. When the modification

was available, the system fault tree was then revised accordingly and reexamined.

5. A "failure detectability" code, the method of failed component detection, was determined for each event. There are two categories of failure detection:

   a. Detectable

      (1) Annunciator in the main control room.

      (2) Indicating light in main control room.

      (3) Periodic test.

      (4) Analog indication.

      (5) Periodic inspection.

   b. Nondetectable

      (1) Undetectable.

      (2) More devices must fail to be detectable.

   When "periodic test" is listed for method of failure detection, the circuit has been checked to ensure that: such a test is practical; there are methods to initiate equipment operation, if needed; there are indications of successful operation; and if test equipment is used, there are provisions for connecting it.

   The periodic test identifies the existence of a failure. Troubleshooting may be required to identify the exact point of a failure. Periodic inspection is performed at scheduled intervals to detect failures and verify operability. The detectability of failures is implicit in the application of the single-failure criterion. Detectability is a function of the system design and the specified test. An objective in an analysis of these systems was to identify nondetectable failures. Whenever it was determined that a particular component failure would be detected by Category b (1 or 2), a system redesign was initiated so that all failures are detectable.

6. Each gate and component failure was coded in computer-readable words; the fault tree description was processed with a preprogrammed computer code. A computer program was used to examine the fault tree for any single component failures leading to the top event.

7. The detailed results of the fault tree analysis is the FMEA. All FMEAs are included in Appendix A of this report in computer output format. The FMEA is a permanent record of the analyses.

4.4 STATUS

Work on the FMEA is ongoing as of the date of this report. Additional FMEAs that are forthcoming are denoted in Table 4-1, "FMEA in Progress." FMEAs for these systems are expected to be completed by mid-1983. All changes to systems previously analyzed will be reexamined, and the results will be incorporated in an amendment.

TABLE 4-1

LIST OF SYSTEMS FOR FSAR/FMEA AND REFERENCE DOCUMENTS

FMEA	Name of System (System Code)	FSAR Section No.	P&ID FSAR Figure No.	Logic FSAR Figure No.	Elementary Diagram Revision No.(1)	One-Line Diagram Revision No.(2)
3-1	Main steam system (MSS)	6.2.4.3.3	10.1-3	7.3-12 7.3-13 7.3-15	6MSS08-4 6MSS20-3 7MSS10-2 7MSS13-2 7MSS14-2 7MSS15-2 7MSS16-2 7MSS17-2 7MSS18-2 7MSS19-2 7MSS20-2 7MSS21-2	
6-1	Feedwater system (FWS)	6.2.4.3.3	10.1-6	10.4-11	6FWS07-2	
8-9	Standby diesel generator fuel (EGF)	9.5.4.3 7.3.2.1	9.5-40	9.5-41	6EGF01-3 6EGF02-3 6EGF03-3 7EGF02-1 7EGF03-1	
9-1	Reactor building closed loop cooling water (CCP)	9.2.2.3 6.2.4.3.3	9.2-3	9.2-4	6CCP11-4 6CCP13-4 6CCP16-3 6CCP17-3 6CCP18-3 6CCP19-3 6CCP21-2 6CCP22-2 7CCP07-2 11ISC01-3 11ISC02-3 11ISC04-3 11ISC05-1 11ISC06-1	
9-10	Service water system (SWP)	9.2.1.3 7.3.2.1 9.2.5.3.1	9.2-1	9.2-2	5SWP01-5 5SWP02-5 5SWP03-5 5SWP04-5 5SWP05-5 5SWP06-5 5SWP07-4 5SWP08-4 5SWP09-4 5SWP10-4 5SWP11-4 5SWP12-4 5ENS21-4 5ENS22-4 6SWP01-4 6SWP06-5 6SWP07-5 6SWP08-4 6SWP09-3 6SWP10-3 6SWP11-4 6SWP12-4 6SWP13-4 6SWP14-4 6SWP16-4 6SWP17-5 6SWP18-4 6SWP19-4 6SWP20-4 6SWP21-2 6SWP22-2 6SWP23-2 6SWP24-4 6SWP25-4 6SWP26-4 6SWP27-3 6SWP32-2 6SWP33-2 6SWP34-2 6SWP35-2 6SWP36-2 6SWP37-2 6SWP38-1 6SWP39-1 6SWP40-1 7SWP03-3 7SWP04-3 7SWP08-3 7SWP15-3 7SWP17-3 7CCP01-2 11ISC02-3 11ISC04-3	
12-1	Instrument air system (IAS)	9.3.1.1.3 6.2.4.3.3	9.3-1	9.3-2	7IAS01-4 7IAS02-4 7IAS03-4 7IAS04-4 7IAS07-4 7IAS08-4 7IAS09-1	
12-2	Service air system (SAS)	6.2.4.3.3	9.3-1	9.3-2	NONE	
12-4	Standby diesel generator air startup (EGA)(3)	9.5.6.5 7.3.2.1	9.5-40	9.5-41	6EGA01-3 6EGA02-3 11EGA01-1 11EGA02-1 11EGA03-1	
12-9	Breathing air (AAS)(3)	9.3.1.3.3 6.2.4.3.3	9.3-3	9.3-4	7AAS01-1	

TABLE 4-1 (Cont)

FMEA	Name of System (System Code)	FSAR Section No.	P&ID FSAR Figure No.	Logic FSAR Figure No.	Elementary Diagram Revision No.(1)	One-Line Diagram Revision No.(2)
15-1	Fire protection water (FPW)	6.2.4.3.3	9.5-1	9.5-4a	7FPW04-1 7FPW05-1 11ISC02-3	
22-1	Reactor building ventilation (HVR)	9.4.2.3 7.3.2.1	9.4-8	9.4-9	6HVR01-7 6HVR02-7 6HVR11-5 6HVR12-5 6HVR13-5 6HVR14-5 6HVR15-5 6HVR16-5 6HVR17-5 6HVR18-5 6HVR19-5 6HVR20-5 6HVR21-5 6HVR22-5 6HVR23-5 6HVR24-5 6HVR25-5 6HVR26-5 6HVR27-5 6HVR29-1 6HVR30-1 6EJS05-5 6SWP05-5 7HVR01-7 7HVR02-7 7HVR05-4 7HVR06-5 7HVR08-4 7HVR09-4 7HVR10-1 7SWP10-2	
22-7	Diesel generator building ventilation (HVP)	9.4.6.3 7.3.2.1	9.4-15	9.4-16	6HVP01-5 6HVP02-5 6HVP03-5 6HVP06-1 7HVP01-4 7HVP02-4 7HVP03-4 5ENS21-4 5ENS22-4	
22-8	Yard structure ventilation (HVY)	9.4.7.3 7.3.2.1	9.4-2	9.4-17	6HVY12-1 6HVY13-1 7HVY08-2	
22-9	Control building air-conditioning (HVC)	9.4.1.3 7.3.2.1 6.4.4.1	9.4-1	9.4-4 9.4-5 9.4-6 9.4-7	6HVC01-6 6HVC02-6 6HVC03-6 6HVC04-5 6HVC06-4 6HVC09-6 6HVC10-5 6HVC11-5 6HVC12-3 6HVC13-4 7HVC01-5 7HVC02-5 7HVC03-5 7HVC04-5 7HVC05-6 7HVC08-6 7HVC15-3 7HVC19-4 7HVC20-1 7HVC22-1 7HVK01-4 7SWP05-3 7SWP16-4 7SWP18-2	
22-12	Control building chilled water (HVK)	9.4.10.1.3 7.3.2.1	9.4-1	9.4-20	6HVK01-4 6HVK02-3 6HVK03-3 6HVK04-2 6HVC01-6 6HVC02-6 6EJS05-5 6SWP16-4 6SWP28-4 7HVK02-3	
22-23	Primary containment purge (CPS)	9.4.2.3 6.2.4.3.3	9.4-8	9.4-9	7CPS01-6 7CPS02-5 7CPS03-5 7CPS06-3 11ISC01-3 11ISC03-3	
23-6	Reactor building floor drains (DFR)	9.3.3.3 6.2.4.3.3	9.3-9	9.3-13	6DFR07-5 6DFR11-5 7DFR06-2 7ISC01-2 11ISC01-3 11ISC02-3 11ISC03-3 11ISC04-3	
BYS	Battery system (BYS)	8.3.2.1.2	-	-	NONE	ICA-4 ICM-5

TABLE 4-1 (Cont)

FMEA	Name of System (System Code)	FSAR Section No.	P&ID FSAR Figure No.	Logic FSAR Figure No.	Elementary Diagram Revision No.(1)					One-Line Diagram Revision No.(2)		
24-9.1	Standby station service supply breakers (ENS)	8.3.1.2	-	8.3-5	5ENS02-8	5ENS03-8	5ENS05-8	5ENS07-8	1D-7			
					5ENS08-7	5ENS09-7	5ENS11-6	5ENS12-6	1Q-5			
					5ENS13-7	5ENS14-5	5ENS15-6	5ENS16-6	1R-5			
					5ENS17-7	5ENS18-5	5ENS19-4	5ENS20-4				
					5EJS01-7	5EJS02-6	5EJS03-6	5EJS04-6				
					5CSL01-3	5SFC01-4	5SFC02-4	5RHS01-3				
					5RHS02-3	5RHS03-3	5RHS04-1	5RHS05-1				
					5SWP01-5	5SWP02-5	5SWP03-5	5SWP05-5				
					5SWP06-5	5SWP07-5	5SWP09-4	5SWP10-4				
					5SWP11-4	5SWP12-4	5SWP17-3	8ENS01-7				
					8ENS02-7	8ENS03-7	8ENS04-7	8EJS01-5				
					8EJS02-5							
24-9.2	Standby diesel generator protection (EGP)	8.3.1.2	-	8.3-5	5EGP01-7	5EGP03-6	5EGP05-7	5EGP06-7	1D-7			
					5EGP08-6	5ENS02-8	5ENS03-8	5ENS07-8	1Q-5			
					5ENS08-7	5ENS09-7	5ENS11-6	5ENS12-6	1R-5			
					5ENS14-5	5ENS15-6	5ENS16-6	5ENS18-5				
					5ENS21-4	5ENS22-4	8EGP01-6	8EGP03-6				
					8EGP04-5	8EGP05-5	8EGP06-6	8EGP07-5				
					8EGP08-6	8EGP09-1	8EGP10-1	8SYD01-4				
24-9.3	Standby diesel generator protection (EGS)	8.3.1.2 9.5.8.3	9.5-40	8.3-5	5EGP01-7	5EGP03-6	5ENS21-4	5ENS22-4	-			
					8EGP01-3	8EGP02-3	8EGP05-5	8EGP08-6				
					8EGS01-3	8EGS02-3						
24-9.4	Emergency bus load sequencing	8.3.1.2	-	8.3-5	5ENS05-8	5ENS07-7	5ENS08-4	5ENS09-7	1D-7			
					5ENS14-5	5ENS15-6	5ENS18-5	5ENS21-4	1Q-5			
					5ENS22-4	5CSL01-3	5RHS01-3	5RHS02-3	1R-5			
					5RHS03-3	5RHS04-1	5RHS05-1	5SFC01-4				
					5SFC02-4	5SWP01-5	5SWP02-5	5SWP03-5				
					5SWP05-5	5SWP06-5	5SWP07-4	5SWP09-4				
					5SWP10-4	5SWP11-4	5SWP12-4	7SWP17-3				
					8ENS01-7	8ENS02-7						
24-9.5	600-V ac emergency power (EJS)(4)	8.3.1.2	-	8.3-5	5EJS01-7	5EJS02-6	5EJS03-6	5EJS04-6	1D-7	1Z-6	1AQ-3	1AR-3
					6EJS01-5	6EJS02-5	6EJS03-5	6EJS04-5	1AS-1	1AT-3	1AU-3	1AV-3
					6EJS05-5	7EJS03-1	8EJS01-5	8EJS02-5	1AW-3	1AX-3	1AY-3	1CB-4
									1CC-3			
25-1	Reactor coolant recirculation (RCS)	6.2.4.3.3	5.4-2	-	5RCS11-1	5RCS12-1	5RCS13-1	5RCS14-1	1J-4			
					5RCS15-1	5RCS16-1	5RCS17-1	5RCS18-1				

TABLE 4-1 (Cont)

FMEA	Name of System (System Code)	FSAR Section No.	P&ID FSAR Figure No.	Logic FSAR Figure No.	Elementary Diagram Revision No.(1)	One-Line Diagram Revision No.(2)
26-3	Reactor water cleanup (WCS)	6.2.4.3.3	5.4-16	-	6WCS03-5 6WCS11-5	
27-4	High pressure core spray (CSH)	6.2.4.3.3 7.3.2.1 6.3.2.5	6.3-1	-	6CSH01-3 6CSH02-3 6CSH03-3 6CSH04-3 6CSH05-3	
27-5	Low pressure core spray (CSL)	7.3.2.1 6.2.4.3.3 6.3.2.5	6.3-4	-	5CSL01-3 6CSL01-3 6CSL02-3 6CSL03-3	
27-6	Reactor core isolation cooling (ICS)	6.2.4.3.3	5.4-9	-	6ICS02-2 6ICS03-1 6ICS04-1 11ICS02-2 11ISC05-2 11ISC10-1 11ISC11-1 11ISC13-1	
27-7	Residual heat removal	6.2.2.3.3 6.2.4.3.3 6.3.2.5 7.3.2.1	5.4-13	-	5RHS01-3 5RHS02-3 5RHS03-3 5RHS04-1 5RHS05-1 6RHS01-2 6RHS02-2 6RHS03-2 6RHS04-2 6RHS05-2 6RHS06-2 6RHS07-2 6RHS08-2 6RHS09-2 6RHS10-2 6RHS11-2 6RHS12-2 6RHS13-2 6RHS14-2 6RHS15-2 6RHS16-2 6RHS17-2 6RHS18-2 6RHS19-2 6RHS20-2 6RHS21-2 6RHS22-2 6RHS23-2 6RHS24-2 6RHS25-2 6RHS26-2 6RHS27-1 6RHS28-1 6RHS29-1 6RHS30-1 6RHS31-1 6RHS32-1 6RHS33-1 6RHS34-1 6RHS35-1 6RHS36-1 6RHS37-1 6RHS38-1 6RHS39-1 6RHS40-1 6RHS41-1 6RHS42-1 6SWP25-4	
27-13	DBA hydrogen recombiner (HCS)	6.2.5.3.4 6.2.4.3.3 7.3.2.1	6.2-72	6.2-82	6HSC01-4 6HCS02-5 6HCS03-5 6HCS04-5 6HCS05-5 6HCS06-5 6HCS07-3 6HCS08-3 6HCS09-3 6HCS10-3 6HCS11-3 7HCS01-3 7HCS04-2	
27-15	Standby gas treatment system (GTS)	6.5.1.3 7.3.2.1	9.4-8	6.5-2	6GTS01-4 6GTS02-4 6GTS03-4 6GTS04-4 6GTS05-4 7GTS01-3 7GTS02-3 7GTS03-3 7HVR10-1	
27-16	Standby liquid control (SLS)	9.3.5.3 6.2.4.3.3	9.3-17	-	6SLS01-3 6SLS02-3 6SLS03-3	
27-19	Containment isolation (ISC)	6.2.4.3.3 7.3.2.1	-	6.2-40	7ISC01-2 11ISC01-3 11ISC02-3 11ISC03-3 11ISC04-3 11ISC05-1 11ISC06-1	

TABLE 4-1 (Cont)

FMEA	Name of System (System Code)	FSAR Section No.	P&ID FSAR Figure No.	Logic FSAR Figure No.	Elementary Diagram Revision No.[1]	One-Line Diagram Revision No.[2]
32-9	Reactor building equipment drains (DER)	9.3.3.3 6.2.4.3.3	9.3-9	9.3-13	6DER01-3 6DER02-4 7DER03-2 11ISC02-3 11ISC04-3	
33-1	Containment leakage monitoring (LMS)	6.2.4.3.3	6.2-73	-	7LMS02-2 11ISC02-3 11ISC04-3	
33-2	Containment atmosphere monitoring (CMS)[5]	6.2.4.3.3 6.2.5.3.4	6.2-71	6.2-61	7CMS01-3 7CMS02-3 7CMS03-4 7CMS04-4 7CMS05-5 7CMS06-4 7CMS07-4 7CMS08-4 7CMS09-4 7CMS10-4 7CMS11-4 7CMS12-4 7CMS13-2 7CMS15-2 7CMS16-2 7CMS17-2 7CMS18-2 7CMS19-2 7CMS20-2 7CMS21-1 7CMS22-1 7CMS23-1	
34-2	Spent fuel pool cooling and cleanup (SFC)	9.1.3.3	9.1-5	9.1-6	5SFC01-4 5SFC02-4 5ENS21-4 5ENS22-4 1Q-5 6CCP07-4 6CCP09-4 7SFC01-4 7SFC02-4 1R-5 7SFC09-2 7SFC10-2	
RMS	Radiation monitoring system (RMS)[5]	11.5.3	-	-	(Later)	
SCM	120-V ac emergency power (SCM)[5]	8.3.1.2	-	-	(Later)	
UPS	Uninterruptible power supply (UPS)[5]	8.3.1.2	-	-	(Later)	

[1] Prefix elementary diagram numbers with 12177-ESK-.
[2] Prefix one-line diagram numbers with 12177-EE-.
[3] Included in FMEA 27-19.
[4] FMEA 24-9.5 (600-V ac emergency power) shows the failures that will cause loss of particular 600-V load and motor control centers. The components of other systems that are affected by these failures can be identified by reviewing Appendix B.
[5] FMEA in progress.

SECTION 5

FINDINGS

1. The analysis disclosed instances where the single-failure criterion was not met. In all cases, except for those reported below, the systems were redesigned to conform to the single-failure criterion. A FMEA of the redesigned systems confirmed compliance. The systems described below were found to be out of conformance and the design was evaluated to determine whether compensating features were available to provide the function. Where no compensating feature was identified, the design is being corrected.

2. A single failure was identified in the diesel building ventilation system (HVP), (FMEA 22-7, sheet 2). One tornado damper, 2HVP*DMP13, provides tornado protection for all three diesel generator control rooms. A postulated failure of this damper to close on demand, which is detectable by periodic inspection, would result in loss of tornado protection to all three diesel generator control rooms. The design is being corrected by the addition of another tornado damper in series with 2HVP*DMP13. The FMEA will be revised to reflect the corrected design.

3. The control building air conditioning system (HVC) (FMEA-22-9) was analyzed and 16 single failures were identified in FMEA 22-9 (sheets 1, 3, 5, 6, 8, 9, 10, 11, 21, and 70) relating to three design problems: cable chase ventilation, tornado protection, and habitability.

   a. Single-sectioned backdraft dampers 2HVC*DMP80 and 2HVC*DMP82 and single-sectioned fire dampers 2HVC*DMPF40, 2HVC*DMPF66, 2HVC*DMPF97, 2HVC*DMPF184, 2HVC*DMPF220, 2HVC*DMPF120, and 2HVC*DMPF173 are identified as single failures on FMEA 22-9, Sheets 1, 3, 6, 8, 9, and 10. These dampers are located in ductwork that provides essential ventilation for a cable chase that contains Division II and III cable. A postulated failure of any one of these dampers to remain in the open position, which is detectable by periodic inspection, would allow the temperature within the cable chase to increase, potentially degrading both Division II and III cables and associated

safety-related loads. A design will be provided to correct this issue.

b. Tornado dampers 2HVC*DMP4, 2HVC*DMP9, and 2HVC*DMP22 and normally closed tornado-proof air damper 2HVC*AOD142 are identified as single failures on FMEA 22-9 Sheets 11, 21, and 70. Each damper provides tornado protection for areas common to more than one division of safety. A postulated failure of any one of the tornado dampers to close on demand or the tornado-proof air damper to remain closed, which is detectable by periodic inspection or periodic test, respectively, would allow a tornado to damage more than one division of safety-related equipment. The design is being corrected with the addition of a tornado damper in series with the existing damper at each damper's location. The FMEA will be revised to reflect the corrected design.

c. Two single-sectioned fire dampers 2HVC*DMPF83 and 2HVC*DMPF91 are identified as single failures on FMEA 22-9 Sheet 5. 2HVC*DMPF83 and 2HVC*DMPF91 are located in ductwork that supplies filtered outside air to the relay room and to the control room, respectively. A postulated failure of either fire damper to remain in the open position, which is detectable by periodic inspection, would result in the loss of the respective room's positive pressure system. Loss of either room's positive pressure would degrade the habitability system. The design is being corrected with the replacement of these fire dampers with multi-sectioned fire dampers. The sections of these fire dampers will be independent so that for either damper if one section fails closed, the remaining damper section is capable of passing 100 percent of the required air flow. The FMEA will be revised to reflect the corrected design.

4. Single failure of the SGTS decay heat removal function was identified in FMEA 27-15. A low flow air bleed system is provided to remove decay heat from the charcoal filter adsorbers, its operation depends on being able to initiate and to maintain air flow through the inlet of one filter train to the other redundant filter train discharge fan and discharge valve. Assuming a single failure of any active component identified in FMEA 27-15 air flow for decay heat removal cannot be maintained. This will cause loss of decay heat removal function for

the SGTS. Any consequence of this loss cannot be isolated from the remaining filter train which must run continuously during a LOCA to maintain negative pressure in the reactor building.

A design will be provided to correct this issue. The FMEA will be revised following implementation of the corrective action and reissue of the drawings.

SECTION 6

CONCLUSIONS

It has been verified that the single-failure criterion of IEEE-279-1971, Requirement 4.2 and IEEE-308-1974, Requirement 4.8, are met in the design of those BOP and BOP/NSSS safety-related I&C and electrical power systems for which an FMEA has been completed and included herein except in the case of the diesel generator building ventilation, control building air conditioning, and standby gas treatment system described in Section 5.

Revisions to the designs identified in Section 5 will be provided in an amendment. The FMEA will be revised following implementation of the corrective action and reissue of the drawings.

APPENDIX A

FAILURE MODES AND EFFECTS ANALYSIS

APPENDIX A

LIST OF FMEAs CONTAINED IN APPENDIX A

FMEA	Name of System
3-1	Main Steam System
6-1	Feedwater System
8-9	Standby Diesel Generator Fuel
9-1	Reactor Building Closed Loop Cooling Water
9-10	Service Water System
12-1	Instrument Air System
12-2	Service Air System [Part of Containment Isolation FMEA No. 27-19]
12-4	Standby Diesel Generator Air Startup
12-9	Breathing Air [Part of Containment Isolation FMEA No. 27-19]
15-1	Fire Protection Water
22-1	Reactor Building Ventilation
22-7	Diesel Generator Building Ventilation
22-8	Yard Structure Ventilation
22-9	Control Building Air Conditioning
22-12	Control Building Chilled Water
22-23	Primary Containment Purge
23-6	Reactor Building Floor Drains
BYS	Battery System
24-9.1	Standby Station Service Supply Breakers
24-9.2	Standby Diesel Generator Protection

LIST OF FMEAs CONTAINED IN APPENDIX A (Cont)

FMEA	Name of System
24-9.3	Standby Diesel Generator Protection
24-9.4	Emergency Bus Load Sequencing
24-9.5	600-V AC Emergency Power
25-1	Reactor Coolant Recirculation
26-3	Reactor Water Cleanup
27-4	High Pressure Core Spray
27-5	Low Pressure Core Spray
27-6	Reactor Core Isolation Cooling Containment Isolation Function
27-7	Residual Heat Removal Short-Term LOCA, Long-Term LOCA, and Transient Safety Functions
27-7	Residual Heat Removal Containment Isolation Function
27-13	DBA Hydrogen Recombiner
27-15	Standby Gas Treatment System
27-16	Standby Liquid Control
27-19	Containment Isolation
32-9	Reactor Building Equipment Drains
33-1	Containment Leakage Monitoring
34-2	Spent Fuel Pool Cooling and Cleanup

APPENDIX A

FAILURE MODES AND EFFECTS ANALYSIS

Explanation of Column Headings

1. FTSK - The identifying page number of the computer-generated fault tree that was constructed from the data input to the FMEA computer program.

2. Component Identifier - The computer readable identifier for the device analyzed. (Although the term "component" is used, it may refer to an assembly, module, single operator error, or component.)

3. Component and Failure Mode - The name of the device and its particular failure mode. The same equipment mark number used throughout engineering and design drawings and for procurement is provided.

4. Method of Failure Detection - One of the five failure detection methods determined for the device.

5. Effect on System - The notation None is used when multiple failures must occur before protective action is prevented. When "None" appears, the failure of the component alone does not prevent protective action should such need arise.

6. Other Remarks - Single failure - This notation denotes a component whose failure leads to a noncompliance with the single-failure criterion: i.e., the system's top most undesired event occurs upon the failure of a single component.

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -AZ	6025HSS3	2HSS*HOV112 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -C	6049HSS3	2HSS*HOV208 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -D	6062HSS3	2HSS*HYV7A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV7A OPEN	
3-1 -J	6077HSS3	2HSS*HYV7B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -G	6090HSS3	2HSS*HYV7C MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV7C OPEN	
3-1 -E	6105HSS3	2HSS*HYV7D MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV7D OPEN	
3-1 -BA	6206HSS3	2HSS*HOV111 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -L	6230HSS3	2HSS*HYV6A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV6A OPEN	
3-1 -K	6246HSS3	2HSS*HYV6B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV6B OPEN	
3-1 -H	6259HSS3	2HSS*HYV6C MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV6C OPEN	
3-1 -F	6274HSS3	2HSS*HYV6D MECHANICALLY FAILS OPEN	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -AA	60631013	SFB-2HSSA19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -Z	60641013	SFA-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7A OPEN	
3-1 -AB	60651013	CR7-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7A OPEN	
3-1 -Z	60671013	CR7-2HSSA18 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSA18 CONTACT 3 CLOSE	
3-1 -AB	60681013	CR7-2HSSA18 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSA18 CONTACT 4 CLOSE	
3-1 -AA	60711013	CR18-2HSSA19 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSA19 CONTACT 3 CLOSE	
3-1 -BL	60721013	CR18-2HSSA19 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSA19 CONTACT 2 CLOSE	
3-1 -BL	60741013	CR18-2HSSA19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7A OPEN	
3-1 -AD	60781013	SFB-2HSSB19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -AC	60791013	SFA-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -AE	60801013	CR7-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -AC	60811013	CR7-2HSSB18 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSB18 CONTACT 3 CLOSE	
3-1 -AE	60821013	CR7-2HSSB18 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSB18 CONTACT 4 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -AD	60851013	CR18-2HSSB19 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSB19 CONTACT 3 CLOSE	
3-1 -BR	60861013	CR18-2HSSB19 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSB19 CONTACT 2 CLOSE	
3-1 -BR	60871013	CR18-2HSSB19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -AG	60911013	SFB-2HSSC19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7C OPEN	
3-1 -AF	60921013	SFA-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7C OPEN	
3-1 -AH	60931013	CR7-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7C OPEN	
3-1 -AF	60951013	CR7-2HSSC18 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSC18 CONTACT 3 CLOSE	
3-1 -AH	60961013	CR7-2HSSC18 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSC18 CONTACT 4 CLOSE	
3-1 -AG	60991013	CR18-2HSSC19 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSC19 CONTACT 3 CLOSE	
3-1 -BH	61001013	CR18-2HSSC19 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSC29 CONTACT 2 CLOSE	
3-1 -BH	61021013	CR18-2HSSC19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7C OPEN	
3-1 -AK	61061013	SFB-2HSSD19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7D OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -AJ	61071013	SFA-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7D OPEN	
3-1 -AL	61081013	CR7-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7D OPEN	
3-1 -AJ	61091013	CR7-2HSSD18 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSD18 CONTACT 3 CLOSE	
3-1 -AL	61101013	CR7-2HSSD18 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSD18 CONTACT 4 CLOSE	
3-1 -AK	61131013	CR18-2HSSD19 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSD19 CONTACT 3 CLOSE	
3-1 -CB	61141013	CR18-2HSSD19 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSD19 CONTACT 2 CLOSE	
3-1 -CB	61151013	CR18-2HSSD19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7D OPEN	
3-1 -BG	61181013	CR3-2HSSA18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BG	61191013	CR3-2HSSA18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -U	61201017	2HSS*HYV7A PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -BJ	61211013	SVE A-2HSSA18 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSA18 SOLENOID VALVE CLOSED	
3-1 -BH	61221013	SVE B-2HSSA19 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSA19 SOLENOID VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BG	61231012	2HSS*HYV7A SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7A SOLENOID VALVE SVC CLOSED	
3-1 -BK	61241013	CR2-2HSSA18 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -BJ	61261013	SVE A-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSA18 SOLENOID VALVE CLOSED	
3-1 -BJ	61271013	CR4-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSA18 SOLENOID VALVE CLOSED	
3-1 -BH	61281013	SVE B-2HSSA19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSA19 SOLENOID VALVE CLOSED	
3-1 -BH	61291013	CR4A-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSA19 SOLENOID VALVE CLOSED	
3-1 -BG	61301012	2HSS*HYV7A SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7A SOLENOID VALVE SVC CLOSED	
3-1 -BG	61311012	CR3-2HSSA18 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7A SOLENOID VALVE SVC CLOSED	
3-1 -BK	61321013	CR2-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -BK	61341013	CR11-2HSSA18 CONTACT 2 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -BK	61351013	CR11-2HSSA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -BJ	61361013	CR4-2HSSA18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BJ	61371013	CR4-2HSSA18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BH	61381013	CR4A-2HSSA18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BH	61391013	CR4A-2HSSA18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -T	61401017	2HSS*HYV7B PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -BP	61411013	SVE A-2HSSB18 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSB18 SOLENOID VALVE CLOSED	
3-1 -BN	61421013	SVE B-2HSSB19 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSB19 SOLENOID VALVE CLOSED	
3-1 -BM	61431012	2HSS*HYV7B SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7B SOLENOID VALVE SVC CLOSED	
3-1 -BQ	61441013	CR2-2HSSB18 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -BP	61461013	SVE A-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSB18 SOLENOID VALVE CLOSED	
3-1 -BP	61471013	CR4-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSB18 SOLENOID VALVE CLOSED	
3-1 -BN	61481013	SVE B-2HSSB19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSB19 SOLENOID VALVE CLOSED	
3-1 -BN	61491013	CR4A-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSB19 SOLENOID VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BH	61501012	2HSS*HYV7B SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7B SOLENOID VALVE SVC CLOSED	
3-1 -BH	61511012	CR3-2HSSB18 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7B SOLENOID VALVE SVC CLOSED	
3-1 -BQ	61521013	CR2-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -BQ	61541013	CR11-2HSSB18 CONTACT 2 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -BQ	61551013	CR11-2HSSB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -BP	61561013	CR4-2HSSB18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BP	61571013	CR2-2HSSB18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BN	61581013	CR4A-2HSSB18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BN	61591013	CR4A-2HSSB18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BH	61601013	CR3-2HSSB18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BH	61611013	CR3-2HSSB18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -S	61621017	2HSS*HYV7C PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV7C HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BU	61631013	SVE A-2HSSC18 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSC18 SOLENOID VALVE CLOSED	
3-1 -BT	61641013	SVE B-2HSSC19 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSC19 SOLENOID VALVE CLOSED	
3-1 -BS	61651012	2HSS*HYV7C SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7C SOLENOID VALVE SVC CLOSED	
3-1 -BV	61661013	CR2-2HSSC18 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7C HYDRAULIC PUMP RUNNING	
3-1 -BU	61681013	SVE A-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSC18 SOLENOID VALVE CLOSED	
3-1 -BU	61691013	CR4-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSC18 SOLENOID VALVE CLOSED	
3-1 -BT	61701013	SVE B-2HSSC19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSC19 SOLENOID VALVE CLOSED	
3-1 -BT	61711013	CR4A-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSC19 SOLENOID VALVE CLOSED	
3-1 -BS	61721012	2HSS*HYV7C SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7C SOLENOID VALVE SVC CLOSED	
3-1 -BS	61731012	CR3-2HSSC18 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7C SOLENOID VALVE SVC CLOSED	
3-1 -BV	61741013	CR2-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7C HYDRAULIC PUMP RUNNING	
3-1 -BV	61761013	CR11-2HSSC18 CONTACT 2 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7C HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BV	61771013	CR11-2HSSC18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7C HYDRAULIC PUMP RUNNING	
3-1 -BU	61781013	CR4-2HSSC18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BU	61791013	CR4-2HSSC18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BT	61801013	CR4A-2HSSC18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BT	61811013	CR4A-2HSSC18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BS	61821013	CR3-2HSSC18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BS	61831013	CR3-2HSSC18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -R	61841017	2HSS*HYV7D PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV7D HYDRAULIC PUMP RUNNING	
3-1 -BZ	61851013	SVE A-2HSSD18 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSD18 SOLENOID VALVE CLOSED	
3-1 -BY	61861013	SVE B-2HSSD19 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSD19 SOLENOID VALVE CLOSED	
3-1 -BX	61871012	2HSS*HYV7D SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7D SOLENOID VALVE SVC CLOSED	
3-1 -CA	61881013	CR2-2HSSD18 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7D HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BZ	61901013	SVE A-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSD18 SOLENOID VALVE CLOSED	
3-1 -BZ	61911013	CR4-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSD18 SOLENOID VALVE CLOSED	
3-1 -BY	61921013	SVE B-2HSSD19 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSD19 SOLENOID VALVE CLOSED	
3-1 -BY	61931013	CR4A-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSD19 SOLENOID VALVE CLOSED	
3-1 -BX	61941012	2HSS*HYV7D SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7D SOLENOID VALVE SVC CLOSED	
3-1 -BX	61951012	CR3-2HSSD18 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV7D SOLENOID VALVE SVC CLOSED	
3-1 -CA	61961013	CR2-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7D HYDRAULIC PUMP RUNNING	
3-1 -CA	61981013	CR11-2HSSD18 CONTACT 2 FAILS CLOSED	PERIODIC TEST	2HSS*HYV7D HYDRAULIC PUMP RUNNING	
3-1 -CA	61991013	CR11-2HSSD18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV7D HYDRAULIC PUMP RUNNING	
3-1 -BZ	62001013	CR4-2HSSD18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BZ	62011013	CR4-2HSSD18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BY	62021013	CR4A-2HSSD18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BY	62031013	CR4A-2HSSD18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BX	62041013	CR3-2HSSD18 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BX	62051013	CR3-2HSSD18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AN	62311013	SFB-2HSSA13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6A OPEN	
3-1 -AH	62321013	SFA-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6A OPEN	
3-1 -AP	62341013	CR7-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6A OPEN	
3-1 -AH	62361013	CR7-2HSSA12 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSA12 CONTACT 3 CLOSE	
3-1 -AP	62371013	CR7-2HSSA12 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSA12 CONTACT 4 CLOSE	
3-1 -AN	62401013	CR18-2HSSA13 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSA13 CONTACT 3 CLOSE	
3-1 -CK	62411013	CR18-2HSSA13 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSA13 CONTACT 2 CLOSE	
3-1 -CK	62431013	CR18-2HSSA13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6A OPEN	
3-1 -AR	62471013	SFB-2HSSB13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -AQ	62481013	SFA-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6B OPEN	
3-1 -AS	62491013	CR7-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6B OPEN	
3-1 -AQ	62501013	CR7-2HSSB12 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSB12 CONTACT 3 CLOSE	
3-1 -AS	62511013	CR7-2HSSB12 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSB12 CONTACT 4 CLOSE	
3-1 -AR	62541013	CR18-2HSSB13 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSB13 CONTACT 3 CLOSE	
3-1 -CQ	62551013	CR18-2HSSB13 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSB13 CONTACT 2 CLOSE	
3-1 -CQ	62561013	CR18-2HSSB13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6B OPEN	
3-1 -AU	62601013	SFB-2HSSC13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6C OPEN	
3-1 -AT	62611013	SFA-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6C OPEN	
3-1 -AV	62621013	CR7-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6C OPEN	
3-1 -AT	62641013	CR7-2HSSC12 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSC12 CONTACT 3 CLOSE	
3-1 -AV	62651013	CR7-2HSSC12 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSC12 CONTACT 4 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -AU	62681013	CR18-2HSSC13 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSC13 CONTACT 3 CLOSE	
3-1 -CV	62691013	CR18-2HSSC13 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSC13 CONTACT 2 CLOSE	
3-1 -CV	62711013	CR18-2HSSC13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6C OPEN	
3-1 -AX	62751013	SFB-2HSSD13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -AH	62761013	SFA-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -AY	62771013	CR7-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -AH	62781013	CR7-2HSSD12 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR7-2HSSD12 CONTACT 3 CLOSE	
3-1 -AY	62791013	CR7-2HSSD12 CONTACT 4 FAILS CLOSE	PERIODIC TEST	CR7-2HSSD12 CONTACT 4 CLOSE	
3-1 -AX	62821013	CR18-2HSSD13 CONTACT 3 FAILS CLOSE	PERIODIC TEST	CR18-2HSSD13 CONTACT 3 CLOSE	
3-1 -DA	62831013	CR18-2HSSD13 CONTACT 2 FAILS CLOSE	PERIODIC TEST	CR18-2HSSD13 CONTACT 2 CLOSE	
3-1 -DA	62841013	CR18-2HSSD13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -Q	62871017	2HSS*HYV6A PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV6A HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CH	62881013	SVE A-2HSSA12 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSA12 SOLENOID VALVE CLOSED	
3-1 -CG	62891013	SVE B-2HSSA13 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSA13 SOLENOID VALVE CLOSED	
3-1 -CF	62901012	2HSS*HYV6A SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6A SOLENOID VALVE SVC CLOSED	
3-1 -CJ	62911013	CR2-2HSSA12 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV6A HYDRAULIC PUMP RUNNING	
3-1 -CH	62931013	SVE A-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSA12 SOLENOID VALVE CLOSED	
3-1 -CH	62941013	CR4-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSA12 SOLENOID VALVE CLOSED	
3-1 -CG	62951013	SVE B-2HSSA13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSA13 SOLENOID VALVE CLOSED	
3-1 -CG	62961013	CR4A-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSA13 SOLENOID VALVE CLOSED	
3-1 -CF	62971012	2HSS*HYV6A SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6A SOLENOID VALVE SVC CLOSED	
3-1 -CF	62981012	CR3-2HSSA12 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6A SOLENOID VALVE SVC CLOSED	
3-1 -CJ	62991013	CR2-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6A HYDRAULIC PUMP RUNNING	
3-1 -CJ	63011013	CR11-2HSSA12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6A HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CJ	63021013	CR11-2HSSA12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6A HYDRAULIC PUMP RUNNING	
3-1 -CH	63031013	CR4-2HSSA12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CH	63041013	CR4-2HSSA12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CG	63051013	CR4A-2HSSA12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CG	63061013	CR4A-2HSSA12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CF	63071013	CR3-2HSSA12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CF	63081013	CR3-2HSSA12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -P	63091017	2HSS*HYV6B PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV6B HYDRAULIC PUMP RUNNING	
3-1 -CN	63101013	SVE A-2HSSB12 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSB12 SOLENOID VALVE CLOSED	
3-1 -CN	63111013	SVE B-2HSSB13 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSB13 SOLENOID VALVE CLOSED	
3-1 -CL	63121012	2HSS*HYV6B SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6B SOLENOID VALVE SVC CLOSED	
3-1 -CP	63131013	CR2-2HSSB12 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV6B HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CN	63151013	SVE A-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSB12 SOLENOID VALVE CLOSED	
3-1 -CN	63161013	CR4-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSB12 SOLENOID VALVE CLOSED	
3-1 -CH	63171013	SVE B-2HSSB13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSB13 SOLENOID VALVE CLOSED	
3-1 -CH	63181013	CR4A-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSB13 SOLENOID VALVE CLOSED	
3-1 -CL	63191012	2HSS*HYV6B SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6B SOLENOID VALVE SVC CLOSED	
3-1 -CL	63201012	CR3-2HSSB12 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6B SOLENOID VALVE SVC CLOSED	
3-1 -CP	63211013	CR2-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6B HYDRAULIC PUMP RUNNING	
3-1 -CP	63231013	CR11-2HSSB12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6B HYDRAULIC PUMP RUNNING	
3-1 -CP	63241013	CR11-2HSSB12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6B HYDRAULIC PUMP RUNNING	
3-1 -CN	63251013	CR4-2HSSB12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CN	63261013	CR4-2HSSB12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CH	63271013	CR4A-2HSSB12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CH	63281013	CR4A-2HSSB12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CL	63291013	CR3-2HSSB12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CL	63301013	CR3-2HSSB12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -N	63311017	2HSS*HYV6C PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -CT	63321013	SVE A-2HSSC12 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSC12 SOLENOID VALVE CLOSED	
3-1 -CS	63331013	SVE B-2HSSC13 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSC13 SOLENOID VALVE CLOSED	
3-1 -CR	63341012	2HSS*HYV6C SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6C SOLENOID VALVE SVC CLOSED	
3-1 -CU	63351013	CR2-2HSSC12 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -CT	63371013	SVE A-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSC12 SOLENOID VALVE CLOSED	
3-1 -CT	63381013	CR4-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSC12 SOLENOID VALVE CLOSED	
3-1 -CS	63391013	SVE B-2HSSC13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSC13 SOLENOID VALVE CLOSED	
3-1 -CS	63401013	CR4A-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSC13 SOLENOID VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CR	63411012	2HSS*HYV6C SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6C SOLENOID VALVE SVC CLOSED	
3-1 -CR	63421012	CR3-2HSSC12 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6C SOLENOID VALVE SVC CLOSED	
3-1 -CU	63431013	CR2-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -CU	63451013	CR11-2HSSC12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -CU	63461013	CR11-2HSSC12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -CT	63471013	CR4-2HSSC12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CT	63481013	CR4-2HSSC12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CS	63491013	CR4A-2HSSC12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CS	63501013	CR4A-2HSSC12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CR	63511013	CR3-2HSSC12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CR	63521013	CR3-2HSSC12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -H	63531017	2HSS*HYV6D PUMP STARTER ENERGIZED BY A SHORT	UNDETECTABLE	2HSS*HYV6D HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CY	63541013	SVE A-2HSSD12 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE A-2HSSD12 SOLENOID VALVE CLOSED	
3-1 -CX	63551013	SVE B-2HSSD13 SOLENOID VALVE FAILS CLOSE	PERIODIC TEST	SVE B-2HSSD13 SOLENOID VALVE CLOSED	
3-1 -CH	63561012	2HSS*HYV6D SOLENOID VALVE SVC FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6D SOLENOID VALVE SVC CLOSED	
3-1 -CZ	63571013	CR2-2HSSD12 CONTACT 1 FAILS CLOSED	PERIODIC TEST	2HSS*HYV6D HYDRAULIC PUMP RUNNING	
3-1 -CY	63591013	SVE A-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSD12 SOLENOID VALVE CLOSED	
3-1 -CY	63601013	CR4-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE A-2HSSD12 SOLENOID VALVE CLOSED	
3-1 -CX	63611013	SVE B-2HSSD13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSD13 SOLENOID VALVE CLOSED	
3-1 -CX	63621013	CR4A-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SVE B-2HSSD13 SOLENOID VALVE CLOSED	
3-1 -CH	63631012	2HSS*HYV6D SVC COIL EN BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6D SOLENOID VALVE SVC CLOSED	
3-1 -CH	63641012	CR3-2HSSD12 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HSS*HYV6D SOLENOID VALVE SVC CLOSED	
3-1 -CZ	63651013	CR2-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6D HYDRAULIC PUMP RUNNING	
3-1 -CZ	63671013	CR11-2HSSD12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6D HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CZ	63681013	CR11-2HSSD12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HYV6D HYDRAULIC PUMP RUNNING	
3-1 -CY	63691013	CR4-2HSSD12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CY	63701013	CR4-2HSSD12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CX	63711013	CR4A-2HSSD12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CX	63721013	CR4A-2HSSD12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CH	63731013	CR3-2HSSD12 CONTACT 1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CH	63741013	CR3-2HSSD12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AB 3-1 -AE	60661523	B21-K14A COIL ENERGIZED	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -BL 3-1 -BR	60731523	B21-K51A COIL ENERGIZED	PERIODIC TEST	2HSS*HYV7B OPEN	
3-1 -AH 3-1 -AL	60941523	B21-K127A COIL ENERGIZED	PERIODIC TEST	2HSS*HYV7D OPEN	
3-1 -BN 3-1 -CB	61011523	B21-K131A COIL ENERGIZED	PERIODIC TEST	2HSS*HYV7D OPEN	
3-1 -AP 3-1 -AS	62351523	B21-K51B COIL ENERGIZED	PERIODIC TEST	2HSS*HYV6B OPEN	
3-1 -CK 3-1 -CQ	62421523	B21-K14B COIL ENERGIZED	PERIODIC TEST	2HSS*HYV6B OPEN	
3-1 -CK	62441523	B21-K14B CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CK	62451523	B21-K14B CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AV 3-1 -AY	62631523	B21-K131B COIL ENERGIZED	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -CV 3-1 -DA	62701523	B21-K127B COIL ENERGIZED	PERIODIC TEST	2HSS*HYV6D OPEN	
3-1 -BC	60266083	42C-2HSSN12 COIL FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -AZ	60276083	42D-2HSSN12 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BC	60286083	42D-2HSSN12 CONTACT 9 FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BD	60296081	3A-2HSSN12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV112 OPEN	
3-1 -BD	60306081	2HSSN12 575 115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV112 OPEN	
3-1 -BD 3-1 -X	60316081	LOSS OF 2EHS*HCC102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -AZ	60326083	B22-S6 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -AZ 3-1 -BE	60336082	B22-S6 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HSS*HOV112 OPEN	
3-1 -BC	60346083	33-2HSSN12 CONTACT 15 FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BC	60356083	33-2HSSN12 MECHANICAL FAILURE	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BC	60366083	TQS-2HSSN12 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BC	60376083	EXCESS TORQUE	PERIODIC TEST	2HSS*HOV112 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BC	60386083	B22-K56A CONTACT R2 FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BC	60396083	B22-K56A COIL ENERGIZED	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BE	60406083	B22-S6 CONTACT 6 FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BE	60416083	3-2-2HSSA10 CONTACT T1 FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BB	62076083	42C-2HSSN11 COIL FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BA	62086083	42D-2HSSN11 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BB	62096083	42D-2HSSN11 CONTACT 9 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CC	62106081	3A-2HSSN11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV111 OPEN	
3-1 -CC	62116081	2HSSN11 575 115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV111 OPEN	
3-1 -CC	62126081	LOSS OF 2EHS*HCC302D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV111 OPEN	
3-1 -BA	62136083	B22-S5 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BA 3-1 -CD	62146082	B22-S5 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HSS*HOV111 OPEN	
3-1 -BB	62156083	33-2HSSN11 CONTACT 15 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BB	62166083	33-2HSSN11 MECHANICAL FAILURE	PERIODIC TEST	2HSS*HOV111 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -BB	62176083	TQS-2HSSN11 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BB	62186083	EXCESS TORQUE	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BB	62196083	B22-K56B CONTACT R2 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -BB	62206083	B22-K56B COIL ENERGIZED	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CD	62216083	B22-S5 CONTACT 6 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CD	62226083	3-1-2HSSB10 CONTACT T2 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -H	60506203	42C-2HSSN07 COIL FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -C	60516203	420-2HSSN07 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	60526203	420-2HSSN07 CONTACT 9 FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -X	60536201	3A-2HSSN07 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -X	60546201	2HSSN07 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -C	60556203	1-2HSSN07 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -C 3-1 -Y	60566202	1-2HSSN07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	60576203	B22-K8 CONTACT R3 FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	60586203	B22-K8 COIL ENERGIZED	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -Y	60596203	1-2HSSN07 CONTACT 2T FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -Y	60606203	3-1-2HSSA10 CONTACT T2 FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	63756203	33-2HSSN07 CONTACT 15 FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	63766203	33-2HSSN07 MECHANICAL FAILURE	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	63776203	TQS-2HSSN07 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -H	63786203	EXCESS TORQUE	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -BF	60427103	3-2-2HSSA10 COIL FAILS OPEN	PERIODIC TEST	2HSS*HOV112 OPEN	
3-1 -BF	60437103	3-1-2HSS10 CONTACT T1 FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -BF	60447103	3A-2HSSA10 FUSE FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -BF	60457103	LOSS OF 2SCH*PNL103A CKT #7 (GREEN)	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -BF	60467103	1-2HSSA10 CONTACT NO FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -BF	60477103	1-2HSSA10 CONTACT NC FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -BF	60487103	1-2HSSA10 OPERATOR ERROR	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	
3-1 -Y	60617103	3-1-2HSSA10 COIL FAILS OPEN	PERIODIC TEST	2HSS*HOV208 MAIN STEAM OUTBOARD DRAIN VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CE	62237103	3-1-2HSSB10 COIL FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CE	62247103	3-1-2HSSB10 CONTACT T1 FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CE	62257103	3A-2HSSB10 FUSE FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CE	62267103	LOSS OF 2SCH*FNL303B CKT #16 (YELLOW)	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CE	62277103	1-2HSSB10 CONTACT NO FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CE	62287103	1-2HSSB10 CONTACT NC FAILS OPEN	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -CE	62297103	1-2HSSB10 OPERATOR ERROR	PERIODIC TEST	2HSS*HOV111 OPEN	
3-1 -AP	62387133	B21-K51B CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AP	62397133	B21-K51B CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -Q	62927133	CS1-2HSSA12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6A HYDRAULIC PUMP RUNNING	
3-1 -Q	63007133	CS1-2HSSA12 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV6A HYDRAULIC PUMP RUNNING	
3-1 -AS	62527143	B21-K51B CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AS	62537143	B21-K51B CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -CQ	62577143	B21-K14B CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CQ	62587143	B21-K14B CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -P	63147143	CS1-2HSSB12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6B HYDRAULIC PUMP RUNNING	
3-1 -P	63227143	CS1-2HSSB12 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV6B HYDRAULIC PUMP RUNNING	
3-1 -AV	62667153	C21-K131B CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AV	62677153	B21-K131B CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CV	62727153	B21-K127B CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CV	62737153	B21-K127B CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -N	63367153	CS1-2HSSC12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -N	63447153	CS1-2HSSC12 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV6C HYDRAULIC PUMP RUNNING	
3-1 -AY	62807163	B21-K131B CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AY	62817163	B21-K131B CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -DA	62857163	B21-K127B CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -DA	62867163	B21-K127B CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -N	63587163	CS1-2HSSD12 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV6D HYDRAULIC PUMP RUNNING	
3-1 -N	63667163	CS1-2HSSD12 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV6D HYDRAULIC PUMP RUNNING	
3-1 -AB	60697173	B21-K14A CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AB	60707173	B21-K14A CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BL	60757173	B21-K51A CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BL	60767173	B21-K51A CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -U	61257173	CS1-2HSSA18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -U	61337173	CS1-2HSSA18 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV7A HYDRAULIC PUMP RUNNING	
3-1 -AE	60837183	B21-K14A CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AE	60847183	B21-K14A CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BR	60887183	B21-K51A CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BR	60897183	B21-K51A CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -T	61457183	CS1-2HSSB18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -T	61537183	CS1-2HSSB18 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV7B HYDRAULIC PUMP RUNNING	
3-1 -AH	60977193	B21-K127A CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AH	60987193	B21-K127A CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BH	61037193	B21-K131A CONTACT T1 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -BH	61047193	B21-K131A CONTACT T2 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -S	61677193	CS1-2HSSC18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV7C HYDRAULIC PUMP RUNNING	
3-1 -S	61757193	CS1-2HSSC18 OPERATOR ERROR	PERIODIC TEST	2HSS*HYV7C HYDRAULIC PUMP RUNNING	
3-1 -AL	61117203	B21-K127A CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -AL	61127203	B21-K127A CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CB	61167203	B21-K131A CONTACT T3 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -CB	61177203	B21-K131A CONTACT T4 FAILS CLOSE	PERIODIC TEST	NONE	
3-1 -R	61897203	CS1-2HSSD18 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2HSS*HYV7D HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
3-1 -R	61977203	CS1-2HSSD18 OPERATOR ERROR	PERIODIC TEST	2HSSxHYV7D HYDRAULIC PUMP RUNNING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
6-1 -A	B001FWS3	2FWS*AOV 23A AIR TESTED CHECK VALVE FAILS OPEN	PERIODIC TEST	NONE	
6-1 -A	B002FWS6	2FWS*V 12A CHECK VALVE FAILS OPEN	PERIODIC INSPECTION	NONE	
6-1 -A	B003FWS3	2FWS*AOV 23B AIR TESTED CHECK VALVE FAILS OPEN	PERIODIC TEST	NONE	
6-1 -A	B004FWS6	2FWS*V 12B CHECK VALVE FAILS OPEN	PERIODIC INSPECTION	NONE	
6-1 -B	B005FWS3	2FWS*MOV 21A FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -C	B021FWS3	2FWS*MOV 21B FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -B	B0066073	42C-2FWSA05 RELAY FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -D	B0076073	42O-2FWSA05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -B	B0086071	LOSS OF 2EHS*MCC 102 (GREEN)	ANNUNCIATED IN CONTROL ROOM	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -B	B0096071	2FWSA05 575\115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -B	B0106071	2FWSA05 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -D	B0116073	42O-2FWSA05 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -D 6-1 -F	B0126072	S4-2FWSA05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
6-1 -D	B0136073	S4-2FWSA05 CONTACT 3T FAILS CLOSED	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0146073	42O-2FWSA05 CONTACT 9 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0156073	33-2FWSA05 CONTACT 15 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0166073	42C-2FWSA05 CONTACT 8 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0176073	S4-2FWSA05 CONTACT 4T FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0186073	TQS-2FWSA05 OVER TORQUE PRESENT	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0196073	TQS-2FWSA05 CONTACT 17 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -F	B0206073	S4-2FWSA05 CONTACT 2T FAILS OPEN	PERIODIC TEST	2FWS*MOV 21A FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -C	B0226073	42C-2FWSB05 RELAY FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -E	B0236073	42O-2FWSB05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -C	B0246071	LOSS OF 2EHS*MCC 302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -C	B0256071	2FWSB05 575\115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -C	B0266071	2FWSB05 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
6-1 -E	B0276073	420-2FWSB05 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -E 6-1 -G	B0286072	S5-2FWSB05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -E	B0296073	S5-2FWSB05 CONTACT 3T FAILS CLOSED	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0306073	420-2FWSB05 CONTACT 9 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0316073	33-2FWSB05 CONTACT 15 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0326073	42C-2FWSB05 CONTACT 8 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0336073	S5-2FWSB05 CONTACT 4T FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0346073	TQS-2FWSB05 OVER TORQUE PRESENT	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0356073	TQS-2FWSB05 CONTACT 17 FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	
6-1 -G	B0366073	S5-2FWSB05 CONTACT 2T FAILS OPEN	PERIODIC TEST	2FWS*MOV 21B FEEDWATER SYSTEM ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
FEEDWATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -E	A002EGF1	DIV I FUEL OIL STRAINER 2EGF* STR1A(A-) BLOCKED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A003EGF1	DIV I FUEL OIL STRAINER 2EGF* STR1C(A-) BLOCKED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -B	A004EGF6	2EGF*TK1A(A-) FUEL OIL STORAGE TANK FUEL OIL LEVEL LO	PERIODIC INSPECTION	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -B	A006EGF6	2EGF*TK1A(A-) FUEL OIL STORAGE TANK WATER LEVEL HI	PERIODIC INSPECTION	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -B	A007EGF6	2EGF*TK3A(A-) FUEL OIL DAY TANK WATER LEVEL HI	PERIODIC INSPECTION	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Q	A013EGF1	DIV II FUEL OIL STRAINER 2EGF* STR1D(B-) BLOCKED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -C	A014EGF6	2EGF*TK1B(B-) FUEL OIL STORAGE TANK FUEL OIL LEVEL LO	PERIODIC INSPECTION	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -C	A016EGF6	2EGF*TK1B(B-) FUEL OIL STORAGE TANK WATER LEVEL HI	PERIODIC INSPECTION	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -C	A017EGF6	2EGF*TK3B(B-) FUEL OIL DAY TANK WATER LEVEL HI	PERIODIC INSPECTION	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -G	A024EGF1	DIV III FUEL OIL STRAINER 2EGF* STR2A(Z-) BLOCKED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A025EGF1	DIV III FUEL OIL STRAINER 2EGF* STR2B(Z-) BLOCKED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -D	A026EGF6	2EGF*TK2(Z-) FUEL OIL STORAGE TANK FUEL OIL LEVEL LO	PERIODIC INSPECTION	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -D	A028EGF6	2EGF*TK2(Z-) FUEL OIL STORAGE TANK WATER LEVEL HI	PERIODIC INSPECTION	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -D	A029EGF6	2EGF*TK4(Z-) FUEL OIL STORAGE TANK WATER LEVEL HI	PERIODIC INSPECTION	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -E	A034EGF3	XFR 2EGF*P1A DISCH PRESS 2EGF* PI14A RUPTURE	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A035EGF3	XFR 2EGF*P1C DISCH PRESS 2EGF* PI14C RUPTURE	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -E	A043EGF3	DIV I FUEL OIL XFR CHECK VALVE 2EGF*V12(A-) FAILED CLOSED	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A044EGF3	DIV I FUEL OIL XFR CHECK VALVE 2EGF*V13(A-) FAILED CLOSED	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -R	A046EGF3	XFR 2EGF*P1D DISCH PRESS 2EGF* PI14D RUPTURE	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -F	A053EGF3	DIV II FUEL OIL XFR CHECK VALVE 2EGF*V32(B-) FAILED CLOSED	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Q	A054EGF3	DIV II FUEL OIL XFR CHECK VALVE 2EGF*V33(B-) FAILED CLOSED	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -G	A055EGF3	XFR 2EGF*P2A DISCH PRESS 2EGF*PI16A RUPTURE	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A056EGF3	XFR 2EGF*P2B DISCH PRESS 2EGF*PI16B RUPTURE	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -G	A064EGF3	DIV III FUEL OIL XFR CHECK VALVE 2EGF*V52(Z-) FAILED CLOSED	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A065EGF3	DIV III FUEL OIL XFR CHECK VALVE 2EGF*V53(Z-) FAILED CLOSED	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -J	A066EGF3	XFR PMP MOTOR 2EGF* P1A(AG) WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -J	A067EGF3	DIV I FUEL OIL XFR PMP DRIVE 2EGF*P1A(AG) MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -F	A077EGF3	XFR PMP MOTOR 2EGF* P1B(BY) WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -F	A078EGF3	DIV II FUEL OIL XFR PMP DRIVE 2EGF*P1B(BY) MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -X	A088EGF3	XFR PMP MOTOR 2EGF* P2A(ZP) WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -X	A089EGF3	DIV III FUEL OIL XFR PMP DRIVE 2EGF*P2A(ZP) MECH FAILURE	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -K	A099EGF3	XFR PMP MOTOR 2EGF* P1C(AG) WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -K	A100EGF3	DIV I FUEL OIL XFR PMP DRIVE 2EGF*P1C(AG) MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Q	A110EGF3	XFR PMP MOTOR 2EGF* P1D(BY) WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Q	A111EGF3	DIV II FUEL OIL XFR PMP DRIVE 2EGF*P1D(BY) MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Y	A121EGF3	XFR PMP MOTOR 2EGF* P2B(ZP) WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Y	A122EGF3	DIV III FUEL OIL XFR PMP DRIVE 2EGF*P2B(ZP) MECH FAILURE	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -F	A169EGF1	DIV II FUEL OIL STRAINER 2EGF* STR1B(B-) BLOCKED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -E	A170EGF3	DIV I FUEL OIL XFR 2EGF*STR1A INSTN 2EGF*PDIS 20A RUPTURE	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A171EGF3	DIV I FUEL OIL XFR 2EGF*STR1C INSTN 2EGF*PDIS 20A RUPTURE	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -R	A173EGF3	DIV II FUEL OIL XFR 2EGF*STR1D INSTN 2EGF*PDIS 20A RUPTURE	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -G	A174EGF3	DIV III FUEL OIL XFR 2EGF*STR2A INSTN 2EGF*PDIS 24A RUPTURE	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -H	A175EGF3	DIV III FUEL OIL XFR 2EGF*STR2B INSTN 2EGF*PDIS 24A RUPTURE	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -A	A0426011	DIV I FUEL OIL XFR FLOW INSTN 2EGF*FIS13A RUPTURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -J	A0686013	DIV I 42-2EGFA01 CONTACTOR AT 2EHS*MCC103A FAILED OPEN	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -M	A0696011	DIV I PRIMARY WINDING OF 150VA XFMR CKT 2EGFA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -M 8-9 -P	A0706011	LOSS OF 575V PWR TO XFMR DIV I CKT 2EGFA01 AT 2EHS*MCC103A	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -M	A0716011	DIV I CKT 2EGFA01 PMP 2EGF*P1A SHORT EXISTS IN CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -M	A0726011	DIV I 3A FUSE CKT 2EGFA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -M	A0736011	DIV I SECONDARY WINDING OF 150VA XFMR CKT 2EGFA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -L	A0746013	1-2EGFA01 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -L 8-9 -AD	A0756013	1-2EGFA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -L	A0766012	42-2EGFA01 STARTER COIL FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -K	A1016013	DIV I 42-2EGFA02 CONTACTOR AT 2EHS*MCC103A FAILED OPEN	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -P	A1026011	DIV I PRIMARY WINDING OF 150VA XFMR CKT 2EGFA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -P	A1046011	DIV I CKT 2EGFA02 PMP 2EGF*P1C SHORT EXISTS IN CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -P	A1056011	DIV I 3A FUSE CKT 2EGFA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -P	A1066011	DIV I SECONDARY WINDING OF 150VA XFMR CKT 2EGFA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -N	A1076013	1-2EGFA02 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -N 8-9 -AG	A1086013	1-2EGFA02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AD	A1326013	1-2EGFA01 CONTACT 6 FAILED OPEN	PERIODIC TEST	1-2EGFA01 CONTACT 6 OPEN	
8-9 -AD	A1336013	2EGF*LS5A CKT 2EGFA01 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AD	A1346013	2EGF*LS7A CKT 2EGFA01 CONTACT FAILED OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -AD	A1356013	1-2EGFA01 CONTACT 4 FAILED OPEN	PERIODIC TEST	1-2EGFA01 CONTACT 4 OPEN	
8-9 -L	A1366012	49-2EGFA01 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -L	A1376012	OVERLOAD EXISTS ON CKT 2EGFA01 FUEL OIL XFR PMP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AG	A1506013	1-2EGFA01 CONTACT 6 FAILED OPEN	PERIODIC TEST	1-2EGFA02 CONTACT 6 OPEN	
8-9 -AG	A1516013	2EGF*LS5A CKT 2EGFA02 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AG	A1526013	2EGF*LS7A CKT 2EGFA02 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AG	A1536013	1-2EGFA02 CONTACT 4 FAILED OPEN	PERIODIC TEST	1-2EGFA02 CONTACT 4 OPEN	
8-9 -N	A1546012	49-2EGFA02 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -N	A1556012	OVERLOAD EXISTS ON CKT 2EGFA02 FUEL OIL XFR PMP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -A	A0526021	DIV II FUEL OIL XFR FLOW INSTN 2EGF*FIS13B RUPTURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -F	A0796023	DIV II 42-2EGFB01 CONTACTOR AT 2EHS*MCC303B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -T	A0806021	DIV II PRIMARY WINDING OF 150VA XFMR CKT 2EGFB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -T 8-9 -V	A0816021	LOSS OF 575V PWR TO XFMR DIV II CKT 2EGFB01 AT 2EHS*MCC303B	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -T	A0826021	DIV II CKT 2EGFB01 PMP 2EGF*P1B SHORT EXISTS IN CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -T	A0836021	DIV II 3A FUSE CKT 2EGFB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -T	A0846021	DIV II SECONDARY WINDING OF 150VA XFMR CKT 2EGFB01 FAILED OPN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -S	A0856023	1-2EGFB01 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -S 8-9 -AE	A0866023	1-2EGFB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -S	A0876022	42-2EGFB01 STARTER COIL FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Z	A0986022	42-2EGFC01 STARTER COIL FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -N	A1096022	42-2EGFA02 STARTER COIL FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Q	A1126023	DIV II 42-2EGFB02 CONTACTOR AT 2EHS*MCC303B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -V	A1136021	DIV II PRIMARY WINDING OF 150VA XFMR CKT 2EGFB02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -V	A1156021	DIV II CKT 2EGFB02 PMP 2EGP*P1D SHORT EXISTS IN CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -V	A1166021	DIV II 3A FUSE CKT 2EGFB02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -V	A1176021	DIV II SECONDARY WINDING OF 150VA XFMR CKT 2EGFB02 FAILED OPN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -U	A1186023	1-2EGFB02 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -U 8-9 -AH	A1196023	1-2EGFB02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -U	A1206022	42-2EGFB02 STARTER COIL FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AE	A1386023	1-2EGFB01 CONTACT 6 FAILED OPEN	PERIODIC TEST	1-2EGFB01 CONTACT 6 OPEN	
8-9 -AE	A1396023	2EGF*LS5B CKT 2EGFB01 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AE	A1406023	2EGF*LS7B CKT 2EGFB01 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AE	A1416023	1-2EGFB01 CONTACT 4 FAILED OPEN	PERIODIC TEST	1-2EGFB01 CONTACT 4 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -S	A1426022	49-2EGFB01 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -S	A1436022	OVERLOAD EXISTS ON CKT 2EGFB01 FUEL OIL XFR PMP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AH	A1566023	1-2EGFB02 CONTACT 6 FAILED OPEN	PERIODIC TEST	1-2EGFB02 CONTACT 6 OPEN	
8-9 -AH	A1576023	2EGF*LS5B CKT 2EGFB02 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AH	A1586023	2EGF*LS7B CKT 2EGFB02 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AH	A1596023	1-2EGFB02 CONTACT 4 FAILED OPEN	PERIODIC TEST	1-2EGFB02 CONTACT 4 OPEN	
8-9 -U	A1606022	49-2EGFB02 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -U	A1616022	OVERLOAD EXISTS ON CKT 2EGFB02 FUEL OIL XFR PMP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -A	A0636031	DIV III FUEL OIL XFR FLOW INSTM 2EGF*FIS104 RUPTURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -X	A0906033	DIV III 42-2EGFC01 CONTACTOR AT 2EHS*MCC201 FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AA	A0916031	DIV III PRIMARY WINDING OF 150VA XFMR CKT 2EGFC01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -AA 8-9 -AC	A0926031	LOSS OF 575V PWR TO XFMR DIV III CKT 2EGFC01 AT 2EHS*MCC201	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AA	A0936031	CKT 2EGFC01 PMP 2EGP*P2A SHORT EXISTS IN CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AA	A0946031	DIV III 3A FUSE CKT 2EGFC01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AA	A0956031	DIV III SEC WINDING OF 150VA XFMR CKT 2EGFC01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Z	A0966033	1-2EGFC01 CONTACT 1B FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Z 8-9 -AF	A0976033	1-2EGFC01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Y	A1236033	DIV III 42-2EGFC02 CONTACTOR AT 2EHS*MCC201 FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AC	A1246031	DIV III PRIMARY WINDING OF 150VA XFMR CKT 2EGFC02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AC	A1266031	CKT 2EGFC02 PMP 2EGP*P2B SHORT EXISTS IN CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AC	A1276031	DIV III 3A FUSE CKT 2EGFC02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AC	A1286031	DIV III SEC WINDING OF 150VA XFMR CKT 2EGFC02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -AB	A1296033	1-2EGFC02 CONTACT 1B FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AB 8-9 -AJ	A1306033	1-2EGFC02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AB	A1316032	42-2EGFC02 STARTER COIL FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AF	A1446033	1-2EGFC01 CONTACT 2T FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AF	A1456033	2EGF*LS106 CKT 2EGFC01 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AF	A1466033	2EGF*LS108 CKT 2EGFC01 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AF	A1476033	1-2EGFC01 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Z	A1486032	49-2EGFC01 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -Z	A1496032	OVERLOAD EXISTS ON CKT 2EGFC01 FUEL OIL XFR PMP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AJ	A1626033	1-2EGFC02 CONTACT 2Y FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AJ	A1636033	2EGF*LS106 CKT 2EGFC02 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
8-9 -AJ	A1646033	2EGF*LS108 CKT 2EGFC02 CONTACT FAILED OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
8-9 -AJ	A1656033	1-2EGFC02 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AB	A1666032	49-2EGFC02 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	
8-9 -AB	A1676032	OVERLOAD EXISTS ON CKT 2EGFC02 FUEL OIL XFR PMP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III STBY DSL ENG GEN FUEL OIL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -Q	J001CCP3	2CCP*MOV 265 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -D	J026CCP3	2CCP*MOV 124 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -P	J056CCP3	2CCP*MOV 273 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -E	J081CCP3	2CCP*MOV 122 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -S	J110CCP3	2CCP*MOV 4A FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -R	J131CCP3	2CCP*MOV 94A FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -U	J152CCP3	2CCP*MOV 21A FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -T	J173CCP3	2CCP*MOV 5A FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -W	J194CCP3	2CCP*MOV 4B FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -V	J214CCP3	2CCP*MOV 94B FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Y	J234CCP3	2CCP*MOV 21B FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -X	J254CCP3	2CCP*MOV 5B FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AC 9-1 -Z	J0081013	3A-2-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -J 9-1 -F	J0321023	3A-21-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AH 9-1 -AE 9-1 -N 9-1 -K	J0631043	3B-21-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BF 9-1 -AK	J1151053	3A-24-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -BJ 9-1 -AR 9-1 -BK 9-1 -AT	J1781053	3A-25-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BN 9-1 -AZ	J2591053	3A-26-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BG 9-1 -AM 9-1 -BL 9-1 -AV	J1361063	3B-26-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BH 9-1 -AP 9-1 -BM 9-1 -AX	J1571063	3B-24-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -U	J1536113	42C-2CCPA14 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -U	J1546112	42O-2CCPA14 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -U	J1556111	2CCPA14 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -U	J1566111	2CCPA14 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BH	J1586113	3B-24-2ISCB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3B-24-2ISCB02 CONTACT T1 CLOSED	
9-1 -BH	J1596113	42O-2CCPA14 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 21A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BH	J1606113	1-2CCPA14 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 21A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BH 9-1 -AP	J1616112	1-2CCPA14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AP	J1626113	42O-2CCPA14 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AP	J1636113	33-2CCPA14 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AQ	J1646113	49X-2CCPA14 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AP	J1656113	3B-24-2ISCB02 CONTACT R2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AP	J1666113	TQS-2CCPA14 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AP	J1676113	TQS-2CCPA14 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AQ	J1686111	49X-2CCPA14 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AP	J1696113	1-2CCPA14 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AP	J1706113	42C-2CCPA14 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AQ	J1716111	49-2CCPA14 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AQ	J1726111	49-2CCPA14 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Y	J2356113	42C-2CCPB14 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Y 9-1 -BN	J2366112	42D-2CCPB14 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Y	J2376111	2CCPB14 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -Y	J2386111	2CCPB14 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BM	J2396113	3B-24-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3B-24-2ISCB02 CONTACT T3 CLOSED	
9-1 -BM	J2406113	420-2CCPB14 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 21B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BM	J2416113	1-2CCPB14 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 21B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BM 9-1 -AX	J2426112	1-2CCPB14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AX	J2436113	420-2CCPB14 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AX	J2446113	33-2CCPB14 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AY	J2456113	49X-2CCPB14 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AX	J2466113	3B-24-2ISCB02 CONTACT R4 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AX	J2476113	TQS-2CCPB14 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AX	J2486113	TQS-2CCPB14 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AY	J2496111	49X-2CCPB14 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AX	J2506113	1-2CCPB14 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AX	J2516113	42C-2CCPB14 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AY	J2526111	49-2CCPB14 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AY	J2536111	49-2CCPB14 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 21B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -D	J0276133	42C-2CCPN15 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -D	J0286132	42O-2CCPN15 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -D	J0296131	2CCPN15 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -D	J0306131	2CCPN15 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -J	J0316133	42O-2CCPN15 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 124 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -J	J0336133	3A-21-2ISCA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3A-21-2ISCA02 CONTACT T3 CLOSED	
9-1 -G	J0346133	3-1-2CCPA07 CONTACT R1 FAILS CLOSED	PERIODIC TEST	3-1-2CCPA07 MANUAL INIT CONTACT R1 CLOSED	
9-1 -J	J0356133	1-2CCPN15 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 124 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -J 9-1 -F	J0366132	1-2CCPN15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -F	J0376133	42O-2CCPN15 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -F	J0386133	33-2CCPN15 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -F	J0396133	3A-21-2ISCA02 CONTACT R2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -H	J0406133	TQS-2CCPN15 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -H	J0416133	TQS-2CCPN15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -F	J0426133	1-2CCPN15 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -F	J0436133	42C-2CCPN15 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -F	J0446133	3-2CCPA07 CONTACT T2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BC	J0466133	49X-2CCPN15 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BC	J0516131	49X-2CCPN15 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BC	J0546131	49-2CCPN15 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BC	J0556131	49-2CCPN15 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -S	J1116163	42C-2CCPA18 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -S	J1126162	42O-2CCPA18 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -S	J1136161	2CCPA18 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -S	J1146161	2CCPA18 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BF	J1166163	3A-24-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3A-24-2ISCA02 CONTACT T2 CLOSED	
9-1 -BF	J1176163	42D-2CCPA18 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 4A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BF	J1186163	1-2CCPA18 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 4A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BF 9-1 -AK	J1196162	1-2CCPA18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AK	J1206163	42D-2CCPA18 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AK	J1216163	33-2CCPA18 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AL	J1226163	49X-2CCPA18 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AK	J1236163	3A-24-2ISCA02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AK	J1246163	TQS-2CCPA18 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AK	J1256163	TQS-2CCPA18 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AL	J1266161	49X-2CCPA18 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AK	J1276163	1-2CCPA18 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AK	J1286163	42C-2CCPA18 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AL	J1296161	49-2CCPA18 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AL	J1306161	49-2CCPA18 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -W	J1956163	42C-2CCPB18 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -W	J1966162	42O-2CCPB18 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -W	J1976161	2CCPB18 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -W	J1986161	2CCPB18 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BK	J1996163	3A-25-2ISCA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3A-25-2ISCA02 CONTACT T2 CLOSED	
9-1 -BK	J2006163	42O-2CCPB18 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 4B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BK	J2016163	1-2CCPB18 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 4B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BK 9-1 -AT	J2026162	1-2CCPB18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AT	J2036163	42O-2CCPB18 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AT	J2046163	33-2CCPB18 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AU	J2056163	49X-2CCPB18 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AT	J2066163	3A-25-2ISCA02 CONTACT R2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AT	J2076163	TQS-2CCPB18 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AT	J2086163	TQS-2CCPB18 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AU	J2096161	49X-2CCPB18 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AT	J2106163	1-2CCPB18 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AT	J2116163	42C-2CCPB18 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AU	J2126161	49-2CCPB18 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AU	J2136161	49-2CCPB18 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 4B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -T	J1746173	42C-2CCPA19 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -T	J1756172	42O-2CCPA19 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -T	J1766171	2CCPA19 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -T	J1776171	2CCPA19 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BJ	J1796173	3A-25-2ISCA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3A-25-2ISCA02 CONTACT T3 CLOSED	
9-1 -BJ	J1806173	420-2CCPA19 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 5A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BJ	J1816173	1-2CCPA19 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 5A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BJ 9-1 -AR	J1826172	1-2CCPA19 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AR	J1836173	420-2CCPA19 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AR	J1846173	33-2CCPA19 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AS	J1856173	49X-2CCPA19 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AR	J1866173	3A-25-2ISCA02 CONTACT R4 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AR	J1876173	TQS-2CCPA19 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AR	J1886173	TQS-2CCPA19 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AS	J1896171	49X-2CCPA19 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AR	J1906173	1-2CCPA19 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AR	J1916173	42C-2CCPA19 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AS	J1926171	49-2CCPA19 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AS	J1936171	49-2CCPA19 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -X	J2556173	42C-2CCPB19 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -X	J2566172	42O-2CCPB19 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -X	J2576171	2CCPB19 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -X	J2586171	2CCPB19 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BN	J2606173	3A-26-2ISCA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3A-26-2ISCA02 CONTACT T1 CLOSED	
9-1 -BN	J2616173	42O-2CCPB19 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 5B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BN	J2626173	1-2CCPB19 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 5B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -AZ	J2636172	1-2CCPB19 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2646173	42O-2CCPB19 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2656173	33-2CCPB19 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -BA	J2666173	49X-2CCPB19 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2676173	3A-26-2ISCA02 CONTACT R2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2686173	TQS-2CCPB19 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2696173	TQS-2CCPB19 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BA	J2706171	49X-2CCPB19 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2716173	1-2CCPB19 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AZ	J2726173	42C-2CCPB19 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BA	J2736171	49-2CCPB19 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BA	J2746171	49-2CCPB19 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 5B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Q	J0026183	42C-2CCPN03 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Q	J0036182	42O-2CCPN03 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Q 9-1 -D 9-1 -S 9-1 -T 9-1 -W 9-1 -X	J0046181	LOSS OF 2EHS*MCC 103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REAC BLDG CLOSED LOOP COOLING WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -Q	J0056181	2CCPN03 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Q	J0066181	2CCPN03 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AC	J0076183	420-2CCPN03 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 265 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -AC	J0096183	3A-2-2ISCA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3A-2-2ISCA02 CONTACT T3 CLOSED	
9-1 -AB	J0116183	3-1-2CCPA07 CONTACT R2 FAILS CLOSED	PERIODIC TEST	3-1-2CCPA07 MANUAL INIT CONTACT R2 CLOSED	
9-1 -AC	J0126183	1-2CCPN03 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 265 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -AC 9-1 -AA	J0136182	1-2CCPN03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Z	J0146183	420-2CCPN03 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Z	J0156183	33-2CCPN03 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Z	J0166183	3A-2-2ISCA02 CONTACT R4 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Z	J0176183	TQS-2CCPN03 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -Z	J0186183	TQS-2CCPN03 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AA	J0196183	1-2CCPN03 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AA	J0206183	42C-2CCPN03 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AA	J0216183	3-2CCPN03 CONTACT T3 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BB	J0226183	49X-2CCPN03 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BB	J0236181	49X-2CCPN03 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BB	J0246181	49-2CCPN03 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BB	J0256181	49-2CCPN03 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 265 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -E	J0826193	42C-2CCPN05 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -E	J0836192	42O-2CCPN05 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -E	J0846191	2CCPN05 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -E	J0856191	2CCPN05 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -N	J0866193	42O-2CCPN05 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 122 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -N	J0876193	3B-21-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3B-21-2ISCB02 CONTACT T3 CLOSED	
9-1 -L	J0886193	3-1-2CCPB07 CONTACT R1 FAILS CLOSED	PERIODIC TEST	3-1-2CCPB07 MANUAL INIT CONTACT R1 CLOSED	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -N	J0896193	1-2CCPN05 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 122 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -N 9-1 -K	J0906192	1-2CCPN05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -K	J0916193	42D-2CCPN05 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -K	J0926193	33-2CCPN05 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -K	J0936193	3B-21-2ISCB02 CONTACT R2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -M	J0946193	TQS-2CCPN05 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -M	J0956193	TQS-2CCPN05 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -K	J0966193	1-2CCPN05 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -K	J0976193	42C-2CCPN05 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -K	J0986193	3-2CCPB07 CONTACT T4 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BE	J1006193	49X-2CCPN05 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BE	J1056191	49X-2CCPN05 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BE	J1086191	49-2CCPN05 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -BE	J1096191	49-2CCPN05 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -R	J1326213	42C-2CCPA20 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -R	J1336212	42O-2CCPA20 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -R	J1346211	2CCPA20 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -R	J1356211	2CCPA20 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BG	J1376213	3B-26-2ISCB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3B-26-2ISCB02 CONTACT T1 CLOSED	
9-1 -BG	J1386213	42O-2CCPA20 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 94A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BG	J1396213	1-2CCPA20 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 94A CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BG 9-1 -AM	J1406212	1-2CCPA20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AM	J1416213	42O-2CCPA20 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AM	J1426213	33-2CCPA20 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AN	J1436213	49X-2CCPA20 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AM	J1446213	3B-26-2ISCB02 CONTACT R2 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AM	J1456213	TQS-2CCPA20 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AM	J1466213	TQS-2CCPA20 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AN	J1476211	49X-2CCPA20 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AM	J1486213	1-2CCPA20 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AM	J1496213	42C-2CCPA20 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AN	J1506211	49-2CCPA20 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AN	J1516211	49-2CCPA20 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94A CONTAINMENT ISOLATION VALVE OPEN	
9-1 -V	J2156213	42C-2CCPB20 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -V	J2166212	42O-2CCPB20 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -V	J2176211	2CCFB20 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -V	J2186211	2CCFB20 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BL	J2196213	3B-26-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3B-26-2ISCB02 CONTACT T3 CLOSED	
9-1 -BL	J2206213	42O-2CCPB20 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 94B CKT SEAL-IN OR MANUAL CONTACT CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -BL	J2216213	1-2CCPB20 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 94B CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -BL 9-1 -AV	J2226212	1-2CCPB20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2236213	42O-2CCPB20 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2246213	33-2CCPB20 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AW	J2256213	49X-2CCPB20 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2266213	3B-26-2ISCB02 CONTACT R4 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2276213	TQS-2CCPB20. OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2286213	TQS-2CCPB20 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AW	J2296211	49X-2CCPB20 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2306213	1-2CCPB20 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AV	J2316213	42C-2CCPB20 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AW	J2326211	49-2CCPB20 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AW	J2336211	49-2CCPB20 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 94B CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -P	J0576223	42C-2CCPN13 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -P	J0586223	42O-2CCPN13 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -P 9-1 -E 9-1 -R 9-1 -U 9-1 -V 9-1 -Y	J0596221	LOSS OF 2EHS*MCC 303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -P	J0606221	2CCPN13 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -P	J0616221	2CCPN13 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AH	J0626223	42O-2CCPN13 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV 273 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -AH	J0646223	3B-21-2ISCB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3B-21-2ISCB02 CONTACT T1 CLOSED	
9-1 -AG	J0666223	3-1-2CCPB07 CONTACT R2 FAILS CLOSED	PERIODIC TEST	3-1-2CCPB07 MANUAL INIT CONTACT R2 CLOSED	
9-1 -AH	J0676223	1-2CCPN13 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV 273 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
9-1 -AH 9-1 -AF	J0686222	1-2CCPN13 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AE	J0696223	42O-2CCPN13 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AE	J0706223	33-2CCPN13 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AE	J0716223	3B-21-2ISCB02 CONTACT R4 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AE	J0726223	TQS-2CCPN13 OVERTORQUE PRESENT	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AE	J0736223	TQS-2CCPN13 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AF	J0746223	1-2CCPN13 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AF	J0756223	42C-2CCPN13 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AF	J0766223	3-2CCPB07 CONTACT T3 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BD	J0776223	49X-2CCPN13 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BD	J0786221	49X-2CCPN13 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BD	J0796221	49-2CCPN13 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -BD	J0806221	49-2CCPN13 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 273 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AB	J0107073	3-1-2CCPA07 RELAY FAILS OPEN	PERIODIC TEST	3-1-2CCPA07 MANUAL INIT CONTACT R1 CLOSED	
9-1 -AA	J0457073	2CCPA07 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AD	J0477071	LOSS OF 2SCM*PNL 101A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AD	J0487073	2CCPA07 3A FUSE FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-1 -AD	J0497073	1-2CCPA07 CONTACT B FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AD	J0507073	3-2CCPA07 CONTACT T1 FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AD	J0527072	1-2CCPA07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AD	J0537073	1-2CCPA07 CONTACT A FAILS OPEN	PERIODIC TEST	2CCP*MOV 124 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AG	J0657073	3-1-2CCPB07 RELAY FAILS OPEN	PERIODIC TEST	3-1-2CCPB07 MANUAL INIT CONTACT R1 CLOSED	
9-1 -AF	J0997073	2CCPB07 RELAY FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AJ	J1017071	LOSS OF 2SCM*PNL 301B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AJ	J1027073	2CCPB07 3A FUSE FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AJ	J1037073	1-2CCPB07 CONTACT B FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AJ	J1047073	3-2CCPB07 CONTACT T1 FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AJ	J1067072	1-2CCPB07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	
9-1 -AJ	J1077073	1-2CCPB07 CONTACT A FAILS OPEN	PERIODIC TEST	2CCP*MOV 122 CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-E	D009CCP3	2CCP*RV 64A FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-E	D010CCP3	2CCP*RV 64B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-H	D690HCS3	2HCS*SOV10A MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-X	E404HCS3	2HCS*SOV 10B MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-C	D001SWP3	2SWP*PV 54A FAILS TO MODULATE (CLOSE)	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-C	D002SWP3	2SWP*PV 54B FAILS TO MODULATE (CLOSE)	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-L	D003SWP3	2SWP*RVY 46A FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO REACTOR BLDG RECIRC CLG COIL	
9-10-L	D004SWP3	2SWP*RVX 46A FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO REACTOR BLDG RECIRC CLG COIL	
9-10-L	D005SWP3	2SWP*AOV 97A CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO REACTOR BLDG RECIRC CLG COIL	
9-10-L	D006SWP3	2SWP*AOV 97B CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO REACTOR BLDG RECIRC CLG COIL	
9-10-L	D007SWP3	2SWP*RVX 46B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO REACTOR BLDG RECIRC CLG COIL	
9-10-L	D008SWP3	2SWP*RVY 46B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO REACTOR BLDG RECIRC CLG COIL	
9-10-G	D011SWP3	2SWP*RV 34A FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHR HEAT EXCHANGER	
9-10-G	D012SWP3	2SWP*MOV 33A CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHR HEAT EXCHANGER	
9-10-G	D013SWP3	2SWP*MOV 90A CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHR HEAT EXCHANGER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-G	D014SWP3	2SWP*MOV 90B CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHR HEAT EXCHANGER	
9-10-G	D015SWP3	2SWP*MOV 33B CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHR HEAT EXCHANGER	
9-10-G	D016SWP3	2SWP*RB 34B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHR HEAT EXCHANGER	
9-10-H	D017SWP3	2SWP*RV 27A FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-H	D018SWP3	2SWP*V 76A FAILS CLOSED	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-R	D019SWP3	2SWP*RV 27B FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-R	D020SWP3	2SWP*V 76B FAILS CLOSE	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AE	D021SWP3	2SWP*V 260 FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-AE 9-10-AH	D022SWP3	2SWP*RV 518 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH	D023SWP3	2SWP*V 259 FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-AH	D025SWP3	2SWP*V 75A FAILS CLOSE	PERIODIC TEST	NONE	
9-10-AH	D026SWP3	2SWP*V 75B FAILS CLOSE	PERIODIC TEST	NONE	
9-10-F	D027SWP3	2SWP*V 219A CONDENSER SWP INLET CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-F	D028SWP3	2SWP*TV 35A SWP OUTLET VALVE FAILS TO MODULATE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-F	D029SWP3	2SWP*MOV 67A CONDENSER SWP INLET VALVE CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-Q	D030SWP3	2SWP*MOV 67B CONDENSER SWP INLET VALVE CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-Q	D031SWP3	2SWP*TV 35B SWP OUTLET VALVE FAILS TO MODULATE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-Q	D032SWP3	2WP*V 219B CONDENSER SWP INLET CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-F	D033SWP3	2SWP*RV 58A CONDENSER OUTLET RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-F	D034SWP3	2SWP*V 240A COND RECIRC PUMP DISCH CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-F	D035SWP3	2SWP*P 2A CONDENSER RECIRC PUMP INOPERATIVE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-Q	D036SWP3	2SWP*RV 58B CONDENSER OUTLET RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-Q	D037SWP3	2SWP*V 240B COND RECIRC PUMP DISCH CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-Q	D038SWP3	2SWP*P2B CONDENSER RECIRC PUMP INOPERATIVE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO MAIN CONTROL ROOM CHILLERS	
9-10-H	D039SWP3	2HVP*UC 1A LOSS OF COOLING WATER	PERIODIC TEST	NONE	
9-10-H	D040SWP3	2HVP*UC 1B LOSS OF COOLING WATER	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-H	D041SWP3	2HVP*UC 2 LOSS OF COOLING WATER	PERIODIC TEST	NONE	
9-10-S	D042SWP3	2SWP*RVX 157A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV I UNIT SPACE CLRS	
9-10-S	D043SWP3	2SWP*RVY 157A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV I UNIT SPACE CLRS	
9-10-S	D044SWP3	2SWP*RVX 157B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II UNIT SPACE CLRS	
9-10-S	D045SWP3	2SWP*RVY 157B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II UNIT SPACE CLRS	
9-10-T	D046SWP3	2HVC*UC 104 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-T	D047SWP3	2HVC*UC 105 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HR	D048SWP3	2HVC*UC 103B LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HR	D049SWP3	2HVC*UC 103B LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HQ	D050SWP3	2HVC*UC 106 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HQ	D051SWP3	2HVC*UC 107 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-[illegible]	D052SWP3	2HVC*UC 101A LOSS OF SERVICE WATER	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-T	D053SWP3	2HVC*UC 101B LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-T	D054SWP3	2HVC*UC 102 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HP	D056SWP3	2HVR*UC 410A LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HJ	D057SWP3	2HVR*UC 412B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 261 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HJ	D058SWP3	2HVR*UC 411B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 261 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HP	D059SWP3	2HVR*UC 410B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 240 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HS	D060SWP3	2HVR*UC 403A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV III ECCS ROOM UNIT COOLERS	
9-10-HS	D061SWP3	2HVR*UC 403B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV III ECCS ROOM UNIT COOLERS	
9-10-HJ	D062SWP3	2HVR*UC 411C LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 261 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HP	D063SWP3	2HVR*UC 410C LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 240 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HS	D064SWP3	2HVR*UC 402A LOSS OF SERVCE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV 1 ECCS ROOM UNIT COOLERS	
9-10-HS	D065SWP3	2HVR*UC 402B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV 1 ECCS ROOM UNIT COOLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HT	D066SWP3	2HVR*UC 401C LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II ECCS ROOM UNIT COOLERS	
9-10-HT	D067SWP3	2HVR*UC 401F LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II ECCS ROOM UNIT COOLERS	
9-10-HK	D069SWP3	2HVR*UC 405 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HK	D070SWP3	2HVR*UC 406 LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HK	D071SWP3	2HVR*UC 414A LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HK	D072SWP3	2HVR*UC 414B LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HH	D073SWP3	2HVR*UC 415A LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HH	D074SWP3	2HVR*UC 415B LOSS OF SERVICE WATER	PERIODIC TEST	NONE	
9-10-HL	D075SWP3	2HVR*UC 408A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV I ELECTRICAL MCC AREA UNIT CLRS	
9-10-HL	D076SWP3	2HVR*UC 408B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV I ELECTRICAL MCC AREA UNIT CLRS	
9-10-HL	D077SWP3	2HVR*UC 409A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II ELECTRICAL MCC AREA UNIT CLRS	
9-10-HL	D078SWP3	2HVR*UC 409B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II ELECTRICAL MCC AREA UNIT CLRS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HJ	D079SWP3	2HVR*UC 412A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 261 FT DIV I GENERAL AREA UNIT CLRS	
9-10-HJ	D080SWP3	2HVR*UC 411A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 261 FT DIV I GENERAL AREA UNIT CLRS	
9-10-HJ	D081SWP3	2HVR*UC 404A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 175 FT DIV I GENERAL AREA UNIT CLRS	
9-10-HJ	D082SWP3	2HVR*UC 404B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 175 FT DIV I GENERAL AREA UNIT CLRS	
9-10-HJ	D083SWP3	2SVR*UC 404C LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 175 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HJ	D084SWP3	2HVR*UC 404D LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 175 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HS	D085SWP3	2HVR*UC 401A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV 1 ECCS ROOM UNIT COOLERS	
9-10-HS	D086SWP3	2HVR*UC 401D LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV 1 ECCS ROOM UNIT COOLERS	
9-10-HT	D087SWP3	2HVR*UC 401B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II ECCS ROOM UNIT COOLERS	
9-10-HT	D088SWP3	2HVR*UC 401E LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WATER TO DIV II ECCS ROOM UNIT COOLERS	
9-10-HN	D089SWP3	2HVR*UC 407D LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 215 FT DIV II GENERAL AREA UNIT CLRS	
9-10-HN	D090SWP3	2HVR*UC 407E LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 215 FT DIV II GENERAL AREA UNIT CLRS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HN	D091SWP3	2HVR*UC 407A LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 215 FT DIV I GENERAL AREA UNIT CLRS	
9-10-HN	D092SWP3	2HVR*UC 407B LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 215 FT DIV I GENERAL AREA UNIT CLRS	
9-10-HN	D093SWP3	2HVR*UC 407C LOSS OF SERVICE WATER	PERIODIC TEST	LOSS OF SERVICE WTR TO EL 215 FT DIV I GENERAL AREA UNIT CLRS	
9-10-D	D094SWP3	LOSS OF NORMAL DISCHARGE SYSTEM	PERIODIC TEST	NONE	
9-10-GK	D095SWP3	LOSS OF COMMON INTAKE BAY	PERIODIC TEST	NONE	
9-10-GK	D096SWP3	LOSS OF TUNNEL NO 1	PERIODIC TEST	NONE	
9-10-GK	D097SWP3	LOSS OF TUNNEL NO 2	PERIODIC TEST	NONE	
9-10-GL	D120SWP3	2SWP*MOV 74A FAILS CLOSED	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-AQ	D157SWP3	2SWP*MOV 74E FAILS CLOSED	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-BM	D200SWP3	2SWP*MOV 74C FAILS CLOSED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BK	D421SWP3	2SWP*MOV 3A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CG	D449SWP3	2SWP*MOV 19A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CE	D475SWP3	2SWP*MOV 92A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CF	D496SWP3	2SWP*MOV 93A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-B	D516SWP3	2SWP*MOV 47A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-BH	D542SWP3	2SWP*MOV 38A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BH	D570SWP3	2SWP*MOV 39A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BJ	D591SWP3	2SWP*MOV 50A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-AA	D608SWP3	2SWP*MOV 17A MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AB	D621SWP3	2SWP*MOV 18A MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AG	D635SWP3	2SWP*MOV 66A MECHANICALLY FAILS CLOSE	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-Y	D665SWP3	2SWP*MOV 12A MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB	D674SWP3	2SWP*MOV 95A MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HH	D694SWP3	2SWP*MOV 77A MECHANICALLY FAILS CLOSE	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-HV	D709SWP3	2SWP*MOV 30A MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 30A OPEN	
9-10-GU	D821SWP3	2SWP*MOV 74B FAILS CLOSED	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-BQ	D840SWP3	2SWP*MOV 74D FAILS CLOSED	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-AS	D859SWP3	2SWP*MOV 74F FAILS CLOSED	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AE	D994SWP3	2SWP*MOV 95A MECHANICALLY FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-BK	E132SWP3	2SWP*MOV 3B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CG	E160SWP3	2SWP*MOV 19B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CE	E185SWP3	2SWP*MOV 92B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-CF	E209SWP3	2SWP*MOV 93B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-B	E228SWP3	2SWP*MOV 47B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-BS	E254SWP3	2SWP*MOV 38B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BS	E284SWP3	2SWP*MOV 39B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BJ	E305SWP3	2SWP*MOV 50B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-AD	E322SWP3	2SWP*MOV 17B MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AC	E335SWP3	2SWP*MOV 18B MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AF	E348SWP3	2SWP*MOV 66B MECHANICALLY FAILS CLOSE	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG HTR FLOW	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-Z	E378SWP3	2SWP*MOV 21B MECHANICALLY FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-AH	E392SWP3	2SWP*MOV 95B MECHANICALLY FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-HX	E408SWP3	2SWP*MOV 77B MECHANICALLY FAILS CLOSE	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-HU	E423SWP3	2SWP*MOV 30B MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-AJ	E510SWP3	2SWP*MOV 94A MECHANICALLY FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-AK	E532SWP3	2SWP*MOV 94B MECHANICALLY FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-LB	D4100013	2SWP*PDIS 1A FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LZ	D5500013	2SWP*PDIS 1C FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-MD	D7860013	2SWP*PDIS 1E FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-NY	E1210013	2SWP*PDIS 1B FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-PH	E4680013	2SWP*PDIS 1D FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-QB	E4990013	2SWP*PDIS 1F FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-JG	D1040643	2SWP*TSLX 64A NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JG	D1060643	2SWP*TSL64A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JG	D1070643	2SWP*TT 64A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JG	D1080643	2SWP*TE 64A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JG 9-10-JH 9-10-KH 9-10-LE 9-10-LF 9-10-EQ 9-10-LP	D1090643	LOSS OF H13-P829 CONTROL POWER	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-NE	D8030643	2SWP*TSLX 64B NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-NE	D8050643	2SWP*TSL 64B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-NE	D8060643	2SWP*TT64B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-NE	D8070643	2SWP*TE 64B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-NE 9-10-NF 9-10-NE 9-10-PB 9-10-PC 9-10-GB 9-10-GC	D8080643	LOSS OF H13-P830 CONTROL POWER	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-JH	D1150653	2SWP*TSLX65A NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JH	D1170653	2SWP*TSL65A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JH	D1180653	2SWP*TT65A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JH	D1190653	2SWP*TE65A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HF	D8140653	2SWP*TSLX 65B NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-HF	D8160653	2SWP*TSL 65B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-HF	D8170653	2SWP*TT 65B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-HF	D8180653	2SWP*TE 65B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-EQ	D6580663	2SWP*PSL 66A FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 66A NC CONTACT CLOSE	
9-10-EQ	D6630663	2SWP*PT 66A FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 66A NC CONTACT CLOSE	
9-10-EQ	D6640663	2SWPA22 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*PSLX 66A NC CONTACT CLOSE	
9-10-GB	E3710663	2SWP*PSL 66B FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 66B NC CONTACT CLOSE	
9-10-GB	E3760663	2SWP*PT 66B FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 66B NC CONTACT CLOSE	
9-10-GB	E3770663	2SWP*PWRS 66B FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 66B NC CONTACT CLOSE	
9-10-LK	D5620903	2CCP*PSLX 90A NC CONTACT FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LK	D5660903	2CCF*PSL 90A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LK	D5670903	2CCP*PT 90A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LK	D5680903	2CCP*PWRS 90A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LK	D5690903	LOSS OF H13-P896 CONTROL POWER	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PK	E2760903	2CCP*PSLX90B NC CONTACT FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PK	E2800903	2CCP*PSL 90B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PK	E2810903	2CCP*PT 90B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PK	E2820903	2CCP*PWRS 90B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PK	E2830903	LOSS OF H13-P897 CONTROL POWER	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-LP	D6800953	2SWP*PSL 95A FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 95A NC CONTACT CLOSE	
9-10-LP	D6810953	2SWP*PT 95A FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 95A NC CONTACT CLOSE	
9-10-LP	D6820953	2SWP*PWRS 95A FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 95A NC CONTACT CLOSE	
9-10-GC	E3980953	2SWP*PSL 95B FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 95B NC CONTACT CLOSE	
9-10-GC	E3990953	2SWP*PT 95B FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 95B NC CONTACT CLOSE	
9-10-GC	E4000953	2SWP*PWRS 95B FAILS INOPERATIVE	PERIODIC TEST	2SWP*PSLX 95B NC CONTACT CLOSE	
9-10-JY	D1990963	2SWP*FSL96A FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JY 9-10-LG	D2010963	2SWP*PWRS 96A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-JY 9-10-MQ	D2020963	LOSS OF H1B-P828 CONTROL POWER	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-JY	D2030963	2SWP*FE 96A FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JY	D2040963	2SWP*FT 96A FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KH	D2660963	2SWP*PSL 96C FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KH	D2670963	2SWP*PWRS 96C FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KH	D2680963	2SWP*FE 96C FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KH	D2690963	2SWP*FT 96C FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KQ	D3330963	2SWP*FSL 96E FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KQ	D3350963	2SWP*PWRS96E FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KQ	D3360963	2SWP*FE 96E FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KQ	D3370963	2SWP*FT 96E FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MW	D9010963	2SWP*FSL 96B FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MW	D9020963	2SWP*PWRS 96B FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MW 9-10-NM 9-10-PF	D9030963	LOSS OF H23-P831 CONTROL POWER	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-MW	D9040963	2SWP*FE 96B FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MW	D9050963	2SWP*FT96B FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NE	D9680963	2SWP*FSL 96D FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NE	D9690963	2SWP*PWRS 96D FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NE	D9700963	2SWP*FE 96D FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NE	D9710963	2SWP*FT 96D FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NM	E0430963	2SWP*FSL 96F FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NM	E0450963	2SWP*PWRS 96F FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NM	E0460963	2SWP*FE 96F FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NM	E0470963	2SWP*FT 96F FAILS INOPERATIVE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-LE	D4421393	2SWP*PSL 139A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-LE	D4461393	2SWP*PT 139A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-LE	D4471393	2SWP*PWRS 139A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-PB	E1531393	2SWP*PSL 139B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-PB	E1571393	2SWP*PT 139B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-PB	E1581393	2SWP*PWRS 139B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-LF	D4711403	2SWP*PSL 140A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-LF	D4721403	2SWP*PT 140A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-LF	D4731403	2SWP*PWRS 140A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-PC	E1821403	2SWP*PT 140B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-PC	E1831403	2SWP*PWRS 140B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-PC	E2021403	2SWP*PSL 140B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 19B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-LG	D5391423	2SWP*PSL 142A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-LG	D5401423	2SWP*PT 142A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-LG	D5411423	2SWP*PWRS 142A FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-PF	E2511423	2SWP*PSL 142B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-PF	E2521423	2SWP*PT 142B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-PF	E2531423	2SWP*PWRS 142B FAILS INOPERATIVE	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-AH	D1765013	2SWP*P1A FEEDER BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JQ	D1775013	2SWP*P1A BREAKER 52 TC ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GM	D1805011	35A-2SWPA01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GM	D1815011	15A-2SWPA01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GM 9-10-BN 9-10-AR	D1825011	LOSS OF 125V DC 2ENS*SWG 101 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-GM	D1865011	35A-2SWPA01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GM	D1875011	15A-2SWPA01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JT	D1905013	33-2SWPA24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JR	D1915013	1-2SWPA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JR 9-10-DB 9-10-AX	D1925013	3-2ENSX04 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-JR	D1935013	3-2ENSX04 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JT	D1945013	86-2SPWPA01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JW	D2055013	2C-2SWPA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JU	D2065013	1-2SWPA01 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JV	D2075013	2A-2SWPA01 CONTACT 1. FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JV	D2085013	1-2SWPA01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JW	D2095013	2C-2SWPA01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JZ	D2105013	2A-2SWPA01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JW	D2115013	52XA-2SWPA01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JW	D2125013	71X4-2ENSX04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JW	D2135013	71X4-2ENSX04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JZ	D2145013	3-4-2SWPA44 CONTACT T3 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JZ	D2155013	1-2SWPA01 CONTACT 16 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JV	D2165013	2B-2SWPA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KD	D2175013	52-2SWPC01 CONTACT 66 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KD	D2185013	52-2SWPE01 CONTACT 59 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KD	D2195013	52XA-2SWPA01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KB	D2275013	52-2SWPC01 CONTACT 70 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KC	D2285013	2B-2SWPA01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KC	D2295013	52-2SWPE01 CONTACT 62 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KB	D2305013	71X4-2ENSA04 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KB	D2315013	1-2SWPE01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KB	D2325013	1-2SWPE01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KC	D2335013	1-2SWPC01 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KC	D2345013	1-2SWPC01 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KD	D2355013	52XA-2SWPA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JU 9-10-KB	D2365013	71X4-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JX	D2395013	52X-2SWPA01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JX	D2435013	2D-2SWPA01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JU	D2485013	71X4-2ENSX04 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JU	D2495013	1-2SWPA01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JV	D2505013	1-2SWPA01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-MP	D8785023	2SWP*P1B FEEDER BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MN	D8795023	2SWP*P1B BREAKER 52TC ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GV	D8825021	35A-2SWPB01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-GV	D8835021	15A-2SWPB01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GV 9-10-BR 9-10-AU	D8845021	LOSS OF 125V DC 2ENS*SWG 103 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-GV	D8885021	35A-2SWPB01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GV	D8895021	15A-2SWPB01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HR	D8925023	33-2SWPB24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HP	D8935023	1-2SWPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HP 9-10-ER 9-10-BC	D8945023	3-2ENSY04 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-HP	D8955023	3-2ENSY04 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HR	D8965023	86-2SWPB01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HU	D9065023	2C-2SWPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HS	D9075023	1-2SWPB01 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HS	D9085023	2A-2SWPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HT	D9095023	1-2SWPB01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HU	D9105023	2C-2SWPB01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HX	D9115023	2A-2SWPB01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HU	D9125023	52XA-2SWPB01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HU	D9135023	71X4-2ENSY04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HU	D9145023	71X4-2ENSY04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HX	D9155023	3-4-2SWPB44 CONTACT T3 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HX	D9165023	1-2SWPB01 CONTACT 16 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9175023	52-2SWPD01 CONTACT 66 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9185023	52-2SWPF01 CONTACT 58 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9195023	52XA-2SWPB01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HT	D9275023	2B-2SWPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HZ	D9285023	52-2SWPD01 CONTACT 70 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HZ	D9295023	2B-2SWPB01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9305023	52-2SWPF01 CONTACT 62 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HZ	D9315023	71X4-2ENSY04 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HZ	D9325023	1-2SWPF01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HZ	D9335023	1-2SWPF01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9345023	1-2SWPD01 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9355023	1-2SWPD01 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NA	D9365023	52XA-2SWPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HS 9-10-HZ	D9375023	71X4-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HV	D9405023	52X-2SWPB01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HV	D9445023	2D-2SWPB01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HS	D9495023	71X4-2ENSY04 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HS	D9505023	1-2SWPB01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HT	D9515023	1-2SWPB01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-BL	D2515033	2SWP*P1C BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BN	D2535031	35A-2SWPC01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BN	D2545031	15A-2SWPC01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BN	D2565031	35A-2SWPC01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BN	D2575031	15A-2SWPC01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DC	D2775033	53-2SWPC24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DB	D2785033	3-2-ENSX04 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DB	D2795033	1-2SWPC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DC	D2805033	3-2SWPC01 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DC	D2815033	86-2SWPC01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DD	D2825033	1-2SWPC01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-DD	D2835033	1-2SWPC01 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DF	D2845033	2A-2SWPC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DE	D2855033	71X2-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DE	D2865033	1-2SWPC01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DE	D2875033	1-2SWPC01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DF	D2885033	2A-2SWPC01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DE	D2895033	71X2-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DE	D2905033	2B-2SWPC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DF	D2915033	1-2SWPC01 CONTACT 16 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DF	D2925033	3-4-2SWPA44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DG	D2935033	52X-2SWPC01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DG	D2975033	2D-2SWPC01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KK	D3025033	2C-2SWPC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KK	D3035033	2C-2SWPC01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KK	D3045033	52XA-2SWPC01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KK	D3055033	71X2-2ENSX04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KK	D3065033	71X2-2ENSX04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KN	D3075033	2B-2SWPC01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KN	D3085033	52-2SWPA01 CONTACT 52 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KN	D3095033	52-2SWPE01 CONTACT 70 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KM	D3105033	71X1-2ENSX04 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KM	D3115033	1-2SWPE01 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KM	D3125033	1-2SWPE01 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KP	D3135033	52XA-2SWPC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KN	D3145033	1-2SWPA01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KN	D3155033	1-2SWPA01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KM	D3165033	71X1-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KP	D3175033	52-2SWPE01 CONTACT 66 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KP	D3185033	52XA-2SWPC01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KP	D3195033	52-2SWPA01 CONTACT 58 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BP	D9535043	2SWP*P1D BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BR	D9555041	35A-2SWPD01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BR	D9565041	15A-2SWPD01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BR	D9585041	35A-2SWPD01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BR	D9595041	15A-2SWPD01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ES	D9795043	33-2SWPD24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ER	D9805043	3-2-ENSX04 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ER	D9815043	1-2SWPD01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ES	D9825043	3-2SWPD01 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-ES	D9835043	86-2SWPD01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ET	D9845043	1-2SWPD01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ET	D9855043	1-2SWPD01 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EV	D9865043	2A-2SWPD01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EU	D9875043	71X2-2ENSY04 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EU	D9885043	1-2SWPD01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EU	D9895043	1-2SWPD01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EV	D9905043	2A-2SWPD01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EU	D9915043	71X2-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EV	D9925043	1-2SWPD01 CONTACT 16 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EV	D9935043	3-4-2SWPB44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EW	E0015043	52X-2SWPD01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EW	E0055043	2D-2SWPD01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NG	E0105043	2C-2SWPD01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NG	E0115043	2C-2SWPD01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NG	E0125043	52XA-2SWPD01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NG	E0135043	71X2-2ENSY04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NG	E0145043	71X2-2ENSY04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ET	E0155043	2B-2SWPD01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NJ	E0165043	2B-2SWPD01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NK	E0175043	52-2SWPB01 CONTACT 62 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NK	E0185043	52-2SWPF01 CONTACT 70 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NJ	E0195043	71X1-2ENSY04 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NJ	E0205043	1-2SWPF01 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NJ	E0215043	1-2SWPF01 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NL	E0225043	52XA-2SWPD01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NK	E0235043	1-2SWPB01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NK	E0245043	1-2SWPB01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NJ	E0255043	71X1-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NL	E0265043	52-2SWPF01 CONTACT 66 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NL	E0275043	52XA-2SWPD01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NL	E0285043	52-2SWPB01 CONTACT 58 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-AL	D3205053	2SWP*P1E BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AR	D3225051	35A-2SWPE01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AR	D3235051	15A-2SWPE01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AR	D3255051	35A-2SWPE01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AR	D3265051	A15A-2SWPE01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AY	D3445053	33-2SWPE24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AX	D3455053	3-2ENSX04 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-AX	D3465053	1-2SWPE01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AY	D3475053	3-2SWPE01 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AY	D3485053	3-2SWPC01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AY	D3495053	86-2SWPE01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AZ	D3515053	1-2SWPC01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AZ	D3525053	1-2SWPE01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KR	D3545053	2A-2SWPE01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KR	D3555053	1-2SWPE01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KR	D3565053	1-2SWPE01 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KR	D3575053	71X3-2ENSX04 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KR 9-10-KX	D3585053	71X3-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KW	D3595053	2A-2SWPE01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KW	D3605053	1-2SWPE01 CONTACT 16 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KW	D3615053	3-5-2SWPA44 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KS	D3625053	52X-2SWPE01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KS	D3665053	2D-2SWPE01 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KT	D3715053	2C-2SWPE01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KT	D3725053	2C-2SWPE01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KT	D3735053	52XA-2SWPE01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KT	D3745053	71X3-2ENSX04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KT	D3755053	71X3-2ENSX04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AZ	D3765053	2B-2SWPE01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3775053	2B-2SWPE01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3785053	52-2SWPC01 CONTACT 62 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3795053	52-2SWPA01 CONTACT 70 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KU	D3805053	1-2SWPA01 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KU	D3815053	1-2SWPA01 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KU	D3825053	1-2SWPC01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KU	D3835053	1-2SWPC01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3845053	71X3-2ENSX04 CONTACT 19 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3855053	52XA-2SWPE01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3865053	52-2SWPC01 CONTACT 58 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3875053	52XA-2SWPA01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KX	D3885053	52-2SWPA01 CONTACT 66 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AN	E0305063	2SWP*P1F BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AU	E0325061	35A-2SWPF01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AU	E0335061	15A-2SWPF01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AU	E0355061	35A-2SWPF01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AU	E0365061	15A-2SWPF01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-BD	E0545063	33-2SWPF24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BC	E0555063	3-2ENSY04 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BC	E0565063	1-2SWPF01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BD	E0575063	3-2SWPF01 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BD	E0585063	3-2SWPD01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BD	E0595063	86-2SWPF01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BE	E0605063	1-2SWPF01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BE	E0615063	1-2SWPF01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BE	E0635063	2A-2SWPF01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NN	E0645063	1-2SWPF01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NN	E0655063	1-2SWPF01 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NN	E0665063	71X3-2ENSY04 CONTACT 38 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NN 9-10-NU	E0675063	71X3-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NT	E0685063	2A-2SWPF01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NT	E0695063	1-2SWPF01 CONTACT 16 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NT	E0705063	3-5-2SWPB44 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NP	E0715063	52X-2SWPF01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NP	E0755063	2D-2SWPF01 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NQ	E0825063	2C-2SWPF01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NQ	E0835063	2C-2SWPF01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NQ	E0845063	52XA-2SWPF01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NQ	E0855063	71X3-2ENSY04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NQ	E0865063	1X3-2ENSY04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BE	E0875063	2B-2SWPF01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NR	E0885063	2B-2SWPF01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NU	E0895063	5?-2SWPD01 CONTACT 62 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NU	E0905063	52-2SWP301 CONTACT 70 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NR	E0915063	1-2SWPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NR	E0925063	1-2SWPB01 CONTACT 13 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NR	E0935063	1-2SWPD01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NR	E0945063	1-2SWPD01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NU	E0955063	71X3-2ENSY04 CONTACT 19 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NU	E0965063	52XA-2SWPF01 CONTACT 7 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NU	E0975063	52-2SWPD01 CONTACT 58 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NU	E0985063	52XA-2SWPF01 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NU	E0995063	52-2SWPB01 CONTACT 66 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-JQ 9-10-JR 9-10-JU 9-10-JV 9-10-JZ 9-10-KA 9-10-KN	D1785073	1-2SWPA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-KU	D1785073	1-2SWPA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JQ	D1795073	1-2SWPA01 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JQ	D1835073	27X1-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JQ	D1845073	27X1-2ENSX04 CONTACT 19 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JQ	D1855073	86-2SWPA01 CONTACT 1C FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JT	D1885073	2SWPA01 GROUND OR PHASE OVERCURRENT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JT	D1895073	86-2SWPA01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JS	D1955073	62-1-2SWPA01 CONTACT 5 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JS	D1965073	62-12SWPA01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JS	D1975073	52-2SWPA01 CONTACT 56 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JS	D1985073	2SWP*FSLX96A NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JX	D2405073	52X-2SWPA01 OPERATING COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KA	D2415073	52X-2SWPA01 RESET COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KA	D2425073	52X-2SWPA01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JX	D2445073	2D-2SWPA01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KA 9-10-KV	D2455073	27X3-2ENSX04 COIL NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-KA	D2465073	27X3-2ENSX04 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KA	D2475073	1-2SWPA01 CONTACT 5 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-MN 9-10-MP 9-10-MS 9-10-MT 9-10-MX 9-10-MY 9-10-MK	D8805083	1-2SPWB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-MR	D8805083	1-2SPWB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-MN	D8815083	1-2SWPB01 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MN	D8855083	27X1-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MN	D8865083	27X1-2ENSY04 CONTACT 19 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MN	D8875083	86-2SWPB01 CONTACT 1C FAILS CLOSE.	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MR	D8905083	2SWPB01 GROUND OR PHASE OVERCURRENT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HR	D8915083	86-2SWPB01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HQ	D8975083	62-1-2SWPB01 CONTACT 5 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HQ	D8985083	62-1-2SWPB01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HQ	D8995083	52-2SWPB01 CONTACT 56 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HQ	D9005083	2SWP*FSLX 96B NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HV	D9415083	52X-2SWPB01 OPERATING COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HY	D9425083	52X-2SWPB01 RESET COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HY	D9435083	52X-2SWPB01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HV	D9455083	2D-2SWPB01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HY 9-10-NS	D9465083	27X3-2ENSY04 COIL NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-HY	D9475083	27X3-2ENSY04 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HY	D9485083	1-2SWPB01 CONTACT 5 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KC 9-10-KE 9-10-DB 9-10-DD 9-10-DE 9-10-DF 9-10-KL	D2385093	1-2SWPC01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-KU	D2385093	1-2SWPC01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-BN	D2525093	2SWP*P1C BREAKER 52 TC ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KE	D2555093	1-2SWPC01 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KE	D2595093	27X2-2ENSX04 CONTACT 19 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KE	D2605093	86-2SWPC01 CONTACT 1C FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KF	D2615093	62-1-2SWPC01 CONTACT 5 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DC	D2625093	86-2SWPC01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DC	D2635093	2SWPC01 GROUND OR PHASE OVERCURRENT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KF	D2645093	62-1-2SWPC01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KF	D2655093	2SWP*FSLX96C NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KG	D2705093	3-2SWPC01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KG	D2715093	3-2SWPC01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-KG	D2725093	52-2SWPA01 CONTACT 68 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-KJ	D2735093	3-7-2SWPA44 CONTACT T1 FAILS CLOSE	PERIODIC TEST	3-7 2SWPA44 CONTACT T1 CLOSE	
9-10-DG	D2945093	52X-2SWPC01 OPERATING COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KL	D2955093	52X-2SWPC01 RESET COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KL	D2965093	52X-2SWPC01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-DG	D2985093	2D-2SWPC01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KL	D2995093	1-2SWPC01 CONTACT 5 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KL	D3005093	27-2-2ENSX04 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-KL	D3015093	27X2-2ENSX04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NA 9-10-NB 9-10-ER 9-10-ET 9-10-EU 9-10-EV 9-10-NH	D9395103	1-2SWPD01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-NR	D9395103	1-2SWPD01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-BR	D9545103	2SWP*P1D BREAKER 52TC ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NB	D9575103	1-2SWPD01 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NB	D9605103	27X2-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NB	D9615103	27X2-2ENSY04 CONTACT 19 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NB	D9625103	86-2SWPD01 CONTACT 1C FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NC	D9635103	62-1-2SWPD01 CONTACT 5 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ES	D9645103	86-2SWPD01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ES	D9655103	2SWPD01 GROUND OR PHASE OVERCURRENT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NC	D9665103	62-1-2SWPD01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NC	D9675103	2SWP*FSLX 96D NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-ND	D9725103	3-2SWPD01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-ND	D9735103	3-2SWPD01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-ND	D9745103	52-2SWPB01 CONTACT 68 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-NF	D9755103	3-7-2SWPB44 CONTACT T1 FAILS CLOSE	PERIODIC TEST	3-7-2SWPB44 CONTACT T1 CLOSE	
9-10-EH	E0025103	52X-2SWPD01 OPERATING COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NH	E0035103	52X-2SWPD01 RESET COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NH	E0045103	52X-2SWPD01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-EH	E0065103	2D-2SWPD01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NH	E0075103	1-2SWPD01 CONTACT 5 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NH	E0085103	27-2-2ENSY04 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-NH	E0095103	27X2-2ENSY04 COIL NOT ENERGIZED	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KB 9-10-KM 9-10-DJ 9-10-AX 9-10-AZ 9-10-KV	D2375113	1-2SWPE01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-AR	D3215113	2SWP*P1E BREAKER 52 TC ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DJ	D3245113	1-2SWPE01 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DK	D3275113	62-1-2SWPE01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DH	D3285113	3-2SWPE01 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DK	D3295113	62-1-2SWPE01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DL	D3305113	3-2SWPE01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DK	D3315113	2SWP*FSLX 96E NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DL	D3325113	52-2SWPC01 CONTACT 72 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-DL	D3345113	3-7-2SWPA44 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3-7-2SWPA44 CONTACT T2 CLOSE	
9-10-DH	D3385113	86-2SWPE01 CONTACT 1C FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-AY	D3395113	2SWPE01 GROUND OR PHASE OVERCURRENT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AY	D3405113	86-2SWPE01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DH	D3415113	3-2SWPC01 CONTACT 6 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DH	D3425113	27X3-2ENSX04 CONTACT 19 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-DH	D3435113	27X3-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AZ 9-10-KR 9-10-KH	D3535113	1-2SWPE01 OPERATOR ERROR	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KS	D3635113	52X-2SWPE01 OPERATING COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KV	D3645113	52X-2SWPE01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KV	D3655113	52X-2SWPE01 RESET COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KS	D3675113	2D-2SWPE01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KV	D3685113	1-2SWPE01 CONTACT 5 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-KV	D3695113	27-3-2ENSX04 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NZ 9-10-NJ 9-10-EY 9-10-BC 9-10-BE 9-10-NM	D9385123	1-2SWPF01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-NT 9-10-NS	D9385123	1-2SWPF01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-AU	E0315123	2SWP*P1F BREAKER 52TC ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EY	E0345123	1-2SWPF01 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EZ	E0375123	62-1-2SWPF01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EX	E0385123	3-2SWPF01 CONTACT 2 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EZ	E0395123	62-1-2SWPF01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-FA	E0405123	3-2SWPF01 COIL ENERGIZED BY SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EZ	E0415123	2SWP*FSLX 96F NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-FA	E0425123	52-2SWPD01 CONTACT 72 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-FA	E0445123	3-7-2SWPB44 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3-7-2SWPB44 CONTACT T2 CLOSE	
9-10-EX	E0485123	86-2SWPF01 CONTACT 1C FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-BD	E0495123	2SWPF01 GROUND OR PHASE OVERCURRENT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-BD	E0505123	86-2SWPF01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EX	E0515123	3-2SWPD01 CONTACT 6 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EX	E0525123	27X3-2ENSY04 CONTACT 19 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-EX	E0535123	27X3-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NP	E0725123	52X-2SWPF01 OPERATING COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NS	E0735123	52X-2SWPF01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NS	E0745123	52X-2SWPF01 RESET COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NP	E0765123	2D-2SWPF01 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NS	E0775123	1-2SWPF01 CONTACT 5 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NS	E0785123	27X3-2ENSY04 CONTACT 12 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-CQ	D4226013	42C-2SWPA02 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CP	D4236013	42D-2SWPA02 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 3A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CQ	D4246013	33-2SWPA02 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CQ	D4256013	420-2SWPA02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-DM	D4266011	3A-2SWPA02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 3A OPEN	
9-10-DM	D4276011	2SWPA02 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 3A OPEN	
9-10-CP	D4286013	3A-12-2ISCA02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3A-12-2ISCA02 CONTACT T2 CLOSE	
9-10-CP	D4296013	1-2SWPA02 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA02 CONTACT 2B CLOSE	
9-10-CQ	D4306013	33-2SWPA02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-LC	D4316013	3-1-2SWPA44 CONTACT R1 FAILS CLOSE	PERIODIC TEST	3-1-2SWPA44 CONTACT R1 OR 3-1-2SWPA25 CONTACT R2 CLOSE	
9-10-LD	D4326013	3-1-2SWPA25 CONTACT R2 FAILS CLOSE	PERIODIC TEST	3-1-2SWPA44 CONTACT R1 OR 3-1-2SWPA25 CONTACT R2 CLOSE	
9-10-CP 9-10-DN 9-10-DR 9-10-DQ	D4336013	3A-12-2ISCA02 COIL ENERGIZED	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CQ 9-10-CP	D4346013	1-2SWPA02 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CQ	D4356013	TQS-2SWPA02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CQ	D4366013	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 3A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-LE	D4396013	2SWP*PSLX 139A NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-DN	D4436013	3A-12-2ISCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-DN	D4446013	3-1-2SWPA25 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-DN	D4456013	3-1-2SWPA44 CONTACT T2 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CQ	D4486013	1-2SWPA02 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-CH	E1336013	42C-2SWPB02 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CV	E1346013	42O-2SWPB02 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CH	E1356013	33-2SWPB02 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CH	E1366013	42O-2SWPB02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-FB	E1376011	3A-2SWPB02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 3B OPEN	
9-10-FB	E1386011	2SWPB02 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 3B OPEN	
9-10-CV	E1396013	3B-12-2ISCB02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3B-12-2ISCB02 CONTACT T2 CLOSE	
9-10-CV	E1406013	1-2SWPB02 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB02 CONTACT 2B CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CH	E1416013	33-2SWPB02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-PA	E1426013	3-1-2SWPB44 CONTACT R1 FAILS CLOSE	PERIODIC TEST	3-1-2SWPB44 CONTACT R1 OR 3-1-2SWPB25 CONTACT R2 CLOSE	
9-10-NZ	E1436013	3-1-2SWPB25 CONTACT R2 FAILS CLOSE	PERIODIC TEST	3-1-2SWPB44 CONTACT R1 OR 3-1-2SWPB25 CONTACT R2 CLOSE	
9-10-CV 9-10-FC 9-10-FF 9-10-FE	E1446013	3B-12-2ISCB02 COIL ENERGIZED	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CH 9-10-CV	E1456013	1-2SWPB02 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CH	E1466013	TQS-2SWPB02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CH	E1476013	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-PB	E1506013	2SWP*PSLX139B NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-FC	E1546013	3B-12-2ISCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-FC	E1556013	3-1-2SWPB25 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-FC	E1566013	3-1-2SWPB44 CONTACT T2 FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-CH	E1596013	1-2SWPB02 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-HE	D6096063	33-2SWPA07 CONTACT 4 FAILS OEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HE	D6106063	33-2SWPA07 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HE	D6116063	42C-2SWPA07 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HE	D6126063	42D-2SWPA07 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AA	D6136063	42C-2SWPA07 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HE	D6146063	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HE	D6156063	TQS-2SWPA07 CONTACT R18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HE 9-10-AA	D6166063	1-2SWPA07 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HE	D6176063	1-2SWPA07 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-LL	D6186061	2SWPA07 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-LL	D6196061	3A-2SWPA07 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AA	D6206063	1-2SWPA07 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF	E3236063	33-2SWPB07 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF	E3246063	33-2SWPB07 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF	E3256063	42C-2SWPB07 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HF	E3266063	42D-2SWPB07 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AD	E3276063	42C-2SWPB07 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF	E3286063	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF	E3296063	TQS-2SWPB07 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF 9-10-HD	E3306063	1-2SWPB07 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HF	E3316063	1-2SWPB07 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-PL	E3326061	2SWPB07 575-115V XFRM FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-PL	E3336061	3A-2SWPB07 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AD	E3346063	1-2SWPB07 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD	D6236073	33-2SWPA08 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD	D6246073	33-2SWPA08 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD	D6256073	42C-2SWPA08 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD	D6266073	42D-2SWPA08 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AB	D6276073	42C-2SWPA08 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HD	D6286073	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD	D6296073	TQS-2SWPA08 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD 9-10-AB	D6306073	1-2SWPA08 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HD	D6316073	1-2SWPA08 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-LH	D6326071	2SWPA08 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-LH	D6336071	3A-2SWPA08 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AB	D6346073	1-2SWPA08 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3366073	33-2SWPB08 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3376073	33-2SWPB08 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3386073	42C-2SWPB08 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3396073	42O-2SWPB08 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AC	E3406073	42C-2SWPB08 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3416073	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3426073	TQS-2SWPB08 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HG 9-10-AC	E3436073	1-2SWPB08 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-HG	E3446073	1-2SWPB08 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-PH	E3456071	2SWPB08 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-PH	E3466071	3A-2SWPB08.FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-AC	E3476073	1-2SWPB08 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL HT EXCHANGER	
9-10-CT	D4506083	42C-2SWPA09 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CG	D4516083	42D-2SWPA09 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CT	D4526083	33-2SWPA09 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CT	D4536083	42D-2SWPA09 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-LH 9-10-ED 9-10-LL 9-10-LH 9-10-LN	D4546081	LOSS OF 2EHS*MCC 102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-DP	D4556081	3A-2SWPA09 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 19A OPEN	
9-10-DP	D4566081	2SWPA09 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 19A OPEN	
9-10-DR	D4576083	3A-12-2ISCA02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3A-12-2ISCA02 CONTACT T4 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-DR	D4586083	1-2SWPA09 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA09 CONTACT 2B CLOSE	
9-10-CT	D4596083	33-2SWPA09 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-DR	D4606083	3-1-2SWPA44 CONTACT R3 FAILS CLOSE	PERIODIC TEST	3-1-2SWPA44 CONTACT R3 OR 3-3-2SWPA25 CONTACT R2 CLOSE	
9-10-DS	D4616083	3-3-2SWPA25 CONTACT R2 FAILS CLOSE	PERIODIC TEST	3-1-2SWPA44 CONTACT R3 OR 3-3-2SWPA25 CONTACT R2 CLOSE	
9-10-CT 9-10-DR	D4626083	1-2SWPA09 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CT	D4636083	TQS-2SWPA09 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CT	D4646083	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-DQ	D4666083	3A-12-2ISCA02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-DQ	D4676083	3-3-2SWPA25 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-DQ	D4686083	3-1-2SWPA44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CT	D4746083	1-2SWPA09 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 19A OPEN	
9-10-CZ	E1616083	42C-2SWPB09 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CG	E1626083	42O-2SWPB09 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 19B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CZ	E1636083	33-2SWPB09 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CZ	E1646083	420-2SWPB09 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-FD 9-10-PG 9-10-CA 9-10-PL 9-10-PH 9-10-PN	E1656081	LOSS OF 2EHS*MCC 302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-FD	E1666081	3A-2SWPB09 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 19B OPEN	
9-10-FD	E1676081	2SWPB09 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 19B OPEN	
9-10-FF	E1686083	3B-12-2ISCB02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3B-12-2ISCB02 CONTACT T4 CLOSE	
9-10-FF	E1696083	1-2SWPB09 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB09 CONTACT 2B CLOSE	
9-10-CZ	E1706083	33-2SWPB09 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-FF	E1716083	3-1-2SWPB44 CONTACT R3 FAILS CLOSE	PERIODIC TEST	3-1-2SWPB44 CONTACT R3 OR 3-3-2SWPB25 CONTACT R2 CLOSE	
9-10-FG	E1726083	3-3-2SWPB25 CONTACT R2 FAILS CLOSE	PERIODIC TEST	3-1-2SWPB44 CONTACT R3 OR 3-3-2SWPB25 CONTACT R2 CLOSE	
9-10-CZ 9-10-FF	E1736083	1-2SWPB09 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CZ	E1746083	TQS-2SWPB09 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CZ	E1756083	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 19B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-FE	E1776083	3B-12-2ISCB02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-FE	E1786083	3-3-2SWPB25 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-FE	E1796083	3-1-2SWPB44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CZ	E1846083	1-2SWPB09 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 19B OPEN	
9-10-CS	D4766093	42C-2SWPA10 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CR	D4776093	42O-2SWPA10 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CS	D4786093	33-2SWPA10 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CS	D4796093	42O-2SWPA10 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-DT	D4806091	2SWPA10 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 92A OPEN	
9-10-DT	D4816091	3A-2SWPA10 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 92A OPEN	
9-10-DT 9-10-DH 9-10-DZ 9-10-BA	D4826091	LOSS OF 2EHS*MCC103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-CR	D4836093	3A-13-2ISCA02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3A-13-2ISCA02 CONTACT T2 CLOSE	
9-10-CR	D4846093	1-2SWPA10 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2DWPA10 CONTACT 2B CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CS	D4856093	33-2SWPA10 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-DV	D4866093	3-1-2SWPA25 CONTACT R4 FAILS CLOSE	PERIODIC TEST	3-1-2SWPA25 CONTACT R4 OR 3-2-2SWPA44 CONTACT R1 CLOSE	
9-10-DV	D4876093	3-2-2SWPA44 CONTACT R1 FAILS CLOSE	PERIODIC TEST	3-1-2SWPA25 CONTACT R4 OR 3-2-2SWPA44 CONTACT R1 CLOSE	
9-10-CR 9-10-DU 9-10-DY 9-10-DX	D4886093	3A 13-2ISCA02 COIL ENERGIZED	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CS 9-10-CR	D4896093	1-2SWPA10 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CS	D4906093	TQS-2SWPA10 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CS	D4916093	EXCESS TORQUE	PERICDIC TEST	2SWP*MOV 92A OPEN	
9-10-DU	D4936093	3A-13-2ISCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-DU	D4946093	3-1-2SWPA25 CONTACT T3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-DU	D4956093	3-2-2SWPA44 CONTACT T2 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CS	D7316093	1-2SWPA10 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	
9-10-CY	E1866093	42C-2SWPB10 COIL FAILS OPEN	PERICDIC TEST	2SWP*MOV 92B OPEN	
9-10-CX	E1876093	42O-2SWPB10 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 92B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CY	E1886093	33-2SWPB10 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-CY	E1896093	420-2SWPB10 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-FH	E1906091	2SWPB10 575-115V XFMR FAILSURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 92B OPEN	
9-10-FH	E1916091	3A-2SWPB10 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 92B OPEN	
9-10-FH 9-10-FL 9-10-FP 9-10-BF	E1926091	LOSS OF 2EHS*MCC303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-CX	E1936093	3B-13-2ISCB02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3B-13-2ISCB02 CONTACT T2 CLOSE	
9-10-CX	E1946093	1-2SWPB10 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB10 CONTACT 2B CLOSE	
9-10-CY	E1956093	33-2SWPB10 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-FK	E1966093	3-1-2SWPB25 CONTACT R4 FAILS CLOSE	PERIODIC TEST	3-1-2SWPB25 CONTACT R4 OR 3-2-2SWPB44 CONTACT R1 CLOSE	
9-10-FK	E1976093	3-2-2SWPB44 CONTACT R1 FAILS CLOSE	PERIODIC TEST	3-1-2SWPB25 CONTACT R4 OR 3-2-2SWPB44 CONTACT R1 CLOSE	
9-10-CX 9-10-FJ 9-10-FN 9-10-FM	E1986093	3B-13-2ISCB02 COIL ENERGIZED	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-CY 9-10-CX	E1996093	1-2SWPB10 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-CY	E2006093	TQS-2SWPB10 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CY	E2016093	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-FJ	E2056093	3B-13-2ISCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-FJ	E2066093	3-1-2SWPB25 CONTACT T3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-FJ	E2076093	3-2-2SWPB44 CONTACT T2 FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-CY	E2086093	1-2SWPB10 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-CU	D4976103	42C-2SWPA11 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-CF	D4986103	42D-2SWPA11 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-CU	D4996103	33-2SWPA11 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-CU	D5006103	42D-2SWPA11 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-DW	D5016101	2SWPA11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 93A OPEN	
9-10-DW	D5026101	3A-2SWPA11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 93A OPEN	
9-10-DY	D5036103	3A-13-2ISCA02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3A-13-2ISCA02 CONTACT T4 CLOSES	
9-10-DY	D5046103	1-2SWPA11 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA11 CONTACT 2B FAILS CLOSE	
9-10-CU	D5056103	33-2SWPA11 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-DY	D5066103	3-3-2SWPA25 CONTACT R4 FAILS CLOSE	PERIODIC TEST	3-3-2SWPA25 CONTACT R4 OR 3-2-2SWPA44 CONTACT R3 CLOSED	
9-10-DY	D5076103	3-3-2SWPA44 CONTACT R3 FAILS CLOSE	PERIODIC TEST	3-3-2SWPA25 CONTACT R4 OR 3-2-2SWPA44 CONTACT R3 CLOSED	
9-10-CU 9-10-DY	D5086103	1-2SWPA11 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-CU	D5096103	TQS-2SWPA11 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-CU	D5106103	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-DX	D5116103	3-3-2SWPA25 CONTACT T3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-DX	D5126103	3-2-2SWPA44 CONTACT T4 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-DX	D5136103	3A-13-2ISCA02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-CU	D5146103	1-2SWPA11 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 93A OPEN	
9-10-DA	E2106103	42C-2SWPB11 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-CF	E2116103	42O-2SWPB11 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-DA	E2126103	33-2SWPB11 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-DA	E2136103	42O-2SWPB11 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-FL	E2146101	2SWPB11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 93B OPEN	
9-10-FL	E2156101	3A-2SWPB11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 93B OPEN	
9-10-FN	E2166103	3B-13-2ISCB02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3B-13-2ISCB02 CONTACT T4 CLOSE	
9-10-FN	E2176103	1-2SWPB11 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB11 CONTACT 2B CLOSE	
9-10-DA	E2186103	33-2SWPB11 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-FN	E2196103	3-3-2SWPB25 CONTACT R4 FAILS CLOSE	PERIODIC TEST	3-3-2SWPB25 CONTACT R4 OR 3-2-2SWPB44 CONTACT R3 CLOSE	
9-10-FN	E2206103	3-2-2SWPB44 CONTACT R3 FAILS CLOSE	PERIODIC TEST	3-3-2SWPB25 CONTACT R4 OR 3-2-2SWPB44 CONTACT R3 CLOSE	
9-10-DA 9-10-FN	E2216103	1-2SWPB11 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-DA	E2226103	TQS-2SWPB11 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-DA	E2236103	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-FM	E2246103	3-3-2SWPB25 CONTACT T3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-FM	E2256103	3-2-2SWPB44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-FM	E2266103	3B-13-2ISCB02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	
9-10-DA	E2276103	1-2SWPB11 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 93B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CJ	D5176113	42C-2SWPA12 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CH	D5186113	42O-2SWPA12 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CJ	D5196113	33-2SWPA12 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CJ	D5206113	42O 2SWPA12 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-DZ	D5216111	2SWPA12 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 47A OPEN	
9-10-DZ	D5226111	3A-2SWPA12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 47A OPEN	
9-10-CH	D5236113	3A-14-2ISCA02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3A-14-2ISCA02 CONTACT T2 CLOSE	
9-10-CH	D5246113	1-2SWPA12 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA12 CONTACT 2B CLOSE	
9-10-CJ	D5256113	33-2SWPA12 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-EB	D5266113	3-3-2SWPA44 CONTACT R1 FAILS CLOSE	PERIODIC TEST	3-2-SWPA12 CONTACT R2 OR 3-3-2SWPA44 CONTACT R1 CLOSE	
9-10-EB	D5276113	3-2SWPA12 CONTACT R2 FAILS CLOSE	PERIODIC TEST	3-2-SWPA12 CONTACT R2 OR 3-3-2SWPA44 CONTACT R1 CLOSE	
9-10-CH 9-10-EA 9-10-EK 9-10-CH	D5286113	3A-14-2ISCA02 COIL ENERGIZED	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CJ 9-10-CH	D5296113	1-2SWPA12 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 47A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CJ	D5306113	TQS-2SWPA12 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CJ	D5316113	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CJ	D5326113	1-2SWPA12 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-EA	D5336113	3-2SWPA12 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-EA	D5346113	3-3-SWPA44 CONTACT T2 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-EA	D5356113	3A-14-2ISCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-EB	D5366113	3-2SWPA12 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-LG	D5386113	2SWP*PSLX 142A NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*MOV 47A OPEN	
9-10-CL	E2296113	42C-2SWPB12 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CK	E2306113	42O-2SWPB12 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CL	E2316113	33-2SWPB12 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CL	E2326113	42O-2SWPB12 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-FP	E2336111	2SWPB12 575-115V XFRM FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 47B OPEN	
9-10-FP	E2346111	3A-2SWPB12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 47B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CK	E2356113	3B-14-2ISCB02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3B-14-2ISCB02 CONTACT T2 CLOSE	
9-10-CK	E2366113	1-2SWPB12 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB12 CONTACT 2B CLOSE	
9-10-CL	E2376113	33-2SWPB12 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-PE	E2386113	3-3-2SWPB44 CONTACT R1 FAILS CLOSE	PERIODIC TEST	3-2SWPB12 CONTACT R2 OR 3-3-2SWPB44 CONTACT R1 CLOSE	
9-10-PD	E2396113	3-2SWPB12 CONTACT R2 FAILS CLOSE	PERIODIC TEST	3-2SWPB12 CONTACT R2 OR 3-3-2SWPB44 CONTACT R1 CLOSE	
9-10-CK 9-10-FQ 9-10-FX 9-10-FH	E2406113	3B-14-2ISCB02 COIL ENERGIZED	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CL 9-10-CK	E2416113	1-2SWPB12 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CL	E2426113	TQS-2SWPB12 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CL	E2436113	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-CL	E2446113	1-2SWPB12 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-FQ	E2456113	3-2SWPB12 CONTACT T1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-FQ	E2466113	3-3-2SWPB44 CONTACT T2 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-FQ	E2476113	3B-14-2ISCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PD	E2486113	3-2SWPB12 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-PF	E2506113	2SWP*PSLX 142B NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-BU	D0246123	TQS-2SWPA13 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BU	D0686123	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-KE	D2586123	27-2-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BU	D5436123	42C-2SWPA13 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BT	D5446123	42D-2SWPA13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BU	D5456123	33-2SWPA13 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BU	D5466123	42D-2SWPA13 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LH	D5476121	2SWPA13 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LH	D5486121	3A-2SWPA13 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EC	D5496123	1-2SWPA13 CONTACT 1T FAILS CLOSE	PERIODIC TEST	NONE	
9-10-BT	D5506123	1-2SWPA13 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA13 CONTACT 2B CLOSE	
9-10-BT	D5516123	3A-15-2ISCA02 CONTACT T3 FAILS CLOSE	PERIODIC TEST	3A-15-2ISCA02 CONTACT T2 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-BT 9-10-LJ	D5526123	1-2SWPA13 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BU 9-10-BT 9-10-BV	D5536123	3A-15-2ISCA02 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BU	D5546123	3A-15-2ISCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LJ	D5556123	3-6-2SWPA25 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LJ	D5566123	3-5-2SWPA44 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-LJ	D5576123	1-2SWPA13 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EC	D5606123	3-6-2SWPA25 CONTACT T1 FAILS CLOSE	PERIODIC TEST	3-6-2SWPA25 CONTACT T1 OR 3-5-2SWPA44 CONTACT T2 CLOSE	
9-10-EC	D5616123	3-5-2SWPA44 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3-6-2SWPA25 CONTACT T1 OR 3-5-2SWPA44 CONTACT T2 CLOSE	
9-10-BY	E2556123	42C-2SWPB13 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BX	E2566123	42D-2SWPB13 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BY	E2576123	3D-2SWPB13 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BY	E2586123	42D-2SWPB13 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PG	E2596121	2SWPB13 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER ISOLATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PG	E2606121	3A-2SWPB13 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FR	E2616123	1-2SWPB13 CONTACT 1T FAILS CLOSE	PERIODIC TEST	NONE	
9-10-FX	E2626123	1-2SWPB13 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB13 CONTACT 2B CLOSE	
9-10-BX	E2636123	3B-15-2ISCB02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3B-15-2ISCB02 CONTACT T2 CLOSE	
9-10-BY	E2646123	TQS-2SWPB13 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BY	E2656123	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BX 9-10-PH	E2666123	1-2SWPB13 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BY 9-10-BX	E2676123	3B-15-2ISCB02 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BY	E2686123	3B-15-2ISCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PJ	E2696123	3-6-2SWPB25 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PH	E2706123	3-5-2SWPB44 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-PH	E2716123	1-2SWPB13 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FR	E2746123	3-6-2SWPB25 CONTACT T1 FAILS CLOSE	PERIODIC TEST	3-6-2SWPB25 CONTACT T1 OR 3-5-2SWPB44 CONTACT T2 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-FR	E2756123	3-5-2SWPB44 CONTACT T2 FAILS CLOSE	PERIODIC TEST	3-6-2SWPB25 CONTACT T1 OR 3-5-2SWPB44 CONTACT T2 CLOSE	
9-10-BH	D5716133	42C-2SWPA14 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BV	D5726133	42O-2SWPA14 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BH	D5736133	33-2SWPA14 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BH	D5746133	42O-2SWPA14 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-ED	D5756131	2SWPA14 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-ED	D5766131	3A-2SWPA14 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EF	D5776133	1-2SWPA14 CONTACT 1T FAILS CLOSE	PERIODIC TEST	NONE	
9-10-BV	D5786133	1-2SWPA14 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA14 CONTACT 2B CLOSE	
9-10-BV	D5796133	3A-15-2ISCA02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3A-15-2ISCA02 CONTACT T4 CLOSE	
9-10-BN	D5806133	TQS-2SWPA14 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BH	D5816133	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BV 9-10-EE	D5826133	1-2SWPA14 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EF	D5836133	3-6-2SWPA25 CONTACT T3 FAILS CLOSE	PERIODIC TEST	3-6-2SWPA25 CONTACT T3 OR 3-5-2SWPA44 CONTACT T3 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-EF	D5846133	3-5-2SWPA44 CONTACT T3 FAILS CLOSE	PERIODIC TEST	3-6-2SWPA25 CONTACT T3 OR 3-5-2SWPA44 CONTACT T3 CLOSE	
9-10-EE	D5856133	3-6-2SWPA25 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EG	D5866133	3-6-2SWPA44 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EE	D5876133	1-2SWPA14 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BN	D5896133	3A-16-2ISCA02 CONTACT R3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-BW	D5906133	3A-16-2ISCA02 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-CA	E2856133	42C-2SWPB14 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BZ	E2866133	42O-2SWPB14 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-CA	E2876133	33-2SWPB14 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-CA	E2886133	42O-2SWPB14 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-CA	E2896131	2SWPB14 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-CA	E2906131	3A-2SWPB14 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FT	E2916133	1-2SWPB14 CONTACT 1T FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-BZ	E2926133	1-2SWPB14 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB14 CONTACT 2B CLOSE	
9-10-BZ	E2936133	3B-16-2ISCB02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3B-16-2ISCB02 CONTACT T4 CLOSE	
9-10-CA	E2946133	TQS-2SWPB14 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-CA	E2956133	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-BZ 9-10-FS	E2966133	1-2SWPB14 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FT 9-10-BZ	E2976133	3B-16-2ISCB02 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FT	E2986133	3-6-2SWPB25 CONTACT T3 FAILS CLOSE	PERIODIC TEST	3-6-2SWPB25 CONTACT T3 OR 3-5-2SWPB44 CONTACT T3 CLOSE	
9-10-FT	E2996133	3-5-2SWPB44 CONTACT T3 FAILS CLOSE	PERIODIC TEST	3-6-2SWPB25 CONTACT T3 OR 3-5-2SWPB44 CONTACT T3 CLOSE	
9-10-FS	E3006133	3-6-2SWPB25 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FU	E3016133	3-6-2SWPB44 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FS	E3026133	1-2SWPB14 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FT	E3046133	3B-16-2ISCB02 CONTACT R3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-CM	D5926143	42C-2SWPA15 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-BJ	D5936143	420-2SWPA15 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-CM	D5946143	33-2SWPA15 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-CM	D5956143	420-2SWPA15 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-EH	D5966141	2SWPA15 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 50A OPEN	
9-10-EH	D5976141	3A-2SWPA15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 50A OPEN	
9-10-CM	D5986143	33-2SWPA15 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-EK	D5996143	1-2SWPA15 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPA15 CONTACT 2B CLOSE	
9-10-EJ 9-10-EK	D6006143	1-2SWPA15 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-CM	D6016143	TQS-2SWPA15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-CM	D6026143	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-EK	D6036143	3-3-2SWPA44 CONTACT R3 FAILS CLOSE	PERIODIC TEST	3-3-2SWPA44 CONTACT R3 OR 3A-14-2ISCA02 CONTACT T4 CLOSE	
9-10-EK	D6046143	3A-14-2ISCA02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3-3-2SWPA44 CONTACT R3 OR 3A-14-2ISCA02 CONTACT T4 CLOSE	
9-10-EL	D6056143	3-3-2SWPA44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-CM	D6066143	3A-14-2ISCA62 CONTACT R3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-EJ	D6076143	1-2SWPA15 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 50A OPEN	
9-10-CN	E3066143	42C-2SWPB15 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-BJ	E3076143	42D-2SWPB15 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-CN	E3086143	33-2SWPB15 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-CN	E3096143	42D-2SWPB15 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-FV	E3106141	2SWPB15 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 50B OPEN	
9-10-FV	E3116141	3A-2SWPB15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 50B OPEN	
9-10-CN	E3126143	33-2SWPB15 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-FX	E3136143	1-2SWPB15 CONTACT 2B FAILS CLOSE	PERIODIC TEST	1-2SWPB15 CONTACT 2B CLOSE	
9-10-CN 9-10-FX	E3146143	1-2SWPB15 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-CN	E3156143	TQS-2SWPB15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-CN	E3166143	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-FX	E3176143	3-3-2SWPB44 CONTACT R3 FAILS CLOSE	PERIODIC TEST	3-3-2SWPB44 CONTACT R3 OR 3B-14-2ISCB02 CONTACT T4 CLOSE	
9-10-FX	E3186143	3B-14-2ISCB02 CONTACT T4 FAILS CLOSE	PERIODIC TEST	3-3-2SWPB44 CONTACT R3 OR 3B-14-2ISCB02 CONTACT T4 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-FN	E3196143	3-3-2SWPB44 CONTACT T4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-FN	E3206143	3B-14-2ISCB02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-CN	E3216143	1-2SWPB15 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 50B OPEN	
9-10-AV	D6366173	42D-2SWPA18 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AG	D6376173	42C-2SWPA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV	D6386173	33-2SWPA18 CONTACT 4 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV	D6396173	33-2SWPA18 CONTACT 11 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BA	D6406171	2SWPA18 575-115V XFMR FAILUR	ANNUNCIATED IN CONTROL ROOM	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BA	D6416171	3A-2SWPA18 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AG	D6426173	1-2SWPA18 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV 9-10-AG	D6436173	1-2SWPA18 OPERATOR ERROR	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV	D6446173	42C-2SWPA18 CONTACT 6 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-EN	D6456173	3-1-2SWPA18 CONTACT T2 FAILS CLOSE	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-EH	D6466173	3-2SWPA18 CONTACT R2 FAILS CLOSE	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV	D6476173	TQS-2SWPA18 CONTACT 18 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV	D6486173	EXCESS TORQUE	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AV	D6496173	1-2SWPA18 CONTACT 2B FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BB	D6506173	1-2SWPA18 CONTACT 1T FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-DB	D6516173	3-2SWPA18 CONTACT T1 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BB	D6526173	3-1-SWPA18 CONTACT R1 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-EP	D6536173	2-2SWPA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2-2SWPA18 CONTACT 5 CLOSE	
9-10-EH	D6546173	3-2SWPA18 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-EN	D6556173	3-1-2SWPA18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW.	
9-10-EH	D6566173	DR-2ENSX04 COIL NOT ENERGIZED	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-EH	D6576173	DR-2ENSX04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF DSL ENG CLG WTR FLOW	
9-10-EP	D6596173	DR-2ENSX04 COIL ENERGIZED	PERIODIC TEST	2-2SWPA18 CONTACT 5 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-EP	D6606173	DR-2ENSX04 CONTACT 13 FAILS CLOSE	PERIODIC TEST	2-2SWPA18 CONTACT 5 CLOSE	
9-10-EQ	D6616173	2SWP*PSLX 66A NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*PSLX 66A NC CONTACT CLOSE	
9-10-EP	D6626173	2SWPA18 CONTACT 5 FAILS CLOSE	PERIODIC TEST	2-2SWPA18 CONTACT 5 CLOSE	
9-10-AH	E3496173	42O-2SWPB18 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AF	E3506173	42C-2SWPB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH	E3516173	33-2SWPB18 CONTACT 4 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH	E3526173	33-2SWPB18 CONTACT 11 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BF	E3536171	2SWPB18 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BF	E3546171	3A-2SWPB18 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AF	E3556173	1-2SWPB18 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH 9-10-AF	E3566173	1-2SWPB18 OPERATOR ERROR	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH	E3576173	42C-2SWPB18 CONTACT 6 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-FZ	E3586173	3-1-2SWPB18 CONTACT T2 FAILS CLOSE	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-FY	E3596173	3-2SWPB18 CONTACT R2 FAILS CLOSE	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-AH	E3606173	TQS-2SWPB18 CONTACT 18 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH	E3616173	EXCESS TORQUE	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-AH	E3626173	1-2SWPB18 CONTACT 2B FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BG	E3636173	1-2SWPB18 CONTACT 1T FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BG	E3646173	3-2SWPB18 CONTACT T1 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-BG	E3656173	3-1-2SWPB18 CONTACT R1 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-GA	E3666173	2-2SWPB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2-2SWPB18 CONTACT 5 CLOSE	
9-10-FY	E3676173	3-2SWPB18 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-FZ	E3686173	3-1-2SWPB18 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-FY	E3696173	DR-2ENSY04 COIL NOT ENERGIZED	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-FY	E3706173	DR-2ENSY04 CONTACT 13 FAILS OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF DSL ENG CLG WTR FLOW	
9-10-GA	E3726173	DR-2ENSY04 COIL ENERGIZED	PERIODIC TEST	2-2SWPB18 CONTACT 5 CLOSE	
9-10-GA	E3736173	DR-2ENSY04 CONTACT 13 FAILS CLOSE	PERIODIC TEST	2-2SWPB18 CONTACT 5 CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-GB	E3746173	2SWP*PSLX 66B NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*PSLX 66B NC CONTACT CLOSE	
9-10-GA	E3756173	2-2SWPB18 CONTACT 5 FAILS CLOSE	PERIODIC TEST	2-2SWPB18 CONTACT 5 CLOSE	
9-10-GP	D1216183	42C-2SWPA24 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1226183	42C-2SWPA24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1236183	33-2SWPA24 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GL	D1246181	3A-2SWPA24 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GL	D1256181	2SWPA24 575-115V XFMR FAILSURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1266183	42D-2SWPA24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GP	D1276183	52X-2SWPA24 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GP	D1286183	1-2SWPA24 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GP 9-10-JJ	D1296182	1-2SWPA24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1306183	33-2SWPA24 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1316183	1-2SWPA24 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JK	D1326183	52X-2SWPA24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JK	D1336183	52-2SWPA01 RONTACT 64 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1346183	TQS-2SWPA24 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JJ	D1356183	EXCESS TORQUE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JK	D1366183	1-2SWPA24 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JK	D1376183	62-2SWPA24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-JK	D1386183	52X-2SWPA24 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GX	D8226183	42C-2SWPB24 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HG	D8236183	42C-2SWPB24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HG	D8246183	33-2SWPB24 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GU	D8256181	3A-2SWPB24 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GU	D8266181	2SWPB24 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-HG	D8276183	42D-2SWPB24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GX	D8286183	52X-2SWPB24 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GX	D8296183	1-2SWPB24 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-GX 9-10-MG	D8306182	1-2SWPB24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MG	D8316183	33-2SWPB24 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MG	D8326183	1-2SWPB24 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MH	D8336183	52X-2SWPB24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MH	D8346183	52-2SWPB01 CONTACT 64 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MG	D8356183	TQS-2SWPB24 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MG	D8366183	EXCESS TORQUE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MH	D8376183	1-2SWPB24 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MH	D8386183	62-2SWPB24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-MH	D8396183	52X-2SWPB24 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GR	D1396193	42C-2SWPC24 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1406193	42C-2SWPC24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1416193	33-2SWPC24 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BH	D1426191	3A-2SWPC24 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-BM	D1436191	2SWPC24 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1446193	420-2SWPC24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GR	D1456193	52X-2SWPC24 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GR	D1466193	1-2SWPC24 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GR 9-10-JL	D1476192	1-2SWPC24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1486193	33-2SWPC24 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1496193	1-2SWPC24 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JM	D1506193	52X-2SWPC24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JM	D1516193	52-2SWPC01 CONTACT 64 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1526193	TQS-2SWPC24 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JL	D1536193	EXCESS TORQUE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JM	D1546193	1-2SWPC24 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JM	D1556193	62-2SWPC24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-JM	D1566193	52X-2SWPC24 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-GZ	D8416193	42C-2SWPD24 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HJ	D8426193	42C-2SWPD24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HJ	D8436193	33-2SWPD24 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BQ	D8446191	3A-2SWPD24 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BQ	D8456191	2SWPD24 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HJ	D8466193	42D-2SWPD24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GZ	D8476193	52X-2SWPD24 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GZ	D8486193	1-2SWPD24 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GZ 9-10-HJ	D8496192	1-2SWPD24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HJ	D8506193	33-2SWPD24 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HJ	D8516193	1-2SWPD24 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HK	D8526193	52X-2SWPD24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HK	D8536193	52-2SWPD01 CONTACT 64 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HJ	D8546193	TQS-2SWPD24 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HJ	D0556193	EXCESS TORQUE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HK	D0566193	1-2SWPD24 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HK	D0576193	62-2SWPD24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-HK	D0586193	52X-2SWPD24 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GT	D1586203	42C-2SWPE24 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JN	D1596203	42C-2SWPE24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JN	D1606203	33-2SWPE24 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AQ	D1616201	3A-2SWPE24 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AQ	D1626201	2SWPE24 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JN	D1636203	42D-2SWPE24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-GT	D1646203	52X-2SWPE24 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-GT	D1656203	1-2SWPE24 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-GT 9-10-JN	D1666202	1-2SWPE24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JN	D1676203	33-2SWPE24 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTS	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JN	D1686203	1-2SWPE24 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JP	D1696203	52X-2SWPE24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JP	D1706203	52-2SWPE01 CONTACT 64 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JN	D1716203	TQS-2SWPE24 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JN	D1726203	EXCESS TORQUE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JP	D1736203	1-2SWPE24 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JP	D1746203	62-2SWPE24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-JP	D1756203	52X-2SWPE24 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-HA	D8606203	42C-2SWPF24 ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-HL	D8616203	42C-2SWPF24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-HL	D8626203	33-2SWPF24 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AS	D8636201	3A-2SWPF24 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AS	D8646201	2SWPF24 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-HL	D8656203	420-2SWPF24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HA	D8666203	52X-2SWPF24 CONTACT 4 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-HA	D8676203	1-2SWPF24 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-HA 9-10-ML	D8686202	1-2SWPF24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-ML	D8696203	33-2SWPF24 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-ML	D8706203	1-2SWPF24 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-MM	D8716203	52X-2SWPF24 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-MM	D8726203	52-2SWPF01 CONTACT 64 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-ML	D8736203	TQS-2SWPF24 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-ML	D8746203	EXCESS TORQUE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-MM	D8756203	1-2SWPF24 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-MM	D8766203	62-2SWPF24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-MM	D8776203	52X-2SWPF24 CONTACT 2 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-KY	D3956213	420-2SWPA23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KY	D3976211	2SWPA25 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KY	D3986211	3A-2SWPA23 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LB	D3996213	52-2SWPA01 CONTACT 8C FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LB	D4006213	1-2SWPA23 CONTACT IT FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LA	D4016213	33-2SWPA23 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LA	D4026213	42C-2SWPA23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KY 9-10-KZ	D4036213	1-2SWPA23 OPERATOR ERROR	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KY	D4046213	1-2SWPA23 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LA	D4056213	33-2SWPA23 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LB	D4066213	2SWP*PDIS 1A NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LB	D4076213	2-1-2SWPA23 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LA	D4086213	EXCESS TORQUE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LA	D4096213	TQS-2SWPA23 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LB	D4116213	33-2SWPA23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-LB	D4126213	2-1-2SWPA23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KZ	D4136213	42C-2SWPA23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KZ	D4146213	42C-2SWPA23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KZ	D4156213	1-2SWPA23 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KZ	D4166213	1-2SWPA23 CONTACT 1B FAILS CLOSE	PERIODIC TEST	NONE	
9-10-KZ	D4176213	52-2SWPA01 CONTACT 3C FAILS CLOSE	PERIODIC TEST	NONE	
9-10-KZ	D4186213	2-2-2SWPA23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KZ	D4196213	33-2SWPA23 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-KZ	D4206213	2-2-2SWPA23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-NV	E1066213	42D-2SWPB23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NV	E1086211	2SWPB23 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NV	E1096211	3A-2SWPB23 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NY	E1106213	52-2SWPB01 CONTACT 8C FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NY	E1116213	1-2SWPB23 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NX	E1126213	33-2SWPB23 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NX	E1136213	42C-2SWPB23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NV 9-10-NW	E1146213	1-2SWPB23 OPERATOR ERROR	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NV	E1156213	1-2SWPB23 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NX	E1166213	33-2SWPB23 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NY	E1176213	2SWP*PDIS 1B NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NY	E1186213	2-1-2SWPB23 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NX	E1196213	EXCESS TORQUE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NX	E1206213	TQS-2SWPB23 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NY	E1226213	33-2SWPB23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NY	E1236213	2-1-2SWPB23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NW	E1246213	42C-2SWPB23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NW	E1256213	42C-2SWPB23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NW	E1266213	1-2SWPB23 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NW	E1276213	1-2SWPB23 CONTACT 1B FAILS CLOSE	PERIODIC TEST	NONE	
9-10-NW	E1286213	52-2SWPB01 CONTACT 3C FAILS CLOSE	PERIODIC TEST	NONE	
9-10-NW	E1296213	2-2-2SWPB23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NW	E1306213	33-2SWPB23 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NW	E1316213	2-2-2SWPB23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-LX	D3506223	42C-2SWPC23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LH	D7406223	42O-2SWPC23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LH	D7426221	2SWPC23 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LH	D7436221	3A-2SWPC23 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LZ	D7496223	52-2SWPC01 CONTACT 8C FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LZ	D7456223	1-2SWPC23 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LY	D7466223	33-SWPC23 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-LY	D7476223	42C-2SWPC23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LW 9-10-LX	D7486223	1-2SWPC23 OPERATOR ERROR	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LW	D7496223	1-2SWPC23 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LY	D7506223	33-2SWPC23 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LZ	D7516223	2SWP*POIS 1C NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LZ	D7526223	2-1-2SWPC23 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LY	D7536223	EXCESS TORQUE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LY	D7546223	TQS-2SWPC23 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LZ	D7566223	33-2SWPC23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LZ	D7576223	2-1-2SWPC23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LX	D7586223	42C-2SWPC23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LX	D7596223	1-2SWPC23 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LX	D7606223	1-2SWPC23 CONTACT 1B FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-LX	D7616223	52-2SWPC01 CONTACT 3C FAILS CLOSE	PERIODIC TEST	NONE	
9-10-LX	D7626223	2-2-2SWPC23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LX	D7636223	33-2SWPC23 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-LX	D7646223	2-2-2SWPC23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-PU	E3916223	42C-2SWPD23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PT	E4536223	42O-2SWPD23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PT	E4556221	2SWPD23 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PT	E4566221	A-2SWPD23 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PW	E4576223	52-2SWPD01 CONTACT 8C FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PW	E4586223	1-2SWPD23 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PV	E4596223	33-2SWPD23 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PV	E4606223	42O-2SWPD23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PT 9-10-PU	E4616223	1-2SWPD23 OPERATOR ERROR	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PT	E4626223	1-2SWPD23 CONTACT 23 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PV	E4636223	33-2SWPD23 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PW	E4646223	2SWP*PDIS 1D NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PW	E4656223	2-1-2SWPD23 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PV	E4666223	EXCESS TORQUE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PV	E4676223	TQS-2SWPD23 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PW	E4696223	33-2SWPD23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PW	E4706223	2-1-2SWPD23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PU	E4716223	42C-2SWPD23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PU	E4726223	1-2SWPD23 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PU	E4736223	1-2SWPD23 CONTACT 1B FAILS CLOSE	PERIODIC TEST	NONE	
9-10-PU	E4746223	52-2SWPD01 CONTACT 3C FAILS CLOSE	PERIODIC TEST	NONE	
9-10-PU	E4756223	2-2-2SWPD23 CONTACT 3 FAILS CLOSE	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PU	E4766223	33-2SKPD23 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SKP*P1D TRAIN FAILS INOPERATIVE	
9-10-PU	E4776223	2-2-2SKPD23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SKP*P1D TRAIN FAILS INOPERATIVE	
9-10-GS	D7706233	42C-2SKPE23 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MA	D7716233	42D-2SKPE23 COIL FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MA	D7736231	2SKPE23 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MA	D7746231	3A-2SKPE23 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MD	D7756233	52-2SKPE01 CONTACT 8C FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MD	D7766233	1-2SKPE23 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MC	D7776233	33-2SKPE23 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MC	D7786233	42C-2SKPE23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MA 9-10-MB	D7796233	1-2SKPE23 OPERATOR ERROR	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MA	D7806233	1-2SKPE23 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	
9-10-MC	D7816233	33-2SKPE23 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SKP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-MD	D7826233	2SWP*PDIS 1E NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MD	D7836233	2-1-2SWPE23 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MC	D7846233	EXCESS TORQUE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MC	D7856233	TQS-2SWPE23 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MD	D7876233	33-2SWPE23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MD	D7886233	2-1-2SWPE23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MB	D7896233	42C-2SWPE23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MB	D7906233	42C-2SWPE23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MB	D7916233	1-2SWPE23 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MB	D7926233	1-2SPWE23 CONTACT 1B FAILS CLOSE	PERIODIC TEST	NONE	
9-10-MB	D7936233	52-2SWPE01 CONTACT 3C FAILS CLOSE	PERIODIC TEST	NONE	
9-10-MB	D7946233	2-2-2SWPE23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MB	D7956233	33-2SWPE23 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-NB	D7966233	2-2-2SWPE23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-PY	E4836233	42C-2SWPF23 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PX	E4846233	42D-2SWPF23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PX	E4866231	2SWPF23 575-115V XFRM FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PX	E4876231	3A-2SWPF23 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QB	E4886233	52-2SWPF01 CONTACT 6C FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QB	E4896233	1-2SWPF23 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QA	E4906233	33-2SWPF23 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QA	E4916233	42C-2SWPF23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PX 9-10-PY	E4926233	1-2SWPF23 OPERATOR ERROR	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PX	E4936233	1-2SWPF23 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QA	E4946233	33-2SWPF23 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QB	E4956233	2SWP*PDIS 1F NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-QB	E4966233	2-1-2SWPF23 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QA	E4976233	EXCESS TORQUE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QA	E4986233	TQS-2SWPF23 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QB	E5006233	33-2SWPF23 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-QB	E5016233	2-1-2SWPF23 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PY	E5026233	42C-2SWPF23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PY	E5036233	42C-2SWPF23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PY	E5046233	1-2SWPF23 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PY	E5056233	1-2SWPF23 CONTACT 1B FAILS CLOSE	PERIODIC TEST	NONE	
9-10-PY	E5066233	52-2SWPF01 CONTACT 3C FAILS CLOSE	PERIODIC TEST	NONE	
9-10-PZ	E5076233	2-2-2SWPF23 CONTACT 8 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PZ	E5086233	33-2SWPF23 CONTACT 1 FAILS CLOSE	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PZ	E5096233	2-2-2SWPF23 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HB	D6666243	33-2SWPA22 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB	D6676243	33-2SWPA22 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB	D6686243	42C-2SWPA22 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB	D6696243	42O-2SWPA22 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-Y	D6706243	42C-2SWPA22 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB	D6716243	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB	D6726243	TQS-2SPWA22 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HB 9-10-Y	D6736243	1-2SWPA22 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-LN	D6756241	2SWPA22 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-LN	D6766241	3A-2SWPA22 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-Y	D6776243	1-2SWPA2 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL	
9-10-HC	E3796243	33-2SWPB22 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-HC	E3806243	33-2SWPB22 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-HC	E3816243	42C-2SWPB22 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-HC	E3826243	42D-2SWPB22 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-Z	E3836243	42C-2SWPB22 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-HC	E3846243	EXCESS TORQUE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-HC	E3856243	TQS-2SWPB22 CONTACT 1B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-HC 9-10-Z	E3866243	1-2SWPB22 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-HC	E3876243	1-2SWPB22 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-PN	E3886241	2SWPB22 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-PN	E3896241	3A-2SWPB22 FUSE FAILS OPEN.	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-Z	E3906243	1-2SWPB22 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO SPENT FUEL POOL	
9-10-CD	E5116263	42D-2SWPA31 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-AJ	E5126263	42C-2SWPA31 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD	E5136263	33-2SWPA31 CONTACT 4 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD	E5146263	33-2SWPA31 CONTACT 11 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-GE	E5156261	2SWPA31 575-115V XFRM FAILURE	ANNUNCIATED IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV I SERVICE WATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-GE	E5166261	3A-2SWPA31 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-GE	E5176261	LOSS OF 2EHS*MCC 201A (PURPLE)	ANNUNCIATED IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-AJ	E5186263	1-2SWPA31 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD 9-10-AJ	E5196263	1-2SWPA31 OPERATOR ERROR	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-AJ	E5206263	3-2SWPA31 CONTACT T2 FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD	E5216263	42C-2SWPA31 CONTACT 6 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD	E5226263	TQS-2SWPA31 CONTACT 18 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD	E5236263	EXCESS TORQUE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-GF	E5246263	1-2SWPA31 CONTACT 1T FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CD	E5256263	1-2SWPA31 CONTACT 2B FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-GF	E5266263	3-2SWPA31 CONTACT R1 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-QC	E5276263	3-2SWPA31 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-QC 9-10-QD	E5286263	3-(LTR) COIL NOT ENERGIZED	PERIODIC TEST	3-(LTR) CONTACT 6 CLOSE	
9-10-QC	E5296263	3-(LTR) CONTACT 6 FAILS CLOSE	PERIODIC TEST	3-(LTR) CONTACT 6 CLOSE	

FISK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-QC	E5306263	K 40 NO CONTACT FAILS CLOSE	PERIODIC TEST	K40 NO CONTACT CLOSE	
9-10-QC 9-10-QD	E5316263	K 40 COIL ENERGIZED	PERIODIC TEST	K40 NO CONTACT CLOSE	
9-10-CC	E5336263	42D-2SWPB31 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-AK	E5346263	42C-2SWPB31 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CC	E5356263	33-2SWPB31 CONTACT 4 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CC	E5366263	33-2SWPB31 CONTACT 11 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-GG	E5376261	2SWPB31 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-GG	E5386261	3A-2SWPB31 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-GG	E5396261	LOSS OF 2EHS*MCC201B (PURPLE)	ANNUNCIATED IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-AK	E5406263	1-2SWPB31 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CC 9-10-AK	E5416263	1-2SWPB31 OPERATOR ERROR	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-AK	E5426263	3-2SWPB31 CONTACT T2 FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CC	E5436263	42C-2SWPB31 CONTACT 6 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CC	E5446263	TQS-2SWPB31 CONTACT 18 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CC	E5456263	EXCESS TORQUE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-GH	E5466263	1-2SWPB31 CONTACT 1T FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CC	E5476263	1-2SWPB31 CONTACT 2B FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-GH	E5486263	3-2SWPB31 CONTACT R1 FAILS OPEN	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-QD	E5496263	3-2SWPB31 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-QD	E5506263	3-CONTACT 8 FAILS CLOSE	PERIODIC TEST	3-(LTR) CONTACT 8 CLOSE	
9-10-QD	E5516263	K40 NO CONTACT FAILS CLOSE	PERIODIC TEST	K40 NO CONTACT CLOSE	
9-10-LP	D6786273	2SWP*PSLX 95A NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*PSLX 95A NC CONTACT CLOSE	
9-10-HH	D6796273	99-1X-2SWPA43 CONTACT 2 FAILS CLOSE	PERIODIC TEST	99-1X-2SWPA 43 CONTACT 2 CLOSE	
9-10-HH	D9956273	42C-2SWPA25 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-HH	D9966272	1-2SWPA26 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-HH	D9976273	1-2SWPA26 CONTACT 27 FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV I SERVICE WATER	
9-10-CB	E3936273	42C-2SWPB26 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-CB	E3946272	1-2SWPB26 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2EGS*EG2 LOSS OF DIV II SERVICE WATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-CB	E3956273	1-2SWPB26 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2EGS*EG2 LOSS OF DIV II SERVICE WATER	
9-10-GC	E3966273	2SWP*PSLX 95B NC CONTACT FAILS CLOSE	PERIODIC TEST	2SWP*PSLX 95B NC CONTACT CLOSE	
9-10-CB	E3976273	99-2X-2SWPB43 CONTACT 2 FAILS CLOSE	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-JB	D6956323	42D-2SWPA28 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-HW	D6966323	42C-2SWPA28 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JB	D6976323	33-2SWPA28 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JB	D6986323	33-2SWPA28 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JB	D6996323	42C-2SWPA28 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-LS	D7006321	3A-2SWPA28 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 77A CLOSE	
9-10-LS	D7016321	2SWPA28 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 77A CLOSE	
9-10-HW	D7026323	1-2SWPA28 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-LT 9-10-HW	D7036323	1-2SWPA28 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JB	D7046323	TQS-2SWPA28 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JB	D7056323	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 77A CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JB	D7066323	1-2SWPA28 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JB	D7076323	2SWP*LS 73A NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-LT	D7086323	1-2SWPA28 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWP*MOV 77A CLOSE	
9-10-JA	E4096323	42O-2SWPB28 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-HX	E4106323	42C-2SWPB28 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-JA	E4116323	33-2SWPB28 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-JA	E4126323	33-2SWPB28 CONTACT 11 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-JA	E4136323	42C-2SWPB28 CONTACT 6 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-PP	E4146321	3A-2SWPB28 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 77B CLOSE	
9-10-PP	E4156321	2SWPB28 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 77B CLOSE	
9-10-HX	E4166323	1-2SWPB28 CONTACT 2T FAILS CLOSE	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-PQ 9-10-HX	E4176323	1-2SWPB28 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-JA	E4186323	TQS-2SWPB28 CONTACT 18 FAILS OPEN	PERIODIC TEST	2SWP*MOV 77B CLOSE	
9-10-JA	E4196323	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 77B CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JA	E4206323	1-2SWPB28 CONTACT 1T FAILS OPEN	PERIODIC TEST	2SWPxMOV 77B CLOSE	
9-10-JA	E4216323	2SWPxLS 73B NC CONTACT FAILS OPEN	PERIODIC TEST	2SWPxMOV 77B CLOSE	
9-10-PQ	E4226323	1-2SWPB28 CONTACT 2B FAILS OPEN	PERIODIC TEST	2SWPxMOV 77B CLOSE	
9-10-HY	D7106333	42C-2SWPA30 COIL FAILS OPEN	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HV	D7116333	42O-2SWPA30 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HY	D7126333	33-2SWPA30 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HY	D7136333	33-2SWPA30 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HY	D7146333	42O-2SWPA30 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HV	D7176333	1-2SWPA30 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HY 9-10-HV	D7186333	1-2SWPA30 OPERATOR ERROR	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HY	D7196333	TQS-2SWPA30 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-HY	D7206333	EXCESS TORQUE	PERIODIC TEST	2SWPxMOV 30A OPEN	
9-10-LV	D7216333	1-2SWPA30 CONTACT 1B FAILS OPEN	PERIODIC TEST	2SWPxMOV 30A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-LV	D7226333	2SWP*LS 30A NO CONTACT FAILS OPEN	PERIODIC TEST	2SWP*MOV 30A OPEN	
9-10-MY	D7236333	1-2SWPA30 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SWP*MOV 30A OPEN	
9-10-HZ	E4246333	42C-2SWPB30 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HU	E4256333	42O-2SWPB30 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HZ	E4266333	33-2SWPB30 CONTACT 8 FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HZ	E4276333	33-2SWPB30 CONTACT 15 FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HZ	E4286333	42O-2SWPB30 CONTACT 9 FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-PR	E4296331	3A-2SWPB30 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 30B OPEN	
9-10-PR	E4306331	2SWPB30 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*MOV 30B OPEN	
9-10-HU	E4316333	1-2SWPB30 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HZ 9-10-HU	E4326333	1-2SWPB30 OPERATOR ERROR	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HZ	E4336333	TQS-2SWPB30 CONTACT 17 FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-HZ	E4346333	EXCESS TORQUE	PERIODIC TEST	2SWP*MOV 30B OPEN	
9-10-PS	E4356333	1-2SWPB30 CONTACT 1B FAILS OPEN	PERIODIC TEST	2SWP*MOV 30B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PS	E4366333	2SNP*LS 30B NO CONTACT FAILS OPEN	PERIODIC TEST	2SNP*MOV 30B OPEN	
9-10-HZ	E4376333	1-2SNPB30 CONTACT 2T FAILS OPEN	PERIODIC TEST	2SNP*MOV 30B OPEN	
9-10-GJ	D0986343	42-SNPA36 FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JC	D0996342	1-2SNPA36 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JC	D1006343	1-2SNPA36 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JC	D1016341	2SNPA36 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JC	D1026341	3A-2SNPA36 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-JC 9-10-JE 9-10-GL 9-10-BN 9-10-AQ 9-10-GN 9-10-KY 9-10-DN 9-10-EH 9-10-JS	D1036341	LOSS OF 2EHS*MCC101 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-LU 9-10-GQ 9-10-LW 9-10-GS 9-10-MA	D1036341	LOSS OF 2EHS*MCC101 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-JC	D1056343	1-2SNPA36 CONTACT 1B FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV I BAR RACK HEATER	
9-10-LU	D7156351	3A-2SNPA30 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SNP*MOV 30A OPEN	
9-10-LU	D7166351	2SNPA30 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SNP*MOV 30A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-GJ	D7976353	42-2SNPB36 FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-JD	D7986352	1-2SNPB36 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-JD	D7996353	1-2SPB36 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-JD	D8006351	2SNPB36 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-JD	D8016351	3A-2SNPB36 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-JD 9-10-JF 9-10-GU 9-10-BQ 9-10-AS 9-10-GN 9-10-NV 9-10-FB 9-10-FV 9-10-PP	D8026351	LOSS OF 2EHS*NCC 301 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-PR 9-10-GY 9-10-PT 9-10-AT 9-10-PX	D8026351	LOSS OF 2EHS*NCC 301 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-JD	D8046353	1-2SNPB36 CONTACT 1B FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 1 DIV II BAR RACK HEATER	
9-10-GJ	D1106363	42-2SNPA37 FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JE	D1116362	1-2SNPA37 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JE	D1126363	1-2SNPA37 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JE	D1136361	2SNA37 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JE	D1146361	3A-2SWPA37 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-JE	D1166363	1-2SWPA37 CONTACT 1B FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV I BAR RACK HEATER	
9-10-GJ	D8096373	42-2SWPB37 FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-JF	D8106372	1-2SWPB37 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-JF	D8116373	1-2SWPB37 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-JF	D8126371	2SWPB37 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-JF	D8136371	3A-2SWPB37 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-JF	D8156373	1-2SWPB37 CONTACT 1B FAILS OPEN	PERIODIC TEST	LOSS OF TUNNEL NO 2 DIV II BAR RACK HEATER	
9-10-AH	D3896383	49-2SWPA45 NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-AH	D3906383	42-2SWPA45 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GN	D3916383	42-2SWPA45 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GN	D3926381	3A-2SWPA45 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GN	D3936381	2SWPA45 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-GN	D3946383	42C-2SWPA23 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-KY	D3966383	42D-2SWPA23 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1A TRAIN FAILS INOPERATIVE	
9-10-AP	E1006383	49-2SWPB45 NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-AP	E1016383	42-2SWPB45 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GW	E1026383	42-2SWPB45 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GW	E1036381	3A-2SWPB45 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GW	E1046381	2SWPB45 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-GW	E1056383	42C-2SWPB23 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-NV	E1076383	42D-2SWPB23 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1B TRAIN FAILS INOPERATIVE	
9-10-BL	D7346393	49-2SWPC45 NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BL	D7356393	42-2SWPC45 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GQ	D7366393	42-2SWPC45 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GQ	D7376391	3A-2SWPC45 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GQ	D7386391	2SWPC45 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-GQ	D7396393	42C-2SWPC23 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-LW	D7416393	420-2SWPC23 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1C TRAIN FAILS INOPERATIVE	
9-10-BP	E4476393	49-2SWPD45 NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-BP	E4486393	42-2SWPD45 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GY	E4496393	42-2SWPD45 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GY	E4506391	3A-2SWPD45 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GY	E4516391	2SWPD45 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-GY	E4526393	42C-2SWPD23 CONTACT 20 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-PT	E4546393	420-2SWPD23 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1D TRAIN FAILS INOPERATIVE	
9-10-AL	D7656403	49-2SWPE45 NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-AL	D7666403	42-2SWPE45 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-GS	D7676403	42-2SWPE45 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-GS	D7686401	3A-2SWPE45 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-GS	D7696401	2SWPE45 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-MA	D7726403	420-2SWPE23 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-AT	E4786403	49-2SWPF45 NC CONTACT FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AT	E4796403	42-2SWPF45 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AT	E4806403	42-2SWPF45 CONTACT 4 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AT	E4816401	3A-2SWPF45 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-AT	E4826401	2SWPF45 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-PX	E4856403	420-2SWPF23 CONTACT 14 FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-W	D6917013	2HCS*SOV 10A COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-W	D6927013	1-2HCSA07 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-W	D6937013	1-2HCSA07 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-X	E4057013	2HCS*SOV 10B COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-X	E4067013	1-2HCSB07 CONTACT 1T FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-X	E4077013	1-2HCSB07 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	
9-10-U	D7247033	2SWP*SOV 7A CLOSE	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-U	D7257033	F1-2SWPA32 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-U 9-10-P	D7267033	LOSS OF 2SCN*PNL 101A CKT 27 (GREEN)	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-U	D7277033	1-1-2SNPA32 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-U	D7287033	1-1-2SNPA32 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-P	D7297033	2SNP*SOV 8A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-P	D7307033	F2-2SNPA32 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-P	D7327033	1-2-2SNPA32 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-P	D7337033	1-2-2SNPA32 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-N	E4387033	2SNP*SOV 7B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-N	E4397033	F1-2SNPB32 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-N 9-10-V	E4407033	LOSS OF 2SCN*PNL 301B CKT 27 (YELLOW)	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-N	E4417033	1-1-2SNPB32 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-N	E4427033	1-1-2SNPB32 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-V	E4437033	2SNP*SOV 7B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-V	E4447033	F2-2SNPB32 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-V	E4457033	1-2-2SNPB32 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-V	E4467033	1-2-2SWPB32 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-LD	D4387043	3-1-2SWPA25 COIL FAILS OPEN	PERIODIC TEST	2SWPxMOV 3A OPEN	
9-10-LD	D4407043	F1-2SWPA25 FUSE FAILS OPEN	PERIODIC TEST	2SWPxMOV 3A OPEN	
9-10-LD 9-10-DS	D4417043	LOSS OF 120V AC 2SCHxPNL 101A CKT#28	PERIODIC TEST	2SWPxMOV 3A OPEN	
9-10-DS	D4657043	3-3-2SWPA25 COIL FAILS OPEN	PERIODIC TEST	2SWPxMOV 19A OPEN	
9-10-LF	D4697043	2SWPxPSLX 140A NC CONTACT FAILS OPEN	PERIODIC TEST	2SWPxMOV 19A OPEN	
9-10-DS	D4707043	F2-2SWPA25 FUSE FAILS OPEN	PERIODIC TEST	2SWPxMOV 19A OPEN	
9-10-PA	E1497043	3-1-2SWPB25 COIL FAILS OPEN	PERIODIC TEST	2SWPxMOV 3B OPEN	
9-10-PA	E1517043	F1-2SWPB25 FUSE FAILS OPEN	PERIODIC TEST	2SWPxMOV 3B OPEN	
9-10-PA 9-10-FG	E1527043	LOSS OF 120V AC 2SCHxPNL 301B CKT #28	PERIODIC TEST	2SWPxMOV 3B OPEN	
9-10-FG	E1767043	3-3-2SWPB25 COIL FAILS OPEN	PERIODIC TEST	2SWPxMOV 19B OPEN	
9-10-PC	E1807043	2SWPxPSLX 140B NC CONTACT FAILS OPEN	PERIODIC TEST	2SWPxMOV 19B OPEN	
9-10-FG	E1817043	F2-2SWPB25 FUSE FAILS OPEN	PERIODIC TEST	2SWPxMOV 19B OPEN	
9-10-LJ	D5587083	3-6-2SWPA25 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EG	D5887083	3-6-2SWOA44 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PJ	E2727083	3-4-2SWPB25 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FU	E3037083	3-6-2SWPB44 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-LQ	D6837153	99-1X-2SWPA43 COIL ENERGIZED BY A SHORT	PERIODIC TEST	99-1X-2SWPA 43 CONTACT 2 CLOSE	
9-10-LQ	D6847153	94-1-2SWPA43 ISOLATOR FAILS SHORTED	PERIODIC TEST	99-1X-2SWPA 43 CONTACT 2 CLOSE	
9-10-LQ	D6857153	99-1-2SWPN46 ISOLATOR FAILS SHORTED	PERIODIC TEST	99-1X-2SWPA 43 CONTACT 2 CLOSE	
9-10-LR	D6867153	62-2SWPN46 CONTACT 5 FAILS CLOSE	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-LR	D6877153	62-2SWPN46 COIL ENERGIZED BY A SHORT	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-LR	D6887153	3778-18-(1) COIL ENERGIZED	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-LR	D6897153	3778-18-CD NO CONTACT FAILS CLOSE	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-GD	E4017153	99-2X-2SWPB43 COIL ENERGIZED BY A SHORT	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-GD	E4027153	99-2-2SWPB43 ISOLATOR FAILS SHORTED	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-GD	E4037153	99-2-2SWPN46 ISOLATOR FAILS SHORTED	PERIODIC TEST	99-2X-2SWPB43 CONTACT 2 CLOSE	
9-10-JZ	D2207173	3-4-2SWPA44 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-JZ 9-10-KN 9-10-LC 9-10-DV 9-10-EL	D2217173	52-2ENSX11 CONTACT 58 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-JZ 9-10-KN 9-10-LC 9-10-DV 9-10-EL	D2227173	52-EGPX07 CONTACT 59 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-JZ 9-10-KN 9-10-LC 9-10-DV 9-10-EL	D2237173	52-2ENSX10 CONTACT 58 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-EL	D2247171	3A-2SWPA44 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-EL	D2257171	3A-2SWPA44 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-EL	D2267171	LOSS OF 2BYS*PNL 201A CKT NO 4 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-KJ	D2747173	3-7-2SWPA44 COIL ENERGIZED BY A SHORT	PERIODIC TEST	3-7-2SWPA44 CONTACT T2 CLOSE	
9-10-KJ	D2757173	4Y1-2ENSX04 COIL ENERGIZED	PERIODIC TEST	3-7-2SWPA44 CONTACT T2 CLOSE	
9-10-KJ	D2767173	4Y1-2ENSX04 CONTACT 7 FAILS CLOSE	PERIODIC TEST	3-7-2SWPA44 CONTACT T2 CLOSE	
9-10-KN	D3707173	3-5-2SWPA44 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1E TRAIN FAILS INOPERATIVE	
9-10-LC	D4377173	3-1-2SWPA44 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 3A OPEN	
9-10-DV	D4927173	3-2-2SWPA44 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 92A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-SL	D5377173	3-3-2SHPA44 COIL FAILS OPEN	PERIODIC TEST	2SHP*HOV 47A OPEN	
9-10-LJ	D5597173	3-5-2SHPA44 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I SERVICE WATER ISOLATION	
9-10-EG	D5637173	52-2EGPX07 CONTACT 60 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-EG	D5647173	52-2ENSX11 CONTACT 58 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-EG	D5657173	52-2ENSX10 CONTACT 58 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-HX	D9207173	3-4-2SHPB44 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-HX 9-10-NT 9-10-NZ 9-10-FK 9-10-PE	D9217173	52-2ENSY11 CONTACT 58 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-HX 9-10-NT 9-10-NZ 9-10-FK 9-10-PE	D9227173	52-2EGPY07 CONTACT 60 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-HX 9-10-NT 9-10-NZ 9-10-FK 9-10-PE	D9237173	52-2ENSY10 CONTACT 58 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-PE	D9247171	3A-2SHPB44 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-PE	D9257171	3A-2SHPB44 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
9-10-PE	D9267171	LOSS OF 2BYS*PNL 201B CKT NO4 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	
9-10-NF	D9767173	3-7-2SWPB44 COIL ENERGIZED BY A SHORT	PERIODIC TEST	3-7-2SWPB44 CONTACT T2 CLOSE	
9-10-NF	D9777173	4Y1-2ENSY04 COIL ENERGIZED	PERIODIC TEST	3-7-2SWPB44 CONTACT T2 CLOSE	
9-10-NF	D9787173	4Y1-2ENSY04 CONTACT 7 FAILS CLOSE	PERIODIC TEST	3-7-2SWPB44 CONTACT T2 CLOSE	
9-10-NT	E0807173	3-5-2SWPB44 COIL FAILS OPEN	PERIODIC TEST	2SWP*P1F TRAIN FAILS INOPERATIVE	
9-10-NZ	E1487173	3-1-2SWPB44 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 3B OPEN	
9-10-FK	E2037173	3-2-2SWPB44 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 92B OPEN	
9-10-PE	E2497173	3-3-2SWPB44 COIL FAILS OPEN	PERIODIC TEST	2SWP*MOV 47B OPEN	
9-10-PH	E2737173	3-5-2SWPB44 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II SERVICE WATER ISOLATION	
9-10-FU	E2777173	52-2EGPY07 CONTACT 60 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-FU	E2787173	52-2ENSY11 CONTACT 58 FAILS CLOSE	PERIODIC TEST	NONE	
9-10-FU	E2797173	52-2ENSY10 CONTACT 58 FAILS CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-C	L004IAS3	ADS ACCUMULATOR CHECK VALVE 2IAS*V471 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-C	L005IAS3	ADS ACCUMULATOR CHECK VALVE 2IAS*V421 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-C	L006IAS3	ADA ACCUMULATOR CHECK VALVE 2IAS*V431 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-H	L007IAS3	ADS ACCUMULATOR CHECK VALVE 2IAS*V526 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-H	L008IAS3	ADS ACCUMULATOR CHECK VALVE 2IAS*V571 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-H	L009IAS3	ADS ACCUMULATOR CHECK VALVE 2IAS*V581 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-X	L010IAS3	2IAS*V448 INBOARD ISOL CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-X	L011IAS3	2IAS*SV19A DIV I ADS ACCUMULATOR RELIEF VLV FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-X	L012IAS3	2IAS*V372 ADS ACCUMULATOR CHK VALVE FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-X	L013IAS3	2IAS*SV20A DIV I ADS ACCUMULATOR RELIEF VLV FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-Y	L014IAS3	2IAS*V449 INBOARD ISOL CHK VALVE FAILED CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-Y	L015IAS3	2IAS*SV19B DIV I ADS ACCUMULATOR RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-Y	L016IAS3	2IAS*V371 ADS ACCUMULATOR CK VALVE FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-Y	L017IAS3	2IAS*SV20B DIV II ADS ACC RELIEF VLV FAILS OPEN.	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-B	L018IAS3	2IAS*V448 INBOARD ISOL CHK VALVE FAILS OPEN	PERIODIC TEST	NONE	
12-1-B	L019IAS3	2IAS*V449 INBOARD ISOL CHK VALVE FAILS OPEN	PERIODIC TEST	NONE	
12-1-K	L021IAS3	2IAS*SOV164 FAILED OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-L	L032IAS3	2IAS*SOV165 FAILED OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN.	
12-1-J	L043IAS3	2IAS*SOV166 FAILED OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-H	L053IAS3	2IAS*SOV184 FAILED OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-G	L062IAS3	2IAS*SOV183 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV183 MSRV INST AIR HDR B INBOARD ISOL VLV OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-D	L067IAS3	2IAS*SOV182 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV182 MSRV INST AIR HDR A INBOARD ISOL VLV OPEN	
12-1-F	L073IAS3	2IAS*SOV185 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV185 INSTR AIR HDR A DIV II INBOARD ISOL VALVE OPEN	
12-1-E	L079IAS3	2IAS*SOV180 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV180 INSTR AIR HDR B DIV II INBOARD ISOL VALVE OPEN	
12-1-D	L085IAS3	2IAS*SOV170 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV170 MSRV INST AIR HDR A OUTBOARD ISOL VLV OPEN	
12-1-E	L090IAS3	2IAS*SOV168 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV168 INSTR AIR HDR B DIV I OUTBOARD ISOL VALVE OPEN	
12-1-G	L095IAS3	2IAS*SOV169 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV169 MSRV INST AIR HDR B OUTBOARD ISOL VLV OPEN	
12-1-F	L101IAS3	2IAS*SOV167 FAILS OPEN MECHANICALLY	PERIODIC TEST	2IAS*SOV167 INSTR AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-AA	L121IAS3	2IAS*SOV165 FAILS CLOSED MECHANICALLY	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-X	L134IAS3	2IAS*SOV164 FAILS CLOSED MECHANICALLY	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-Y	L147IAS3	2IAS*SOVX186 FAILS CLOSED MECHANICALLY	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-Z	L153IAS3	2IAS*SOVX181 FAILS CLOSED MECHANICALLY	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-Z	L159IAS3	2IAS*SOVY181 FAILS CLOSED MECHANICALLY	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-Y	L165IAS3	2IAS*SOVY186 FAILS CLOSED MECHANICALLY	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-AR	L173IAS3	2IAS*PSNX181 BI-STABLE FAILS ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AR	L174IAS3	2IAS*PSNL181 BI-STABLE FAILS ENERGIZED	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AS	L175IAS3	IAS*PNRS181 FAILS INDICATING HIGH PRESSURE	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AS	L176IAS3	2IAS*PT181 OUTPUT INDICATES HIGH PRESSURE	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AQ	L179IAS3	2IAS*PSNX186 BI-STABLE ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AQ	L180IAS3	2IAS*PSNL186 BI-STABLE FAILS ENERGIZED	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AT	L181IAS3	2IAS*PNRS186 FAILS INDICATING HIGH PRESSURE	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AT	L182IAS3	2IAS*PT186 OUTPUT INDICATES HIGH PRESSURE	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AS	L184IAS3	2IAS*PSNY181 BI-STABLE FAILS ENERGIZED	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AS	L185IAS3	2IAS*PSNH181 BI-STABLE FAILS ENERGIZED	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AT	L187IAS3	2IAS*PNRSY186 BI-STABLE FAILS ENERGIZED	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AT	L188IAS3	2IAS*PSNH186 BI-STABLE FAILS ENERGIZED	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-H	L212IAS3	ADS ACCUMULATOR CHECK VALVE 2IAS*V546 FAILS CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-Q	L0207013	3X3-2IASA11 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-Q	L0227013	1BB-2IASA11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-Q	L0237013	1BB-2IASA11 CONTACT 2T FAILS CLOSED	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-K	L0247013	2IAS*SOV164 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-K	L0257013	3-2IASA11 SEAL-IN CONTACT T1 FAILED CLOSED	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-K	L0267013	3-2IASA11 RELAY ENERGIZED BY SHORT	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-K	L0277013	1B-2IASA11 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-K	L0287013	1B-2IASA11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-Q	L0297013	3A-23-2ISCA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV164 ADS AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-Q 12-1-S	L0307011	2A-23-2ISCA02 RELAY ENERGIZED	ANNUNCIATED IN CONTROL ROOM	2IAS*SOV166 HSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-S	L0427013	3X3-2IASA11 CONTACT R3 FAILS CLOSED	PERIODIC TEST	2IAS*SOV166 HSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-S	L0447013	1CC-2IASA11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-S	L0457013	1CC-2IASA11 CONTACT 2T FAILS CLOSED	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-J	L0467013	2IAS*SOV166 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-J	L0477013	3X-2IASA11 SEAL-IN CONTACT T1 FAILED CLOSED	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-J	L0487013	3X-2IASA11 RELAY ENERGIZED BY SHORT	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-J	L0497013	1C-2IASA11 SEAL-IN CONTACT 2B FAILS CLOSED	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-J	L0507013	1C-2IASA11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-S	L0517013	3A-23-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-H	L0567013	2IAS*SOV184 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AK 12-1-X 12-1-AC 12-1-AB	L1157012	LOSS OF BUS A 2SCH*PNL102A 120VAC DIV I CONT PWR	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV166 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-X	L1357013	2IAS*SOV164 SOLENOID FAILED OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-X	L1367012	F2-2IASA11 3A FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AN	L1377013	3-2IASA11 RELAY COIL FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AN	L1387013	3-2IASA11 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AN	L1397013	1B-2IASA11 OPERATOR ERROR	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AN	L1407013	1B-2IASA11 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AP	L1417013	3X3-2IASA11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AP	L1427013	1J-2IASA11 CONTACT A FAILED CLOSE	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AN	L1437013	1B-2IASA11 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AN	L1447013	1BB-2IASA11 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AN	L1457013	1BB-2IASA11 OPERATOR ERROR	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-AP	L1467013	3X3-2IASA11 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV I ADS ACCUMULATOR TANKS	
12-1-D	L0867022	2IAS*SOV170 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV170 MSRV INST AIR HDR A OUTBOARD ISOL VLV OPEN	
12-1-AF	L0877023	3A-24-2ISCA02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	2IAS*SOV170 MSRV INST AIR HDR A OUTBOARD ISOL VLV OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AF 12-1-N 12-1-P 12-1-V	L0887023	3A-24-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2IAS*SOV167 INSTR AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-AF	L0897023	3X4-2IASA11 CONTACT R3 FAILS CLOSED	PERIODIC TEST	2IAS*SOV170 MSRV INST AIR HDR A OUTBOARD ISOL VLV OPEN	
12-1-E	L0917022	2IAS*SOV168 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV168 INSTR AIR HDR B DIV I OUTBOARD ISOL VALVE OPEN	
12-1-N	L0927023	2IAS*SOV168 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV168 INSTR AIR HDR B DIV I OUTBOARD ISOL VALVE OPEN	
12-1-N	L0937023	3A-24-2ISCA02 CONTACT T3 FAILS OPEN	PERIODIC TEST	2IAS*SOV168 INSTR AIR HDR B DIV I OUTBOARD ISOL VALVE OPEN	
12-1-N	L0947023	3X4-2IASA11 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV168 INSTR AIR HDR B DIV I OUTBOARD ISOL VALVE OPEN	
12-1-G	L0967022	2IAS*SOV165 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV169 MSRV INST AIR HDR B OUTBOARD ISOL VLV OPEN	
12-1-P	L0977023	2IAS*SOV169 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV169 MSRV INST AIR HDR B OUTBOARD ISOL VLV OPEN	
12-1-P	L0997023	3A-24-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV169 MSRV INST AIR HDR B OUTBOARD ISOL VLV OPEN	
12-1-P	L1007023	3X4-2IASA11 CONTACT R1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV169 MSRV INST AIR HDR B OUTBOARD ISOL VLV OPEN	
12-1-F	L1027022	2IAS*SOV167 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV167 INSTR AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-F	L1037023	2IAS*SOV167 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV167 INSTR AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-V	L1047023	3X3-2IASA11 RELAY COIL FAILS OPEN	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-V	L1057023	3A-24-2ISCA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV167 INSTR AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-V	L1067023	3X3-2IASA11 CONTACT R4 FAILS CLOSED	PERIODIC TEST	2IAS*SOV167 INSTR AIR HDR A DIV I OUTBOARD ISOL VALVE OPEN	
12-1-AF	L2117022	2IAS*SOV170 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV170 NSRV INST AIR HDR A OUTBOARD ISOL VLV OPEN	
12-1-R	L0317033	3X1-2IASB11 CONTACT R1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-R	L0337033	1AA-2IASB11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-R	L0347033	1BB-2IASB11 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-L	L0357033	2IAS*SOV165 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-L	L0367033	3-2IASB11 SEAL-IN CONTACT T1 FAILED CLOSE	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-L	L0377033	3-2IASB11 RELAY ENERGIZED BY SHORT	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-L	L0387033	1A-2IASB11 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-L	L0397033	1A-2IASB11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	
12-1-R	L0407033	3B-23-2IASB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV165 ADS AIR HDR B DIV II OUTBOARD ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-R 12-1-T 12-1-H	L0417033	3A-23-2IASCB02 RELAY ENERGIZED	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-T	L0527033	3X1-2IASB11 CONTACT T2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-T	L0547033	1BB-2IASB11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-T	L0557033	1BB-2IASB11 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-H	L0577033	3X-2IASB11 SEAL-IN CONTACT T1 FAILED CLOSED	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-H	L0587033	3X-2IASB11 RELAY ENERGIZED BY SHORT	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-H	L0597033	1B-2IASB11 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-H	L0607033	1B-2IASB11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-T	L0617033	3B-23-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-G	L0637032	2IAS*SOV183 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV183 MSRV INST AIR HDR B INBOARD ISOL VLV OPEN	
12-1-H	L0647033	2IAS*SOV183 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV183 MSRV INST AIR HDR B INBOARD ISOL VLV OPEN	
12-1-H	L0657033	3B-23-2ISCB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV183 MSRV INST AIR HDR B INBOARD ISOL VLV OPEN	
12-1-H	L0667033	3X1-2IASB11 CONTACT R4 FAILS CLOSED	PERIODIC TEST	2IAS*SOV183 MSRV INST AIR HDR B INBOARD ISOL VLV OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AG	L0727033	3X2-2IASB11 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV182 MSRV INST AIR HDR A INBOARD ISOL VLV OPEN	
12-1-AH 12-1-AA 12-1-AD 12-1-AE	L1087032	LOSS OF BUS B 2SCH*PNL302B 120VAC DIV II CONT PWR	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AA	L1227032	2IAS*SOV165 SOLENOID FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AA	L1237032	F1-2IASB01 3A FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AL	L1247033	3-2IASB11 RELAY COIL FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AL	L1257033	3-2IASB11 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AL	L1267033	1A-2IASB11 OPERATOR ERROR	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AL	L1277033	1A-2IASB11 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AH	L1287033	3X1-2IASB11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AH	L1297033	1G-2IASB11 CONTACT A FAILED CLOSED	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AL	L1307033	1A-2IASB11 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AL	L1317033	1AA-2IASB11 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AL	L1327033	1AA-2IASB11 OPERATOR ERROR	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-AM	L1337033	3X1-2IASB11 CONTACT R1 FAILED OPEN	PERIODIC TEST	LOSS OF AIR SPLY TO DIV II ADS ACCUMULATOR TANKS	
12-1-D	L0687042	2IAS*SOV182 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV182 MSRV INST AIR HDR A INBOARD ISOL VLV OPEN	
12-1-AG	L0697043	2IAS*SOV182 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV182 MSRV INST AIR HDR A INBOARD ISOL VLV OPEN	
12-1-AJ	L0707043	3B-24-2ISCB02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	2IAS*SOV185 INSTR AIR HDR A DIV II INBOARD ISOL VALVE OPEN	
12-1-AJ 12-1-U	L0717043	3B-24-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	2IAS*SOV180 INSTR AIR HDR B DIV II INBOARD ISOL VALVE OPEN	
12-1-F	L0747042	2IAS*SOV185 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV185 INSTR AIR HDR A DIV II INBOARD ISOL VALVE OPEN	
12-1-F	L0757043	2IAS*SOV185 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV185 INSTR AIR HDR A DIV II INBOARD ISOL VALVE OPEN	
12-1-AH	L0767043	3X2-2IASB11 RELAY COIL FAILS OPEN	PERIODIC TEST	2IAS*SOV182 MSRV INST AIR HDR A INBOARD ISOL VLV OPEN	
12-1-AJ	L0777043	3B-24-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	2IAS*SOV185 INSTR AIR HDR A DIV II INBOARD ISOL VALVE OPEN	
12-1-AJ	L0787043	3X2-2IASB11 CONTACT R1 FAILS CLOSED	PERIODIC TEST	2IAS*SOV185 INSTR AIR HDR A DIV II INBOARD ISOL VALVE OPEN	
12-1-E	L0807042	2IAS*SOV180 CLOSES THEN OPENS INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOV180 INSTR AIR HDR B DIV II INBOARD ISOL VALVE OPEN	
12-1-E	L0817043	2IAS*SOV180 ENERGIZED BY A SHORT	PERIODIC TEST	2IAS*SOV180 INSTR AIR HDR B DIV II INBOARD ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-U	L0827043	3X1-2IASB11 RELAY COIL FAILS OPEN	PERIODIC TEST	2IAS*SOV184 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-U	L0837043	3B-24-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	2IAS*SOV180 INSTR AIR HDR B DIV II INBOARD ISOL VALVE OPEN	
12-1-U	L0847043	3X1-2IASB11 CONTACT R4 FAILS CLOSED	PERIODIC TEST	2IAS*SOV180 INSTR AIR HDR B DIV II INBOARD ISOL VALVE OPEN	
12-1-AK	L0987073	3X4-2IASA11 RELAY COIL FAILS OPEN	PERIODIC TEST	2IAS*SOV168 INSTR AIR HDR B DIV I OUTBOARD ISOL VALVE OPEN	
12-1-AK	L1147073	1J-2IASA11 CONTACT B FAILS OPEN	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AK	L1167073	F12-2IAS11 3A FUSE FAILS OPEN	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AK	L1177073	1J-2IASA11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AK	L1187073	1J-2IASA11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AK	L1197073	3X5-2IASA11 CONTACT T4 FAILS OPEN	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AK	L1207073	3X5-2IASA11 RELAY FAILS OPEN	PERIODIC TEST	2IAS*SOV166 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AH	L1077083	1G-2IASB11 CONTACT B FAILS OPEN	PERIODIC TEST	2IAS*SOV184 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AH	L1097083	F9-2IASB11 3A FUSE FAILS OPEN	PERIODIC TEST	2IAS*SOV184 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AH	L1107083	1G-2IASB11 CONTACT A FAILS OPEN	PERIODIC TEST	2IAS*SOV184 NSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AH	L1117083	1G-2IASB11 OPERATOR ERROR	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AH	L1127083	3X2-2IASB11 CONTACT T4 FAILS OPEN	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AH	L1137083	3X2-2IASB11 RELAY FAILS OPEN	PERIODIC TEST	2IAS*SOV184 MSRV ACC INSTR AIR HDR DIV I ISOL VALVE OPEN	
12-1-AD	L1487093	2IAS*SOVX186 SOLENOID COIL FAILED OPEN	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AD	L1497093	F7-2IASB17 3A FUSE FAILS OPEN	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AD	L1507093	1J-2IASB17 CONTACT 3T FAILS OPEN	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AD	L1517093	1J-2IASB17 OPERATOR ERROR	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AD	L1527093	1J-2IASB17 CONTACT 2T FAILS OPEN	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AC	L1547093	2IAS*SOVX181 SOLENOID COIL FAILED OPEN	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AC	L1557093	F6-2IASA17 3A FUSE FAILS OPEN	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AC	L1567093	1A-2IASA17 CONTACT 3T FAILS OPEN	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AC	L1577093	1A-2IASA17 OPERATOR ERROR	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AC	L1587093	1A-2IASA17 CONTACT 2T FAILS OPEN	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AB	L1607093	2IAS*SOVY181 SOLENOID COIL FAILED OPEN	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AB	L1617093	F7-2IASA17 3A FUSE FAILS OPEN	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AB	L1627093	1H-2IASA17 CONTACT 3T FAILS OPEN	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AB	L1637093	1H-2IASA17 OPERATOR ERROR	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AB	L1647093	1H-2IASA17 CONTACT 2T FAILS OPEN	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AE	L1667093	2IAS*SOVY186 SOLENOID COIL FAILED OPEN	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-AE	L1677093	F8-2IASB17 3A FUSE FAILS OPEN	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-AE	L1687093	1K-2IASB17 CONTACT 3T FAILS OPEN	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-AE	L1697093	1K-2IASB17 OPERATOR ERROR	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-AE	L1707093	1K-2IASB17 CONTACT 2T FAILS OPEN	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	
12-1-AR	L1717093	2IASPSNX181 CONTACT FAILS OPEN	PERIODIC TEST	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AR	L1727092	LOSS OF 120VAC DIV I BUS A 2SCM*PNL102A CKT NO. 32	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOVX181 DIV I HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AQ	L1777093	2IAS*PSNX186 CONTACT FAILS OPEN	PERIODIC TEST	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-1-AQ	L1787092	LOSS OF 120VAC DIV II BUS B 2SCH*PNL302B CKT NO. 32	INDICATING LIGHT IN CONTROL ROOM	2IAS*SOVX186 DIV II HIGH FLOW SUPPLY VALVE CLOSED	
12-1-AB	L1837093	2IAS*PSNY181 CONTACT FAILS OPEN	PERIODIC TEST	2IAS*SOVY181 DIV I LOW FLOW SUPPLY VALVE CLOSED	
12-1-AE	L1867093	2IAS*PSNY186 CONTACT FAILS OPEN	PERIODIC TEST	2IAS*SOVY186 DIV II LOW FLOW SUPPLY VALVE CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-4-C	G001EGA1	2EGA*V 2A CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I LEFT BANK STARTING AIR PRESSURE	
12-4-C	G002EGA1	2EGA*SV 1A SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I LEFT BANK STARTING AIR PRESSURE	
12-4-C	G003EGA1	2EGA*SV 4A SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I LEFT BANK STARTING AIR PRESSURE	
12-4-C	G004EGA1	2EGA*V 2B CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RIGHT BANK STARTING AIR PRESSURE	
12-4-C	G005EGA1	2EGA*SV 2A SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RIGHT BANK STARTING AIR PRESSURE	
12-4-C	G006EGA1	2EGA*SV 3A SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RIGHT BANK STARTING AIR PRESSURE	
12-4-B	G007EGA1	2EGA*V 16A CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II LEFT BANK STARTING AIR PRESSURE	
12-4-B	G008EGA1	2EGA*SV 1B SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II LEFT BANK STARTING AIR PRESSURE	
12-4-B	G009EGA1	2EGA*SV 4B SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II LEFT BANK STARTING AIR PRESSURE	
12-4-B	G010EGA1	2EGA*V 16B CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RIGHT BANK STARTING AIR PRESSURE	
12-4-B	G011EGA1	2EGA*SV 2B SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RIGHT BANK STARTING AIR PRESSURE	
12-4-B	G012EGA1	2EGA*SV 3B SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RIGHT BANK STARTING AIR PRESSURE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
12-4-D	G013EGA1	2EGA*V 29A CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III LEFT BANK STARTING AIR PRESSURE	
12-4-D	G014EGA1	2EGA*SV 111 SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III LEFT BANK STARTING AIR PRESSURE	
12-4-D	G015EGA1	2EGA*V 29B CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III RIGHT BANK STARTING AIR PRESSURE	
12-4-D	G016EGA1	2EGA*SV 121 SAFETY VALVE STUCK OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III RIGHT BANK STARTING AIR PRESSURE	

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FAILURE MODES AND EFFECTS ANALYSIS
STBY DIESEL GENERATOR AIR STARTUP

J.O.12177 FMEA-12-4 SH 2

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
15-1.-A	E001FPW3	2FPW*SOV 218 MECH FAIL OPEN	PERIODIC TEST	2FPW*SOV 218 VALVE OPEN	
15-1.-A	E002FPW3	2FPW*SOV 220 MECH FAIL OPEN	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-A	E003FPW3	2FPW*SOV 219 MECH FAIL OPEN	PERIODIC TEST	2FPW*SOV 219 VALVE OPEN	
15-1.-A	E004FPW3	2FPW*SOV 221 MECH FAIL OPEN	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-C	E011FPW3	2FPW 595 MECH FAIL OPEN	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2HVC*FLT 2-A OPEN	
15-1.-C	E012FPW3	2FPW*595 OPERATOR ERROR	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2HVC*FLT 2-A OPEN	
15-1.-C	E013FPW3	2FPW*594 MECH FAILS OPEN	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2HVC*FLT 2-B OPEN	
15-1.-C	E014FPW3	2FPW*594 OPERATOR ERROR	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2HVC*FLT 2-B OPEN	
15-1.-B	E015FPW3	2FPW*596 MECH FAILS OPEN	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2GTS*FLT 1-A OPEN	
15-1.-B	E016FPW3	2FPW*596 OPERATOR ERROR	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2GTS*FLT 1-A OPEN	
15-1.-B	E017FPW3	2FPW*597 MECH FAILS OPEN	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2GTS*FLT 1-B OPEN	
15-1.-B	E018FPW3	2FPW*597 OPERATOR ERROR	PERIODIC TEST	FIRE WATER SPRAY LINE TO 2GTS*FLT 1-B OPEN	
15-1.-G	E0371122	3B-2-2ISCB02 COIL ENERGIZED	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 219 VALVE OPEN	
15-1.-H	E0057043	3-2FPWA03 CONTACT R2 FAILS CLOSE	PERIODIC TEST	2FPW*SOV 218 VALVE OPEN	
15-1.-F	E0067043	1A-2FPWA03 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2FPW*SOV 218 VALVE OPEN	
15-1.-F	E0077043	1A-2FPWA03 OPERATOR ERROR	PERIODIC TEST	2FPW*SOV 218 VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
15-1.-F	E0087043	1A-2FPWA03 CONTACT 1T FAILS CLOSE	PERIODIC TEST	2FPW*SOV 218 VALVE OPEN	
15-1.-F	E0097043	3A-21-2ISCA02 CONTACT T4 FAIL CLOSE	PERIODIC TEST	2FPW*SOV 218 VALVE OPEN	
15-1.-D	E0197043	3-2FPWA03 CONTACT R3 FAILS CLOSE	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-D	E0207043	1B-2FPWA03 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-D	E0217043	1B-2FPWA03 OPERATOR ERROR	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-D	E0227043	1B-2FPWA03 CONTACT 1T FAILS CLOSE	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-H	E0247041	F3-2FPWA03 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2FPW*SOV 220 VALVE OPEN	
15-1.-H	E0257043	3-2FPWA03 CONTACT T1 FAIL OPEN	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-H	E0267043	1C-2FPWA03 CONTACT B FAIL OPEN	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-H	E0277042	3-2FPWA03 COIL FAIL OPEN	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 220 VALVE OPEN	
15-1.-H	E0287042	3-2FPWA03 CONTACT A FAIL OPEN	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 220 VALVE OPEN	
15-1.-H	E0297043	1C-2FPWA03 OPERATOR ERROR	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-D	E0307043	3A-18-2ISCA02 CONTACT T4 FAIL OPEN	PERIODIC TEST	2FPW*SOV 220 VALVE OPEN	
15-1.-D	E0317042	3A-18-2ISCA02 COIL ENERGIZED	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 220 VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
FIRE PROTECTION WATER

J.O.12177 FMEA-15-1.4 SH 2

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
15-1.-J	E0327053	3-2FPWB03 CONTACT R2 FAIL CLOSE	PERIODIC TEST	2FPW*SOV 219 VALVE OPEN	
15-1.-G	E0337053	1A-2FPWB03 CONTACT 2B FAIL CLOSE	PERIODIC TEST	2FPW*SOV 219 VALVE OPEN	
15-1.-G	E0347053	1A-2FPWB03 OPERATOR ERROR	PERIODIC TEST	2FPW*SOV 219 VALVE OPEN	
15-1.-G	E0357053	1A-2FPWB03 CONTACT 1T FAIL CLOSE	PERIODIC TEST	2FPW*SOV 219 VALVE OPEN	
15-1.-G	E0367053	3B-2-2ISCB02 CONTACT M3 FAIL CLOSE	PERIODIC TEST	2FPW*SOV 219 VALVE OPEN	
15-1.-E	E0387053	3-2FPWB03 CONTACT R2 FAIL CLOSE	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-E	E0397053	1B-2FPWB03 CONTACT 2B FAIL CLOSE	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-E	E0407053	1B-2FPWB03 OPERATOR ERROR	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-E	E0417053	1B-2FPWB03 CONTACT 1T FAIL CLOSE	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-J	E0427051	F3-2FPWB03 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2FPW*SOV 221 VALVE OPEN	
15-1.-J	E0437053	3-2FPWB03 CONTACT T1 FAIL OPEN	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-J	E0447053	1C-2FPWB03 CONTACT B FAIL OPEN	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-J	E0457052	3-2FPWB03 COIL FAIL CLOSE	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 221 VALVE OPEN	

May 14.81

FAILURE MODES AND EFFECTS ANALYSIS
FIRE PROTECTION WATER

J.O.12177 FMEA-15-1.4 SH 3

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
15-1.-J	E0467052	3-2FPWB03 CONTACT A FAIL OPEN	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 221 VALVE OPEN	
15-1.-J	E0477053	1C-2FPWB03 OPERATOR ERROR	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-E	E0487053	3B-2-2ISCB02 CONTACT M4 FAIL CLOSE	PERIODIC TEST	2FPW*SOV 221 VALVE OPEN	
15-1.-E	E0497052	3B-2-2ISCB02 COIL ENERGIZED	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 221 VALVE OPEN	
15-1.-F	E0107122	3A-21-2ISCA02 COIL ENERGIZED	INDICATING LIGHT IN CONTROL ROOM	2FPW*SOV 218 VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-A	Z756GTS3	2GTS*MOV1A CLOSED	PERIODIC TEST	NONE	
22-1-A	Z757GTS3	2GTS*MOV1B CLOSED	PERIODIC TEST	NONE	
22-1-A	Z758GTS3	LOSS OF SGTS FLTR TRAIN A 2GTS*FLT1A	PERIODIC TEST	NONE	
22-1-A	Z759GTS3	LOSS OF SGTS FLTR TRAIN B 2GTS*FLT1B	PERIODIC TEST	NONE	
22-1-P	Z005HVR3	2HVR*AOD1A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-P	Z046HVR3	2HVR*AOD1B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-Q	Z086HVR3	2HVR*AOD9A MEHCANICALLY FAILS OPEN	PERIODIC TEST	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-Q	Z093HVR3	2HVR*AOD9B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-R	Z100HVR3	2HVR*AOD10A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-R	Z107HVR3	2HVR*AOD10B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-E	Z147HVR3	2HVR*MOD6A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-B	Z158HVR3	2HVR*MOD7A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-G	Z200HVR3	2HVR*MOD6B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-B	Z211HVR3	2HVR*MOD7B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BQ	Z220HVR3	2HVR*UC401A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BS	Z234HVR3	2HVR*UC401B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BT	Z248HVR3	2HVR*UC401C MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BQ	Z261HVR3	2HVR*UC401D MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BS	Z274HVR3	2HVR*UC401E MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BT	Z287HVR3	2HVR*UC401F MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BR	Z300HVR3	2HVR*UC402A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BR	Z316HVR3	2HVR*UC402B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BH	Z332HVR3	2HVR*UC403A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BH	Z363HVR3	2HVR*UC403B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BH	Z394HVR3	2HVR*UC404A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-BH	Z407HVR3	2HVR*UC404B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BG	Z420HVR3	2HVR*UC404C MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-BG	Z433HVR3	2HVR*UC404D MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-AH	Z446HVR3	2HVR*UC405 MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RM A UNIT COOLER INOPERATIVE	
22-1-AH	Z460HVR3	2HVR*UC406 MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RM B UNIT COOLER INOPERATIVE	
22-1-BK	Z474HVR3	2HVR*UC407A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-BK	Z487HVR3	2HVR*UC407B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DB	Z501HVR3	2HVR*UC407C MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-BL	Z514HVR3	2HVR*UC407D MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-BL	Z527HVR3	2HVR*UC407E MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-BD	Z540HVR3	2HVR*UC408A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-BD	Z555HVR3	2HVR*UC408B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-BC	Z568HVR3	2HVR*UC409A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BC	Z582HVR3	2HVR*UC409B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-AK	Z595HVR3	2HVR*UC410A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-BJ	Z608HVR3	2HVR*UC410B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-BJ	Z621HVR3	2HVR*UC410C MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-BF	Z634HVR3	2HVR*UC411A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-BE	Z647HVR3	2HVR*UC411B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BN	Z660HVR3	2HVR*UC411C MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BF	Z673HVR3	2HVR*UC412A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-BE	Z686HVR3	2HVR*UC412B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-AG	Z699HVR3	2HVR*UC414A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-AG	Z713HVR3	2HVR*UC414B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-AF	Z727HVR3	2HVR*UC415A MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AF	Z741HVR3	2HVR*UC415B MECHANICALLY FAIL INOPERATIVE	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-H	Z114SWP3	2SWP*RVX46A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z115SWP3	2SWP*RVY46A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H 22-1-BQ 22-1-BR 22-1-BH 22-1-BH 22-1-AH	Z116SWP3	LOSS OF DIV I SERVICE WATER	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-BK 22-1-DB 22-1-BD 22-1-AK 22-1-BF 22-1-AG 22-1-AF	Z116SWP3	LOSS OF DIV I SERVICE WATER	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z118SWP3	2SWP*AOV97A FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AA	Z167SWP3	2SWP*RVX46B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AA	Z168SWP3	2SWP*RVY46B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AA 22-1-BS 22-1-BT 22-1-BS 22-1-BT 22-1-BH 22-1-BG 22-1-AH	Z169SWP3	LOSS OF DIV II SERVICE WATER	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BL 22-1-BC 22-1-BJ 22-1-BE 22-1-BN 22-1-BE 22-1-AG 22-1-AF	Z169SWP3	LOSS OF DIV II SERVICE WATER	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AA	Z171SWP3	2SWP*AOV97B FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BQ	Z221SWP3	2SWP*RV80A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BS	Z235SWP3	2SWP*RV80B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BT	Z249SWP3	2SWP*RV80C MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BQ	Z262SWP3	2SWP*RV80D MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BS	Z275SWP3	2SWP*RV80E MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BT	Z288SWP3	2SWP*RV80F MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BR	Z301SWP3	2SWP*RV10A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BR	Z317SWP3	2SWP*RV10B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BM	Z333SWP3	2SWP*RV51A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EB	Z334SHP3	2SHP*MOV15A MECHANICALLY FAILS CLOSE	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BH	Z364SHP3	2SHP*RV81B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EG	Z365SHP3	2SHP*MOV15B MECHANICALLY FAILS CLOSE	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BH	Z395SHP3	2SHP*RV82A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-BH	Z408SHP3	2SHP*RV82B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-BG	Z421SHP3	2SHP*RV82C MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-BG	Z434SHP3	2SHP*RV82D MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-AH	Z447SHP3	2SHP*RV556 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-AH	Z461SHP3	2SHP*RV558 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-BK	Z475SHP3	2SHP*RV83A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-BK	Z488SHP3	2SHP*RV83B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DB	Z502SHP3	2SHP*RV83C MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BL	Z515SWP3	2SWP*RV83D MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-BL	Z528SWP3	2SWP*RV83E MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-BD	Z541SWP3	2SWP*RV9A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-BD	Z556SWP3	2SWP*RV9B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-BC	Z569SWP3	2SWP*RV11A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-BC	Z583SWP3	2SWP*RV11B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-AK	Z596SWP3	2SWP*RV84A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-BJ	Z609SWP3	2SWP*RV84B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-BJ	Z622SWP3	2SWP*RV84C MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-BF	Z635SWP3	2SWP*RV85A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-BE	Z648SWP3	2SWP*RV85B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BN	Z661SWP3	2SWP*RV85C MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BF	Z674SWP3	2SWP*RV68A MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-BE	Z687SWP3	2SWP*RV68B MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-AG	Z700SWP3	2SWP*RV155A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-AG	Z714SWP3	2SWP*RV155B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-AF	Z728SWP3	2SWP*RV72A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-AF	Z742SWP3	2SWP*RV72B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-AP	Z0190143	2HVR*RUH14A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AP	Z0210143	LOSS OF 120VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AP	Z0220143	LOSS OF 575VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AP	Z0230143	2HVR*RUH14A LOCAL MICROPROCESSOR FAILS INOP	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AP	Z0240143	2HVR*REX14A GASEOUS RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AP	Z0250143	2HVR*REY14A PARTICULATE RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AV	Z0590143	2HVR*RUW14B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AV	Z0610143	LOSS OF 120VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AV	Z0620143	LOSS OF 575VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AV	Z0630143	2HVR*RUW14B LOCAL MICROPROCESSOR FAILS INOP	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AV	Z0640143	2HVR*REX14B GASEOUS RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AV	Z0650143	2HVR*REY14B PARTICULATE RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AN	Z0300323	2HVR*RUW32A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AN	Z0320323	LOSS OF 120VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AN	Z0330323	LOSS OF 575VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AN	Z0340323	2HVR*RUW32A LOCAL MICROPROCESSOR FAILS INOP	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AN	Z0350323	2HVR*REX32A GASEOUS RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AN	Z0360323	2HVR*REY32A PARTICULATE RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AU	Z0700323	2HVR*RUH32B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AU	Z0720323	LOSS OF 120VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AU	Z0730323	LOSS OF 575VAC PNL (LTR) (GREEN)	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AU	Z0740323	2HVR*RUH32B LOCAL MICROPROCESSOR FAILS INOP	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AU	Z0750323	2HVR*REX32B GASEOUS RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AU	Z0760323	2HVR*REY32B PARTICULATE RAD ELEMENT FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-D	Z1171Z63	2HVR*UC413A BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-F	Z1701Z63	2HVR*UC413B BRKR MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AH	Z0171113	3A-10-2ISCA02 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AT	Z0571133	3B-10-2ISCB02 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-D	Z1196013	2HVR*UC413A BREAKER 52TC ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AY 22-1-X 22-1-Y 22-1-Z	Z1236012	1-2HVRA03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AY	Z1246013	1-2HVRA03 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1256013	1-2HVRA03 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1266013	3-2-2HVRA03 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Y	Z1276013	2HVR*FS18A NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Y	Z1286013	3-2-2HVRA03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Y	Z1296013	62-2HVRA90 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Y	Z1316013	27X-2EJSX08 CONTACT 20 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Y	Z1326013	1-2HVRA03 CONTACT 7 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Z	Z1336013	1-2HVRA03 CONTACT 9 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AY	Z1356013	3-4-2HVRA03 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AY	Z1366013	27X-2EJSX08 CONTACT 12 FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AZ	Z1376013	3-4-2HVRA03 ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AZ	Z1386013	2HVR*FS18A NC CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AZ	Z1396013	62-2HVRA03 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AZ	Z1406013	62-2HVRA03 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AZ	Z1416013	52-2HVRA03 CONTACT 28 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1426013	15A-2HVRA03 POSITIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1436013	15A-2HVRA03 NEGATIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1446013	LOSS OF 125VDC DIV I BUS A	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1456013	35A-2HVRA03 POSITIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-X	Z1466013	35A-2HVRA03 NEGATIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-J	Z1556013	3-2-2HVRA03 CONTACT 6 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-K	Z1566013	3-3-2HVRA03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-K	Z1576013	52-2HVRA03 AUX CONTACT 28 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-K	Z1666013	3-1-2HVRA03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-F	Z1726023	2HVR*UC413B BREAKER 52TC ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BA 22-1-AB 22-1-AC 22-1-AD	Z1766022	1-2HVRB03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BA	Z1776023	1-2HVRB03 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1786023	1-2HVRB03 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1796023	3-2-2HVRB03 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AC	Z1806023	2HVR*FS18B NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AC	Z1816023	3-2-2HVRB03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AC	Z1826023	62-2HVRB90 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AC	Z1846023	27X-2EJSY08 CONTACT 20 FAIL OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AC	Z1856023	1-2HVRB03 CONTACT 7 FAIL OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AD	Z1866023	1-2HVRB03 CONTACT 9 FAIL OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BA	Z1886023	3-4-2HVRB03 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BA	Z1896023	27X-2EJSY08 CONTACT 12 FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BB	Z1906023	3-4-2HVRB03 ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BB	Z1916023	2HVR*FS18B NC CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BB	Z1926023	62-2HVRB03 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BB	Z1936023	62-2HVRB03 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-BB	Z1946023	52-2HVRB03 CONTACT 28 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1956023	15A-2HVRB03 POSITIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1966023	15A-2HVRB03 NEGATIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1976023	LOSS OF 125VDC DIV II BUS B	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1986023	35A-2HVRB03 POSITIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AB	Z1996023	35A-2HVRB03 NEGATIVE FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-N	Z2096023	3-3-2HVRB03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-N	Z2106023	52-2HVRB03 AUX CONTACT 28 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-N	Z2196023	3-1-2HVRB03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-Y 22-1-AY	Z1306053	27X-2EJSX08 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AC 22-1-BA	Z1836053	27X-2EJSY08 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-EC	Z3356053	42C-2SWPA06 ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EB 22-1-BX 22-1-EG 22-1-BY	Z3366051	LOSS OF 2EHS*MCC201 (PURPLE)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III ECCS ROOM COOLING	
22-1-EB	Z3376051	2SWPA06 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EB	Z3386051	2SWPA06 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED	Z3396053	42C-2SWPA06 CONTACT 6 FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED	Z3406053	33-2SWPA06 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED	Z3416053	33-2SWPA06 CONTACT 11 FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED	Z3426053	420-2SWPA06 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED	Z3436053	1-2SWPA06 CONTACT 2T FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED 22-1-EC	Z3446052	1-2SWPA06 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EC	Z3596053	33-2SWPA06 CONTACT 1 FAILS CLOSED	PERIODIC TEST	NONE	
22-1-EC	Z3606053	1-2SWPA06 CONTACT 1T FAILS CLOSE	PERIODIC TEST	1-2SWPA06 CONTACT 1T CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-ED	Z3616052	EXCESS TORQUE	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-ED	Z3626053	TQS-2SKPA06 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EH	Z3666053	42C-2SKPB06 ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EG	Z3676051	2SKPB06 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EG	Z3686051	2SKPB06 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ	Z3696053	420-2SKPB06 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ	Z3706053	42C-2SKPB06 CONTACT 6 FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ	Z3716053	33-2SKPB06 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ	Z3726053	33-2SKPB06 CONTACT 11 FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ	Z3736053	1-2SKPB06 CONTACT 2T FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ 22-1-EH	Z3746052	1-2SKPB06 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EH	Z3896053	420-2SKPB06 CONTACT 9 FAILS CLOSED	PERIODIC TEST	NONE	
22-1-EH	Z3906053	33-2SKPB06 CONTACT 1 FAILS CLOSED	PERIODIC TEST	NONE	
22-1-EH	Z3916053	1-2SKPB06 CONTACT 1T FAILS CLOSE	PERIODIC TEST	1-2SKPB06 CONTACT 1T CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EJ	Z3926052	EXCESS TORQUE	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EJ	Z3936053	TQS-2SHPB06 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EC	Z7556053	420-2SHPA06 CONTACT 9 FAILS CLOSED	PERIODIC TEST	NONE	
22-1-CX	Z2226111	49-2HVRA11 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CX	Z2236113	42-2HVRA11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CX	Z2246111	3A-2HVRA11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CX	Z2256111	2HVRA11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CX 22-1-CY 22-1-BZ 22-1-CA 22-1-CT	Z2266111	LOSS OF 2EJS*PNL101A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DJ	Z2276113	2HVR*TIS23A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DH	Z2286113	42-2HVRA11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DJ	Z2296113	1-2HVRA11 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DJ 22-1-DH	Z2306112	1-2HVRA11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DJ	Z2316113	1-2HVRA11 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DH	Z2326113	1-2HVRA11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DH	Z2336113	1-2HVRA11 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CZ	Z2366111	49-2HVRB11 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CZ	Z2376113	42-2HVRB11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CZ	Z2386111	3A-2HVRB11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CZ	Z2396111	2HVRB11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CZ 22-1-CB 22-1-DA 22-1-CC 22-1-CV 22-1-CH	Z2406111	LOSS OF 2EJS*PNL302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DL	Z2416113	2HVR*TIS23B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DK	Z2426113	42-2HVRB11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DL	Z2436113	1-2HVRB11 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DL 22-1-DK	Z2446112	1-2HVRB11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DL	Z2456113	1-2HVRB11 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DK	Z2466113	1-2HVRB11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DK	Z2476113	1-2HVRB11 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CB	Z2506121	49-2HVRC11 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CB	Z2516123	42-2HVRC11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CB	Z2526121	3A-2HVRC11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CB	Z2536121	2HVRC11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DN	Z2546123	2HVR*TIS23C NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DN	Z2556123	42-2HVRC11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DN	Z2566123	1-2HVRC11 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DN 22-1-DM	Z2576122	1-2HVRC11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DN	Z2586123	1-2HVRC11 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DM	Z2596123	1-2HVRC11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DM	Z2606123	1-2HVRC11 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CY	Z2636121	49-2HVRD11 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CY	Z2646123	42-2HVRD11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CY	Z2656121	3A-2HVRD11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CY	Z2666121	2HVRD11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DQ	Z2676123	2HVR*TIS23D NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DP	Z2686123	42-2HVRD11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DQ	Z2696123	1-2HVRD11 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DQ 22-1-DP	Z2706122	1-2HVRD11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DQ	Z2716123	1-2HVRD11 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DP	Z2726123	1-2HVRD11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DP	Z2736123	1-2HVRD11 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DA	Z2766131	49-2HVRE11 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DA	Z2776133	42-2HVRE11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DA	Z2786131	3A-2HVRE11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DA	Z2796131	2HVR 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DS	Z2806133	2HVR*TIS23E NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DR	Z2816133	42-2HVRE11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DS	Z2826133	1-2HVRE11 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DS 22-1-DR	Z2836132	1-2HVRE11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DS	Z2846133	1-2HVRE11 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DR	Z2856133	1-2HVRE11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DR	Z2866133	1-2HVRE11 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CC	Z2896131	49-2HVRF11 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CC	Z2906133	42-2HVRF11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CC	Z2916131	3A-2HVRF11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-CC	Z2926131	2HVRF11 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DU	Z2936133	2HVR*TIS23F NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DT	Z2946133	42-2HVRF11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DU	Z2956133	1-2HVRF11 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DU 22-1-DT	Z2966132	1-2HVRF11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DU	Z2976133	1-2HVRF11 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DT	Z2986133	1-2HVRF11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-DT	Z2996133	1-2HVRF11 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ECCS ROOM COOLING	
22-1-BZ	Z3026141	49-1-2HVRA12 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BZ	Z3036141	49-2-2HVRA12 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BZ	Z3046143	42-1-2HVRA12 COIL FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BZ	Z3056143	42-2-2HVRA12 COIL FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BZ	Z3066141	3A-2HVRA12 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BZ	Z3076141	2HVRA12 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DW	Z3086143	2HVR*TIS22A NO CONTACT FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DV	Z3096143	42-1-2HVRA12 CONTACT 4 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DW	Z3106143	1-2HVRA12 CONTACT 10 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DW 22-1-DV	Z3116142	1-2HVRA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DW	Z3126143	1-2HVRA12 CONTACT 14 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DV	Z3136143	1-2HVRA12 CONTACT 18 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DV	Z3146143	1-2HVRA12 CONTACT 2 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DV	Z3156143	42-2-2HVRA12 CONTACT 4 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CA	Z3186141	49-1-2HVRB12 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CA	Z3196141	49-2-2HVRB12 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CA	Z3206143	42-1-2HVRB12 COIL FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CA	Z3216143	42-2-2HVRB12 COIL FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CA	Z3226141	3A-2HVRB12 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-CA	Z3236141	2HVRB12 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DY	Z3246143	2HVR*TIS22B NO CONTACT FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DX	Z3256143	42-1-2HVRB12 CONTACT 4 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DY	Z3266143	1-2HVRB12 CONTACT 10 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DY 22-1-DX	Z3276142	1-2HVRB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DY	Z3286143	1-2HVRB12 CONTACT 14 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DX	Z3296143	1-2HVRB12 CONTACT 18 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DX	Z3306143	1-2HVRB12 CONTACT 2 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-DX	Z3316143	42-1-2HVRB12 CONTACT 4 FAIL OPEN	PERIODIC TEST	LOSS OF DIV I ECCS ROOM COOLING	
22-1-BX	Z3456151	49-1-2HVRA13 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BX	Z3466151	49-2-2HVRA13 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BX	Z3476153	42-1-2HVRA13 COIL FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BX	Z3486153	42-2-2HVRA13 COIL FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BX	Z3496151	3A-2HVRA13 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BX	Z3506151	2HVRA13 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EA	Z3516153	2HVR*TIS24A NO CONTACT FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-DZ	Z3526153	42-1-2HVRA13 CONTACT 4 FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EA	Z3536153	1-2HVRA13 CONTACT 10 FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EA 22-1-DZ	Z3546152	1-2HVRA13 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EA	Z3556153	1-2HVRA13 CONTACT 14 FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DZ	Z3566153	1-2HVRA13 CONTACT 18 FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-DZ	Z3576153	1-2HVRA13 CONTACT 2 FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-DZ	Z3586153	42-2-2HVRA13 CONTACT 4 FAIL OPEN	PERIODIC TEST	2HVR*UC403A HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BY	Z3756151	49-1-2HVRB13 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BY	Z3766151	49-2-2HVRB13 NC CONTACT FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BY	Z3776153	42-1-2HVRB13 COIL FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BY	Z3786153	42-2-2HVRB13 COIL FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BY	Z3796151	3A-2HVRB13 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-BY	Z3806151	2HVRB13 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EF	Z3816153	2HVR*TIS24B NO CONTACT FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EE	Z3826153	42-1-2HVRB13 CONTACT 4 FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EF	Z3836153	1-2HVRB13 CONTACT 10 FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EF 22-1-EE	Z3846152	1-2HVRB13 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EF	Z3856153	1-2HVRB13 CONTACT 14 FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EE	Z3866153	1-2HVRB13 CONTACT 18 FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EE	Z3876153	1-2HVRB13 CONTACT 2 FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-EE	Z3886153	42-2-2HVRB13 CONTACT 4 FAIL OPEN	PERIODIC TEST	2HVR*UC403B HPCS PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CT	Z3966161	49-2HVRA14 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CT	Z3976163	42-2HVRA14 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CT	Z3986161	3A-2HVRA14 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CT	Z3996161	2HVRA14 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EL	Z4006163	2HVR*TIS25A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EK	Z4016163	42-2HVRA14 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EL	Z4026163	1-2HVRA14 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EL 22-1-EK	Z4036162	1-2HVRA14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EL	Z4046163	1-2HVRA14 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EK	Z4056163	1-2HVRA14 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EK	Z4066163	1-2HVRA14 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4096161	49-2HVRB14 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4106163	42-2HVRB14 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4116161	3A-2HVRB14 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4126161	2HVRB14 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4136163	2HVR*TIS25B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EM	Z4146163	42-2HVRB14 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4156163	1-2HVRB14 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU 22-1-EM	Z4166162	1-2HVRB14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CU	Z4176163	1-2HVRB14 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EM	Z4186163	1-2HVRB14 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-EM	Z4196163	1-2HVRB14 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV I GENERAL AREA COOLING	
22-1-CV	Z4226171	49-2HVRC14 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CV	Z4236173	42-2HVRC14 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CV	Z4246171	3A-2HVRC14 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CV	Z4256171	2HVRC14 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EP	Z4266173	2HVR*TIS25C NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EN	Z4276173	42-2HVRC14 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EP	Z4286173	1-2HVRC14 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EP 22-1-EN	Z4296172	1-2HVRC14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EP	Z4306173	1-2HVRC14 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EN	Z4316173	1-2HVRC14 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EN	Z4326173	1-2HVRC14 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CH	Z4356171	49-2HVRD14 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CH	Z4366173	42-2HVRD14 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CH	Z4376171	3A-2HVRD14 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CH	Z4386171	2HVRD14 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-ER	Z4396173	2HVR*TIS25D NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EQ	Z4406173	42-2HVRD14 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-ER	Z4416173	1-2HVRD14 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-ER 22-1-EQ	Z4426172	1-2HVRD14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-ER	Z4436173	1-2HVRD14 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EQ	Z4446173	1-2HVRD14 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-EQ	Z4456173	1-2HVRD14 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 175FT DIV II GENERAL AREA COOLING	
22-1-CD	Z4486181	49-2HVRA15 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-CD	Z4496183	42-2HVRA15 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-CD	Z4506181	3A-2HVRA15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-CD	Z4516181	2HVRA15 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-CD 22-1-DE 22-1-DF 22-1-DG	Z4526181	LOSS OF 2EJS*PNL103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-ET	Z4536183	2HVR*TIS116 NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-ES	Z4546183	42-2HVRA15 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-ET	Z4556183	1-2HVRA15 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-ET 22-1-ES	Z4566182	1-2HVRA15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-ET	Z4576183	1-2HVRA15 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-ES	Z4586183	1-2HVRA15 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-ES	Z4596183	1-2HVRA15 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC405 RHR HT EXCHANGER RH A UNIT COOLER INOPERATIVE	
22-1-CE	Z4626181	49-2HVRA16 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-CE	Z4636183	42-2HVRA16 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-CE	Z4646181	3A-2HVRA16 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-CE	Z4656181	2HVRA16 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-CE 22-1-DC 22-1-DD	Z4666181	LOSS OF 2EJS*PNL303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-EV	Z4676183	2HVR*TIS115 NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-EU	Z4686183	42-2HVRA16 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-EV	Z4696183	1-2HVRA16 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-EV 22-1-EU	Z4706182	1-2HVRA16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EV	Z4716183	1-2HVRA16 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-EU	Z4726183	1-2HVRA16 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-EU	Z4736183	1-2HVRA16 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC406 RHR HT EXCHANGER RH B UNIT COOLER INOPERATIVE	
22-1-DE	Z4766191	49-2HVRA17 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DE	Z4776193	42-2HVRA17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DE	Z4786191	3A-2HVRA17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DE	Z4796191	2HVRA17 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EX	Z4806193	2HVR*TIS26A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EH	Z4816193	42-2HVRA17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EX	Z4826193	1-2HVRA17 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EX 22-1-EH	Z4836192	1-2HVRA17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EX	Z4846193	1-2HVRA17 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EH	Z4856193	1-2HVRA17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-EW	Z4866193	1-2HVRA17 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DF	Z4896191	49-2HVRB17 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DF	Z4906193	42-2HVRB17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DF	Z4916191	3A-2HVRB17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DF	Z4926191	2HVRB17 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EZ	Z4936193	2HVR*TIS26B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EY	Z4946193	42-2HVRB17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EZ	Z4956193	1-2HVRB17 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EZ 22-1-EY	Z4966192	1-2HVRB17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EZ	Z4986193	1-2HVRB17 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EY	Z4996193	1-2HVRB17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-EY	Z5006193	1-2HVRB17 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DG	Z5036201	49-2HVRC17 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DG	Z5046203	42-2HVRC17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-DG	Z5056201	3A-2HVRC17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DG	Z5066201	2HVRC17 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FB	Z5076203	2HVR*TIS26C NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FA	Z5086203	42-2HVRC17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FB	Z5096203	1-2HVRC17 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FB 22-1-FA	Z5106202	1-2HVRC17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FB	Z5116203	1-2HVRC17 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FA	Z5126203	1-2HVRC17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-FA	Z5136203	1-2HVRC17 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV I GENERAL AREA COOLING	
22-1-DC	Z5166201	49-2HVRD17 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DC	Z5176203	42-2HVRD17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DC	Z5186201	3A-2HVRD17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DC	Z5196201	2HVRD17 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FD	Z5206203	2HVR*TIS26D NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-FC	Z5216203	42-2HVRD17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FD	Z5226203	1-2HVRD17 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FD 22-1-FC	Z5236202	1-2HVRD17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FD	Z5246203	1-2HVRD17 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FC	Z5256203	1-2HVRD17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FC	Z5266203	1-2HVRD17 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DD	Z5296211	49-2HVRE17 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DD	Z5306213	42-2HVRE17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DD	Z5316211	3A-2HVRE17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-DD	Z5326211	2HVRE17 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FF	Z5336213	2HVR*TIS26E NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FE	Z5346213	42-2HVRE17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FF	Z5356213	1-2HVRE17 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FF 22-1-FE	Z5366212	1-2HVRE17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-FF	Z5376213	1-2HVRE17 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FE	Z5386213	1-2HVRE17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-FE	Z5396213	1-2HVRE17 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 215FT DIV II GENERAL AREA COOLING	
22-1-CK	Z5426221	49-2HVRA18 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-CK	Z5436223	42-2HVRA18 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-CK	Z5446221	3A-2HVRA18 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-CK 22-1	Z5456221	2HVRA18 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-CL 22-1-BP 22-1-CQ 22-1-CP	Z5466221	LOSS OF 2EJS*PNL104A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FH	Z5476223	2HVR*TIS19A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-FG	Z5486223	42-2HVRA18 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-FH	Z5496223	1-2HVRA18 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-FH 22-1-FG	Z5506222	1-2HVRA18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	
22-1-FH	Z5526223	1-2HVRA18 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL HCC AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-FG	Z5536223	1-2HVRA18 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FG	Z5546223	1-2HVRA18 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-CL	Z5576221	49-2HVRB18 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-CL	Z5586223	42-2HVRB18 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-CL	Z5596221	3A-2HVRB18 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-CL	Z5606221	2HVRB18 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FK	Z5616223	2HVR*TIS19B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FJ	Z5626223	42-2HVRB18 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FK	Z5636223	1-2HVRB18 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FK 22-1-FJ	Z5646222	1-2HVRB18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FK	Z5656223	1-2HVRB18 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FJ	Z5666223	1-2HVRB18 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	
22-1-FJ	Z5676223	1-2HVRB18 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL MCC AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CH	Z5706231	49-2HVRA19 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-CH	Z5716233	42-2HVRA19 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-CH	Z5726231	3A-2HVRA19 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-CH	Z5736231	2HVRA19 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-CH 22-1-CN 22-1-CR 22-1-CS 22-1-BV 22-1-BH 22-1-BU	Z5746231	LOSS OF 2EJS*PNL304B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FH	Z5756233	2HVR*TIS16A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-FL	Z5766233	42-2HVRA19 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-FH	Z5776233	1-2HVRA19 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-FH 22-1-FL	Z5786232	1-2HVRA19 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-FH	Z5796233	1-2HVRA19 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-FL	Z5806233	1-2HVRA19 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	
22-1-FL	Z5816233	1-2HVRA19 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL HCC AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CN	Z5846231	49-2HVRB19 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-CN	Z5856233	42-2HVRB19 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-CN	Z5866231	3A-2HVRB19 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-CN	Z5876231	2HVRB19 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FP	Z5886233	2HVR*TIS16B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FN	Z5896233	42-2HVRB19 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FP	Z5906233	1-2HVRB19 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FP 22-1-FN	Z5916232	1-2HVRB19 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FP	Z5926233	1-2HVRB19 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FN	Z5936233	1-2HVRB19 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-FN	Z5946233	1-2HVRB19 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL MCC AREA COOLING	
22-1-BP	Z5976241	49-2HVRA20 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-BP	Z5986243	42-2HVRA20 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-BP	Z5996241	3A-2HVRA20 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BP	Z6006241	2HVRA20 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FR	Z6016243	2HVR*TIS27A NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FQ	Z6026243	42-2HVRA20 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FR	Z6036243	1-2HVRA20 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FR 22-1-FQ	Z6046242	1-2HVRA20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FR	Z6056243	1-2HVRA20 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FQ	Z6066243	1-2HVRA20 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-FQ	Z6076243	1-2HVRA20 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC410A EL 240FT DIV I GEN AREA UNIT CLR INOPERATIVE	
22-1-CR	Z6106241	49-2HVRB20 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CR	Z6116243	42-2HVRB20 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CR	Z6126241	3A-2HVRB20 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CR	Z6136241	2HVRB20 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FT	Z6146243	2HVR*TIS27B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FS	Z6156243	42-2HVRB20 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-FT	Z6166243	1-2HVRB20 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FT 22-1-FS	Z6176242	1-2HVRB20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FT	Z6186243	1-2HVRB20 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FS	Z6196243	1-2HVRB20 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FS	Z6206243	1-2HVRB20 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CS	Z6236251	49-2HVRC20 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CS	Z6246253	42-2HVRC20 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CS	Z6256251	3A-2HVRC20 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-CS	Z6266251	2HVRC20 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FV	Z6276253	2HVR*TIS27C NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FU	Z6286253	42-2HVRC20 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FV	Z6296253	1-2HVRC20 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FV 22-1-FU	Z6306252	1-2HVRC20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FV	Z6316253	1-2HVRC20 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-FU	Z6326253	1-2HVRC20 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-FU	Z6336253	1-2HVRC20 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 240FT DIV II GENERAL AREA COOLING	
22-1-BN	Z6626251	49-2HVRC86 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BN	Z6636253	42-2HVRC86 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BN	Z6646251	3A-2HVRC86 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BN	Z6656251	2HVRC86 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GB	Z6666253	2HVR*TIS28C NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GA	Z6676253	42-2HVRC86 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GB	Z6686253	1-2HVRC86 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GB 22-1-GA	Z6696252	1-2HVRC86 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GB	Z6706253	1-2HVRC86 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GA	Z6716253	1-2HVRC86 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GA	Z6726253	1-2HVRC86 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CQ	Z6366261	49-2HVRA86 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-CQ	Z6376263	42-2HVRA86 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-CQ	Z6386261	3A-2HVRA86 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-CQ	Z6396261	2HVRA86 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FX	Z6406263	2HVR*TIS28A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FW	Z6416263	42-2HVRA88 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FX	Z6426263	1-2HVRA86 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FX 22-1-FW	Z6436262	1-2HVRA86 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FX	Z6446263	1-2HVRA86 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FW	Z6456263	1-2HVRA86 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-FW	Z6466263	1-2HVRA86 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-BV	Z6496261	49-2HVRB86 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BV	Z6506263	42-2HVRB86 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BV	Z6516261	3A-2HVRB86 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-BV	Z6526261	2HVRB86 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FZ	Z6536263	2HVR*TIS28B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FY	Z6546263	42-2HVRB86 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FZ	Z6556263	1-2HVRB86 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FZ 22-1-FY	Z6566262	1-2HVRB86 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FZ	Z6576263	1-2HVRB86 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FY	Z6586263	1-2HVRB86 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-FY	Z6596263	1-2HVRB86 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-CP	Z6756271	49-2HVRA87 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-CP	Z6766273	42-2HVRA87 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-CP	Z6776271	3A-2HVRA87 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-CP	Z6786271	2HVRA87 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-GD	Z6796273	2HVR*TIS30A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-GC	Z6806273	42-2HVRA87 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-GD	Z6816273	1-2HVRA87 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-GD 22-1-GC	Z6826272	1-2HVRA87 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-GD	Z6836273	1-2HVRA87 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-GC	Z6846273	1-2HVRA87 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-GC	Z6856273	1-2HVRA87 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIV I GENERAL AREA COOLING	
22-1-BU	Z6886271	49-2HVRB87 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BU	Z6896273	42-2HVRB87 COIL FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BU	Z6906271	3A-2HVRB87 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-BU	Z6916271	2HVRB87 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GF	Z6926273	2HVR*TIS30B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GE	Z6936273	42-2HVRB87 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GF	Z6946273	1-2HVRB87 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GF 22-1-GE	Z6956272	1-2HVRB87 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GF	Z6966273	1-2HVRB87 CONTACT 14 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-GE	Z6976273	1-2HVRB87 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-GE	Z6986273	1-2HVRB87 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF ELEVATION 261FT DIVII GENERAL AREA COOLING	
22-1-CF	Z7016291	49-2HVRX01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CF	Z7026293	42-2HVRX01 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CF	Z7036291	3A-2HVRX01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CF	Z7046291	2HVRX01 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CF	Z7056291	LOSS OF 2EJS*PNL(LTR) (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GH	Z7066293	2HVR*TIS35A NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GG	Z7076293	42-2HVRX01 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GH	Z7086293	1-2HVRX01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GH 22-1-GG	Z7096292	1-2HVRX01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GH	Z7106293	1-2HVRX01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GG	Z7116293	1-2HVRX01 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-GG	Z7126293	1-2HVRX01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC414A RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CG	Z7156291	49-2HVRY01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CG	Z7166293	42-2HVRY01 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CG	Z7176291	3A-2HVRY01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CG	Z7186291	2HVRY01 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-CG	Z7196291	LOSS OF 2EJS*PNL(LTR) (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GK	Z7206293	2HVR*TIS35B NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GJ	Z7216293	42-2HVRY01 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GK	Z7226293	1-2HVRY01 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GK 22-1-GJ	Z7236292	1-2HVRY01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GK	Z7246293	1-2HVRY01 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GJ	Z7256293	1-2HVRY01 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	
22-1-GJ	Z7266293	1-2HVRY01 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC414B RCIC PUMP ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CH	Z7296301	49-2HVRX02 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-CH	Z7306303	42-2HVRX02 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-CH	Z7316301	3A-2HVRX02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-CH	Z7326301	2HVRX02 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-CH	Z7336301	LOSS OF 2EJS*PNL(LTR) (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-GH	Z7346303	2HVR*TIS38A NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-GL	Z7356303	42-2HVRX02 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-GH	Z7366303	1-2HVRX02 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-GH 22-1-GL	Z7376302	1-2HVRX02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-GH	Z7386303	1-2HVRX02 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-GL	Z7396303	1-2HVRX02 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-SL	Z7406303	1-2HVRX02 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC415A SGTS ROOM A UNIT COOLER INOPERATIVE	
22-1-CJ	Z7436301	49-2HVRY02 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-CJ	Z7446303	42-2HVRY02 COIL FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-CJ	Z7456301	3A-2HVRY02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-CJ	Z7466301	2HVRY02 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-CJ	Z7476301	LOSS OF 2EJS*PNL(LTR) (YELLON)	ANNUNCIATED IN CONTROL ROOM	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GP	Z7486303	2HVR*TIS38B NO CONTACT FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GN	Z7496303	42-2HVRY02 CONTACT 4 FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GP	Z7506303	1-2HVRY02 CONTACT 10 FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GP 22-1-GN	Z7516302	1-2HVRY02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GP	Z7526303	1-2HVRY02 CONTACT 14 FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GN	Z7536303	1-2HVRY02 CONTACT 18 FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-GN	Z7546303	1-2HVRY02 CONTACT 2 FAILS OPEN	PERIODIC TEST	2HVR*UC415B SGTS ROOM B UNIT COOLER INOPERATIVE	
22-1-E	Z1487013	2HVR*MOD6A MOTOR WINDING FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-J	Z1497013	1A-2HVRA88 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-E	Z1507013	F1-2HVRA88 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-E 22-1-H	Z1517013	LOSS OF 2SCH*PNL101A CKT 21 (GREEN)	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-J	Z1527012	1A-2HVRA88 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-J	Z1537013	1A-2HVRA88 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-J	Z1547013	3-3-2HVRA03 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z1597013	2HVR*MOD7A MOTOR WINDING FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z1607013	1B-2HVRA88 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z1617013	F2-2HVRA88 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z1627012	1B-2HVRA88 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-H	Z1637013	1B-2HVRA88 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-K	Z1647013	3-1-2HVRA03 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-K	Z1657013	3-3-2HVRA03 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-G	Z2017023	2HVR*MOD6B MOTOR WINDING FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-H	Z2027023	1A-2HVRB88 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-G	Z2037023	F1-2HVRB88 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-G 22-1-L	Z2047023	LOSS OF 2SCN*PNL301B CKT 20(YELLOW)	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-H	Z2057022	1A-2HVRB88 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-H	Z2067023	1A-2HVRB88 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-H	Z2077023	3-3-2HVRB03 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-H	Z2087023	3-2-2HVRB03 CONTACT 6 FAIL OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-L	Z2127023	2HVR*MCD7B MOTOR WINDING FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-L	Z2137023	1B-2HVR888 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-L	Z2147023	F2-2HVRB88 FUSE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-L	Z2157022	1B-2HVRB88 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-L	Z2167023	1B-2HVRB88 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-N	Z2177023	3-1-2HVRB03 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-N	Z2187023	3-3-2HVRB03 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-P	Z0067063	2HVR*SOV1A COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AL	Z0087063	3-1-2HVRA89 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AL	Z0117063	1A-2HVRA89 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AL	Z0127062	1A-2HVRA89 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AL	Z0137063	1A-2HVRA89 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-P	Z0477063	2HVR*SOV1B COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AS	Z0497063	3-1-2HVRB89 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AS	Z0527063	1A-2HVRB89 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AS	Z0537062	1A-2HVRB89 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AS	Z0547063	1A-2HVRB89 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-Q	Z0877063	2HVR*SOV9A COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-S	Z0897063	3-2-2HVRA89 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-S	Z0907063	1B-2HVRA89 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-S	Z0917062	1B-2HVRA89 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-S	Z0927063	1B-2HVRA89 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-Q	Z0947063	2HVR*SOV9B COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-T	Z0967063	3-2-2HVRB89 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-T	Z0977063	1B-2HVRB89 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-T	Z0987062	1B-2HVRB89 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-T	Z0997063	1B-2HVRB89 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-R	Z1017063	2HVR*SOV10A COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-U	Z1037063	3-3-2HVRA89 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-U	Z1047063	1C-2HVRA89 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-U	Z1057062	1C-2HVRA89 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-U	Z1067063	1C-2HVRA89 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-R	Z1087063	2HVR*SOV10B COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-V	Z1097063	3-1-2HVRB90 CONTACT R3 FAILS CLOSED	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-V	Z1107063	3-3-2HVRB89 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-V	Z1117063	1C-2HVRB89 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-V	Z1127062	1C-2HVRB89 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-V	Z1137063	1C-2HVRB89 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AL	Z0077103	3-2-2HVRA90 CONTACT R1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD1A REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AL	Z0097103	F1-2HVRA90 FUSE FAILS OPEN	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AL	Z0107103	3-2-2HVRA90 COIL FAILS OPEN	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AL	Z0157103	LOSS OF 120VAC 2SCH*PNL101A CKT #20	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AH	Z0167103	3A-10-2ISCA02 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AH	Z0187103	2HVR*FS36A NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AQ	Z0207103	33X1-2HVRA90 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AQ	Z0267103	33X1-2HVRA90 OPERATE COIL EN BY A SHORT	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AQ	Z0277103	33X1-2HVRA90 RESET COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0287102	1-2HVRA90 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0297103	1-2HVRA90 CONTACT 2B FAIL CLOSED	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AM	Z0317103	2HVR*FS37A NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0377103	33X2-2HVRA90 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0387103	33X2-2HVRA90 OPERATE COIL EN BY A SHORT	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0397103	33X2-2HVRA90 RESET COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0407103	33X2-2HVRA90 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0417103	33-2HVRA89 2HVR*AOD9A CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AR	Z0427103	2HVR*FS37A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AQ	Z0437103	33X1-2HVRA90 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AQ	Z0447103	33-2HVRA89 2HVR*AOD10A CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AQ	Z0457103	2HVR*FS36A NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AS	Z0487103	3-1-2HVRB90 CONTACT R1 FAILS CLOSED	PERIODIC TEST	2HVR*AOD1B REACTOR BUILDING INLET ISOLATION DAMPER OPEN	
22-1-AS	Z0507103	F1-2HVRB90 FUSE FAILS OPEN	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AS	Z0517103	3-1-2HVRB90 COIL FAILS OPEN	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AS	Z0557103	LOSS OF 120VAC 2SCH*PNL301B CKT #19	PERIODIC TEST	2HVR*AOD10B ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-AT	Z0567103	3B-10-2ISCB02 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AT	Z0587103	2HVR*FS36B NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AH	Z0607103	33X1-2HVRB90 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AH	Z0667103	33X1-2HVRB90 OPERATE COIL EN BY A SHORT	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AH	Z0677103	33X1-2HVRB90 RESET COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0687102	1-2HVRB90 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0697103	1-2HVRB90 CONTACT 2B FAIL CLOSED	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AT	Z0717103	2HVR*FS37B NC CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-AX	Z0777103	33X2-2HVRB90 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0787103	33X2-2HVRB90 OPERATE COIL EN BY A SHORT	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0797103	33X2-2HVRB90 RESET COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0807103	33X2-2HVRB90 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0817103	33-2HVRB89 2HVR*AOD8 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AX	Z0827103	2HVR*FS37B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AW	Z0837103	33X1-2HVRB90 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AW	Z0847103	33-2HVRB89 2HVR*AOD10B CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AW	Z0857103	2HVR*FS36B NO CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-S	Z0887103	3-2-2HVRA90 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVR*AOD9A BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-T	Z0957103	3-1-2HVRB90 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVR*AOD9B BELOW REFUELING FLOOR ISOLATION DAMPER OPEN	
22-1-U	Z1027103	3-2-2HVRA90 CONTACT R3 FAILS CLOSED	PERIODIC TEST	2HVR*AOD10A ABOVE REFUELING FLOOR ISOLATION DAMPER OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-1-W	Z1207103	2HVR*TIS31A NC CONTACT FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-W	Z1217103	52-2HVRA03 CONTACT 26 FAILS CLOSE	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-W	Z1227103	2SHP*AOV97A SOLENOID ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-Y	Z1347103	62-2HVRA90 COIL FAIL OPEN	PERIODIC TEST	LOSS OF DIV I REACTOR BUILDING RECIRCULATION	
22-1-AA	Z1737103	2HVR*TIS31B NC CONTACT FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AA	Z1747103	52-2HVRB03 CONTACT 26 FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AA	Z1757103	2SHP*AOV97B SOLENOID ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	
22-1-AC	Z1877103	62-2HVRB90 COIL FAIL OPEN	PERIODIC TEST	LOSS OF DIV II REACTOR BUILDING RECIRCULATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-D	A001HVP2	2HVP*UC 1A LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-F	A002HVP6	2HVP*DMP 19A DSL GEN ROOM INL TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-F	A003HVP6	2HVP*DMP 19C DSL GEN ROOM INL TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-E	A004HVP6	2HVP*DMP 17A DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-E	A005HVP6	2HVP*DMP 15A DSL GEN ROOM OUT TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-E	A006HVP6	2HVP*DMP 19A DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-E	A007HVP6	2HVP*DMP 15B DSL GEN ROOM OUT TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-E	A008HVP6	2HVP*DMP 19C DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-H	A009HVP6	2HVP*DMP 15A DSL GEN ROOM OUT TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-G	A010HVP6	2HVP*DMP 15B DSL GEN ROOM OUT TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-H	A011HVP3	2HVP*FN 1A DSL GEN RM VENT EXHAUST FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-H	A038HVP3	2HVP*MOD 1A DSL GEN RM EXH DMPR FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-H	A039HVP3	2HVP*MOD 6A DSL GEN RM RECIRC DMPR FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-G	A047HVP3	2HVP*FN 1C DSL GEN ROOM VENT EXHAUST FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-G	A065HVP3	2HVP*MOD 1C DSL GEN RM EXH DMPR FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-J	A066HVP3	2HVF*MOD 6C DSL GEN RM RECIRC DMPR FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-D	A074HVP3	2HVP*UC 1A DSL GEN CONTROL RM CLR FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-F	A089HVP3	2-HVP*AOD 4A DSL GEN ROOM INLET AIR DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-F	A096HVP3	2HVP*AOD 4C DSL GEN ROOM INLET AIR DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-A	A103HVP6	2HVP*DMP 13 DSL GEN CONTROL RM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIESEL GENERATOR BUILDING VENTILATION	SINGLE FAILURE LOSS OF ALL DIESEL GENERATOR CONTROL ROOMS
22-7-B	A201HVP2	2HVP*UC 1B LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-L	A202HVP6	2HVP*DMP 19B DSL GEN ROOM INL TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-L	A203HVP6	2HVP*DMP 19D DSL GEN ROOM INL TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-K	A204HVP6	2HVP*DMP 17B DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-K	A205HVP6	2HVP*DMP 15C DSL GEN ROOM OUT TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-K	A206HVP6	2HVP*DMP 19B DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-K	A207HVP6	2HVP*DMP 15D DSL GEN ROOM OUT TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-K	A208HVP6	2HVP*DMP 19D DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-N	A209HVP6	2HVP*DMP 15C DSL GEN ROOM OUT TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-M	A210HVP6	2HVP*DMP 15D DSL GEN ROOM OUT TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-N	A211HVP3	2HVP*FN 1A DSL GEN RM VENT EXHAUST FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-N	A238HVP3	2HVP*MOD 1B DSL GEN RM EXH DMPR FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-N	A239HVP3	2HVP*MOD 6B DSL GEN RM RECIRC DMPR FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-M	A247HVP3	2HVP*FN 1D DSL GEN ROOM VENT EXHAUST FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-M	A265HVP3	2HVP*MOD 1D DSL GEN RM EXH DMPR FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-P	A266HVP3	2HVP*MOD 6D DSL GEN RM RECIRC DMPR FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-B	A274HVP3	2HVP*UC 1B DSL GEN CONTROL RM CLR FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-L	A289HVP3	2-HVP*AOD 4B DSL GEN ROOM INLET AIR DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-L	A296HVP3	2HVP*AOD 4D DSL GEN ROOM INLET AIR DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-C	A401HVP2	2HVP*UC 2 LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-R	A402HVP6	2HVP*DMP 20A DSL GEN ROOM INL TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-R	A403HVP6	2HVP*DMP 20B DSL GEN ROOM INL TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

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DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-Q	A404HVP6	2HVP*DMP 18 DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-Q	A405HVP6	2HVP*DMP 16A DSL GEN ROOM OUT TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-Q	A406HVP6	2HVP*DMP 20A DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-Q	A407HVP6	2HVP*DMP 16B DSL GEN ROOM OUT TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-Q	A408HVP6	2HVP*DMP 20B DSL GEN ROOM INL TORNADO DMPR FAILS OPEN	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-T	A409HVP6	2HVP*DMP 16A DSL GEN ROOM OUT TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-S	A410HVP6	2HVP*DMP 16B DSL GEN ROOM OUT TORNADO DMPR FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-T	A411HVP3	2HVP*FN 2A DSL GEN RM VENT EXHAUST FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-T	A438HVP3	2HVP*MOD 2A DSL GEN RM EXH DMPR FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-T	A439HVP3	2HVP*MOD 7A DSL GEN RM RECIRC DMPR FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-S	A447HVP3	2HVP*FN 2B DSL GEN ROOM VENT EXHAUST FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-S	A465HVP3	2HVP*MOD 2B DSL GEN RM EXH DMPR FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-U	A466HVP3	2HVP*MOD 7B DSL GEN RM RECIRC DMPR FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-C	A474HVP3	2HVP*UC 2 DSL GEN CONTROL RM CLR FAN MECH FAILS INOPER	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-R	A489HVP3	2-HVP*AOD 5A DSL GEN ROOM INLET AIR DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-R	A496HVP3	2HVP*AOD 5B DSL GEN ROOM INLET AIR DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-H	A0400013	2HVP*E I 1A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-G	A0670013	2HVP*E I 1C FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-N	A2400013	2HVP*E I 1B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-M	A2670013	2HVP*E I 1D FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-T	A4400023	2HVP*E I 2A FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-S	A4670023	2HVP*E I 2B FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-H	A0410063	2HVP*E I 6A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-J	A0680063	2HVP*E I 6C FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-N	A2410063	2HVP*E I 6B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-P	A2680063	2HVP*E I 6D FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-T	A4410073	2HVP*E I 7A FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-U	A4680073	2HVP*E I 7B FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AP	A0420113	2HVP*TYW 11A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AP 22-7-J	A0430113	2HVP*HC 11A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AP	A0440113	2HVP*TC 11A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AP	A0450113	2HVP*TE 11A FAILS LOW	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AP	A0460113	2HVP*TT 11A FAILS LOW	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-J	A0690113	2HVP*TYV 11A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-BA	A2420113	2HVP*TYW 11B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BA 22-7-P	A2430113	2HVP*HC 11B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BA	A2440113	2HVP*TC 11B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BA	A2450113	2HVP*TE 11B FAILS LOW	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BA	A2460113	2HVP*TT 11B FAILS LOW	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-P	A2690113	2HVP*TYV 11B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-BL	A4300153	3-2EGSC01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BL	A4310151	LOSS OF 125 VDC BUS C (PURPLE)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BL	A4320153	K18-2EGSC01 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BL	A4340151	2EGSC01 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BL	A4360151	2EGSC01 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BM	A4421033	2HVP*TYW 103 FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BM 22-7-U	A4431033	2HVP*HC 103 FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BM	A4441033	2HVP*TC 103 FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BM	A4451033	2HVP*TE 103 FAILS LOW	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BM	A4461033	2HVP*TT 103 FAILS LOW	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-U	A4691033	2HVP*TYV 103 FAILS HIGH	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AN	A0305213	DR-2ENSX04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AN	A0315211	LOSS OF 125 VDC BUS A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AN	A0325213	52CP 2CES*IPNL 407 CONTACT T4 FAILS OPEN	PERIODIC TEST	NONE	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AN	A0335213	52CR 2CES*IPNL 407 CONTACT T4 FAILS OPEN	PERIODIC TEST	NONE	
22-7-AN	A0345211	2ENSX04 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AN	A0365211	2ENSX04 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AZ	A2305223	DR-2ENSY04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AZ	A2315221	LOSS OF 125 VDC BUS B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AZ	A2325223	52CP 2CES*IPNL 408 CONTACT T4 FAILS OPEN	PERIODIC TEST	NONE	
22-7-AZ	A2335223	52CR 2CES*IPNL 408 CONTACT T4 FAILS OPEN	PERIODIC TEST	NONE	
22-7-AZ	A2345221	2ENSY04 POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AZ	A2365221	2ENSY04 NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ	A0126013	42-2HVPA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ 22-7-V	A0136011	LOSS OF 2EHS*MCC 103C (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ	A0146011	2HVPA01 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AJ	A0156013	80-2HVPA01 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AK	A0166011	49-2HVPA01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AK	A0176011	49-2HVPA01 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ	A0186011	2HVPA01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ	A0206013	80-2HVPA01 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ	A0216012	80-2HVPA01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AJ	A0226013	2HVP*FS 8A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AM	A0236013	42-2HVPA01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AM	A0246013	1-2HVPA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AM 22-7-AL	A0256013	1-2HVPA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AM	A0266013	1-2HVPA01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AN	A0276013	DR-2ENSX04 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AL	A0286013	1-2HVPA01 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AL	A0296013	1-2HVPA01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AS	A0946013	42X-2HVPA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AS	A0956013	42-2HVPA01 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2126013	42-2HVPB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV 22-7-Z	A2136011	LOSS OF 2EHS*MCC 303D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2146011	2HVPB01 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2156013	80-2HVPB01 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AW	A2166011	49-2HVPB01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AW	A2176011	49-2HVPB01 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2186011	2HVPB01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2206013	80-2HVPB01 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2216012	80-2HVPB01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AV	A2226013	2HVP*FS 8B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AY	A2236013	42-2HVPB01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AY	A2246013	1-2HVPB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AY 22-7-AX	A2256013	1-2HVPB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AY	A2266013	1-2HVPB01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AZ	A2276013	DR-2ENSY04 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AX	A2286013	1-2HVPB01 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AX	A2296013	1-2HVPB01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BD	A2946013	42X-2HVPB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BD	A2956013	42-2HVPB01 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-V	A0486023	42-2HVPC01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-V	A0496021	2HVPC01 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-V	A0506023	80-2HVPC01 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-W	A0516021	49-2HVPC01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-W	A0526021	49-2HVPC01 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-V	A0536021	2HVPC01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-V	A0556023	80-2HVPC01 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-V	A0566022	80-2HVPC01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-V	A0576023	2HVP*FS 8C FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-Y	A0586023	42-2HVPC01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-Y	A0596023	1-2HVPC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-Y 22-7-X	A0606023	1-2HVPC01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-Y	A0616023	1-2HVPC01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-X	A0626023	DR-2ENSX04 CONTACT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-X	A0636023	1-2HVPC01 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-X	A0646023	1-2HVPC01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AT	A1016023	42X-2HVPC01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AT	A1026023	42-2HVPC01 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-Z	A2486023	42-2HVPD01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-Z	A2496021	2HVPD01 575 115V XFM FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-Z	A2506023	80-2HVPD01 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AA	A2516021	49-2HVPD01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AA	A2526021	49-2HVPD01 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-Z	A2536021	2HVPD01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-Z	A2556023	80-2HVPD01 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-Z	A2566022	80-2HVPD01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-Z	A2576023	2HVP*FS 8D FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AC	A2586023	42-2HVPD01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AC	A2596023	1-2HVPD01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AC 22-7-AB	A2606023	1-2HVPD01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AC	A2616023	1-2HVPD01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AB	A2626023	DR-2ENSY04 CONTACT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AB	A2636023	1-2HVPD01 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AB	A2646023	1-2HVPD01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BE	A3016023	42X-2HVPD01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BE	A3026023	42-2HVPD01 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4126033	42-2HVPA02 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG 22-7-AD	A4136031	LOSS OF 2EHS*[illegible] 01 (PURPLE)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4146031	2HVPA02 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4156033	80-2HVPA02 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BH	A4166031	49-2HVPA02 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BH	A4176031	49-2HVPA02 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4186031	2HVPA02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4206033	80-2HVPA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4216032	80-2HVPA02 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BG	A4226033	2HVP*FS 9A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BK	A4236033	42-2HVPA02 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-BK	A4246033	1-2HVPA02 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BK 22-7-BJ	A4256033	1-2HVPA02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BK	A4266033	1-2HVPA02 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BL	A4276033	3-2EGSC01 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BJ	A4286033	1-2HVPA02 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BJ	A4296033	1-2HVPA02 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AD	A4486033	42-2HVPB02 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AD	A4496031	2HVPB02 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AD	A4506033	80-2HVPB02 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AE	A4516031	49-2HVPB02 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AE	A4526031	49-2HVPB02 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AD	A4536031	2HVPB02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AD	A4556033	80-2HVPB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AD	A4566032	80-2HVFB02 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AD	A4576033	2HVP*FS 9B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AG	A4586033	42-2HVPB02 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AG	A4596033	1-2HVPB02 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AG 22-7-AF	A4606033	1-2HVPB02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AG	A4616033	1-2HVPB02 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AF	A4626033	3-2EGSC01 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AF	A4636033	1-2HVPB02 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-AF	A4646033	1-2HVPB02 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BQ	A4946033	42X-2HVPA02 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BQ	A4956033	42-2HVPA02 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BR	A5016033	42X-2HVPB02 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BR	A5026033	42-2HVPB02 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-AR	A0756063	2HVP*TIS 13A NO CONTACT FAILS OPEN ON HIGH CONTROL RM TEMP	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AH	A0766063	42-2HVPA10 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AR	A0776063	1-2HVPA10 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AR 22-7-AQ	A0786063	1-2HVPA10 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AR	A0796063	1-2HVPA10 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AH	A0806061	LOSS OF 2EJS*PNL (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AH	A0816061	2HVPA10 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AH	A0826061	2HVPA10 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AH	A0846061	49-2HVPA10 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AH	A0856061	49-2HVPA10 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AQ	A0866063	42-2HVPA10 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AQ	A0876063	1-2HVPA10 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AQ	A0886063	1-2HVPA10 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-BC	A2756063	2HVP*TIS 13B NO CONTACT FAILS OPEN ON HIGH CONTROL RM TEMP	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AU	A2766063	42-2HVPB10 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BC	A2776063	1-2HVPB10 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BC 22-7-BB	A2786063	1-2HVPB10 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BC	A2796063	1-2HVPB10 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AU	A2806061	LOSS OF 2EJS*PNL (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AU	A2816061	2HVPB10 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AU	A2826061	2HVPB10 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AU	A2846061	49-2HVPB10 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-AU	A2856061	49-2HVPB10 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BB	A2866063	42-2HVPB10 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BB	A2876063	1-2HVPB10 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BB	A2886063	1-2HVPB10 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-BP	A4756063	2HVP*TIS 120 NO CONTACT FAILS OPEN ON HIGH CONTROL RM TEMP	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BF	A4766063	42-2HVPC10 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BP	A4776063	1-2HVPC10 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BP 22-7-BN	A4786063	1-2HVPC10 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BP	A4796063	1-2HVPC10 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BF	A4806061	LOSS OF 2EJS*PNL (PURPLE)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BF	A4816061	2HVPC10 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BF	A4826061	2HVPC10 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BF	A4846061	49-2HVPC10 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BF	A4856061	49-2HVPC10 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BN	A4866063	42-2HVPC10 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BN	A4876063	1-2HVPC10 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BN	A4886063	1-2HVPC10 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-F	A0907012	2-HVP*SOV 4A COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AS	A0917013	42X-2HVPA01 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AS	A0927013	1A-2HVPA04 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AS	A0937013	1A-2HVPA3 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-F	A0977012	2HVP*SOV 4C COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AT	A0987013	42X-2HVPC01 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AT	A0997013	1B-2HVPA04 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-AT	A1007013	1B-2HVPA04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DIESEL GENERATOR BUILDING VENTILATION	
22-7-L	A2907022	2-HVP*SOV 4B COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BD	A2917023	42X-2HVPB01 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BD	A2927023	1A-2HVPB04 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BD	A2937023	1A-2HVPB04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-L	A2977022	2HVP*SOV 4D COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	

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FAILURE MODES AND EFFECTS ANALYSIS
DIESEL GENERATOR BLDG VENTILATION

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-7-BE	A2987023	42X-2HVPD01 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BE	A2997023	1B-2HVFB04 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-BE	A3007023	1B-2HVPB04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DIESEL GENERATOR BUILDING VENTILATION	
22-7-R	A4907032	2-HVP*SOV 5A COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BQ	A4917033	42X-2HVPA02 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BQ	A4927033	1A-2HVPC04 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BQ	A4937033	1A-2HVPC04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-R	A4977032	2HVP*SOV 5B COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BR	A4987033	42X-2HVFB02 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BR	A4997033	1B-2HVPC04 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	
22-7-BR	A5007033	1B-2HVPC04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV III DIESEL GENERATOR BUILDING VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-F	X001HVY3	OVERLOAD FAULT EXISTS IN CKT 2HVYA15	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-C	X003HVY2	2HVY*UC2A LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-F 22-8-G	X004HVY2	LOSS OF 575VAC MOTOR DRIVE PWR 2EHS*MCC101	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SVCE WTR PMP BAY "A" UNIT COOLERS	
22-8-F	X005HVY3	2HVY*UC2A BAY "A" CLR MOTOR FAILED MECHANICALLY	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-F	X006HVY3	2HVY*UC2A BAY "A" CLR MOTOR WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-K	X010HVY3	42-2HVYA15 STARTER CONTACTS FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-G	X012HVY3	OVERLOAD FAULT EXISTS IN CKT 2HVYC15	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-C	X014HVY2	2HVY*UC2C LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-G	X015HVY3	2HVY*UC2C BAY "A" CLR MOTOR FAILED MECHANICALLY	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-G	X016HVY3	2HVY*UC2C BAY "A" CLR MOTOR WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-H	X020HVY3	42-2HVYC15 STARTER CONTACTS FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-H	X034HVY3	OVERLOAD FAULT EXISTS IN CKT 2HVYB15	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-C	X036HVY2	2HVY*UC2B LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-H 22-8-J	X037HVY2	LOSS OF 575VAC MOTOR DRIVE PWR 2EHS*MCC301	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SVCE WTR PMP BAY "B" UNIT COOLERS	
22-8-H	X038HVY3	2HVY*UC2B BAY "B" CLR MOTOR FAILED MECHANICALLY	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-H	X039HVY3	2HVY*UC2B BAY "B" MOTOR WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-P	X043HVY3	42-2HVYB15 STARTER CONTACTS FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-J	X045HVY3	OVERLOAD FAULT EXISTS IN CKT 2HVYD15	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-C	X047HVY2	2HVY*UC2D LOSS OF COOLING WATER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-J	X048HVY3	2HVY*UC2D BAY "B" CLR MOTOR FAILED MECHANICALLY	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-J	X049HVY3	2HVY*UC2D BAY "B" MOTOR WINDING FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-R	X053HVY3	42-2HVYD15 STARTER CONTACTS FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-B	X067HVY2	2HVY-AOD34A SVCE WTR PMP BAY "A" DAMPER FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I BAY "A" TORNADO DAMPER	
22-8-B	X068HVY2	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I BAY "B" TORNADO DAMPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-F 22-8-K	X0026122	49-2HVYA15 OVERLOAD CONT FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-F	X0076122	42-2HVYA15 SEAL IN CONT 4 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-F	X0086122	1-2HVYA15 CONTACT 18 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-F 22-8-K 22-8-L	X0096123	1-2HVYA15 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-K	X0116123	42-2HVYA15 STARTER RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-G 22-8-H	X0136122	49-2HVYC15 OVERLOAD CONT FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-G	X0176122	42-2HVYC15 SEAL IN CONT 4 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-G	X0186122	1-2HVYC15 CONTACT 18 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-G 22-8-H 22-8-N	X0196123	1-2HVYC15 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-H	X0216123	42-2HVYC15 STARTER RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-K	X0226121	3A-FUSE CKT 2HVYA15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-K	X0236121	150VA 575V-115V TRANSFORMER CKT 2HVYA15 DEFECTIVE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-K	X0246123	1-2HVYA15 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-L	X0256123	2HVY*TIS33A TEMP SWITCH FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-L	X0266123	1-2HVYA15 CONTACT 14 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-L	X0276123	1-2HVYA15 CONTACT 10 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2A UNIT COOLER	
22-8-M	X0286121	3A-FUSE CKT 2HVYC15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-M	X0296121	150VA 575V-115V TRANSFORMER CKT 2HVYC15 DEFECTIVE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-M	X0306123	1-2HVYC15 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-N	X0316123	2HVY*TIS33C TEMP SWITCH FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-N	X0326123	1-2HVYC15 CONTACT 14 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-N	X0336123	1-2HVYC15 CONTACT 10 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I 2HVY*UC2C UNIT COOLER	
22-8-H 22-8-P	X0356132	49-2HVYB15 OVERLOAD CONT FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-H	X0406132	42-2HVYB15 SEAL-IN CONT 4 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-H	X0416132	1-2HVYB15 CONTACT 18 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-H 22-8-P 22-8-Q	X0426133	1-2HVYB15 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-P	X0446133	42-2HVYB15 STARTER RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-J 22-8-R	X0466132	49-2HVYD15 OVERLOAD CONT FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-J	X0506132	42-2HVYD15 SEAL-IN CONT 4 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-J	X0516132	1-2HVYD15 CONTACT 18 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-J 22-8-R 22-8-S	X0526133	1-2HVYD15 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-R	X0546133	42-2HVYD15 STARTER RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-P	X0556131	3A-FUSE CKT 2HVYB15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-P	X0566131	150VA 575V-115V TRANSFORMER CKT 2HVYB15 DEFECTIVE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-P	X0576133	1-2HVYB15 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-Q	X0586133	2HVY*TIS33B TEMP SWITCH FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-Q	X0596133	1-2HVYB15 CONTACT 14 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-Q	X0606133	1-2HVYB15 CONTACT 10 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2B UNIT COOLER	
22-8-R	X0616131	3A-FUSE CKT 2HVYD15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-R	X0626131	150VA 575V-115V TRANSFORMER CKT 2HVYD15 DEFECTIVE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-R	X0636133	1-2HVYD15 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-S	X0646133	2HVY*TIS33D TEMP SWITCH FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-S	X0656133	1-2HVYD15 CONTACT 14 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-S	X0666133	1-2HVYD15 CONTACT 10 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II 2HVY*UC2D UNIT COOLER	
22-8-D	X0697083	3-2HVYA16 RELAY ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF DIV I BAY "A" TORNADO DAMPER	
22-8-D	X0707083	3-2HVYA16 CONTACT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I BAY "A" TORNADO DAMPER	
22-8-D	X0717082	1-2HVYA16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I BAY "A" TORNADO DAMPER	
22-8-D	X0727083	1-2HVYA16 CONTACT 1T FAILED CLOSE	PERIODIC TEST	1-2HVYA16 CONTACT 1T CLOSED	
22-8-D	X0737083	1-2HVYA16 CONTACT 2B FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I BAY "A" TORNADO DAMPER	
22-8-E	X0747083	3-2HVYB16 CONTACT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I BAY "B" TORNADO DAMPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-8-E	X0757082	1-2HVYB16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I BAY "B" TORNADO DAMPER	
22-8-E	X0767083	1-2HVYB16 CONTACT 1T FAILED CLOSE	PERIODIC TEST	1-2HVYB16 CONTACT 2T CLOSED	
22-8-E	X0777083	1-2HVYB16 CONTACT 2B FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I BAY "B" TORNADO DAMPER	
22-8-D	X0787083	2HVY-SOV34A ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF DIV I BAY "A" TORNADO DAMPER	
22-8-E	X0797083	2HVY-SOV34B ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF DIV I BAY "B" TORNADO DAMPER	
22-8-E	X0807083	3-2HVYB16 RELAY ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF DIV I BAY "B" TORNADO DAMPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-B	R001HVC3	2HVC*CH 11A RETURN AIR DUCT HEATER INOPERATIVE	PERIODIC TEST	NONE	
22-9-B	R002HVC3	2HVC*CH 11B RETURN AIR DUCT HEATER INOPERATIVE	PERIODIC TEST	NONE	
22-9-S	R003HVC3	2HVC*FLT 1A CONTROL ROOM ACU SUCTION FILTER FAILS	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-S	R004HVC3	2HVC*DMP 2A CONTROL ROOM ACU INLET DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-K	R005HVC3	2HVC*FLT 1B CONTROL ROOM ACU SUCTION FILTER FAILS	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-K	R006HVC3	2HVC*DMP 2B CONTROL ROOM ACU INLET DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-K	R007HVC3	2HVC*DMP 71 CLASS BOUNDARY CHECK DAMPER FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-EE	R008HVC3	2HVC*DMP 73 SECTION X FAILS CLOSED	PERIODIC TEST	NONE	
22-9-EH	R009HVC3	2HVC*DMP 81 SUPPLY CHECK DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE CHASE FLOW PATH	
22-9-EF 22-9-EH	R010HVC6	2HVC*DMP 80 DIV 2-3 CABLE CHASE SPLY CHECK DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION

				11-1-82	FAILURE MODES AND EFFECTS ANALYSIS
4	3	2	1		CONTROL BUILDING AIR CONDITIONING
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-EE	R011HVC6	2HVC*DMPF 48 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-H	R017HVC3	2HVC*CH 7A SPECIAL FILTER HEATER INOPERATIVE	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-H	R018HVC3	2HVC*FLT 2A SPECIAL FILTER MECH FAILURE	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-H	R019HVC3	2HVC*DMP 1A BOOSTER FAN DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-H	R020HVC3	2HVC*FLT 2A INADVERTENT RELEASE OF FPM	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AK	R021HVC3	2HVC*FLT 2B SPECIAL FILTER MECH FAILURE	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AK	R022HVC3	2HVC*CH 7B SPECIAL FILTER HEATER INOPERATIVE	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AH	R023HVC3	2HVC*FLT 2B INADVERTENT RELEASE OF FPM	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AH	R024HVC3	2HVC*DMP 1B BOOSTER FAN DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-E	R025HVC3	2HVC*CH 12A RETURN AIR DUCT HEATER INOPERATIVE	PERIODIC TEST	NONE	
22-9-E	R026HVC3	2HVC*CH 12B RETURN AIR DUCT HEATER INOPERATIVE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AV	R027HVC3	2HVC*DMP 3A RELAY ROOM ACU INLET DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AU	R028HVC3	2HVC*DMP 3B RELAY ROOM ACU INLET DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AU	R029HVC3	2HVC*DMP 72 CLASS BOUNDARY CHECK DAMPER FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-EN	R030HVC3	2HVC*DMP 75 SECTION X FAILS CLOSED	PERIODIC TEST	NONE	
22-9-EP 22-9-EQ	R031HVC6	2HVC*DMP 82 DIV 2-3 CABLE CHASE SPLY CHECK DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-EQ	R032HVC3	2HVC*DMP 83 SUPPLY CHECK DAMPER CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE CHASE FLOW PATH	
22-9-J	R033HVC3	2HVC*DMP 51A RH SHT DN RH ACU DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-DZ	R034HVC3	2HVC*DMP 51B RH SHT DN RH ACU DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ET	R035HVC3	2HVC*DMP 8A MAKE-UP AIR FAN DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EH	R036HVC3	2HVC*DMP 8B MAKE-UP AIR FAN DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-C	R037HVC3	2HVC*DMP 90 BAT RM SUPPLY CHECK DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM VENTILATION	
22-9-FD	R038HVC3	2HVC*DMP 91 BAT RM SUPPLY CHECK DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM VENTILATION	
22-9-FE	R039HVC3	2HVC*DMP 12A BAT RM EXH FAN SUCTION DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FE	R040HVC3	2HVC*DMP 13A BAT RM EXH FAN DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FF	R041HVC3	2HVC*DMP 12B BAT RM EXH FAN SUCTION DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FF	R042HVC3	2HVC*DMP 13B BAT RM EXH FAN DISCHARGE DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-EE	R043HVC6	2HVC*DMPF 33 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-S	R044HVC6	2HVC*DMPF 92 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-S	R045HVC6	2HVC*DMPF 92 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-X	R046HVC6	2HVC*DMPF 90 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-X	R047HVC6	2HVC*DMPF 90 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-K	R049HVC6	2HVC*DMPF 49 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-K	R049HVC6	2HVC*DMPF 49 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EE	R051HVC6	2HVC*DMPF 33 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-ED	R052HVC6	2HVC*DMPF 41 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-ED	R053HVC6	2HVC*DMPF 46 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-ED	R054HVC6	2HVC*DMPF 46 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EG	R055HVC6	2HVC*DMPF 91 CONT RM VENT CHASE FIRE DMPR CLOSED	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CONTROL ROOM POSITIVE PRESSURE
22-9-EE	R056HVC6	2HVC*DMPF 40 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EE	R058HVC6	2HVC*DMPF 34 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-ED	R059HVC6	2HVC*DMPF 42 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-ED	R060HVC6	2HVC*DMPF 47 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EG	R062HVC6	2HVC*DMPF 83 RLY RM VENT CHASE FIRE DMPR CLOSED	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF RELAY ROOM POSITIVE PRESSURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-EF 22-9-EH	R063HVC6	2HVC*DMPF 40 DIV 2-3 CABLE CHASE RET FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-EH	R064HVC6	2HVC*DMPF 63 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE CHASE FLOW PATH	
22-9-EH	R065HVC6	2HVC*DMPF 45 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE CHASE FLOW PATH	
22-9-EF 22-9-EH	R066HVC6	2HVC*DMPF 66 DIV 2-3 CABLE CHASE SPLY FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-V	R067HVC6	2HVC*DMP 9 BLADE X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-V	R068HVC6	2HVC*DMPF 93 NORMAL INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	NORMAL OUTSIDE INLET PATH CLOSED	
22-9-V	R069HVC6	2HVC*DMP 4 BLADE X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-V	R070HVC6	2HVC*DMPF 39 REMOTE INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	REMOTE OUTSIDE INLET PATH CLOSED	
22-9-AH	R071HVC6	2HVC*DMPF 55 SPECIAL FILTER OUTLET FIRE DMPR CLOSED	PERIODIC INSPECTION	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AK	R072HVC6	2HVC*DMPF 54 SPECIAL FILTER INLET FIRE DMPR CLOSED	PERIODIC INSPECTION	SPECIAL FILTER TRAIN DIV II INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AV	R073HVC6	2HVC*DMPF 89 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-AV	R074HVC6	2HVC*DMPF 89 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-AU	R075HVC6	2HVC*DMPF 53 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-AU	R076HVC6	2HVC*DMPF 53 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-BA	R077HVC6	2HVC*DMPF 52 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-BA	R078HVC6	2HVC*DMPF 52 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-L	R080HVC6	2HVC*DMPF 74 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-L	R081HVC6	2HVC*DMPF 79 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EN	R083HVC6	2HVC*DMPF 80 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-L	R085HVC6	2HVC*DMPF 75 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-L	R086HVC6	2HVC*DMPF 84 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EQ	R087HVC6	2HVC*DMPF 85 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE CHASE FLOW PATH	

FISK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-EN	R089HVC6	2HVC*DMPF 86 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EN	R090HVC6	2HVC*DMPF 88 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EQ	R091HVC6	2HVC*DMPF 96 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE CHASE FLOW PATH	
22-9-EP 22-9-EQ	R092HVC6	2HVC*DMPF 97 DIV 2-3 CABLE CHASE SPLY FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-EP 22-9-EQ	R093HVC6	2HVC*DMPF 104 DIV 2-3 CABLE CHASE RET FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-J	R094HVC6	2HVC*DMPF 201 RH SHT DN RH ACU INLET FIRE DMPR CLOSED	PERIODIC INSPECTION	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-J	R095HVC6	2HVC*DMPF 185 RH SHT DN RH ACU INLET FIRE DMPR CLOSED	PERIODIC INSPECTION	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-DZ	R096HVC6	2HVC*DMPF 202 RH SHT DN RH ACU INLET FIRE DMPR CLOSED	PERIODIC INSPECTION	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-DZ	R097HVC6	2HVC*DMPF 186 RH SHT DN RH ACU INLET FIRE DMPR CLOSED	PERIODIC INSPECTION	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-J	R098HVC6	2HVC*DMPF 187 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-J	R099HVC6	2HVC*DMPF 187 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DZ	R100HVC6	2HVC×DMPF 188 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-DZ	R101HVC6	2HVC×DMPF 188 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-R	R102HVC6	2HVC×DMPF 105 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-R	R103HVC6	2HVC×DMPF 95 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-R	R104HVC6	2HVC×DMPF 94 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-R	R105HVC6	2HVC×DMPR 105 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EE	R106HVC6	2HVC×DMPF 34 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EC	R107HVC6	2HVC×DMPF 174 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE CHASE VENTILATION	
22-9-EC	R108HVC6	2HVC×DMPF 117 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE CHASE VENTILATION	
22-9-H 22-9-EC	R109HVC6	2HVC×DMPF 220 DIV 2-3 CABLE CHASE SPLY FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-H 22-9-EC	R110HVC6	2HVC×DMPF 120 DIV 2-3 CABLE CHASE SPLY FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-H 22-9-EC	R111HVC6	2HVC*DMPF 173 DIV 2-3 CABLE CHASE RET FIRE DAMPER FAILS CL	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF CABLE CHASE VENTILATION
22-9-C	R112HVC6	2HVC*DMPF 190 BAT RM SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I BATTERY ROOM VENTILATION	
22-9-C	R113HVC6	2HVC*DMPF 139 BAT RM RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I BATTERY ROOM VENTILATION	
22-9-EA	R114HVC6	2HVC*DMPF 114 BAT RM SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV III BATTERY ROOM VENTILATION	
22-9-EA	R115HVC6	2HVC*DMPF 113 BAT RM RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV III BATTERY ROOM VENTILATION	
22-9-FD	R116HVC6	2HVC*DMPF 191 BAT RM SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II BATTERY ROOM VENTILATION	
22-9-FD	R117HVC6	2HVC-DMPF 141 BAT RM RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II BATTERY ROOM VENTILATION	
22-9-C	R118HVC6	2HVC*DMPF 170 BAT RM RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I BATTERY ROOM VENTILATION	
22-9-C	R119HVC6	2HVC*DMPF 179 EXHAUST INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I BATTERY ROOM VENTILATION	
22-9-EA	R120HVC6	2HVC*DMPF 110 EXHAUST INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV III BATTERY ROOM VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FD	R121HVC6	2HVC*DMPF 172 BAT RM RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II BATTERY ROOM VENTILATION	
22-9-FD	R122HVC6	2HVC*DMPF 171 EXHAUST INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II BATTERY ROOM VENTILATION	
22-9-FF 22-9-FE	R123HVC6	2HVC*DMP 22 BLADE X FAILS CLOSED	PERIODIC INSPECTION	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FF	R124HVC6	2HVC*DMPF 211 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-FF	R125HVC6	2HVC*DMPF 211 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-FG	R126HVC6	2HVC*DMPF 212 SECTION X FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-FG	R127HVC6	2HVC*DMPF 212 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-H	R128HVC6	2HVC*DMP 9 LOCAL INLET TORNADO DAMPER OPEN	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF TORNADO PROTECTION
22-9-H	R129HVC6	2HVC*DMP 4 REMOTE INLET TORNADO DAMPER OPEN	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF TORNADO PROTECTION
22-9-ED	R130HVC6	2HVC*DMPF 41 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-H	R131HVC6	2HVC*DMP 22 EL 261 FT EXH TORNADO DAMPER OPEN	PERIODIC INSPECTION	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF TORNADO PROTECTION

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-H	R133HVC6	2HVC*DMP 24 ELEC TIR DIV II TORNADO DAMPER OPEN	PERIODIC INSPECTION	NONE	
22-9-EB	R134HVC6	2HVC*DMP 26 BASE AREA DIV II TORNADO DAMPER OPEN	PERIODIC INSPECTION	NONE	
22-9-H	R135HVC6	2HVC*DMP 23 ELEC TIR DIV I TORNADO DAMPER OPEN	PERIODIC INSPECTION	NONE	
22-9-EB	R136HVC6	2HVC*DMP 25 BASE AREA DIV I TORNADO DAMPER OPEN	PERIODIC INSPECTION	NONE	
22-9-EH	R137HVC6	2HVC*DMP 23 TORNADO DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-EH	R138HVC6	2HVC*DMPF 212 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-G	R139HVC6	2HVC*DMPF 2 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-G	R140HVC6	2HVC*DMPF 1 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-Q	R141HVC6	2HVC*DMPF 3 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-Q	R142HVC6	2HVC*DMPF 167 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BP	R143HVC6	2HVC*DIFF 215 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BN	R144HVC6	2HVC*DIFF 211 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-G	R145HVC6	2HVC*DIFF 213 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-Q	R146HVC6	2HVC*DIFF 4 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-Q	R147HVC6	2HVC*DIFF 216 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BP	R148HVC6	2HVC*DIF 24 TORNADO DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-Q	R149HVC6	2HVC*DIFF 214 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-F	R150HVC6	2HVC*DIFF 115 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV III CABLE AREA VENTILATION	
22-9-F	R151HVC6	2HVC*DIFF 112 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV III CABLE AREA VENTILATION	
22-9-BN	R152HVC6	2HVC*DIFF 8 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BN	R153HVC6	2HVC*DMPF 11 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-BN	R154HVC6	2HVC*DMPF 15 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-BN	R155HVC6	2HVC*DMPF 200 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R156HVC6	2HVC*DMPF 16 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R157HVC6	2HVC*DMPF 10 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-BN	R158HVC6	2HVC*DMPF 135 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R159HVC6	2HVC*DMPF 13 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R160HVC6	2HVC*DMPF 9 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R161HVC6	2HVC*DMPF 82 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R162HVC6	2HVC*DMPF 197 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-CC	R163HVC6	2HVC*DMP 25 TORNADO DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CC	R164HVC6	2HVC*DMPF 18 INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CC	R165HVC6	2HVC*DMPF 133 INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R166HVC6	2HVC*DMPF 12 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R167HVC6	2HVC*DMPF 7 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CB	R168HVC6	2HVC*DMPF 17 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-BX	R169HVC6	2HVC*DMPF 137 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BX	R170HVC6	2HVC*DMPF 138 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BX	R171HVC6	2HVC*DMPF 27 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BX	R172HVC6	2HVC*DMPF 22 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FT	R173HVC6	2HVC*DMPF 140 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FT	R174HVC6	2HVC*DMPF 26 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BX	R175HVC6	2HVC*DMPF 25 SUPPLY FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BY	R176HVC6	2HVC*DMPF 23 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BY	R177HVC6	2HVC*DMPF 198 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BY	R178HVC6	2HVC*DMPF 29 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BX	R179HVC6	2HVC*DMP 26 TORNADO DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BX	R180HVC6	2HVC*DMPF 30 INLET FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BY	R181HVC6	2HVC*DMPF 12 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BY	R182HVC6	2HVC*DMPF 24 RETURN FIRE DAMPER CLOSED	PERIODIC INSPECTION	LOSS OF DIV II CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-Z	R183HVC3	2HVC*ACU 1A MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AC	R212HVC3	2HVC*ACU 1B MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AX	R240HVC3	2HVC*ACU 2A MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AZ	R266HVC3	2HVC*ACU 2B MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-H	R292HVC3	2HVC*FN 2A MECHANICALLY FAILS INOP	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AH	R321HVC3	2HVC*FN 2B MECHANICALLY FAILS INOP	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-FE	R349HVC3	2HVC*FN 4A MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FF	R367HVC3	2HVC*FN 4B MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-ET	R385HVC3	2HVC*FN 11A MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EN	R404HVC3	2HVC*FN 11B MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-Y	R505HVC3	2HVC*AOD 6A DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AB	R516HVC3	2HVC*AOD 6B DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AL	R527HVC3	2HVC*MOD 3A DAMPER FAILS CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-EH	R539HVC3	2HVC*MOD 3B DAMPER FAILS CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AH	R550HVC3	2HVC*AOD 12A DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AY	R561HVC3	2HVC*AOD 12B DAMPER FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-T	R572HVC3	2HVC*MOV 1A MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-FT	R580HVC3	2HVC*AOD 17B MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-T	R589HVC3	2HVC*MOV 1B MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-N	R607HVC3	2HVC*UC 103A MECHANICALLY FAILS INOP	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-N	R622HVC3	2HVC*UC 103B MECHANICALLY FAILS INOP	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-BF	R635HVC3	2HVC*UC 101A MECHANICALLY FAILS INOP	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BH	R646HVC3	2HVC*UC 101B MECHANICALLY FAILS INOP	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BG	R656HVC3	2HVC*UC 102 MECHANICALLY FAILS INOP	PERIODIC TEST	2HVC*UC 102 DIV III STBY SWGR RM UNIT CLR INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BN	R667HVC3	2HVC*UC 104 MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BQ	R691HVC3	2HVC*UC 105 MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-CA	R694HVC3	2HVC*UC 106 MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-BZ	R708HVC3	2HVC*UC 107 MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-J	R845HVC3	2HVC*ACU 3A MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-DZ	R860HVC3	2HVC*ACU 3B MECHANICALLY FAILS INOP	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-EL	R875HVC3	2HVC*AOD 61A MECHANICALLY FAILS CLOSED	PERIODIC TEST	REMOTE OUTSIDE INLET PATH CLOSED	
22-9-EK	R882HVC3	2HVC*AOD 61B MECHANICALLY FAILS CLOSED	PERIODIC TEST	NORMAL OUTSIDE INLET PATH CLOSED	
22-9-ED	R890HVC6	2HVC*DHPF 42 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-ED	R891HVC6	2HVC*DHPF 47 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-V	R892HVC6	2HVC*DHP 9 BLADE Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-V	R893HVC6	2HVC*DHP 4 BLADE Y FAILS CLOSED	PERIODIC INSPECTION	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-L	R895HVC6	2HVC*DIFF 74 SECTION Y FAILS CLOSED	PERICDIC INSPECTION	NONE	
22-9-L	R896HVC6	2HVC*DIFF 79 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-L	R897HVC6	2HVC*DIFF 80 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EN	R898HVC6	2HVC*DIFF 80 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EN	R899HVC6	2HVC*DIFF 86 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-L	R900HVC6	2HVC*DIFF 75 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EN	R901HVC6	2HVC*DIFF 88 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-R	R902HVC6	2HVC*DIFF 95 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-R	R903HVC6	2HVC*DIFF 94 SECTION Y FAILS CLOSED	PERIODIC INSPECTION	NONE	
22-9-EE	R904HVC3	2HVC*DIP 73 SECTION Y FAILS CLOSED	PERIODIC TEST	NONE	
22-9-EN	R905HVC3	2HVC*DIP 75 SECTION Y FAILS CLOSED	PERIODIC TEST	NONE	
22-9-FE	R906HVC6	2HVC*DIP 22 BLADE Y FAILS CLOSED	PERIODIC INSPECTION	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-ET	R911HVC3	2HVCxAOD 54A MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EH	R917HVC3	2HVCxAOD 54B MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FQ	R923HVC3	2HVCxAOD 171 MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-H	R925HVC3	2HVCxAOD 142 MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF TORNADO PROTECTION
22-9-FH	R926HVC3	2HVCxAOD 182 MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-FV	R939HVC3	2HVCxAOD 179 MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-EJ	R941HVC3	2HVCxAOD 117 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVCxAOD 117 SMOKE REMOVAL EXHAUST DAMPER OPEN	
22-9-BR	R942HVC3	2HVCxAOD 192 MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-U	R955HVC3	2HVCxAOD 120 MECHANICALLY FAILS OPEN	PERIODIC TEST	2HVCxAOD 120 SMOKE REMOVAL EXHAUST DAMPER OPEN	
22-9-FR	R959HVC3	2HVCxAOD 169 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R964HVC3	2HVCxAOD 212 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FP	R968HVC3	2HVCxAOD 213 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FS	R972HVC3	2HVC*AOD 177 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FT	R977HVC3	2HVC*AOD 214 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FU	R981HVC3	2HVC*AOD 215 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BH	R985HVC3	2HVC*AOD 183 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BP	R992HVC3	2HVC*AOD 193 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-FN	R999HVC3	2HVC*AOD 170 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-S	R441HVK3	2HVK*TV 21A CONTROL ROOM ACU CHIL HTR VALVE FAILS INOP	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AA	R457HVK3	2HVK*TV 21B CONTROL ROOM ACU CHIL HTR VALVE FAILS INOP	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AV	R473HVK3	2HVK*TV 22A CONTROL ROOM ACU CHIL HTR VALVE FAILS INOP	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AU	R489HVK3	2HVK*TV 22B CONTROL ROOM ACU CHIL HTR VALVE FAILS INOP	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-ER	R856HVK3	42X-2HVKA01 COIL NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ES	R871HVK3	42X-2HVKB01 COIL NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-N	R606SHP3	2SHP*RV 87A RELIEF VALVE FAILS OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-N	R621SHP3	2SHP*RV 87B RELIEF VALVE FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-N 22-9-BK 22-9-BS 22-9-CD 22-9-BL	R722SHP3	LOSS OF DIV I SERVICE WATER	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BK	R723SHP3	2SHP*RV 87A RELIEF VALVE FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BK	R727SHP3	2SHP*AOD 154A MECHANICALLY FAILS CLOSED	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-N 22-9-BJ 22-9-BU 22-9-CF 22-9-BL	R740SHP3	LOSS OF DIV II SERVICE WATER	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BJ	R741SHP3	2SHP*RV 87B RELIEF VALVE FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BJ	R745SHP3	2SHP*AOD 154B MECHANICALLY FAILS CLOSED	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BL	R762SHP3	2SHP*AOD 501 MECHANICALLY FAILS CLOSED	PERIODIC TEST	2HVC*UC 102 DIV III STBY SWGR RM UNIT CLR INOPERATIVE	
22-9-BS	R775SHP3	2SHP*RV 564 RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BS	R780SHP3	2SHP*AOD 572 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BU	R793SHP3	2SHP*RV 566 RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BU	R798SHP3	2SHP*ACD 571 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-CD	R811SHP3	2SHP*RV 575 RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CD	R815SHP3	2SHP*AOD 573 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CF	R828SHP3	2SHP*RV 576 RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CF	R832SHP3	2SHP*AOD 574 MECHANICALLY FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-AV	R4740083	2HVC*E-I 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GY	R4760083	2HVC*TYY 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GY	R4780083	2HVC*TC 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GZ	R4790083	2HVC*HC 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GY	R4830083	2HVC*TT 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GY	R4840093	2HVC*TE 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GZ	R4850093	2HVC*HYY 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GZ	R4870083	2HVC*HT 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GZ	R4880083	2HVC*HYX 8A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AU	R4900083	2HVC*E-I 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HB	R4920083	2HVC*TYY 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HB	R4940083	2HVC*TC 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HC	R4950083	2HVC*HC 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HB	R4990083	2HVC*TT 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HB	R5000083	2HVC*TE 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HC	R5010083	2HVC*HYY 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HC	R5030083	2HVC*HT 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HC	R5040083	2HVC*HYX 8B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-GA 22-9-GB	R3160181	LOSS OF 120V (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HVC*HOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GA	R3170181	2HVC*RUN 18A MICROPROCESSOR FAILS INOP	ANNUNCIATED IN CONTROL ROOM	2HVC*HOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GA	R3180183	2HVC*RE 18A ELEMENT FAILS INOP	PERIODIC TEST	2HVC*HOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GB	R3190181	2HVC*RUN 18C MICROPROCESSOR FAILS INOP	ANNUNCIATED IN CONTROL ROOM	2HVC*HOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GB	R3200183	2HVC*RE 18C ELEMENT FAILS INOP	PERIODIC TEST	2HVC*HOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GC 22-9-GD	R3440181	LOSS OF 120V (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2HVC*HOV 1B SPECIAL FILTER BYPASS VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-GC	R3450181	2HVC*RUN 18B MICROPROCESSOR FAILS INOP	ANNUNCIATED IN CONTROL ROOM	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GC	R3460183	2HVC*RE 18B ELEMENT FAILS INOP	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GD	R3470181	2HVC*RUN 18D MICROPROCESSOR FAILS INOP	ANNUNCIATED IN CONTROL ROOM	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GD	R3480183	2HVC*RE 18D ELEMENT FAILS INOP	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GA 22-9-GB	R9490181	LOSS OF 575V (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GC 22-9-GD	R9500181	LOSS OF 575V (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-S	R4420213	2HVC*E-I 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GS	R4440213	2HVC*TYY 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GS	R4460213	2HVC*TC 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GT	R4470213	2HVC*HC 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GS	R4510213	2HVC*TT 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GS	R4520213	2HVC*TE 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GT	R4530213	2HVC*HYY 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GT	R4550213	2HVC*HT 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GT	R4560213	2HVC*HYX 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AA	R4590213	2HVC*E-I 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GV	R4600213	2HVC*TYY 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GV	R4620213	2HVC*TC 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GH	R4630213	2HVC*HC 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GV	R4670213	2HVC*TT 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GV	R4680213	2HVC*TE 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GH	R4690213	2HVC*HYY 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GH	R4710213	2HVC*HT 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GH	R4720213	2HVC*HYX 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CL	R2040343	2HVC*TSX 34A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CL	R2060343	2HVC*TS 34A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GU 22-9-HA 22-9-HY	R2090341	LOSS OF 2HVC*P 890 CONTROL POWER (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GU	R2100343	2HVC*TE 34A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GU	R2110343	2HVC*TT 34A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CQ	R2320343	2HVC*TSX 34B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CQ	R2340343	2HVC*TS 34B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-GX 22-9-HD 22-9-JA	R2370341	LOSS OF 2HVC*P 091 CONTROL POWER (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GX	R2380343	2HVC*TE 34B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GX	R2390343	2HVC*TT 34B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-GU	R4540343	2HVC*TSHX 34A FAILS INOPERATIVE	PERIODIC TEST	2HVC*TSHX 34A N-O CONTACT CLOSED	
22-9-GX	R4700343	2HVC*TSHX 34B FAILS INOPERATIVE	PERIODIC TEST	2HVC*TSHX 34B N-O CONTACT CLOSED	
22-9-CU	R2590373	2HVC*TSX 37A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CU	R2610373	2HVC*TS 37A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HA	R2640373	2HVC*TE 37A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HA	R2650373	2HVC*TT 37A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CY	R2850373	2HVC*TSX 37B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CY	R2870373	2HVC*TS 37B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HD	R2900373	2HVC*TE 37B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HD	R2910373	2HVC*TT 37B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HA	R4860373	2HVC*TSHX 37A FAILS INOPERATIVE	PERIODIC TEST	2HVC*TSHX 37A N-O CONTACT CLOSED	
22-9-HD	R5020373	2HVC*TSHX 37B FAILS INOPERATIVE	PERIODIC TEST	2HVC*TSHX 37B N-O CONTACT CLOSED	
22-9-HY	R7250383	2HVC*TT 30A FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HY	R7260303	2HVC*TE 30A FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HX	R7320303	2HVC*TSHX 30A FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HY	R7330303	2HVC*TSLX 30A FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HX	R7350303	2HVC*TSH 30A FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HY	R7360303	2HVC*TSL 30A FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-JA	R7430303	2HVC*TT 30B FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-JA	R7440303	2HVC*TE 30B FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HZ	R7500303	2HVC*TSHX 30B FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-JA	R7510303	2HVC*TSLX 30B FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HZ	R7530303	2HVC*TSH 30B FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-JA	R7540303	2HVC*TSL 30B FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-JC	R7591113	2HVC*TT 111 FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-JC	R7601113	2HVC*TE 111 FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-JC	R7611111	LOSS OF 2HVC*PIL 803 CONTROL POWER (PURPLE)	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-JB	R7671113	2HVC*TSHX 111 FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-JC	R7681113	2HVC*TSLX 111 FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-JB	R7701113	2HVC*TSH 111 FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RH UNIT CLR INOPERATIVE	
22-9-JC	R7711113	2HVC*TSL 111 FAILS INOPERATIVE	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RH UNIT CLR INOPERATIVE	
22-9-JE	R7771553	2HVC*TT 155 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JE	R7781553	2HVC*TE 155 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JE 22-9-JJ	R7791551	LOSS OF 2HVC*PIL 020 CONTROL POWER (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JD	R7051553	2HVC*TSHX 155 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JE	R7061553	2HVC*TSLX 155 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JD	R7081553	2HVC*TSH 155 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JE	R7091553	2HVC*TSL 155 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JF	R8031653	2HVC*TSHX 165 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JG	R8041653	2HVC*TSLX 165 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JF	R8061653	2HVC*TSH 165 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JG	R8071653	2HVC*TSL 165 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JJ	R8131743	2HVC*TT 174 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JJ	R8141743	2HVC*TE 174 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JH	R8201743	2HVC*TSHX 174 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-JJ	R0211743	2HVC*TSLX 174 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JH	R0231743	2HVC*TSH 174 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JJ	R0241743	2HVC*TSL 174 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JL	R0301983	2HVC*TT 198 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JL	R0311983	2HVC*TE 198 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JK	R0371983	2HVC*TSHX 198 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JL	R0301983	2HVC*TSLX 198 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JK	R0491983	2HVC*TSH 198 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JL	R0411983	2HVC*TSL 198 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CK	R1846013	2HVC*FS 23B N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD	R1856013	42-2HVCA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD	R1866013	33-2HVCA12 2HVC*ACD 6A CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD 22-9-Z	R1876013	3-2HVCA01 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD 22-9-FH	R1886013	3-2HVCA01 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AD 22-9-BB 22-9-AH 22-9-FH 22-9-EY 22-9-AH 22-9-ER	R1896011	LOSS OF 2EHS*MCC 103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD	R1906011	2HVCA01 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD	R1916011	2HVCA01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AD	R1926011	49-2HVCA01 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CH	R1936013	3X1-2HVCA01 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CJ	R1956013	42-2HVCA01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CJ	R1966013	1-2HVCA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CK 22-9-CJ	R1976012	1-2HVCA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CK	R1996013	3X1-2HVCA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CK	R2006013	1-2HVCA01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CJ	R2016013	1-2HVCA01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CL	R2026013	2HVC*TSX 34A N-O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-Z 22-9-AX	R2036013	3-3HVKA01 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-FH	R2056013	3-2HVCA01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-FH	R2076013	3-2HVCA01 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-FH	R2086013	2HVCxFS 9A N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CP	R2136013	2HVCxFS 23A N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF	R2146013	42-2HVCB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF	R2156013	33-2HVCB12 2HVCxACD 6B CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF 22-9-AC	R2166013	3-2HVKB01 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF 22-9-FX	R2176013	3-2HVCB01 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF 22-9-BE 22-9-AR 22-9-FK 22-9-FB 22-9-AJ 22-9-ES	R2186011	LOSS OF 2EHSxHCC 303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF	R2196011	2HVCB01 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AF	R2206011	2HVCB01 FUSE FAILS OPEN.	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AF	R2216011	49-2HVCB01 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CN	R2236013	3X1-2HVCB01 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CN	R2246013	42-2HVCB01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CN	R2256013	1-2HVCB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CP 22-9-CN	R2266012	1-2HVCB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CP	R2276013	3X1-2HVCB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CP	R2286013	1-2HVCB01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CN	R2296013	1-2HVCB01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CQ	R2306013	2HVC*TSX 34B N-O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AC 22-9-AZ	R2316013	3-3HVKB01 COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-FX	R2336013	3-2HVCB01 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-FX	R2356013	3-2HVCB01 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-FX	R2366013	2HVC*FS 9B N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DE	R3226013	2HVCxFS 51A N-C CONTACT OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-HE	R5126013	3X-2HVCA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HE	R5146013	42X-2HVCA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HE	R5156013	42-2HVCA01 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HF	R5236013	3X-2HVCB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HF	R5256013	42X-2HVCB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HF	R5266013	42-2HVCB01 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-CT	R2416023	2HVCxFS 16B N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BB	R2426023	42-2HVCA05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BB	R2436023	33-2HVCA12 2HVCxA00 12A CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BB 22-9-AX	R2446023	3-2HVKA01 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BB 22-9-FY	R2456023	3-2HVCA05 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BB	R2466021	2HVCA05 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BB	R2476021	2HVCA05 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BB	R2486021	49-2HVCA05 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CR	R2506023	3X1-2HVCA05 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CS	R2516023	42-2HVCA05 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CS	R2526023	1-2HVCA05 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CT 22-9-CS	R2536022	1-2HVCA05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CT	R2546023	3X1-2HVCA05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CT	R2556023	1-2HVCA05 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CS	R2566023	1-2HVCA05 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CU	R2576023	2HVC*TSX 37A N-O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-FY	R2606023	3-2HVCA05 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-FY	R2626023	3-2HVCA05 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-FY	R2636023	2HVC*FS 13A N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CX	R2676023	2HVC*FS 16A N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BE	R2686023	42-2HVCB05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BE	R2696023	33-2HVCB12 2HVCxAOD 12B CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BE 22-9-AZ	R2706023	3-2HVCB01 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BE 22-9-FZ	R2716023	3-2HVCB05 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BE	R2726021	2HVCB05 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BE	R2736021	2HVCB05 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BE	R2746021	49-2HVCB05 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CV	R2766023	3X1-2HVCB05 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CH	R2776023	42-2HVCB05 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CH	R2786023	1-2HVCB05 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CX 22-9-CH	R2796022	1-2HVCB05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CX	R2806023	3X1-2HVCB05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CX	R2816023	1-2HVCB05 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-CH	R2026023	1-2HVCB 5 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-CY	R2036023	2HVC*TSX 37B N-O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-FZ	R2066023	3-2HVCB05 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-FZ	R2086023	3-2HVCB05 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-FZ	R2096023	2HVC*FS 13B N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HJ	R5576023	3X-2HVCA05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HJ	R5596023	42X-2HVCA05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HJ	R5606023	42-2HVCA05 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HK	R5686023	3X-2HVCB05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HK	R5706023	42X-2HVCB05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HK	R5716023	42-2HVCB05 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-DB	R2936033	2HVC*FS 51B N-C CONTACT OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AN	R2946033	42-2HVCA02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AN	R2956033	33-2HVCA12 2HVC*MOD 3A CONTACT 7 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AP 22-9-AN	R2976033	3-2HVCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AN	R2986031	2HVCA02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AN	R2996031	2HVCA02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AN	R3006031	49-2HVCA02 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-CZ	R3026033	3X1-2HVCA02 CONTACT T1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DA	R3036033	42-2HVCA02 CONTACT 3 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DA	R3046033	1-2HVCA02 CONTACT 1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DB 22-9-DA	R3056032	1-2HVCA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-CZ	R3066033	3X1-2HVCA02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DB	R3076033	1-2HVCA02 CONTACT 13 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DA	R3086033	1-2HVCA02 CONTACT 10 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AP	R3096033	3-2HVCA02 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AP	R3106033	3-2HVCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AP	R3116033	2HVC*FS 53A N-C CONTACT CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DB	R3126033	96X-2HVCA02 CONTACT T1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-DB	R3136033	96X-2HVCA02 COIL FAILS OPEN	PERIODIC TEST	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GA	R3146033	2HVC*RUN 18A N-O CONTACT FAILS OPEN	PERIODIC TEST	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GB	R3156033	2HVC*RUN 18C N-O CONTACT FAILS OPEN	PERIODIC TEST	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AR	R3236033	42-2HVCB02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AR	R3246033	33-2HVCB12 2HVC*MOD 3B CONTACT 7 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AS 22-9-AR	R3256033	3-2HVCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AR	R3266031	2HVCB02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AR	R3276031	2HVCB02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AR	R3286031	49-2HVCB02 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DC	R3306033	3X1-2HVCB02 CONTACT T1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DD	R3316033	42-2HVCB02 CONTACT 3 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DD	R3326033	1-2HVCB02 CONTACT 1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DE 22-9-DD	R3336032	1-2HVCB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DC	R3346033	3X1-2HVCB02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DE	R3356033	1-2HVCB02 CONTACT 13 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DD	R3366033	1-2HVCB02 CONTACT 10 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AS	R3376033	3-2HVCB02 COIL ENERGIZED BY A SHORT	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AS	R3386033	3-2HVCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AS	R3396033	2HVC*FS 53B N-C CONTACT CLOSED	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DE	R3406033	96X-2HVCB02 CONTACT T1 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-DE	R3416033	96X-2HVCB02 COIL FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GC	R3426033	2HVC*RUN 10B N-O CONTACT FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GD	R3436033	2HVC*RUN 10D N-O CONTACT FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-HG	R5356033	3X-2HVCA02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-HG	R5376033	42X-2HVCA02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	

TASK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HG	R5386033	42-2HVCA02 CONTACT 12 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-HH	R5466033	3X-2HVCB02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-HH	R5486033	42X-2HVCB02 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-HH	R5496033	42-2HVCB02 CONTACT 12 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AH	R5736043	33-2HVCA03 CONTACT 8 FAILS OPEN	PERIODIC TEST	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AH	R5746043	33-2HVCA03 CONTACT 15 FAILS OPEN	PERIODIC TEST	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AH	R5756043	42C-2HVCA03 COIL FAILS OPEN	PERIODIC TEST	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AH	R5766043	42O-2HVCA03 N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-T	R5776042	42O-2HVCA03 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AH	R5786041	2HVCA03 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AH	R5796043	TQS-2HVCA03 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AH	R5816041	2HVCA03 575-115V TRANSFORMER FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DF	R5826043	42C-2HVCA03 CONTACT 7 FAILS OPEN	PERIODIC TEST	2HVCxHOV 1A SPECIAL FILTER BYPASS VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DF	R5836043	96X-2HVCA02 CONTACT T3 FAILS OPEN	PERIODIC TEST	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DG	R5846043	420-2HVCA03 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2HVC*MOV 1A MANUAL OPENING CIRCUIT ESTABLISHED	
22-9-DG	R5856043	96X-2HVCA02 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVC*MOV 1A AUTOMATIC OPENING CIRCUIT ESTABLISHED	
22-9-DG	R5866043	1-2HVCA03 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVC*MOV 1A MANUAL OPENING CIRCUIT ESTABLISHED	
22-9-DG 22-9-DF	R5876042	1-2HVCA03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DF	R5886043	1-2HVCA03 CONTACT 2T FAILS OPEN	PERIODIC TEST	2HVC*MOV 1A SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AJ	R5906043	33-2HVCB03 CONTACT 8 FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AJ	R5916043	33-2HVCB03 CONTACT 15 FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AJ	R5926043	42C-2HVCB03 COIL FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AJ	R5936043	420-2HVCB03 N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-T	R5946042	420-2HVCB03 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AJ	R5954041	2HVCB03 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-AJ	R5966043	TQS-2HVCB03 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVC*MOV 1B SPECIAL FILTER BYPASS VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AJ	R5986041	2HVCB03 575-115V TRANSFORMER FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVCxHOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DH	R5996043	42C-2HVCB03 CONTACT 7 FAILS OPEN	PERIODIC TEST	2HVCxHOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DH	R6006043	96X-2HVCB02 CONTACT T3 FAILS OPEN	PERIODIC TEST	2HVCxHOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DJ	R6016043	42D-2HVCB03 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2HVCxHOV 1B MANUAL OPENING CIRCUIT ESTABLISHED	
22-9-DJ	R6026043	96X-2HVCB02 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVCxHOV 1B AUTOMATIC OPENING CIRCUIT ESTABLISHED	
22-9-DJ	R6036043	1-2HVCB03 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVCxHOV 1B MANUAL OPENING CIRCUIT ESTABLISHED	
22-9-DJ 22-9-DH	R6046042	1-2HVCB03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVCxHOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-DH	R6056043	1-2HVCB03 CONTACT 2T FAILS OPEN	PERIODIC TEST	2HVCxHOV 1B SPECIAL FILTER BYPASS VALVE OPEN	
22-9-GF	R3596063	2HVCxFS 26B N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FH	R3516063	42-2HVCA04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FJ 22-9-FH	R3526063	3-2HVCA04 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FH	R3536061	2HVCA04 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FH	R3596061	2HVCA04 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I BATTERY ROOM EXHAUST	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FH	R3556061	49-2HVCA04 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FH	R3576063	3X-2HVCA04 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GE	R3586063	42-2HVCA04 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GE	R3596063	1-2HVCA04 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GF 22-9-GE	R3606062	1-2HVCA04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GF	R3616063	3X-2HVCA04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GF	R3626063	1-2HVCA04 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GE	R3636063	1-2HVCA04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FJ	R3646063	3-2HVCA04 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FJ	R3656063	3-2HVCA04 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-FJ	R3666063	2HVCxFS 24A N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV I BATTERY ROOM EXHAUST	
22-9-GH	R3686063	2HVCxFS 26A N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FK	R3696063	42-2HVCB04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FL 22-9-FK	R3706063	3-2HVCB04 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FK	R3716061	2HVCB04 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FK	R3726061	2HVCB04 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FK	R3736061	49-2HVCB04 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FK	R3756063	3X-2HVCB04 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GG	R3766063	42-2HVCB04 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GG	R3776063	1-2HVCB04 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GH 22-9-GG	R3785062	1-2HVCB04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GH	R3796063	3X-2HVCB04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GH	R3806063	1-2HVCB04 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GG	R3816063	1-2HVCB04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FL	R3826063	3-2HVCB04 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-FL	R3836063	3-2HVCB04 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FL	R3836063	2HVC*FS 24B N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV II BATTERY ROOM EXHAUST	
22-9-GL	R3866093	2HVC*FS 56D N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EY	R3876093	42-2HVCA11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EY	R3886093	33-2HVCA12 2HVC*ACD 54A CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EZ 22-9-EY	R3896093	3-2HVCA11 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EY	R3906091	2HVCA11 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EY	R3916091	2HVCA11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EY	R3926091	49-2HVCA11 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GJ	R3946093	3X1-2HVCA11 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GK	R3956093	42-2HVCA11 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GK	R3966093	1-2HVCA11 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GL 22-9-GK	R3976092	1-2HVCA11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GL	R3986093	3X1-2HVCA11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-GL	R3996093	1-2HVCA11 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GK	R4006093	1-2HVCA11 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EZ	R4016093	3-2HVCA11 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EZ	R4026093	3-2HVCA11 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EZ	R4036093	2HVCxFS 56A N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-GP	R4056093	2HVCxFS 56C N-C CONTACT OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FB	R4066093	42-2HVCB11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FB	R4076093	33-2HVCB12 2HVCxAOD 54B CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FC 22-9-FB	R4086093	3-2HVCB11 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FB	R4096091	2HVCB11 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FB	R4106091	2HVCB11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FB	R4116091	49-2HVCB11 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-GH	R4136093	3X1-2HVCB11 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-GN	R4146093	42-2HVCB11 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-GN	R4156093	1-2HVCB11 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-GP 22-9-GN	R4166092	1-2HVCB11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-GP	R4176093	3X1-2HVCB11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-GP	R4186093	1-2HVCB11 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-GN	R4196093	1-2HVCB11 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FC	R4206093	3-2HVCB11 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FC	R4216093	3-2HVCB11 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FC	R4226093	2HVCxFS 53B N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-EX	R9166093	3X-2HVCA11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-FA	R9226093	3X-2HVCB11 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-EU	R6086103	42-2HVCA16 COIL FAILS OPEN	PERIODIC TEST	2HVCxUC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EU 22-9-BF 22-9-BT 22-9-CE	R6096101	LOSS OF 2EJSxPNL 102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2HVCxUC 101A DIV I STDY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-EU	R6106101	2HVCA16 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVCxUC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HL	R6116103	2HVC*TIS 29A N-O CONTACT OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EU	R6126101	49-2HVCA16 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EU	R6136101	2HVCA16 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HM	R6146103	1-2HVCA16 CONTACT 1 FAILS OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HM	R6156103	42-2HVCA16 CONTACT 3 FAILS OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HM 22-9-HL 22-9-HM	R6166102	1-2HVCA16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EU	R6176101	49-2HVCA16 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HL	R6186103	1-2HVCA16 CONTACT 9 FAILS OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HL	R6196103	1-2HVCA16 CONTACT 13 FAILS OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HM	R6206103	1-2HVCA16 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVC*UC 103A CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-BF	R6376103	42-2HVCA15 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BF	R6386101	2HVCA15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BF	R6396101	49-2HVCA15 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BF	R6406101	2HVCA15 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HQ	R6416103	1-2HVCA15 CONTACT 1 FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HQ	R6426103	42-2HVCA15 CONTACT 3 FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-BF	R6436101	49-2HVCA15 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HQ	R6446102	1-2HVCA15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HQ	R6456103	1-2HVCA15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-BT	R6686103	42-2HVCA17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BT	R6696103	33-2HVCN33 2HVC*ADD 183 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BT 22-9-BN	R6706103	3X-2HVCA17 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BT	R6716101	2HVCA17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BT	R6726101	49-2HVCA17 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BT	R6736101	49-2HVCA17 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BN	R6746103	3X-2HVCA17 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BN	R6755103	2HVC*FS 151 N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-BT	R6766101	2HVCA17 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-HT	R6776103	1-2HVCA17 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-HT	R6786103	42-2HVCA17 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-HT	R6796102	1-2HVCA17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-HT	R6806103	1-2HVCA17 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-JT	R5096103	3-2HVCA17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TURNEL VENTILATION	
22-9-HU	R5326113	1-2HVCB17 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TURNEL VENTILATION	
22-9-EV	R6236113	42-2HVCB16 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EV	R6256111	2HVCB16 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HN	R6266113	2HVC*TIS 299 N-O CONTACT OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EV	R6276111	49-2HVCB16 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EV	R6286111	2HVCB16 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HP	R6296113	1-2HVCB16 CONTACT 1 FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HP	R6306113	42-2HVCB16 CONTACT 3 FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HP 22-9-HN 22-9-HP	R6316112	1-2HVCB16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-EV	R6326111	49-2HVCB16 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HN	R6336113	1-2HVCB16 CONTACT 9 FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HN	R6346113	1-2HVCB16 CONTACT 13 FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-HP	R6356113	1-2HVCB16 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVC*UC 103B CHILLER EQUIP RM UNIT COOLER INOPERATIVE	
22-9-BH	R6476113	42-2HVCB15 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BH	R6486111	2HVCB15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BH	R6496111	49-2HVCB15 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BH	R6506111	2HVCB15 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-HR	R6516113	1-2HVCB15 CONTACT 1 FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-HR	R6526113	42-2HVCB15 CONTACT 3 FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-BH	R6536111	49-2HVCB15 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	

TASK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HR	R6546112	1-2HVCB15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HR	R6556113	1-2HVCB15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-BG	R6576113	42-2HVCN12 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-BG	R6586111	LOSS OF 2EHS*MCC 201 (PURPLE)	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-BG	R6596111	2HVCN12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-BG	R6606111	49-2HVCN12 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-BG	R6616111	2HVCN12 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-HS	R6626113	1-2HVCN12 CONTACT 1 FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-HS	R6636113	42-2HVCN12 CONTACT 3 FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-BG	R6646111	49-2HVCN12 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-HS	R6656112	1-2HVCN12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-HS	R6666113	1-2HVCN12 CONTACT 17 FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-BV	R6026113	42-2HVCB17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BV	R6036113	33-2HVCH34 2HVC*AOD 193 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BV 22-9-BQ	R6046113	3X-2HVCB17 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BV	R6056111	2HVCB17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BV	R6066111	49-2HVCB17 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BV	R6076111	49-2HVCB17 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BQ	R6086113	3X-2HVCB17 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BQ	R6096113	2HVC*FS 161 N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BV	R6906111	2HVCB17 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-HU	R6916113	42-2HVCB17 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-HU	R6926112	1-2HVCB17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-HU	R6936113	1-2HVCB17 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JU	R9966113	3-2HVCB17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JV	R0126123	3-2HVCH28 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-JH	R2496123	3-2HVCH29 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-EV 22-9-EH 22-9-BV 22-9-CG	R6246121	LOSS OF 2EJS*PNL 301B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-CE	R6956123	42-2HVCH28 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CE	R6966123	33-2HVCH33 2HVC*AOD 170 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CE 22-9-CA	R6976123	3X-2HVCH28 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CE	R6986121	2HVCH28 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CE	R6996121	49-2HVCH28 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CE	R7006121	49-2HVCH28 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CA	R7016123	3X-2HVCH28 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CA	R7026123	2HVC*FS 172 N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CE	R7036121	2HVCH28 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-HV	R7046123	1-2HVCH28 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-HV	R7056123	42-2HVCH28 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HV	R7066122	1-2HVCH28 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-HV	R7076123	1-2HVCH29 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CG	R7096123	42-2HVCH29 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CG	R7106123	33-2HVCH34 2HVC*ACD 178 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CG 22-9-BZ	R7116123	3X-2HVCH29 CONTACT R1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CG	R7126121	2HVCH29 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CG	R7136121	49-2HVCH29 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CG	R7146121	49-2HVCH29 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BZ	R7156123	3X-2HVCH29 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BZ	R7166123	2HVC*FS 196 N-C CONTACT CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CG	R7176121	2HVCH29 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-HN	R7186123	1-2HVCH29 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-HN	R7196123	42-2HVCH29 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HH	R7206122	1-2HVCH29 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-HH	R7216123	1-2HVCH29 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-ER	R8466133	42-2HVCA20 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ER	R8476131	2HVCA20 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JH	R8486133	2HVC*TIS 22A N-O CONTACT OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ER	R8496133	42X-2HVKA01 CONTACT T4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JH	R8506131	49-2HVCA20 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ER	R8516131	2HVCA20 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JP	R8526133	1-2HVCA20 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JP	R8536133	42-2HVCA20 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JN	R8546133	1-2HVCA20 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JN	R8556133	1-2HVCA20 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JH	R8576131	49-2HVCA20 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-JP 22-9-JN 22-9-JP	R8586132	1-2HVCA20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JP	R8596133	1-2HVCA20 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ES	R8616133	42-2HVCB20 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ES	R8626131	2HVCB20 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JR	R8636133	2HVC*TIS 22B N-O CONTACT OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ES	R8646133	42X-2HVKB01 CONTACT T4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JQ	R8656131	49-2HVCB20 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-ES	R8666131	2HVCB20 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JS	R8676133	1-2HVCB20 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JS	R8686133	42-2HVCB20 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JR	R8696133	1-2HVCB20 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JR	R8706133	1-2HVCB20 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JQ	R8726131	49-2HVCB20 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-JS 22-9-JR 22-9-JS	R8736132	1-2HVCB20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-JS	R8746133	1-2HVCB20 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II REMOTE SHUTDOWN ROOM AIR CONDITIONING	
22-9-AQ 22-9-Y 22-9-AL 22-9-AN	R4247011	LOSS OF 2SCM*PNL 102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AE	R4437013	3X-2HVKA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AE	R4457013	3X-2HVKA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-GU	R4487013	2HVC*TSHX 34A N-O CONTACT FAILS CLOSED	PERIODIC TEST	2HVC*TSHX 34A N-O CONTACT CLOSED	
22-9-AE	R4497013	1A-2HVKA02 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AE	R4507012	1A-2HVKA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AG	R4597013	3X-2HVKB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AG	R4617013	3X-2HVKB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-GX	R4647013	2HVC*TSHX 34B N-O CONTACT FAILS CLOSED	PERIODIC TEST	2HVC*TSHX 34B N-O CONTACT CLOSED	
22-9-AG	R4657013	1A-2HVKB02 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AG	R4667012	1A-2HVKB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BC	R4757013	3X1-2HVKA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BC	R4777013	3X1-2HVKA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-HA	R4807013	2HVC*TSHX 37A N-O CONTACT FAILS CLOSED	PERIODIC TEST	2HVC*TSHX 37A N-O CONTACT CLOSED	
22-9-BC	R4817013	1B-2HVKA02 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BC	R4827012	1B-2HVKA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BD	R4917013	3X1-2HVKB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BD	R4937013	3X1-2HVKB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-HD	R4967013	2HVC*TSHX 37B N-O CONTACT FAILS CLOSED	PERIODIC TEST	2HVC*TSHX 37B N-O CONTACT CLOSED	
22-9-BD	R4977013	1B-2HVKB02 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-BD	R4987012	1B-2HVKB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-Y	R5067013	2HVC*SOV 6A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-Y	R5077011	F2-2HVCA12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-Y	R5087013	1B-2HVCA12 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-Y	R5097012	1B-2HVCA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-Y	R5107013	1B-2HVCA12 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HE	R5117013	3X-2HVCA01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HE	R5137013	42X-2HVCA01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AL	R5287013	2HVCxMOD 3A COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AL	R5297011	F1-2HVCA12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AL	R5307013	1A-2HVCA12 CONTACT 1T FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AL	R5317012	1A-2HVCA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AL	R5337013	1A-2HVCA12 CONTACT 2B FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-HG	R5347013	3X-2HVCA02 CONTACT T2 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-HG	R5367013	42X-2HVCA02 CONTACT T2 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AN	R5517013	2HVCxSOV 12A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AN	R5527011	F3-2HVCA12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AN	R5537013	1C-2HVCA12 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AN	R5547012	1C-2HVCA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AN	R5557013	1C-2HVCA12 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HJ	R5567013	3X-2HVCA05 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HJ	R5587013	42X-2HVCA05 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I RELAY ROOM AIR CONDITIONING TRAIN	
22-9-EL	R0777013	2HVC*SOV 61A COIL ENERGIZED BY A SHORT	PERIODIC TEST	REMOTE OUTSIDE INLET PATH CLOSED	
22-9-EL	R0787013	1D-2HVCA12 CONTACT 1T FAILS CLOSED	PERIODIC TEST	REMOTE OUTSIDE INLET PATH CLOSED	
22-9-EL	R0797012	1D-2HVCA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	REMOTE OUTSIDE INLET PATH CLOSED	
22-9-AT 22-9-AB 22-9-EH 22-9-AY	R4337021	LOSS OF 2SCH*FIL 302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AB	R5177023	2HVC*SOV 6B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AB	R5187021	F2-2HVCB12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AB	R5197023	1B-2HVCB12 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AB	R5207022	1B-2HVCB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-AB	R5217023	1B-2HVCB12 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-HF	R5227023	3X-2HVCB01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HF	R5247023	42X-2HVCB01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL ROOM AIR CONDITIONING TRAIN	
22-9-EH	R5407023	2HVC*MOD 3B COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-EH	R5417021	F1-2HVCB12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-EH	R5427023	1A-2HVCB12 CONTACT 1T FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-EH	R5437022	1A-2HVCB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-EH	R5447023	1A-2HVCB12 CONTACT 2B FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-HH	R5457023	3X-2HVCB02 CONTACT T2 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-HH	R5477023	42X-2HVCB02 CONTACT T2 FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AY	R5627023	2HVC*SOV 12B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AY	R5637021	F3-2HVCB12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AY	R5647023	1C-2HVCB12 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AY	R5657022	1C-2HVCB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-AY	R5667023	1C-2HVCB12 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-HK	R5677023	3X-2HVCB05 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-HK	R5697023	42X-2HVCB05 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II RELAY ROOM AIR CONDITIONING TRAIN	
22-9-EK	R8047023	2HVC*SOV 61B COIL ENERGIZED BY A SHORT	PERIODIC TEST	NORMAL OUTSIDE INLET PATH CLOSED	
22-9-EK	R8057023	1D-2HVCB12 CONTACT 1T FAILS CLOSED	PERIODIC TEST	NORMAL OUTSIDE INLET PATH CLOSED	
22-9-EK	R8067022	1D-2HVCB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	NORMAL OUTSIDE INLET PATH CLOSED	
22-9-EX	R9127033	2HVC*SOV 54A COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EX	R9137033	1E-2HVCA12 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EX	R9147032	1E-2HVCA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-EX	R9157033	3X-2HVCA11 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I MAKE-UP AIR FAN TRAIN	
22-9-FA	R9187033	2HVC*SOV 54B COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FA	R9197033	1E-2HVCB12 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FA	R9207032	1E-2HVCB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-FA	R9217033	3X-2HVCB11 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II MAKE-UP AIR FAN TRAIN	
22-9-AQ	R4237043	2HVC*FN 2A GUIDE VANES FAIL INOPERATIVE	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-AQ	R4257041	F6-2HVCA12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-GQ	R4267043	42-2HVCA12 N-O CONTACT FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-GQ	R4277043	42-2HVCA12 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-GQ	R4287042	1-2HVCA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-GQ	R4297043	1-2HVCA12 CONTACT 2B FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-GQ	R4307041	49-2HVCA12 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-GQ	R4317041	49-2HVCA12 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV I INOPERATIVE	
22-9-AT	R4327043	2HVC*FN 2B GUIDE VANES FAIL INOPERATIVE	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-AT	R4347041	F6-2HVCB12 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-GR	R4357043	42-2HVCB12 N-O CONTACT FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-GR	R4367043	42-2HVCB12 COIL FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-GR	R4377042	1-2HVCB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-GR	R4387043	1-2HVCB12 CONTACT 2B FAILS OPEN	PERIODIC TEST	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-GR	R4397041	49-2HVCB12 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-GR	R4407041	49-2HVCB12 THERMAL OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	SPECIAL FILTER TRAIN DIV II INOPERATIVE	
22-9-FN	R0007053	2HVC*SOV 170 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JV	R0157053	1B-2HVCH33 CONTACT 2T FAILS CLOSED	PERIODIC TEST	1B-2HVCH33 CONTACT 2T CLOSED	
22-9-JV	R0167052	1B-2HVCH33 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	1B-2HVCH33 CONTACT 2T CLOSED	
22-9-JH	R1937053	42-2HVCH29 CONTACT 10 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-JV	R1987053	42-2HVCH28 CONTACT 10 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-JH	R2227053	3-2HVCH29 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JH	R2757053	1B-2HVCH34 CONTACT 2T FAILS CLOSED	PERIODIC TEST	1B-2HVCH34 CONTACT 2T CLOSED	
22-9-JV	R2967053	3-2HVCH28 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JH	R3017052	1B-2HVCH34 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	1B-2HVCH34 CONTACT 2T CLOSED	
22-9-FT	R5977053	2HVC*SOV 178 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DL	R7247053	3-3-2SHPA29 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	
22-9-DL	R7287053	3-3-2SHPA29 CONTACT T1 FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SWGR ROOM UNIT COOLER INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BK	R7297053	2SHP*SOV 159A COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HX	R7307053	2HVC*TSHX 39A N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DL	R7317053	2HVC*TSLX 39A N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DK	R7347053	3-3-2SHPA29 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DK	R7377053	1-3-2SHPA29 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DK	R7387052	1-3-2SHPA29 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DK	R7397053	1-3-2SHPA29 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVC*UC 101A DIV I STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DS	R7767053	3-1-2SHPA29 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-DS	R7817053	3-3-1-2SHPA29 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-BS	R7827053	2SHP*SOV 572 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JD	R7837053	2HVC*TSHX 155 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-DS	R7847053	2HVC*TSLX 155 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-DR	R7877053	3-1-2SHPA29 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DR	R7907053	1-1-2SHPA29 CONTACT 2B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-DR	R7917052	1-1-2SHPA29 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-DR	R7927053	1-1-2SHPA29 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-DH	R8127053	3-2-2SHPA29 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-DH	R8167053	3-3-2-2SHPA29 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-CD	R8177053	2SHP*SOV 573 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-JH	R8187053	2HVC*TSHX 174 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-DN	R8197053	2HVC*TSLX 174 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-DV	R8227053	3-2-2SHPA29 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-DV	R8257053	1-2-2SHPA29 CONTACT 2B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-DV	R8267052	1-2-2SHPA29 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-DV	R8277053	1-2-2SHPA29 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-BH	R9067053	2HVC*SOV 183 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-JT	R9877053	42-2HVCA17 CONTACT 10 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-JT	R9887053	3-2HVCA17 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-JT	R9907053	1A-2HVCH33 CONTACT 2T FAILS CLOSED	PERIODIC TEST	1A-2HVCH33 CONTACT 2T CLOSED	
22-9-JT	R9917052	1A-2HVCH33 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	1A-2HVCH33 CONTACT 2T CLOSED	
22-9-BP	R9937053	2HVC*SOV 193 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JU	R9947053	42-2HVCB17 CONTACT 10 FAILS CLOSED	PERIODIC TEST	NONE	
22-9-JU	R9957053	3-2HVCB17 CONTACT R1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JU	R9977053	1A-2HVCH34 CONTACT 2T FAILS CLOSED	PERIODIC TEST	1A-2HVCH34 CONTACT 2T CLOSED	
22-9-JU	R9987052	1A-2HVCH34 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	1A-2HVCH34 CONTACT 2T CLOSED	
22-9-H	R9247083	2HVC*SOV 142 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF CONTROL BUILDING AIR CONDITIONING	SINGLE FAILURE LOSS OF TORNADO PROTECTION
22-9-EJ	R9337083	1C-2HVCA32 CONTACT 2T FAILS CLOSED	PERIODIC TEST	1C-2HVCA32 CONTACT 2T CLOSED	
22-9-EJ	R9347082	1C-2HVCA32 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	1C-2HVCA32 CONTACT 2T CLOSED	
22-9-EJ	R9357083	33-2HVCA32 2HVC*AOD 145 CONTACT 7 FAILS CLOSED	PERIODIC TEST	33-2HVCA32 2HVC*AOD 145 OR 148 CONTACT 7 CLOSED	

FTSR	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-EJ	R9367083	33-2HVCA32 2HVC*AOD 146 CONTACT 7 FAILS CLOSED	PERIODIC TEST	33-2HVCA32 2HVC*AOD 145 OR 146 CONTACT 7 CLOSED	
22-9-EJ	R9407083	2HVC*SOV 117 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVC*AOD 117 SMOKE REMOVAL EXHAUST DAMPER OPEN	
22-9-U	R9557083	2HVC*SOV 120 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVC*AOD 120 SMOKE REMOVAL EXHAUST DAMPER OPEN	
22-9-U	R9577083	1D-2HVCA32 CONTACT 2T FAILS CLOSED	PERIODIC TEST	2HVC*AOD 120 SMOKE REMOVAL EXHAUST DAMPER OPEN	
22-9-U	R9507092	1D-2HVCA32 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*AOD 120 SMOKE REMOVAL EXHAUST DAMPER OPEN	
22-9-DN	R7427163	3-3-2SNFB29 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DN	R7467163	3-3-2SNFB29 CONTACT T1 FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-BJ	R7477163	2SNF*SOV 154B COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-HZ	R7487163	2HVC*TSHX 30B N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DN	R7497163	2HVC*TSLX 30B N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DN	R7527163	3-3-2SNFB29 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DN	R7557163	1-3-2SNFB29 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	
22-9-DN	R7567162	1-3-2SNFB29 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 101B DIV II STBY SNGR ROOM UNIT COOLER INOPERATIVE	

FISK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DH	R7577163	1-3-2SHFB29 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVC*UC 101B DIV II STBY SHGR ROOM UNIT COOLER INOPERATIVE	
22-9-DU	R7947163	3-1-2SHFB29 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JG	R7957163	2HVC*TT 165 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JG	R7967163	2HVC*TE 165 FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JG 22-9-JL	R7977161	LOSS OF 2HVC*PNL 831 CONTROL POWER (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-DU	R7997163	3-3-2SHFB29 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BU	R8007163	2SHP*SOV 571 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-JF	R8017163	2HVC*TSHX 165 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-DU	R8027163	2HVC*TSLX 165 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-DT	R8057163	3-1-2SHFB29 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-DT	R0007163	1-1-2SHFB29 CONTACT 2D FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-DT	R0097162	1-1-2SHFB29 OPERATOR ERROR.	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-DT	R8197163	1-1-2SHFB29 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DY	R8297163	3-2-2SHPB29 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DY	R8337163	3-3-2-2SHPB29 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-CF	R8347163	2SHP*SOV 574 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-JK	R8357163	2HVC*TSHX 198 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DY	R8367163	2HVC*TSLX 198 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DX	R8397163	3-2-2SHPB29 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DX	R8427163	1-2-2SHPB29 CONTACT 2B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DX	R8437162	1-2-2SHPB29 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DX	R8447163	1-2-2SHPB29 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-DQ	R7587183	3-3-2SHPN45 COIL FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SHGR RH UNIT CLR INOPERATIVE	
22-9-DQ	R7637183	3-3-2SHPN45 CONTACT T1 FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SHGR RH UNIT CLR INOPERATIVE	
22-9-BL	R7647183	2SHP*SOV 581 COIL ENERGIZED BY A SHORT	PERIODIC TEST	2HVC*UC 102 DIV III STBY SHGR RH UNIT CLR INOPERATIVE	
22-9-JB	R7657183	2HVC*TSHX 111 N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SHGR RH UNIT CLR INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-DQ	R7667183	2HVC*TSLX 111 N-C CONTACT FAILS OPEN	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-DP	R7697183	3-3-2SNPN45 CONTACT R2 FAILS CLOSED	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-DP	R7727183	1-1-2SNPN45 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-DP	R7737182	1-1-2SNPN45 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-DP	R7747183	1-1-2SNPN45 CONTACT 1T FAILS CLOSED	PERIODIC TEST	2HVC*UC 102 DIV III STBY SNGR RM UNIT CLR INOPERATIVE	
22-9-FQ	R9277193	2HVC*SOV 171 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FQ	R9287193	33-2HVCN33 2HVC*AOD 170 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R9297193	2HVC*SOV 182 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-FN	R9307193	33-2HVCN33 2HVC*AOD 183 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-FQ	R9317193	1B-2HVCA40 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FQ	R9327192	1B-2HVCA40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R9377192	1C-2HVCA40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	
22-9-FN	R9387193	1C-2HVCA40 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I ELECTRICAL TUNNEL VENTILATION	

FISK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FR	R9607193	1A-2HVCA40 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FR	R9617192	1-2HVCA20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FR	R9627191	LOSS OF 2SCH*PNL 103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FR	R9637191	F1-2HVCA40 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R9657193	2HVC*SOV 212 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R9667193	1D-2HVCA40 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FN	R9677192	1D-2HVCA40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FP	R9697193	2HVC*SOV 213 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FP	R9707193	1E-2HVCA40 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FP	R9717192	1E-2HVCA40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CABLE AREA VENTILATION	
22-9-FV	R9437203	2HVC*SOV 179 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FV	R9447203	33-2HVCN34 2HVC*AOD 178 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BR	R9457203	2HVC*SOV 192 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-BR	R9467203	33-2HVCH34 2HVC*ADD 193 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-FV	R9477203	1B-2HVCB40 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FV	R9487202	1B-2HVCB40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-BR	R9537202	1C-2HVCB40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-BR	R9547203	1C-2HVCB40 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II ELECTRICAL TUNNEL VENTILATION	
22-9-FS	R9737203	1A-2HVCB40 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FS	R9747202	1-2HVCB40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FS	R9757201	LOSS OF 2SCH*FIL 303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FS	R9767201	F1-2HVCB40 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FT	R9787203	2HVC*SOV 214 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FT	R9797203	1D-2HVCB40 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FT	R9807202	1D-2HVCB40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FU	R9827203	2HVC*SOV 215 COIL ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-9-FU	R9837203	1E-2HVCB40 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CABLE AREA VENTILATION	
22-9-FU	R9847202	1E-2HVCB40 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CABLE AREA VENTILATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-C	H001HVK3	2HVK*CHL 1A CONTROL BUILDING CHILLED WTR CHL FAILS INOP	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-E	H002HVK3	2HVK*CHL 1B CONTROL BUILDING CHILLED WTR CHL FAILS INOP	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-B	H010HVK1	2HVK*V 158 COMPUTER RM ACU OUTLET CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-B	H011HVK1	2HVK*RV 14A CHILLER OUTLET RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-B	H012HVK1	2HVK*RV 35A RELAY RM ACU INLET RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-B	H013HVK1	2HVK*RV 43A CONTROL RM ACU INLET RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-B	H014HVK1	2HVK*RV 37A REMOTE SHTDN RM ACU INL RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-B	H015HVK1	2HVK*V 95 WATER TREATING SYSTEM INL CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-A	H016HVK3	2HVK*V 106 HVK PUMP DISCH CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-A	H017HVK3	2HVK*V 105 HVK PUMP DISCH CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-D	H018HVK1	2HVK*V 163 COMPUTER RM ACU OUTLET CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-D	H019HVK1	2HVK*RV 14B CHILLER OUTLET RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-D	H020HVK1	2HVK*RV 35B RELAY RM ACU INLET RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-D	H021HVK1	2HVK*RV 43B CONTROL RM ACU INLET RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-D	H022HVK1	2HVK*RV 37B REMOTE SHTDN RM ACU INL RELIEF VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-D	H023HVK1	2HVK*V 12 WATER TREATING SYSTEM INL CHECK VALVE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-P	H227HVK3	2HVK*P 1A CONTROL BUILDING CHILLED WATER PUMP FAILS INOP	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Q	H427HVK3	2HVK*P 1B CONTROL BUILDING CHILLED WATER PUMP FAILS INOP	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-G	H003SWP3	2SWP*V 219A CONDENSER SWP INL CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-G	H004SWP3	2SWP*RV 59A CONDENSER OUT RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-G	H005SWP3	2SWP*V 240A COND RECIRC PUMP DISCH CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-J	H007SWP3	2SWP*V 219B CONDENSER SWP INL CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-J	H008SWP3	2SWP*RV 58B CONDENSER OUT RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-J	H009SWP3	2SWP*V 240B COND RECIRC PUMP DISCH CHK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-G	H176SWP3	2SWP*P 2A CONDENSER RECIRC PUMP MECH FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-G	H192SWP3	2SWP*TV 35A SWP OUTLET VALVE MECH FAILS	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H201SWP3	2SWP*MOV 67A CONDENSER SWP INLET VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-J	H376SWP3	2SWP*P 2B CONDENSER RECIRC PUMP MECH FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-J	H392SWP3	2SWP*TV 35B SWP OUTLET VALVE MECH FAILS	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H401SWP3	2SWP*MOV 67B CONDENSER SWP INLET VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-K	H1070013	1MR-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BG	H1120011	LOSS OF 120VAC 2EJA*PNL 101A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BG	H1130011	1CB-CKT #11 2EJA*PNL 101A CIRCUIT BRKR FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-X	H1140013	11R-CKT #11 2EJA*PNL 101A N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-X	H1160013	4R-CKT #11 2EJA*PNL 101A N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-X	H1170013	12R-CKT #11 2EJA*PNL 101A N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-X	H1180013	10R-CKT #11 2EJA*PNL 101A N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Y	H1190013	5R-CKT #11 2EJA*PNL 101A CONTACT 215 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Y	H1200013	16R-CKT #11 2EJA*PNL 101A CONTACT 216 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AB	H1210013	18R-CKT #11 2EJA*PNL 101A CONTACT 217 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-Y	H1220013	3X1-2HVKA03 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AA	H1230013	17R-CKT #11 2EJA*PNL 101A CONTACT 218 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Z	H1240013	15R-CKT #11 2EJA*PNL 101A CONTACT 219 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BA	H1460013	3X-2HVKA01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BA	H1470013	15R-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BA	H1480013	CWF-CKT #11 N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BA	H1490013	EWF-CKT #11 N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Y	H1600013	5R-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Y	H1610011	2HVK*CHL 1A COMPRESSOR HIGH OIL TEMPERATURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Y	H1620013	15R-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-Y	H1630011	2HVK*CHL 1A COMPRESSOR HIGH DISCHARGE TEMPERATURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AB	H1640013	18R-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AA	H1650013	17R-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AA	H1660011	2HVK*CHL 1A COMPRESSOR MOTOR HIGH TEMPERATURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AB	H1670011	2HVK*CHL 1A COMPRESSOR MOTOR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AB	H1680011	52OC-2HVKA03 CONTACT 12 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-F	H2170013	2HVK*CHL 1A COMPRESSOR AUX OIL PUMP FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BG	H2240013	2MR-CKT #11 2EJA*PNL 101A COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BG	H2250013	2HVK*CHL 1A COMPRESSOR AUX OIL PUMP SWITCH FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BG	H2260012	2HVK*CHL 1A COMPRESSOR AUX OIL PUMP SWITCH OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-L	H3070013	1MR-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BS	H3120011	LOSS OF 120VAC 2EJA*PNL 301B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-BS	H3130011	1CB-CKT #11 2EJA*PNL 301B CIRCUIT BRKR FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AJ	H3140013	11R-CKT #11 2EJA*PNL 301B N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AJ	H3160013	4R-CKT #11 2EJA*PNL 301B N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AJ	H3170013	12R-CKT #11 2EJA*PNL 301B N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AJ	H3180013	10R-CKT #11 2EJA*PNL 301B N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3190013	5R-CKT #11 2EJA*PNL 301B CONTACT 215 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3200013	16R-CKT #11 2EJA*PNL 301B CONTACT 216 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AN	H3210013	18R-CKT #11 2EJA*PNL 301B CONTACT 217 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3220013	3X1-2HVKB03 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AM	H3230013	17R-CKT #11 2EJA*PNL 301B CONTACT 218 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AL	H3240013	15R-CKT #11 2EJA*PNL 301B CONTACT 219 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BL	H3460013	3X-2HVKB01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BL	H3470013	15R-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BL	H3480013	CHF-CKT #11 N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BL	H3490013	EHF-CKT #11 N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3600013	5R-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3610011	2HVK*CHL 1B COMPRESSOR HIGH OIL TEMPERATURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3620013	15R-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AK	H3630011	2HVK*CHL 1B COMPRESSOR HIGH DISCHARGE TEMPERATURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AN	H3640013	18R-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AM	H3650013	17R-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AM	H3660011	2HVK*CHL 1B COMPRESSOR MOTOR HIGH TEMPERATURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AN	H3670011	2HVK*CHL 1B COMPRESSOR MOTOR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AN	H3680011	5EOC-2HVK103 CONTACT 12 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-H	H4170013	2HVK*CHL 1B COMPRESSOR AUX OIL PUMP FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BS	H4240013	2MR-CKT #11 2EJA*PNL 301B COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BS	H4250013	2HVK*CHL 1B COMPRESSOR AUX OIL PUMP SWITCH FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BS	H4260012	2HVK*CHL 1B COMPRESSOR AUX OIL PUMP SWITCH OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BA	H1510153	2HVK*FSLX 15A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BC	H1530153	2HVK*FSL 15A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BC	H1570153	2HVK*PWRS 15A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BC	H1580153	2HVK*FT 15A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BC	H1590153	2HVK*FE 15A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BL	H3510153	2HVK*FSLX 15B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BN	H3530153	2HVK*FSL 15B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BN	H3570153	2HVK*PWRS 15B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-BN	H3580153	2HVK*FT 15B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BN	H3590153	2HVK*FE 15B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BA	H1500293	2SWP*FSLX 29A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BB	H1520293	2SWP FSL 29A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BB	H1540293	2SWP*FT 29A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BB	H1550293	2SWP*FE 29A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BB	H1560293	2SWP*PWRS 29A FAILS HIGH	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BL	H3500293	2SWP*FSLX 29B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BM	H3520293	2SWP FSL 29B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BM	H3540293	2SWP*FT 29B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BM	H3550293	2SWP*FE 29B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AW	H1940353	2SWP*E I 35A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AW	H1960353	2SWP*TC 35A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AW	H1990353	2SWP*TT 35A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AW	H2000353	2SWP*TE 35A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AY	H3940353	2SWP*E I 35B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AY	H3960353	2SWP*TC 35B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AY	H3990353	2SWP*TT 35B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AY	H4000353	2SWP*TE 35B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BM	H3560393	2SWP*PWRS 29B FAILS HIGH	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BF	H1770913	2SWP*TE 91A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BF	H1780913	2SWP*TT 91A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BF	H1890913	2SWP*TSLX 91A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BF 22-12-AW	H1900911	LOSS OF PNL 828 CONTROL POWER (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BF	H1910913	2SWP*TSL 91A FAILS LOW	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BR	H3770913	2SWP*TE 91B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BR	H3780913	2SWP*TT 91B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BR	H3890913	2SWP*TSLX 91B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BR 22-12-AY	H3900911	LOSS OF PNL 831 CONTROL POWER (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BR	H3910913	2SWP*TSL 91B FAILS LOW	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AE 22-12-BJ	H1386013	3X-2HVCA01 COIL FAILS OPEN (CONTROL RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AG	H1976013	42-2HVKA01 CONTACT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AG	H1986013	42X-2HVKA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V	H2286013	42-2HVKA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V 22-12-P	H2296013	3-2HVKA01 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V	H2306011	2HVKA01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V	H2316013	3X-2HVKA01 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V	H2326011	49-2HVKA01 N C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V	H2336011	49-2HVKA01 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-V	H2346011	2HVKA01 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BJ	H2356013	3X-2HVKA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BH	H2366013	42-2HVKA01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BH	H2376013	3X-2HVKA01 CONTACT R3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BH 22-12-BJ 22-12-BH	H2386012	1-2HVKA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BJ	H2396013	42-2HVCA20 CONTACT 10 FAILS OPEN (REM SHTDN RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BJ	H2406013	1-2HVKA01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-BH	H2416013	1-2HVKA01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BH	H2426013	1-2HVKA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BJ	H2436013	3X-2HVCA01 CONTACT T3 FAILS OPEN (CONTROL RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BJ	H2446013	3X-2HVCA05 CONTACT T3 FAILS OPEN (RELAY RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-P	H2456012	3-2HVKA01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-P	H2466013	3-2HVKA01 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AH	H2476013	62-2HVKA01 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AH	H2486012	62-2HVKA01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AH	H2496013	2HVK*FS 1FA N O CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AR 22-12-BU	H3386013	3X-2HVCB01 COIL FAILS OPEN (CONTROL RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AT	H3976013	42-2HVKB01 CONTACT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AT	H3986013	42X-2HVKB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-W	H4286013	42-2HVKB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-W 22-12-Q	H4296013	3-2HVKB01 CONTACT R4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-W	H4306011	2HVKB01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-W	H4316013	3X-2HVKB01 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-W	H4326011	49-2HVKB01 N C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-W	H4336011	49-2HVKB01 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-W	H4346011	2HVKB01 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BU	H4356013	3X-2HVKB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BT	H4366013	42-2HVKB01 CONTACT 3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BT	H4376013	3X-2HVKB01 CONTACT R3 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BT 22-12-BU 22-12-BT	H4386012	1-2HVKB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BU	H4396013	42-2HVCB20 CONTACT 10 FAILS OPEN (REM SHTDN RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BU	H4406013	1-2HVKB01 CONTACT 13 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-BT	H4416013	1-2HVKB01 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BT	H4426013	1-2HVKB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BU	H4436013	3X-2HVCB01 CONTACT T3 FAILS OPEN (CONTROL RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BU	H4446013	3X-2HVCB05 CONTACT T3 FAILS OPEN (RELAY RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-Q	H4456012	3-2HVKB01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-Q	H4466013	3-2HVKB01 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AU	H4476013	62-2HVKB01 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AU	H4486012	62-2HVKB01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AU	H4496013	2HVK*FS 15B N O CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-C	H1016022	2HVK*CHL 1A ACB 52TC-2HVKA03 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-K	H1026021	2HVKA03 30A POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-K	H1036021	2HVKA03 30A NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-K	H1046023	1MR-CKT #11 2EJA*PNL 101A CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-K	H1056021	2HVKA03 15A POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-K	H1066021	2HVKA03 15A NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-M	H1086023	1MR-CKT #11 2EJA*PNL 101A CONTACT 20 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-M	H1096023	1-2HVKA03 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-M	H1106023	27X-2EJSX08 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-K	H1116021	LOSS OF 2BYS*SHG 002A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-M 22-12-AC 22-12-AD 22-12-AE	H1156022	1-2HVKA03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AC	H1256023	3X1-2HVKA03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AC	H1266023	1A-2HVKA03 N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AC	H1276023	52-2HVKA03 CONTACT 25 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AC	H1286022	1A-2HVKA03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AC	H1296023	1-2HVKA03 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AD	H1306023	52A-2HVKA03 INST CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AD	H1316023	52A-2HVKA03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AD	H1326023	1-2HVKA03 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AE	H1336023	27X-2EJSX08 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AE	H1346023	42-2HVCA20 CONTACT 12 FAILS OPEN (REM SHTDN RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AE	H1356023	1-2HVKA03 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AE 22-12-BJ	H1396023	3X-2HVCA05 COIL FAILS OPEN (RELAY RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AE	H1416023	3X-2HVCA01 CONTACT T1 FAILS OPEN (CONTROL RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AE	H1426023	3X-2HVCA05 CONTACT T1 FAILS OPEN (RELAY RM)	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-C	H2506023	2HVK*CHL 1A ACB MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AR 22-12-BU	H3396023	3X-2HVCB05 COIL FAILS OPEN (RELAY RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-E	H3016032	2HVK*CHL 1B ACB 52TC-2HVKB03 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-L	H3026031	2HVKB03 30A POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-L	H3036031	2HVKB03 30A NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-L	H3046033	1MR-CKT #11 2EJA*PNL 301B CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-L	H3056031	2HVKB03 15A POSITIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-L	H3066031	2HVKB03 15A NEGATIVE FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-N	H3086033	1MR-CKT #11 2EJA*PNL 301B CONTACT 20 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-N	H3096033	1-2HVKB03 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-N	H3106033	27X-2EJSY08 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-L	H3116031	LOSS OF 2BYS*SNG 002A (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-N 22-12-AP 22-12-AQ 22-12-AR	H3156032	1-2HVKB03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AP	H3256033	3X1-2HVKB03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AP	H3266033	1A-2HVKB03 N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AP	H3276033	52-2HVKB03 CONTACT 25 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AP	H3286032	1A-2HVKB03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AP	H3296033	1-2HVKB03 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AQ	H3306033	52A-2HVKB03 INST CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AQ	H3316033	52A-2HVKB03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AQ	H3326033	1-2HVKB03 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AR	H3336033	27X-2EJSY08 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AR	H3346033	42-2HVCB20 CONTACT 12 FAILS OPEN (REM SHTDN RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AR	H3356033	1-2HVKB03 CONTACT 7 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AR	H3416033	3X-2HVCB01 CONTACT T1 FAILS OPEN (CONTROL RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AR	H3426033	3X-2HVCB05 CONTACT T1 FAILS OPEN (RELAY RM)	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-E	H4506033	2HVK*CHL 1B ACB MECHANICALLY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-F	H2186043	42-2HVKA09 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-F	H2196041	2HVKA09 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-F	H2206041	2HVKA09 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BG	H2216043	2MR-CKT #11 2EJA*PNL 101A N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-F	H2226041	49-2HVKA09 N C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-F	H2236041	49-2HVKA09 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-H	H4186043	42-2HVKB09 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-H	H4196041	2HVKB09 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-H	H4206041	2HVKB09 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BS	H4216043	2MR-CKT #11 2EJA*PNL 301B N O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-H	H4226041	49-2HVKB09 N C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-H	H4236041	49-2HVKB09 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-M	H1366052	27X-2EJSX08 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

J.O.12177 FMEA-22-12 SH 20

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-M	H1376053	27X-2EJSX08 CONTACT 1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AZ	H1406053	62-2EJSX08 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AZ	H1436052	62-2EJSX08 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AZ	H1446053	27A-2EJSA11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	NONE	
22-12-AZ	H1456053	27B-2EJSA11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	NONE	
22-12-N	H3366052	27X-2EJSY08 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-N	H3376053	27X-2EJSY08 CONTACT 1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BK	H3406053	62-2EJSY08 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BK	H3436052	62-2EJSY08 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BK	H3446053	27A-2EJSB11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	NONE	
22-12-BK	H3456053	27B-2EJSB11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	NONE	
22-12-AG	H1936163	3-2SWPA17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AG	H1956163	42X-2HVKA01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-T	H2026163	1-2SWPA17 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-T 22-12-AF	H2036162	1-2SWPA17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H2046163	33-2SWPA17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H2056163	33-2SWPA17 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-T	H2066162	42C-2SWPA17 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H2076161	2SWPA17 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H2086163	TQS-2SWPA17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H2096163	TQS-2SWPA17 OVER TORQUE PRESENT	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-T	H2106163	42C-2SWPA17 CONTACT 7 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AF	H2116163	42O-2SWPA17 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-R	H2126161	2SWPA17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-T	H2136163	3-2SWPA17 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AF	H2146163	1-2SWPA17 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AF	H2156163	1-2SWPA17 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AF	H2166163	3-2SWPA17 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AT	H3936163	3-2SWPB17 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AT	H3956163	42X-2HVKB01 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-U	H4026163	1-2SWPB17 CONTACT 2T FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-U 22-12-AS	H4036162	1-2SWPB17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H4046163	33-2SWPB17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H4056163	33-2SWPB17 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-U	H4066162	42C-2SWPB17 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H4076161	2SWPB17 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H4086163	TQS-2SWPB17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H4096163	TQS-2SWPB17 OVER TORQUE PRESENT	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-U	H4106163	42C-2SWPB17 CONTACT 7 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AS	H4116163	420-2SWPB17 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-S	H4126161	2SWPB17 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-U	H4136163	3-2SWPB17 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AS	H4146163	1-2SWPB17 CONTACT 2B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AS	H4156163	1-2SWPB17 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AS	H4166163	3-2SWPB17 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AV	H1796283	42-2SWPA35 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AV 22-12-R 22-12-F 22-12-V	H1806281	LOSS OF 2EHS*MCC 103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AV	H1816281	2SWPA35 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AV	H1826281	49-2SWPA35 N C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AV	H1836281	49-2SWPA35 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BE	H1846283	1-2SWPA35 CONTACT 2B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BE 22-12-AV	H1856282	1-2SWPA35 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AV	H1866281	2SWPA35 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-AV	H1876283	2SWP*TSLX 91A N C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AV	H1886283	1-2SWPA35 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-AX	H3796283	42-2SWPB35 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX 22-12-S 22-12-H 22-12-W	H3806281	LOSS OF 2EHS*MCC 303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX	H3816281	2SWPB35 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX	H3826281	49-2SWPB35 N C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX	H3836281	49-2SWPB35 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BQ	H3846283	1-2SWPB35 CONTACT 2B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BQ 22-12-AX	H3856282	1-2SWPB35 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX	H3866281	2SWPB35 575 115V XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX	H3876283	2SWP*TSLX 91B N C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-AX	H3886283	1-2SWPB35 CONTACT 1T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-B	H1697023	2HVK*SOV 36A COMPUTER RM ACU INLET VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-12-B	H1707022	2HVK*SOV 36A COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTROL BUILDING CHILLED WATER	
22-12-BD	H1717023	2HVK*LS 41A N C CONTACT FAILS CLOSED	PERIODIC TEST	NONE	
22-12-BD	H1727023	1-2HVKA04 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVK*SOV 36A MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-BD	H1737022	1-2HVKA04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVK*SOV 36A MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-BD	H1747023	3-2HVKA04 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVK*SOV 36A MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-BD	H1757022	3-2HVKA04 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HVK*SOV 36A MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-D	H3697023	2HVK*SOV 36B COMPUTER RM ACU INLET VALVE FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-D	H3707022	2HVK*SOV 36B COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTROL BUILDING CHILLED WATER	
22-12-BP	H3717023	2HVK*LS 41B N C CONTACT FAILS CLOSED	PERIODIC TEST	NONE	
22-12-BP	H3727023	1-2HVKB04 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2HVK*SOV 36B MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-BP	H3737022	1-2HVKB04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2HVK*SOV 36B MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-BP	H3747023	3-2HVKB04 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2HVK*SOV 36B MANUAL OPENING CIRCUIT ESTABLISHED	
22-12-BP	H3757022	3-2HVKB04 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2HVK*SOV 36B MANUAL OPENING CIRCUIT ESTABLISHED	

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FAILURE MODES AND EFFECTS ANALYSIS
CONTROL BUILDING CHILLED WATER

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-F	K001CPS3	2CPS*AOV 104 FAILS OPEN	PERIODIC TEST	2CPS*AOV 104 CONTAINMENT ISOLATION VALVE OPEN	
22-23-F	K011CPS3	2CPS*AOV 106 FAILS OPEN	PERIODIC TEST	2CPS*AOV 106 CONTAINMENT ISOLATION VALVE OPEN	
22-23-E	K021CPS3	2CPS*AOV 105 FAILS OPEN	PERIODIC TEST	2CPS*AOV 105 CONTAINMENT ISOLATION VALVE OPEN	
22-23-E	K031CPS3	2CPS*AOV 107 FAILS OPEN	PERIODIC TEST	2CPS*AOV 107 CONTAINMENT ISOLATION VALVE OPEN	
22-23-A	K041CPS3	2CPS*SOV 120 FAILS OPEN	PERIODIC TEST	2CPS*SOV 120 CONTAINMENT ISOLATION VALVE OPEN	
22-23-A	K052CPS3	2CPS*SOV 122 FAILS OPEN	PERIODIC TEST	2CPS*SOV 122 CONTAINMENT ISOLATION VALVE OPEN	
22-23-D	K063CPS3	2CPS*SOV 119 FAILS OPEN	PERIODIC TEST	2CPS*SOV 119 CONTAINMENT ISOLATION VALVE OPEN	
22-23-D	K074CPS3	2CPS*SOV 121 FAILS OPEN	PERIODIC TEST	2CPS*SOV 121 CONTAINMENT ISOLATION VALVE OPEN	
22-23-C	K085CPS3	2CPS*AOV 108 FAILS OPEN	PERIODIC TEST	2CPS*AOV 108 CONTAINMENT ISOLATION VALVE OPEN	
22-23-C	K096CPS3	2CPS*AOV 110 FAILS OPEN	PERIODIC TEST	2CPS*AOV 110 CONTAINMENT ISOLATION VALVE OPEN	
22-23-B	K107CPS3	2CPS*AOV 109 FAILS OPEN	PERIODIC TEST	2CPS*AOV 109 CONTAINMENT ISOLATION VALVE OPEN	
22-23-B	K118CPS3	2CPS*AOV 111 FAILS OPEN	PERIODIC TEST	2CPS*AOV 111 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AA 22-23-AE 22-23-P	K0091013	3A-9-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	3A-9-2ISCA02 CONTACT T2 CLOSED	
22-23-X 22-23-H 22-23-T	K0471013	3A-10-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	3A-10-2ISCA02 CONTACT T2 CLOSED	
22-23-AC 22-23-AH 22-23-H	K0191033	3B-9-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	3B-9-2ISCB02 CONTACT T2 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-Z 22-23-K 22-23-R	K0591033	3B-10-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	3B-10-2ISCB02 CONTACT T2 CLOSED	
22-23-F	K0037013	2CPS*SOV 104 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 104 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AB	K0047013	3X2-2CPSA01 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 104 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AB	K0057013	3X2-2CPSA01 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 104 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AB	K0067013	1B-2CPSA01 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 104 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AB	K0077012	1B-2CPSA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 104 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AA	K0087013	3A-9-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3A-9-2ISCA02 CONTACT T2 CLOSED	
22-23-AB	K0107013	3-1-2CPSA01 CONTACT R2 FAILS CLOSED	PERIODIC TEST	3-1-2CPSA01 MANUAL INIT CONTACT R2 CLOSED	
22-23-F	K0137013	2CPS*SOV 106 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 106 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AD	K0147013	3X2-2CPSB01 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 106 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AD	K0157013	3X2-2CPSB01 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 106 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AD	K0167013	1B-2CPSB01 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 106 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-AD	K0177012	1B-2CPSB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 106 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AC	K0187013	3B-9-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3B-9-2ISCB02 CONTACT T2 CLOSED	
22-23-AD	K0207013	3-1-2CPSB01 CONTACT R2 FAILS CLOSED	PERIODIC TEST	3-1-2CPSB01 MANUAL INIT CONTACT R2 CLOSED	
22-23-E	K0237013	2CPS*SOV 105 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 105 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AF	K0247013	3X3-2CPSA01 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 105 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AF	K0257013	3X3-2CPSA01 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 105 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AF	K0267013	1C-2CPSA01 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 105 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AF	K0277012	1C-2CPSA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 105 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AE	K0287013	3A-9-2ISCA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3A-9-2ISCA02 CONTACT T3 CLOSED	
22-23-AF	K0307013	3-1-2CPSA01 CONTACT R3 FAILS CLOSED	PERIODIC TEST	3-1-2CPSA01 MANUAL INIT CONTACT R3 CLOSED	
22-23-E	K0337013	2CPS*SOV 107 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 107 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AJ	K0347013	3X3-2CPSB01 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 107 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-AJ	K0357013	3X3-2CPSB01 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 107 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AJ	K0367013	1C-2CPSB01 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 107 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AJ	K0377012	1C-2CPSB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 107 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AH	K0387013	3B-9-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3B-9-2ISCB02 CONTACT T3 CLOSED	
22-23-AJ	K0407013	3-1-2CPSB01 CONTACT R3 FAILS CLOSED	PERIODIC TEST	3-1-2CPSB01 MANUAL INIT CONTACT R3 CLOSED	
22-23-H	K0427023	3-2-2CPSA01 CONTACT R3 FAILS CLOSED	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R3 FAILS CLOSED	
22-23-U	K0437023	2CPS*SOV 120 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 120 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AL	K0447023	3-2CPSA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3-2CPSA02 LOCA OVERRIDE CONTACT T3 CLOSED	
22-23-X	K0467023	3A-10-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3A-10-2ISCA02 CONTACT T2 CLOSED	
22-23-X	K0487023	3X3-2CPSA02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 120 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-X	K0497023	3X3-2CPSA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 120 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-X	K0507023	1C-2CPSA02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 120 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-X	K0517022	1C-2CPSA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 120 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
PRIMARY CONTAINMENT PURGE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-G	K0647023	3-2-2CPSA01 CONTACT R4 FAILS CLOSED	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-D	K0657023	2CPS*SOV 119 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 119 CONTAINMENT ISOLATION VALVE OPEN	
22-23-G	K0667023	3-2CPSA02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3-2CPSA02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-H	K0687023	3A-10-2ISCA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3A-10-2ISCA02 CONTACT T3 CLOSED	
22-23-H	K0707023	3X4-2CPSA02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 119 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-H	K0717023	3X4-2CPSA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 119 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-H	K0727023	1D-2CPSA02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 119 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-H	K0737022	1D-2CPSA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 119 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-N	K0977023	3-2-2CPSA01 CONTACT R1 FAILS CLOSED	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R1 FAILS CLOSED	
22-23-C	K0987023	2CPS*SOV 110 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 110 CONTAINMENT ISOLATION VALVE OPEN	
22-23-N	K0997023	3-2CPSA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3-2CPSA02 LOCA OVERRIDE CONTACT T1 CLOSED	
22-23-P	K1017023	3A-9-2ISCA02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3A-9-2ISCA02 CONTACT T4 CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
PRIMARY CONTAINMENT PURGE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-P	K1037023	3X1-2CPSA02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 110 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-P	K1047023	3X1-2CPSA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 110 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-P	K1057023	1C-2CPSA02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 110 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-P	K1067022	1C-2CPSA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 110 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-S	K1197023	3-2-2CPSA01 CONTACT R2 FAILS CLOSED	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R2 FAILS CLOSED	
22-23-B	K1207023	2CPS*SOV 111 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 111 CONTAINMENT ISOLATION VALVE OPEN	
22-23-S	K1217023	3-2CPSA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3-2CPSA02 LOCA OVERRIDE CONTACT T2 CLOSED	
22-23-T	K1237023	3A-10-2ISCA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3A-10-2ISCA02 CONTACT T1 CLOSED	
22-23-T	K1257023	3X2-2CPSA02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 111 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-T	K1267023	3X2-2CPSA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 111 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-T	K1277023	1B-2CPSA02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 111 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-T	K1287022	1B-2CPSA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 111 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-AL	K1417022	3-2CPSA02 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	3-2CPSA02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-AL	K1427021	1AA-2CPSA02 CONTACT 2T FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	3-2CPSA02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-AL	K1437021	1AA-2CPSA02 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	3-2CPSA02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-Y	K0537033	3-2-2CPSB01 CONTACT R3 FAILS CLOSED	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R3 FAILS CLOSED	
22-23-V	K0547033	2CPS*SOV 122 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 122 CONTAINMENT ISOLATION VALVE OPEN	
22-23-AM	K0557033	3-2CPSB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3-2CPSB02 LOCA OVERRIDE CONTACT T3 CLOSED	
22-23-Z	K0577033	3B-10-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3B-10-2ISCB02 CONTACT T2 CLOSED	
22-23-Z	K0597033	3X3-2CPSB02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 122 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-Z	K0607033	3X3-2CPSB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 122 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-Z	K0617033	1C-2CPSB02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 122 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-Z	K0627032	1C-2CPSB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 122 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-J	K0757033	3-2-2CPSB01 CONTACT R4 FAILS CLOSED	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-D	K0767033	2CPS*SOV 121 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 121 CONTAINMENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-J	K0777033	3-2CPSB02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3-2CPSB02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-K	K0797033	3B-10-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	3B-10-2ISCB02 CONTACT T3 CLOSED	
22-23-K	K0817033	3X4-2CPSB02 SEAL-IN CONTACT T4 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 121 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-K	K0827033	3X4-2CPSB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 121 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-K	K0837033	1D-2CPSB02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 121 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-K	K0847032	1D-2CPSB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 121 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-L	K0867033	3-2-2CPSB01 CONTACT R1 FAILS CLOSED	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R1 FAILS CLOSED	
22-23-C	K0877033	2CPS*SOV 108 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 108 CONTAINMENT ISOLATION VALVE OPEN	
22-23-L	K0887033	3-2CPSB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3-2CPSB02 LOCA OVERRIDE CONTACT T1 CLOSED	
22-23-M	K0907033	3B-9-2ISCB02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3B-9-2ISCB02 CONTACT T4 CLOSED	
22-23-M	K0927033	3X1-2CPSB02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 108 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-M	K0937033	3X1-2CPSB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 108 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-N	K0947033	1A-2CPSB02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 108 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-N	K0957032	1A-2CPSB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 108 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-Q	K1087033	3-2-2CPSB01 CONTACT R2 FAILS CLOSED	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R2 FAILS CLOSED	
22-23-B	K1097033	2CPS*SOV 109 ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*AOV 109 CONTAINMENT ISOLATION VALVE OPEN	
22-23-Q	K1107033	3-2CPSB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3-2CPSB02 LOCA OVERRIDE CONTACT T2 CLOSED	
22-23-R	K1127033	3B-10-2ISCB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	3B-10-2ISCB02 CONTACT T1 CLOSED	
22-23-R	K1147033	3X2-2CPSB02 SEAL-IN CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CPS*SOV 109 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-R	K1157033	3X2-2CPSB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CPS*SOV 109 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-R	K1167033	1B-2CPSB02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2CPS*SOV 109 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-R	K1177032	1B-2CPSB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2CPS*SOV 109 CIRCUIT SEAL-IN OR MANUAL CONTACT CLOSED	
22-23-AM	K1447032	3-2CPSB02 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	3-2CPSB02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-AM	K1457031	1AA-2CPSB02 CONTACT 2T FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	3-2CPSB02 LOCA OVERRIDE CONTACT T4 CLOSED	
22-23-AM	K1467031	1AA-2CPSB02 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	3-2CPSB02 LOCA OVERRIDE CONTACT T4 CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-AG	K0027063	3-1-2CPSA01 RELAY FAILS OPEN	PERIODIC TEST	3-1-2CPSA01 MANUAL INIT CONTACT R2 CLOSED	
22-23-AK	K0127063	3-1-2CPSB01 RELAY FAILS OPEN	PERIODIC TEST	3-1-2CPSB01 MANUAL INIT CONTACT R2 CLOSED	
22-23-H	K0457063	3-2-2CPSA01 RELAY FAILS OPEN	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-Y	K0567063	3-2-2CPSB01 RELAY FAILS OPEN	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AG	K1297063	1-2CPSA01 CONTACT B FAILS OPEN	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AG	K1307063	3-1-2CPSA01 CONTACT T1 FAILS OPEN	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AG	K1317061	LOSS OF 2SCH*PNL 01A (GREEN)	ANNUNCIATED IN CONTROL ROOM	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AG	K1327063	2CPSA01 3A FUSE FAILS OPEN	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AG	K1337063	1-2CPSA01 CONTACT A FAILS OPEN	PERIODIC TEST	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AG	K1347062	1-2CPSA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	3-2-2CPSA01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AK	K1357063	1-2CPSB01 CONTACT B FAILS OPEN	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AK	K1367063	3-1-2CPSB01 CONTACT T1 FAILS OPEN	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AK	K1377061	LOSS OF 2SCH*PNL 301B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AK	K1387063	2CPSB01 3A FUSE FAILS OPEN	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
22-23-AK	K1397063	1-2CPSB01 CONTACT A FAILS OPEN	PERIODIC TEST	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	
22-23-AK	K1407062	1-2CPSB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	3-2-2CPSB01 MANUAL INIT CONTACT R4 FAILS CLOSED	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-J	D001DFR3	2DFR*MOV 120 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-H	D034DFR3	2DFR*MOV 121 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-C	D066DFR3	2DFR*MOV 139 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-B	D087DFR3	2DFR*MOV 140 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-J	D0026073	42C-2DFRA15 RELAY FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-J	D0036072	42O-2DFRA15 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-J 23-6-C	D0046071	LOSS OF 2EHS*MCC102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-J	D0056071	2DFRA15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-J	D0066071	2DFRA15 575/115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-L	D0076073	3A-20-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3A-20-2ISCA02 CONTACT T2 CLOSED	
23-6-L	D0086073	42O-2DFRA15 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2DFR*MOV 120 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-L	D0096073	1-2DFRA15 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DFR*MOV 120 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-L 23-6-K	D0106072	1-2DFRA15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-K	D0116073	42O-2DFRA15 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-K	D0126073	33-2DFRA15 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-M	D0136073	TQS-2DFRA15 OVERTORQUE PRESENT	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-M	D0146073	TQS-2DFRA15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-K	D0166073	1-2DFRA15 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-K	D0246073	42C-2DFRA15 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-K	D0256073	3A-20-2ISCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-P	D0266073	49X-2DFRA15 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-L 23-6-K 23-6-V 23-6-D	D0276073	3A-20-2ISCA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-P	D0286071	49X-2DFRA15 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-P	D0306071	49-2DFRA15 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-P	D0316071	49-2DFRA15 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-H	D0356073	42C-2DFRB15 RELAY FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-H	D0366072	42O-2DFRB15 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING FLOOR DRAINS

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-H 23-6-B	D0376071	LOSS OF 2EHS*MCC302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-H	D0386071	2DFRB15 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-H	D0396071	2DFRB15 575/115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-R	D0406073	3B-20-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3B-20-2ISCB02 CONTACT T2 CLOSED	
23-6-R	D0416073	42O-2DFRB15 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2DFR*MOV 121 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-R	D0426073	1-2DFRB15 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DFR*MOV 121 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-R 23-6-Q	D0436072	1-2DFRB15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-Q	D0446073	42O-2DFRB15 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-Q	D0456073	33-2DFRB15 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-S	D0466073	TQS-2DFRB15 OVERTORQUE PRESENT	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-S	D0476073	TQS-2DFRB15 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-Q	D0496073	1-2DFRB15 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-Q	D0576073	42C-2DFRB15 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING FLOOR DRAINS

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-Q	D0586073	3B-20-2ISCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-U	D0596073	49X-2DFRB15 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-U	D0606071	49X-2DFRB15 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-R 23-6-Q 23-6-X 23-6-F	D0616073	3B-20-2ISCB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-U	D0626071	49-2DFRB15 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-U	D0636071	49-2DFRB15 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-C	D0676113	42C-2DFRA16 RELAY FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-C	D0686112	42O-2DFRA16 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-C	D0696111	2DFRA16 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-C	D0706111	2DFRA16 575/115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-V	D0716113	3A-20-2ISCA02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3A-20-2ISCA02 CONTACT T4 CLOSED	
23-6-V	D0726113	42O-2DFRA16 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2DFR*MOV 139 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-V	D0736113	1-2DFRA16 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DFR*MOV 139 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-V 23-6-D	D0746112	1-2DFRA16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-D	D0756113	42O-2DFRA16 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-D	D0766113	33-2DFRA16 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-E	D0776113	TQS-2DFRA16 OVERTORQUE PRESENT	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-E	D0786113	TQS-2DFRA16 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-D	D0816113	42C-2DFRA16 CONTACT [illegible] FAILS [illegible]	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-D	D0826113	3A-20-2ISCA02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-W	D0836113	49X-2DFRA16 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-W	D0846111	49X-2DFRA16 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-W	D0856111	49-2DFRA16 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-W	D0866111	49-2DFRA16 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-B	D0886113	42C-2DFRB16 RELAY FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-B	D0896112	42O-2DFRB16 ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-B	D0906111	2DFRB16 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-B	D0916111	2DFRB16 575/115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING FLOOR DRAINS

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-X	D0926113	3B-20-2ISCB02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3B-20-2ISCB02 CONTACT T2 CLOSED	
23-6-X	D0936113	42O-2DFRB16 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2DFR*MOV 140 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-X	D0946113	1-2DFRB16 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DFR*MOV 140 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
23-6-X 23-6-F	D0956112	1-2DFRB16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-F	D0966113	42O-2DFRB16 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-F	D0976113	33-2DFRB16 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-G	D0986113	TQS-2DFRB16 OVERTORQUE PRESENT	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-G	D0996113	TQS-2DFRB16 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-F	D1006113	3-1-2DFRB18 CONTACT T3 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-F	D1026113	42C-2DFRB16 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-F	D1036113	3B-20-2ISCB02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-Y	D1046113	49X-2DFRB16 CONTACT 7 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-Y	D1056111	49X-2DFRB16 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-Y	D1066111	49-2DFRB16 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-Y	D1076111	49-2DFRB16 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-K	D0157063	3-1-2DFRA18 CONTACT T2 FAILS OPEN	PERIODIC TEST	2DFR*MOV 120 OUTBOARD OUTLET ISOLATION VALVE OPEN	
23-6-N	D0177063	3-1-2DFRA18 RELAY FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-N	D0187063	1-2DFRA18 CONTACT B FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-N	D0197063	3-1-2DFRA18 CONTACT T1 FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-N	D0207061	LOSS OF 2SCM*PNL 101A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-N	D0217063	2DFRA18 FUSE FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-N	D0227063	1-2DFRA18 CONTACT A FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-N	D0237062	1-2DFRA18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-Q	D0487063	3-1-2DFRB18 CONTACT T2 FAILS OPEN	PERIODIC TEST	2DFR*MOV 121 INBOARD OUTLET ISOLATION VALVE OPEN	
23-6-T	D0507063	3-1-2DFRB18 RELAY FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-T	D0517063	1-2DFRB18 CONTACT B FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-T	D0527063	3-1-2DFRB18 CONTACT T1 FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING FLOOR DRAINS

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
23-6-T	D0537061	LOSS OF 2SCM*PNL 301B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-T	D0547063	2DFRB18 FUSE FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-T	D0557063	1-2DFRB18 CONTACT A FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-T	D0567062	1-2DFRB18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	
23-6-D	D0797063	3-1-2DFRA18 CONTACT 'S FAILS OPEN.	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-D	D0807063	1-2DFRA16 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DFR*MOV 139 OUTBOARD INLET ISOLATION VALVE OPEN	
23-6-F	D1017063	1-2DFRB16 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DFR*MOV 140 INBOARD INLET ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING FLOOR DRAINS

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
BYS -A	3001ICA1	2BYS*SHG002A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 125V DC STANDBY BUS 2BYS*SHG002A	
BYS -B	3002ICA1	2EGS*PNL002 BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV III 125V DC STANDBY BUS 2EGS*PNL002	
BYS -B	3003ICA1	2BYS*SHG002B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 125V DC STANDBY BUS 2BYS*SHG002B	
BYS -C	3004ICA1	BATTERY 2BYS*BAT 2A FAILURE	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF BATTERY POWER	
BYS -C	3005ICA1	1B-2BYSA09 BATTERY SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF BATTERY POWER	
BYS -C	3006ICA1	2B-2BYSA09 CHARGER SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -C	3007ICA1	LOSS OF 600V BUS 2EJS*PNL 100A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -C	3008ICA1	2BYS*CHGR 2A2 FAILURE	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -C	3009ICA1	2BYS*CHGR 2A2 FEEDER BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -C	3010ICA1	LOSS OF 600V BUS 2LAC*PNL100A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -C	3011ICA1	2BYS*CHGR 2A1 FAILURE	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -C	3012ICA1	2BYS*CHGR 2A1 FEEDER BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002A LOSS OF POWER THRU BATTERY CHARGERS	
BYS -F	3013ICA1	BATTERY 2BYS*BAT 2B FAILURE	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF BATTERY POWER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
BYS -F	3014ICA1	1B-2BYS B09 BATTERY SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF BATTERY POWER	
BYS -F	3015ICA1	2B-2BYS B09 CHARGER SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -F	3016ICA1	LOSS OF 600V BUS 2EJS*PNL 100B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -F	3017ICA1	2BYS*CHGR 2B2 FAILURE	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -F	3018ICA1	2BYS*CHGR 2B2 FEEDER BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -F	3019ICA1	LOSS OF 600V BUS 2LAC*PNL 100B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -F	3020ICA1	2BYS*CHGR 2B1 FAILURE	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -F	3021ICA1	2BYS*CHGR 2B1 FEEDER BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2BYS*SHG002B LOSS OF POWER THRU BATTERY CHARGER	
BYS -E	3022ICA1	BATTERY 2BYS*BAT 2C FAILURE	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF BATTERY POWER	
BYS -E	3023ICA1	2BYS*BAT 2C BATTERY SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF BATTERY POWER	
BYS -E	3024ICA1	LOSS OF 2EHS*MCC201 (PURPLE)	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF POWER THRU BATTERY CHARGERS	
BYS -E	3025ICA1	2EGS*PNL 002 CHARGER SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF POWER THRU BATTERY CHARGERS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
BYS -E	3026ICA1	2BYS*CHGR 2C2 FAILURE	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF POWER THRU BATTERY CHARGERS	
BYS -E	3027ICA1	2BYS*CHGR 2C2 FEEDER BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF POWER THRU BATTERY CHARGERS	
BYS -E	3028ICA1	2BYS*CHGR 2C1 FAILURE	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF POWER THRU BATTERY CHARGERS	
BYS -E	3029ICA1	2BYS*CHGR 2C1 FEEDER BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*PNL002 LOSS OF POWER THRU BATTERY CHARGERS	
BYS -B	3050ICA1	DIV III 4.16KV SWG FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -B	3051ICA1	DIV III 4.16KV SWG FDR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3030ICH1	4.16KV SWGR 2ENS*SWG101 FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3031ICH1	4.16KV SWGR 2ENS*SWG101 FDR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3032ICH1	UPS 2VBA*UPS 2A FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3033ICH1	UPS 2VBA*UPS2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -H	3034ICH1	600V LOAD CTR 2EJS*US1 FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -H	3035ICH1	600V LOAD CTR 2EJS*US1 FDR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
BYS -D	3036ICN1	125V DC DIST PNL 2BYS*PNL 201A FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3037ICN1	125V DC DIST PNL 2BYS*PNL 201A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3038ICN1	125V DC MCC 2DMS*MCCA FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -D	3039ICN1	125V DC MCC 2DMS*MCCA ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3040ICN1	4.16KV SWGR 2ENS*SWG 103 FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3041ICN1	4.16KV SWGR 2ENS*SWG 103 FDR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3042ICN1	UPS 2VBA*UPS 2B FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3043ICN1	UPS 2VBA*UPS 2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -J	3044ICN1	600V LOAD CTR 2EJS*US3 FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -J	3045ICN1	600V LOAD CTR 2EJS*US3 FDR ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3046ICN1	125V DC DIST PNL 2BYS*PNL201B FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
BYS -G	3047ICN1	125V DC DIST PNL 2BYS*PNL 201B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3048ICN1.	125V DC MCC 2DHS*MCCB FDR BRKR FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
BYS -G	3049ICN1	125V DC MCC 2DHS*MCCB ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-CL	Y306CSL3	ACB 101-7 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CL	Y307CSL3	TD-2CSLN01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ER	Y308CSL3	50G-2CSLN52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CL	Y309CSL3	86-2CSLN01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ER	Y310CSL3	50G-2CSLN52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ER	Y311CSL3	CT 50-5A CKT 2CSLN52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y312CSL3	86-2CSLN01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y313CSL3	TD-2CSLN01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y314CSL3	TD-2CSLN01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y315CSL3	86-2CSLN01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y316CSL3	86-2CSLN01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y317CSL1	35A POSITIVE FUSE CKT 2CSLN01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EQ	Y318CSL1	35A NEGATIVE FUSE CKT 2CSLN01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KJ	Y319CSL3	50-51-2CSLN51 PH 1 ICC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KH	Y320CSL3	50-51-2CSLN51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KJ	Y321CSL3	50-51-2CSLN51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KJ	Y322CSL3	CT 300-5A PH 1 CKT 2CSLN51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KH	Y323CSL3	50-51-2CSLN51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KH	Y324CSL3	CT 300-5A PH 3 CKT 2CSLN51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KJ	Y325CSL3	50-51-2CSLN51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KJ	Y326CSL3	50-51-2CSLN51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KH	Y327CSL3	50-51-2CSLN51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KH	Y328CSL3	50-51-2CSLN51 PH 3 CC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KJ	Y329CSL3	50-51-2CSLN51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KH	Y330CSL3	50-51-2CSLN51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-F	Y010EGP3	LOSS OF EMER DSL ENG GEN DIV I POWER SPLY	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENSxSWG101	
24-9-H	Y616EGP1	LOSS OF EMER DSL ENG GEN DIV II POWER SPLY	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENSxSWG103	
24-9-DB	Y105EJS3	51-2EJSA01 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DB	Y106EJS3	300-5A CT CKT 2EJSA01 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DA	Y107EJS3	300-5A CT CKT 2EJSA01 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DA	Y108EJS3	51-2EJSA01 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CZ	Y116EJS3	51-2EJSA01 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CZ	Y117EJS3	300-5A CT CKT 2EJSA01 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DH	Y119EJS3	51-2EJSA04 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DF	Y120EJS3	51-2EJSA04 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DH	Y124EJS3	51-2EJSA04 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DH	Y125EJS3	300-5A CT CKT 2EJSA04 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DF	Y126EJS3	51-2EJSA04 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DF	Y127EJS3	300-5A CT CKT 2EJSA04 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DG	Y128EJS3	51-2EJSA04 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DG	Y132EJS3	51-2EJSA04 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DG	Y133EJS3	300-5A CT CKT 2EJSA04 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CH	Y213EJS3	TD-2EJSX04 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DU	Y214EJS3	50G-2EJSA06 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CH	Y215EJS3	86-2EJSX04 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DU	Y216EJS3	50G-2EJSA06 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DU	Y217EJS3	CT 50-5A CKT 2EJSA06 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DT	Y218EJS3	86-2EJSX04 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DT	Y219EJS3	TD-2EJSX04 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DT	Y220EJS3	TD-2EJSX04 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DT	Y221EJS3	86-2EJSX04 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DT	Y222EJS3	86-2EJSX04 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DT	Y223EJS1	35A POSITIVE FUSE CKT 2EJSX04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DT	Y224EJS1	35A NEGATIVE FUSE CKT 2EJSX04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CH	Y225EJS3	ACB 101-2 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DX	Y226EJS3	50-51-2EJSA05 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DH	Y227EJS3	50-51-2EJSA05 PH 2 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DV	Y228EJS3	50-51-2EJSA05 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DX	Y229EJS3	50-51-2EJSA05 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DX	Y230EJS3	CT 300-5A PH 1 CKT 2EJSA05 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DX	Y231EJS3	INSTR XFMR PH 1 5-5A CKT 2EJSA08 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DH	Y232EJS3	50-51-2EJSA05 PH 2 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DH	Y233EJS3	CT 300-5A PH 2 CKT 2EJSA05 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DH	Y234EJS3	INSTR XFMR PH 2 5-5A CKT 2EJSA08 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DV	Y235EJS3	50-51-2EJSA05 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DV	Y236EJS3	CT 300-5A PH 3 CKT 2EJSA05 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DV	Y237EJS3	INSTR XFMR PH 3 5-5A CKT 2EJSA08 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DX	Y238EJS3	50-51-2EJSA05 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DX	Y239EJS3	50-51-2EJSA05 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DH	Y240EJS3	50-51-2EJSA05 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DH	Y241EJS3	50-51-2EJSA05 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DV	Y242EJS3	50-51-2EJSA05 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-DV	Y243EJS3	50-51-2EJSA05 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DX	Y244EJS3	50-51-2EJSA05 PH 1 OC SOIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DW	Y245EJS3	50-51-2EJSA05 PH 2 OC SOIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-DV	Y246EJS3	50-51-2EJSA05 PH 3 OC SOIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CQ	Y247EJS3	TD-2EJSX03 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EE	Y248EJS3	50G-2EJSA03 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CQ	Y249EJS3	86-2EJSX03 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EE	Y250EJS3	50G-2EJSA03 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EE	Y251EJS3	CT 50-5A CKT 2EJSA03 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ED	Y252EJS3	86-2EJSX03 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ED	Y253EJS3	TD-2EJSX03 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ED	Y254EJS3	TD-2EJSX03 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ED	Y255EJS3	86-2EJSX03 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ED	Y256EJS3	86-2EJSX03 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-ED	Y257EJS1	35A POSITIVE FUSE CKT 2EJSX03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-ED	Y258EJS1	35A NEGATIVE FUSE CKT 2EJSX03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CQ	Y259EJS3	ACB 101-14 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EH	Y260EJS3	50-51-2EJSA02 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EG	Y261EJS3	50-51-2EJSA02 PH 2 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EF	Y262EJS3	50-51-2EJSA02 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EH	Y263EJS3	50-51-2EJSA02 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EH	Y264EJS3	CT 300-5A PH 1 CKT 2EJSA02 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EH	Y265EJS3	INSTR XFMR PH 1 5-5A CKT 2EJSA07 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EG	Y266EJS3	50-51-2EJSA02 PH 2 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EG	Y267EJS3	CT 300-5A PH 2 CKT 2EJSA02 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EG	Y268EJS3	INSTR XFMR PH 2 5-5A CKT 2EJSA07 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EF	Y269EJS3	50-51-2EJSA02 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EF	Y270EJS3	CT 300-5A PH 3 CKT 2EJSA02 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EF	Y271EJS3	INSTR XFMR PH 3 5-5A CKT 2EJSA07 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EH	Y272EJS3	50-51-2EJSA02 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EH	Y273EJS3	50-51-2EJSA02 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EG	Y274EJS3	50-51-2EJSA02 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EG	Y275EJS3	50-51-2EJSA02 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EF	Y276EJS3	50-51-2EJSA02 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EF	Y277EJS3	50-51-2EJSA02 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EH	Y278EJS3	50-51-2EJSA02 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EG	Y279EJS3	50-51-2EJSA02 PH 2 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EF	Y280EJS3	50-51-2EJSA02 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LX	Y609EJS3	BACKUP PH OC FAULT EXISTS ON XFMR 2EJS*X1A FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LY	Y612EJS3	BACKUP PH OC FAULT EXISTS ON XFMR 2EJS*X1B FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CY	Y712EJS3	51-2EJSB01 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CY	Y713EJS3	300-5A CT CKT 2EJSB01 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CX	Y714EJS3	300-5A CT CKT 2EJSB01 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CX	Y715EJS3	51-2EJSB01 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CH	Y722EJS3	51-2EJSB01 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CH	Y723EJS3	300-5A CT CKT 2EJSB01 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DE	Y726EJS3	51-2EJSB04 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DC	Y727EJS3	51-2EJSB04 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DE	Y731EJS3	51-2EJSB04 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DE	Y732EJS3	300-5A CT CKT 2EJSB04 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DC	Y733EJS3	51-2EJSB04 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DC	Y734EJS3	300-5A CT CKT 2EJSB04 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DD	Y735EJS3	51-2EJSB04 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DD	Y739EJS3	51-2EJSB04 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DD	Y740EJS3	300-5A CT CKT 2EJSB04 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CJ	Y820EJS3	TD-2-2EJSY04 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DP	Y821EJS3	50G-2EJSB06 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CJ	Y822EJS3	86-2EJSY04 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DP	Y823EJS3	50G-2EJSB06 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DP	Y824EJS3	CT 50-5A CKT 2EJSB06 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DN	Y825EJS3	86-2EJSY04 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DN	Y826EJS3	TD-2EJSY04 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DN	Y827EJS3	TD-2EJSY04 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DN	Y828EJS3	86-2EJSY04 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DN	Y829EJS3	86-2EJSY04 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DN	Y830EJS1	35A POSITIVE FUSE CKT 2EJSY04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DN	Y831EJS1	35A NEGATIVE FUSE CKT 2EJSY04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CJ	Y832EJS3	ACB 103-13 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DS	Y833EJS3	50-51-2EJSB05 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DR	Y834EJS3	50-51-2EJSB05 PH 2 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DQ	Y835EJS3	50-51-2EJSB05 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DS	Y836EJS3	50-51-2EJSB05 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DS	Y837EJS3	CT 300-5A PH 1 CKT 2EJSB05 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-DS	Y838EJS3	INSTR XFMR PH 1 5-5A CKT 2EJSB08 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DR	Y839EJS3	50-51-2EJSB05 PH 2 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DR	Y840EJS3	CT 300-5A PH 2 CKT 2EJSB05 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DR	Y841EJS3	INSTR XFMR PH 2 5-5A CKT 2EJSB08 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DQ	Y842EJS3	50-51-2EJSB05 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DQ	Y843EJS3	CT 300-5A PH 3 CKT 2EJSB05 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DQ	Y844EJS3	INSTR XFMR PH 3 5-5A CKT 2EJSB08 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DS	Y845EJS3	50-51-2EJSB05 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DS	Y846EJS3	50-51-2EJSB05 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DR	Y847EJS3	50-51-2EJSB05 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DR	Y849EJS3	50-51-2EJSB05 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DQ	Y850EJS3	50-51-2EJSB05 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DQ	Y851EJS3	50-51-2EJSB05 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DS	Y852EJS3	50-51-2EJSB05 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DR	Y853EJS3	50-51-2EJSB05 PH 2 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DQ	Y854EJS3	50-51-2EJSB05 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CF	Y855EJS3	TD-2EJSY03 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DZ	Y856EJS3	50G-2EJSB03 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CF	Y857EJS3	86-2EJSY03 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DZ	Y858EJS3	50G-2EJSB03 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DZ	Y859EJS3	CT 50-5A CKT 2EJSB03 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DY	Y860EJS3	86-3EJSY03 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DY	Y861EJS3	TD-2EJSX03 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DY	Y862EJS3	TD-2EJSX03 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DY	Y863EJS3	86-2EJSY03 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DY	Y864EJS3	86-2EJSY03 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DY	Y865EJS1	35A POSITIVE FUSE CKT 2EJSY03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-DY	Y866EJS1	35A NEGATIVE FUSE CKT 2EJSY03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CF	Y867EJS3	ACB 103-1 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EC	Y868EJS3	50-51-2EJSB02 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EB	Y869EJS3	50-51-2EJSB02 PH 2 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EA	Y870EJS3	50-51-2EJSB02 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EC	Y871EJS3	50-51-2EJSB02 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EC	Y872EJS3	CT 300-5A PH 1 CKT 2EJSB02 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EC	Y873EJS3	INSTR XFMR PH 1 5-5A CKT 2EJSB07 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EB	Y874EJS3	50-51-2EJSB02 PH 2 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EB	Y875EJS3	CT 300-5A PH 2 CKT 2EJSB02 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EB	Y876EJS3	INSTR XFMR PH 2 5-5A CKT 2EJSB07 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EA	Y877EJS3	50-51-2EJSB02 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EA	Y878EJS3	CT 300-5A PH 3 CKT 2EJSB02 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EA	Y879EJS3	INSTR XFMR PH 3 5-5A CKT 2EJSB07 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EC	Y880EJS3	50-51-2EJSB02 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EC	Y881EJS3	50-51-2EJSB02 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EB	Y882EJS3	50-51-2EJSB02 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EB	Y883EJS3	50-51-2EJSB02 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EA	Y884EJS3	50-51-2EJSB02 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EA	Y885EJS3	50-51-2EJSB02 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EC	Y886EJS3	50-51-2EJSB02 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EB	Y887EJS3	50-51-2EJSB02 PH 2 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EA	Y888EJS3	50-51-2EJSB02 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LT	Z216EJS3	BACKUP PH OC FAULT EXISTS ON XFMR 2EJS*X3A FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LU	Z219EJS3	BACKUP PH OC FAULT EXISTS ON XFMR 2EJS*X3B FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-A	Y001ENS2	ACB 102-4 DIV III BUS SPLY BRKR CLOSED INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	NONE	
24-9-A	Y002ENS2	ACB 102-5 2ENS*SWG102 SPLY BRKR CLOSED INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	NONE	
24-9-G	Y003ENS3	LOSS OF EMER DSL ENG GEN DIV III POWER SPLY	PERIODIC TEST	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-HA	Y004ENS2	2ENS*SWG102 NORM SPLY BRKR ACB 102-4 OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-HA	Y005ENS2	2ENS*SWG102 ALTN SPLY BRKR ACB 102-4 OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-G	Y006ENS2	ACB 102-4 DIV III BUS NORM SPLY BRKR CLOSED INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-G	Y007ENS2	ACB 102-5 DIV III BUS ALTN SPLY BRKR CLOSED INADVERTENTLY	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-HA	Y008ENS3	ACB 102-2 FAILED TO TRIP ON FAULT	PERIODIC TEST	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-HA	Y009ENS3	ACB 102-3 FAILED TO TRIP ON FAULT	PERIODIC TEST	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-E	Y030ENS3	ACB 101-13 MECH FAILURE	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-E	Y042ENS3	ACB 101-10 MECH FAILURE	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-J	Y431ENS3	2ENS*SWG101 ACB 101-13 MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FN	Y448ENS3	27X2-2ENSX04 ENERGIZING CKT ESTABLISHED	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-P	Y450ENS3	2ENS*SWG101 ACB 101-10 MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BU	Y469ENS3	27X1-2ENSX04 ENERGIZING CKT ESTABLISHED	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GK	Y491ENS3	UND FREQUENTLY FAULT EXISTS ON 2ENS*SWG101	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LQ	Y501ENS3	OC FAULT EXISTS ON PH 1 XFMR 2ABS-X1 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GF	Y504ENS3	OC FAULT EXISTS ON PH 2 XFMR 2ABS-X1 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GF	Y508ENS3	OC FAULT EXISTS ON PH 3 XFMR 2ABS-X1 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LG	Y512ENS3	OC FAULT EXISTS ON PH 1 XFMR 2RTX-XSR1A FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FH	Y515ENS3	OC FAULT EXISTS ON PH 2 XFMR 2RTX-XSR1A FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FH	Y519ENS3	OC FAULT EXISTS ON PH 3 XFMR 2RTX-XSR1A FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LF	Y522ENS3	OC FAULT EXIST ON PH 1 ACB 101-11 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LJ	Y524ENS3	OC FAULT EXISTS ON PH 2 ACB 101-11 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LH	Y526ENS3	OC FAULT EXISTS ON PH 3 ACB 101-11 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LP	Y537ENS3	OC FAULT EXISTS ON PH 1 ACB 101-10 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LS	Y539ENS3	OC FAULT EXISTS ON PH 2 ACB 101-10 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LR	Y541ENS3	OC FAULT EXISTS ON PH 3 ACB 101-10 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GH	Y556ENS3	GND OC FAULT EXISTS ON ACB 101-13 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GP	Y563ENS3	GND OC FAULT EXISTS ON ACB 101-10 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GU 24-9-GV	Y585ENS2	GND OC FAULT EXISTS ON TER L XFMR ABS-X1	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER 4160V AC SYS (2 OF 3 BUSSES)	SINGLE FAILURE (NOT REQD TO BE SINGLE FAILURE PROOF AS PER GDC 17)
24-9-LZ	Y594ENS3	71X3-2ENSX04 ENERGIZING CKT OPEN	PERIODIC TEST	71X3-2ENSX04 CONT 7 CLOSED	
24-9-GT	Y600ENS1	GND OC FAULT EXISTS ON TER L XFMR 2RTX-XSR1A	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GX	Y604ENS1	BACKUP GND OC FAULT EXISTS ON 2NNS-SWG014	ANNUNCIATED IN CONTROL ROOM	62-2ENSX03 CONT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-D	Y636ENS3	ACB 103-4 MECH FAILURE	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-D	Y640ENS3	ACB 103-2 MECH FAILURE	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-K	Z039ENS3	2ENS*SWG103 ACB 103-4 MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-K	Z041ENS3	52TC-2ENSY10 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BC	Z057ENS3	27X2-2ENSY04 ENERGIZING CKT ESTABLISHED	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BN	Z076ENS3	27X1-2ENSY04 ENERGIZING CKT ESTABLISHED	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CB	Z098ENS1	UND FREQUENCY FAULT EXISTS ON 2ENS*SWG103	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LL	Z108ENS3	OC FAULT EXISTS ON PH 1 XFMR 2RTX-XSR1B FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GC	Z111ENS1	OC FAULT EXISTS ON PH 2 XFMR 2RTX-XSR1B FDR	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GC	Z115ENS1	OC FAULT EXISTS ON PH 3 XFMR 2RTX-XSR1B FDR	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LC	Z118ENS3	OC FAULT EXISTS ON PH 1 XFMR 2RTX-XSR1B FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FQ	Z121ENS3	OC FAULT EXISTS ON PH 2 XFMR 2RTX-XSR1B FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FQ	Z125ENS3	OC FAULT EXISTS ON PH 3 XFMR 2RTX-XSR1B FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LB	Z129ENS3	OC FAULT EXIST ON PH 1 ACB 103-8 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-LE	Z131ENS3	OC FAULT EXISTS ON PH 2 ACB 103-8 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-LD	Z133ENS3	OC FAULT EXISTS ON PH 3 ACB 103-8 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-LK	Z144ENS3	OC FAULT EXISTS ON PH 1 ACB 103-2 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-LN	Z146ENS3	OC FAULT EXISTS ON PH 2 ACB 103-2 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-LH	Z148ENS3	OC FAULT EXISTS ON PH 3 ACB 103-2 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-GL	Z163ENS3	GND OC FAULT EXISTS ON ACB 103-4 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-GN	Z170ENS3	GND OC FAULT EXISTS ON ACB 103-2 FDR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-GR	Z206ENS1	GND OC FAULT EXISTS ON TER L XFMR 2RTX-XSR1B	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-GH	Z211ENS1	BACKUP GND OC FAULT EXISTS ON 2NNS-SNG015	ANNUNCIATED IN CONTROL ROOM	62-2ENSY03 CONT 3 CLOSED	
24-9-N	Z224ENS3	2ENS*SNG103 ACB103-2 MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-E 24-9-F 24-9-J	Z226ENS1	DIV I BUS2ENS*SNG1 FAULTS EXIST	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-D 24-9-H 24-9-K	Z227ENS1	DIV 11 BUS 2ENS*SWG103 FAULTS EXIST	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-G 24-9-HA	Z228ENS1	DIV III BUS 2ENS*SWG102 FAULT EXIST	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV III BUS 2ENS*SWG102	
24-9-FM	Y486NNS3	99-2-2NNSX28 OPTICAL ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BT	Y497NNS3	99-2-2NNSZ28 OPTICAL ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BB	Z093NNS3	99-2-2NNSY28 OPTICAL ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BH	Z104NNS3	99-3-2NNSZ28 OPTICAL ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CH	Y281RHS3	ACB 101-3 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CH	Y282RHS3	RD-2RHSA01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EH	Y283RHS3	50G-2RHSA52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CH	Y284RHS3	86-2RHSA01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EH	Y285RHS3	50G-2RHSA52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EH	Y286RHS3	CT 50-5A CKT 2RHSA52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EL	Y287RHS3	86-2RHSA01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EL	Y288RHS3	TD-2RHSA01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EL	Y289RHS3	TD-2RHSA01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EL	Y290RHS3	86-2RHSA01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EL	Y291RHS3	86-2RHSA01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EL	Y292RHS1	35A POSITIVE FUSE CKT 2RHSA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EL	Y293RHS1	35A NEGATIVE FUSE CKT 2RHSA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KE	Y294RHS3	50-51-2RHSA51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KD	Y295RHS3	50-51-2RHSA51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KE	Y296RHS3	50-51-2RHSA51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KE	Y297RHS3	CT 300-5A PH 1 CKT 2RHSA51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KD	Y298RHS3	50-51-2RHSA51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KD	Y299RHS3	CT 300-5A PH 3 CKT 2RHSA51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KE	Y300RHS3	50-51-2RHSA51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KE	Y301RHS3	50-51-2RHSA51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KD	Y302RHS3	50-51-2RHSA51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KD	Y303RHS3	50-51-2RHSA51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KE	Y304RHS3	50-51-2RHSA51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KD	Y305RHS3	50-51-2RHSA51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CK	Y889RHS3	ACB 103-12 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CK	Y890RHS3	TD-2RHSB01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EK	Y891RHS3	50G-2RHSB52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CK	Y892RHS3	86-2RHSB01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EK	Y893RHS3	50G-2RHSB52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EK	Y894RHS3	CT 50-5A CKT 2RHSB52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EJ	Y895RHS3	86-2RHSB01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EJ	Y896RHS3	TD-2RHSB01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EJ	Y897RHS3	TD-2RHSB01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-EJ	Y898RHS3	86-2RHSB01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-EJ	Y899RHS3	86-2RHSB01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-EJ	Y900RHS1	35A POSITIVE FUSE CKT 2RHSB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-EJ	Y901RHS1	35A NEGATIVE FUSE CKT 2RHSB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KC	Y902RHS3	50-51-2RHSB51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KB	Y903RHS3	50-51-2RHSB51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KC	Y904RHS3	50-51-2RHSB51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KC	Y905RHS3	CT-300-5A PH 1 CKT 2RHSB51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KB	Y906RHS3	50-51-2RHSB51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KB	Y907RHS3	CT-300-5A PH 3 CKT 2RHSB51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KC	Y908RHS3	50-51-2RHSB51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-KC	Y909RHS3	50-51-2RHSB51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KB	Y910RHS3	50-51-2RHSB51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KB	Y911RHS3	50-51-2RHSB51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KC	Y912RHS3	50-51-2RHSB51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KB	Y913RHS3	50-51-2RHSB51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CF	Y914RHS3	ACB 103-5 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CF	Y915RHS3	TD-2RHSC01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EP	Y916RHS3	50G-2RHSC52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CF	Y917RHS3	86-2RHSC01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EP	Y918RHS3	50G-2RHSC52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EP	Y919RHS3	CT 50-5A CKT 2RHSC52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EN	Y920RHS3	86-2RHSC01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EN	Y921RHS3	TD-2RHSC01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-EN	Y922RHS3	TD-2RHSC01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EN	Y923RHS3	86-2RHSC01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EN	Y924RHS3	86-2RHSC01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EN	Y925RHS1	35A POSITIVE FUSE CKT 2RHSC01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EN	Y926RHS1	35A NEGATIVE FUSE CKT 2RHSC01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KG	Y927RHS3	50-51-2RHSC51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KF	Y928RHS3	50-51-2RHSC51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KG	Y929RHS3	50-51-2RHSC51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KG	Y930RHS3	CT 300-5A PH 1 CKT 2RHSC51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KF	Y931RHS3	50-51-2RHSC51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KF	Y932RHS3	CT 300-5A PH 3 CKT 2RHSC51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KG	Y933RHS3	50-51-2RHSC51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KG	Y934RHS3	50-51-2RHSC51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KF	Y935RHS3	50-51-2RHSC51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KF	Y936RHS3	50-51-2RHSC51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KG	Y937RHS3	50-51-2RHSC51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KF	Y938RHS3	50-51-2RHSC51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CN	Y331SFC3	ACB 101-5 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CN	Y332SFC3	TD-2SFCA01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EV	Y333SFC3	50G-2SFCA52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CN	Y334SFC3	86-2SFCA01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EV	Y335SFC3	50G-2SFCA52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EV	Y336SFC3	CT 50-5A CKT 2SFCA52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EU	Y337SFC3	86-2SFCA01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EU	Y338SFC3	TD-2SFCA01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EU	Y339SFC3	TD-2SFCA01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EU	Y340SFC3	86-2SFCA01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EU	Y341SFC3	86-2SFCA01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EU	Y342SFC3	35A POSITIVE FUSE CKT 2SFCA01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EU	Y343SFC3	35A NEGATIVE FUSE CKT 2SFCA01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y344SFC3	50-51-2SFCA51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y345SFC3	50-51-2SFCA51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y346SFC3	50-51-2SFCA51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y347SFC3	CT 300-5A PH 1 CKT 2SFCA51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y348SFC3	50-51-2SFCA51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y349SFC3	CT 300-5A PH 3 CKT 2SFCA51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y350SFC3	50-51-2SFCA51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y351SFC3	50-51-2SFCA51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y352SFC3	50-51-2SFCA51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y353SFC3	50-51-2SFCA51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KN	Y354SFC3	50-51-2SFCA51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-KN	Y355SFC3	50-51-2SFCA51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CE	Y939SFC3	ACB 103-10 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CE	Y940SFC3	TD-2SFCB01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ET	Y941SFC3	50G-2SFCB52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CE	Y942SFC3	86-2SFCB01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ET	Y943SFC3	50G-2SFCB52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ET	Y944SFC3	CT 50-5A CKT 2SFCB52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ES	Y945SFC3	86-2SFCB01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ES	Y946SFC3	TD-2SFCB01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ES	Y947SFC3	TD-2SFCB01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ES	Y948SFC3	86-2SFCB01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ES	Y949SFC3	86-2SFCB01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-ES	Y950SFC3	35A POSITIVE FUSE CKT 2SFCB01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-ES	Y951SFC3	35A NEGATIVE FUSE CKT 2SFCB01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KL	Y952SFC3	50-51-2SFCB51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KK	Y953SFC3	50-51-2SFCB51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KL	Y954SFC3	50-51-2SFCB51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KL	Y955SFC3	CT 300-5A PH 1 CKT 2SFCB51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KK	Y956SFC3	50-51-2SFCB51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KK	Y957SFC3	CT 300-5A PH 3 CKT 2SFCB51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KL	Y958SFC3	50-51-2SFCB51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KL	Y959SFC3	50-51-2SFCB51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KK	Y960SFC3	50-51-2SFCB51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KK	Y961SFC3	50-51-2SFCB51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KL	Y962SFC3	50-51-2SFCB51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KK	Y963SFC3	50-51-2SFCB51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FA	Y000SWP3	35A POSITIVE FUSE CKT 2SWPD01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CP	Y356SWP3	ACB 101-4 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CP	Y357SWP3	TD-2-2SWPA01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EZ	Y358SWP3	50G-2SWPA52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-CP	Y359SWP3	86-2SWPA01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EZ	Y360SWP3	50G-2SWPA52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EZ	Y361SWP3	CT 50-5A CKT 2SWPA52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EY	Y362SWP3	86-2SWPA01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EY	Y363SWP3	TD-2SWPA01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EY	Y364SWP3	TD-2SFCA01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-EY	Y365SWP3	86-2SWPA01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EY	Y366SNP3	86-2SNPA01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EY	Y367SNP3	35A POSITIVE FUSE CKT 2SNPA01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-EY	Y368SNP3	35A NEGATIVE FUSE CKT 2SNPA01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KS	Y369SNP3	50-51-2SNPA51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KR	Y370SNP3	50-51-2SNPA51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KS	Y371SNP3	50-51-2SNPA51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KS	Y372SNP3	CT 300-5A PH 1 CKT 2SNPA51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KR	Y373SNP3	50-51-2SNPA51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KR	Y374SNP3	CT 300-5A PH 3 CKT 2SNPA51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KS	Y375SNP3	50-51-2SNPA51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KS	Y376SNP3	50-51-2SNPA51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KR	Y377SNP3	50-51-2SNPA51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KR	Y378SNP3	50-51-2SNPA51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KS	Y379SNP3	50-51-2SNPA51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KR	Y380SNP3	50-51-2SNPA51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CL	Y381SNP3	ACB 101-6 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CL	Y382SNP3	TD-2-2SNPC01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FD	Y383SNP3	50G-2SNPC52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CL	Y384SNP3	86-2SNPC01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FD	Y385SNP3	50G-2SNPC52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FD	Y386SNP3	CT 300-5A CKT 2SNPC52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FC	Y387SNP3	86-2SNPC01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FC	Y388SNP3	TD-2SNPC01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FC	Y389SNP3	TD-2SNPC01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FC	Y390SNP3	86-2SNPC01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FC	Y391SNP3	86-2SNPC01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FC	Y392SNP3	35A POSITIVE FUSE CKT 2SNPC01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FC	Y393SNP3	35A NEGATIVE FUSE CKT 2SNPC01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y394SNP3	50-51-2SNPC51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KV	Y395SNP3	50-51-2SNPC51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y396SNP3	50-51-2SNPC51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y397SNP3	CT 300-5A PH 1 CKT 2SNPC51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KV	Y398SNP3	50-51-2SNPC51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KV	Y399SNP3	CT 300-5A PH 3 CKT 2SNPC51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y400SNP3	50-51-2SNPC51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KN	Y401SNP3	50-51-2SNPC51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KV	Y402SNP3	50-51-2SNPC51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KV	Y403SNP3	50-51-2SNPC51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KN	Y404SNP3	50-51-2SNPC51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KV	Y405SNP3	50-51-2SNPC51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CR	Y406SNP3	ACB 101-8 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CR	Y407SNP3	TD-2SNPE01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FH	Y408SNP3	50G-2SNPE52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CR	Y409SNP3	86-2SNPE01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FH	Y410SNP3	50G-2SNPE52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FH	Y411SNP3	CT 300-5A CKT 2SNPE52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FG	Y412SNP3	86-2SNPE01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FG	Y413SNP3	TD-2SNPE01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FG	Y414SNP3	TD-2SNPE01 CONT 17-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FG	Y415SNP3	86-2SNPE01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FG	Y416SNP3	86-2SNPE01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FG	Y417SNP3	35A POSITIVE FUSE CKT 2SNPE01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FG	Y418SNP3	35A NEGATIVE FUSE CKT 2SNPE01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-LA	Y419SNP3	50-51-2SNPE51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KZ	Y420SNP3	50-51-2SNPE51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-LA	Y421SNP3	50-51-2SNPE51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-LA	Y422SNP3	CT 300-5A PH 1 CKT 2SNPE51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KZ	Y423SNP3	50-51-2SNPE51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KZ	Y424SNP3	CT 300-5A PH 3 CKT 2SNPE51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-LA	Y425SNP3	50-51-2SNPE51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-LA	Y426SNP3	50-51-2SNPE51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KZ	Y427SNP3	50-51-2SNPE51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KZ	Y428SNP3	50-51-2SNPE51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LA	Y429SNP3	50-51-2SNPE51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-KZ	Y430SNP3	50-51-2SNPE51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CE	Y964SNP3	ACB 103-11 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CE	Y965SNP3	TD-2-2SNPB01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EX	Y966SNP3	50G-2SNPB52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CE	Y967SNP3	86-2SNPB01 CONT 1C1 FAILED TO ENERGIZE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EX	Y968SNP3	50G-2SNPB52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EX	Y969SNP3	CT 50-5A CKT 2SNPB52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EH	Y970SNP3	86-2SNPB01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EH	Y971SNP3	TD-2SNPB01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EH	Y972SNP3	TD-2SNPB01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EH	Y973SNP3	86-2SNPB01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EH	Y974SNP3	86-2SNPB01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-EH	Y975SNP3	35A POSITIVE FUSE CKT 2SNPB01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-EH	Y976SNP3	35A NEGATIVE FUSE CKT 2SNPB01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KQ	Y977SNP3	50-51-2SNPB51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KP	Y978SNP3	50-51-2SNPB51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KQ	Y979SNP3	50-51-2SNPB51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KQ	Y980SNP3	CT 300-5A PH 1 CKT 2SNPB51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KP	Y981SNP3	50-51-2SNPB51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KP	Y982SNP3	CT 300-5A PH 3 CKT 2SNPB51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KQ	Y983SNP3	50-51-2SNPB51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KQ	Y984SNP3	50-51-2SNPB51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KP	Y985SNP3	50-51-2SNPB51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KP	Y986SNP3	50-51-2SNPB51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KQ	Y987SNP3	50-51-2SNPB51 PH 1 CC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-KP	Y988SNP3	50-51-2SNPB51 PH 3 CC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CG	Y989SNP3	ACB 103-9 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CG	Y990SNP3	TD-2-2SNPD01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FB	Y991SNP3	50G-2SNPD52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CG	Y992SNP3	86-2SNPD01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FB	Y993SNP3	50G-2SNPD52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FB	Y994SNP3	CT 300-5A CKT 2SNPD52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FA	Y995SNP3	86-2SNPD01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FA	Y996SNP3	TD-2SNPD01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FA	Y997SNP3	TD-2SNPD01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FA	Y998SNP3	86-2SNPD01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FA	Y999SNP3	86-2SNPD01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FA	Z001SNP3	35A NEGATIVE FUSE CKT 2SNPD01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KU	Z002SNP3	50-51-2SNPD51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KT	Z003SNP3	50-51-2SNPD51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KU	Z004SNP3	50-51-2SNPD51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KU	Z005SNP3	CT 300-5A PH 1 CKT 2SNPD51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KT	Z006SNP3	50-51-2SNPD51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KT	Z007SNP3	CT 300-5A PH 3 CKT 2SNPD51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KU	Z008SNP3	50-51-2SNPD51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KU	Z009SNP3	50-51-2SNPD51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KT	Z010SNP3	50-51-2SNPD51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KT	Z011SNP3	50-51-2SNPD51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	
24-9-KU	Z012SNP3	50-51-2SNPD51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNS103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KT	Z013SWP3	50-51-2SWPD51 PH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CH	Z014SWP3	ACB 103-7 FAILED CLOSE MECH FAILURE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CH	Z015SWP3	TD-2SWPF01 CONT 2-A FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FF	Z016SWP3	50G-2SWPF52 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-CH	Z017SWP3	86-2SWPF01 CONT 1C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FF	Z018SWP3	50G-2SWPF52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FF	Z019SWP3	CT 300-5A CKT 2SWPF52 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FE	Z020SWP3	86-2SWPF01 COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FE	Z021SWP3	TD-2SWPF01 CONT 20-J FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FE	Z022SWP3	TD-2SWPF01 CONT 17-I FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FE	Z023SWP3	86-2SWPF01 CONT 8 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FE	Z024SWP3	86-2SWPF01 CONT 7 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-FE	Z025SWP3	35A POSITIVE FUSE CKT 2SWPF01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FE	Z026SWP3	35A NEGATIVE FUSE CKT 2SWPF01 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KY	Z027SWP3	50-51-2SWPF51 PH 1 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KX	Z028SWP3	50-51-2SWPF51 PH 3 IOC CONT 50 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KY	Z029SWP3	50-51-2SWPF51 PH 1 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KY	Z030SWP3	CT 300-5A PH 1 CKT 2SWPF51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KX	Z031SWP3	50-51-2SWPF51 PH 3 IOC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KX	Z032SWP3	CT 300-5A PH 3 CKT 2SWPF51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KY	Z033SWP3	50-51-2SWPF51 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KY	Z034SWP3	50-51-2SWPF51 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KX	Z035SWP3	50-51-2SWPF51 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KX	Z036SWP3	50-51-2SWPF51 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-KY	Z037SWP3	50-51-2SWPF51 PH 1 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-KX	Z038SNP3	50-51-2SNPF51 FH 3 OC COIL FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-C	Y0275023	1-2ENSX12 CONT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-C	Y0285023	1-2ENSX12 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-C	Y6335033	1-2ENSY12 CONT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-C	Y6345033	1-2ENSY12 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CC	Y0195053	25B-2SYDA01 CONT 5 FAILED CLOSE	PERIODIC TEST	25B-2SYDA01 CONT 5 CLOSED	
24-9-CC 24-9-AD	Y0205053	25B-2SYDA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CC	Y0215053	1-2ENSX11 CONT 1 FAILED CLOSE	PERIODIC TEST	1-2ENSX11 CONT 1 CLOSED	
24-9-CC	Y0225053	1-2ENSX11 OPERATOR ERROR	PERIODIC TEST	1-2ENSX11 CONT 1 CLOSED	
24-9-CC	Y0235053	25B-2SYDA02 CONT 5 FAILED CLOSE	PERIODIC TEST	25B-2SYDA02 CONT 5 CLOSED	
24-9-CC 24-9-AD	Y0245053	25B-2SYDA02 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-CC	Y0255053	1B-2ENSX11 CONT 1 FAILED CLOSE	PERIODIC TEST	1B-2ENSX11 CONT 1 CLOSED	
24-9-CC	Y0265053	1B-2ENSX11 OPERATOR ERROR	PERIODIC TEST	1B-2ENSX11 CONT 1 CLOSED	
24-9-E	Y0415053	ACB 101-10 52TC-2ENSX11 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-T	Y0435051	35A POSITIVE FUSE CKT 2ENSX11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-T	Y0445051	35A NEGATIVE FUSE CKT 2ENSX11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNS101	
24-9-L	Y0455053	TD-1-2ENSX11 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-L	Y0465053	TD-3-2ENSX11 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-T	Y0475053	62-2ENSX11 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-T	Y0485053	60AX-2EGPX02 CONT 12 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-U	Y0495053	TD-2-2ENSX11 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-T	Y0505053	62-2ENSX11 CONT 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HR	Y1515053	86A-2ENSX02 CONT 1C FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-U	Y1745053	86B-2ENSX02 CONT 1C FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-L	Y1875053	86C-2ENSX02 CONT 1C FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HS	Y2015053	67-2-2ENSA02 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HS	Y2025053	67-2-2ENSA02 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HT	Y2035053	67-2-2ENSA02 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HS	Y2045053	67-2-2ENSA02 PH 1 CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HU	Y2055053	67-2-2ENSA02 PH 1 CONT IOC FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HT	Y2065053	67-2-2ENSA02 PH 3 CONT IOC FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN	Y2075053	67-2-2ENSA02 PH 3 CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HS	Y2095053	67-2-2ENSA02 PH 2 CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HV	Y2105053	67-2-2ENSA02 PH 2 CONT IOC FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HV	Y2125053	67-2-2ENSA02 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AD	Y4515053	25B-2SYDA02 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-P	Y4525053	52TC-2ENSY11 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-P	Y4535053	52-2ENSX11 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AD	Y4545053	25B-2SYDA01 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BQ	Y4555053	1B-2ENSX11 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BQ 24-9-AD	Y4565053	1B-2ENSX11 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-BQ 24-9-AD	Y4575053	1-2ENSX11 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BQ	Y4585053	1-2ENSX11 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AD	Y4595053	1-2ENSX11 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AD	Y4605053	1B-2ENSX11 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BR	Y4625053	86A-2ENSX02 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BR	Y4635053	86B-2ENSX02 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BV	Y4645053	86C-2ENSX02 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BU	Y4655053	27X1-2ENSX04 CONT 11 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AC	Y4775053	52HL-2ENSX10 BRKR LOCKOUT CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AC	Y4785053	86B-2ENSX01 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AC	Y4795053	86C-2ENSX02 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AE	Y4805053	86A-2ENSX02 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-AC	Y4815053	86A-2ENSX01 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-AF	Y4825053	86B-2ENSX02 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BT	Y4955053	86-2X-2ENSX11 CONT T1 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BR	Y4965053	94-2ENSX13 CONT 11 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BT	Y4985053	86-2X-2ENSX11 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-GG	Y4995053	62-2ENSX11 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSX11 CONT 3 CLOSED	
24-9-LQ	Y5005053	67-2-2ENSA02 CONT D PH 1 FAILED CLOSE	PERIODIC TEST	67-2-2ENSA02 CONT D PH 1 CLOSED	
24-9-LQ	Y5025053	67-2-2ENSA02 CONT IOC PH 1 FAILED CLOSE	PERIODIC TEST	67-2-2ENSA02 CONT IOC PH 1 CLOSED	
24-9-GF	Y5035053	67-2-2ENSA02 CONT D PH 2 FAILED CLOSE	PERIODIC TEST	67-2-2ENSA02 CONT D PH 2 CLOSED	
24-9-GG	Y5055053	62-2ENSX11 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSX11 CONT 3 CLOSED	
24-9-GF	Y5065053	67-2-2ENSA02 CONT IOC PH 2 FAILED CLOSE	PERIODIC TEST	67-2-2ENSA02 CONT IOC PH 2 CLOSED	
24-9-GF	Y5075053	67-2-2ENSA02 CONT D PH 3 FAILED CLOSE	PERIODIC TEST	67-2-2ENSA02 CONT D PH 3 FAILED CLOSE	
24-9-GF	Y5095053	67-2-2ENSA02 CONT IOC PH 3 FAILED CLOSE	PERIODIC TEST	67-2-2ENSA02 CONT IOC PH 3 CLOSED	
24-9-AC	Z2365053	52-2EGPX07 CONT 66 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-CD	Y6255073	25B-2SYDB01 CONT 5 FAILED CLOSE	PERIODIC TEST	25B-2SYDB01 CONT 5 CLOSED	
24-9-CD 24-9-Z	Y6265073	25B-2SYDB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CD	Y6275073	1-2ENSY11 CONT 1 FAILED CLOSE	PERIODIC TEST	1-2ENSY11 CONT 1 CLOSED	
24-9-CD	Y6285073	1-2ENSY11 OPERATOR ERROR	PERIODIC TEST	1-2ENSY11 CONT 1 CLOSED	
24-9-CD	Y6295073	25B-2SYDB02 CONT 5 FAILED CLOSE	PERIODIC TEST	25B-2SYDB02 CONT 5 CLOSED	
24-9-CD 24-9-Z	Y6305073	25B-2SYDB02 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CD	Y6315073	1B-2ENSY11 CONT 1 FAILED CLOSE	PERIODIC TEST	1B-2ENSY11 CONT 1 CLOSED	
24-9-CD	Y6325073	1B-2ENSY11 OPERATOR ERROR	PERIODIC TEST	1B-2ENSY11 CONT 1 CLOSED	
24-9-D	Y6475073	ACB 103-2 52TC-2ENSY11 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-Q	Y6495071	35A POSITIVE FUSE CKT 2ENSY11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-Q	Y6505071	35A NEGATIVE FUSE CKT 2ENSY11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-H	Y6515073	TD-1-2ENSY11 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-H	Y6525073	TD-3-2ENSY11 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-Q	Y6535073	62-2ENSY11 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-Q	Y6545073	60AX-2EGPY02 CONT 12 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y6555073	TD-2-2ENSY11 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-Q	Y6565073	62-2ENSY11 CONT 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HK	Y7585073	86A-2ENSY02 CONT 1C FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-N	Y7935073	86C-2ENSY02 CONT 1C FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HL	Y8085073	67-2-2ENSB02 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HL	Y8095073	67-2-2ENSB02 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN	Y8105073	67-2-2ENSB02 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HL	Y8115073	67-2-2ENSB02 PH 1 CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN	Y8125073	67-2-2ENSB02 PH 1 CONT IOC FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN	Y8135073	67-2-2ENSB02 PH 3 CONT IOC FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HQ	Y8145073	67-2-2ENSB02 PH 3 CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HL	Y8165073	67-2-2ENSB02 PH 2 CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HP	Y8175073	67-2-2ENSB02 PH 2 CONT IOC FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HP	Y8195073	67-2-2ENSB02 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-Z	Z0595073	25B-2SYDB02 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-N	Z0605073	52TC-2ENSY11 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-N	Z0615073	52-2ENSY11 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-Z	Z0625073	25B-2SYDB01 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BJ	Z0635073	1B-2ENSY11 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BJ 24-9-Z	Z0645073	1B-2ENSY11 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BJ 24-9-Z	Z0655073	1-2ENSY11 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BJ	Z0665073	1-2ENSY11 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-Z	Z0675073	1-2ENSY11 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-Z	Z0685073	1B-2ENSY11 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BK	Z0695073	86A-2ENSY02 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BK	Z0705073	86B-2ENSY02 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-BP	Z0715073	86C-2ENSY02 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BN	Z0725073	27X1-2ENSY04 CONT 11 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-Y	Z0845073	52HL-2ENSY10 BRKR LOCKOUT CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-Y	Z0855073	86B-2ENSY01 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-Y	Z0865073	86C-2ENSY02 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-AA	Z0875073	86A-2ENSY02 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-Y	Z0885073	86A-2ENSY01 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-AB	Z0895073	86B-2ENSY02 CONT 8C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BN	Z1025073	86-3X-2ENSY11 CONT T1 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BK	Z1035073	94-2ENSY13 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BN	Z1055073	86-3X-3ENSY11 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GD	Z1065073	62-2ENSY11 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSY11 CONT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LL	Z1075073	67-2-2ENSB02 CONT D PH 1 FAILED CLOSE	PERIODIC TEST	67-2-2ENSB02 CONT D PH 1 CLOSED	
24-9-LL	Z1095073	67-2-2ENSB02 CONT ICC PH 1 FAILED CLOSE	PERIODIC TEST	67-2-2ENSB02 CONT IOC PH 1 CLOSED	
24-9-GC	Z1105073	67-2-2ENSB02 CONT D PH 2 FAILED CLOSE	PERIODIC TEST	67-2-2ENSB02 CONT D PH 2 CLOSED	
24-9-GD	Z1125073	62-2ENSY11 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSY11 CONT 3 CLOSED	
24-9-GC	Z1135073	67-2-2ENSB02 CONT IOC PH 2 FAILED CLOSE	PERIODIC TEST	67-2-2ENSB02 CONT IOC PH 2 CLOSED	
24-9-GC	Z1145073	67-2-2ENSB02 CONT D PH 3 FAILED CLOSE	PERIODIC TEST	67-2-2ENSB02 CONT D PH 3 FAILED CLOSE	
24-9-GC	Z1275073	67-2-2ENSB02 CONT IOC PH 3 FAILED CLOSE	PERIODIC TEST	67-2-2ENSB02 CONT IOC PH 3 CLOSED	
24-9-Y	Z2375073	52-2EGPY07 CONT 66 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENSxSHG103	
24-9-GY	Y0115083	25A-2SYDA01 CONT 5 FAILED CLOSE	PERIODIC TEST	25A-2SYDA01 CONT 5 CLOSED	
24-9-GY 24-9-BF	Y0125083	25A-2SYDA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENSxSHG101	
24-9-GY	Y0135083	1-2ENSX10 CONT 1 FAILED CLOSE	PERIODIC TEST	1-2ENSX10 CONT 1 CLOSED	
24-9-GY	Y0145083	1-2ENSX10 OPERATOR ERROR	PERIODIC TEST	1-2ENSX10 CONT 1 CLOSED	
24-9-GY	Y0155083	25A-2SYDA02 CONT 5 FAILED CLOSE	PERIODIC TEST	25A-2SYDA02 CONT 5 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GY 24-9-BF	Y0165083	25A-2SYDA02 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-GY	Y0175083	1B-2ENSX10 CONT 1 FAILED CLOSE	PERIODIC TEST	1B-2ENSX10 CONT 1 CLOSED	
24-9-GY	Y0185083	1B-2ENSX10 OPERATOR ERROR	PERIODIC TEST	1B-2ENSX10 CONT 1 CLOSED	
24-9-E	Y0295083	ACB 101-13 52TC-2ENSX10 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AM	Y0315081	35A POSITIVE FUSE CKT 2ENSX10 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-AM	Y0325081	35A NEGATIVE FUSE CKT 2ENSX10 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-AM 24-9-T 24-9-JD 24-9-DT 24-9-ED 24-9-EL 24-9-EQ 24-9-EU 24-9-EY 24-9-FC	Y0335081	LOSS OF 125V DC CONTROL PWR DIV I BUS A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-FG	Y0335081	LOSS OF 125V DC CONTROL PWR DIV I BUS A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-AG	Y0345083	TD-1-2ENSX10 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AG	Y0355083	TD-3-2ENSX10 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AM	Y0365083	62-2ENSX10 T COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AM	Y0375083	62-2ENSX10 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-AH	Y0385083	60AX-2EGPX02 CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0395083	TD-2-2ENSX10 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AM	Y0405083	62-2ENSX10 CONT 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HF	Y0515083	66A-2ENSX01 CONT 1C FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0735083	86B-2ENSX01 CONT 1C FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AG	Y0875083	86C-2ENSX01 CONT 1C FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HJ	Y1345083	67-1-2ENSA01 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HH	Y1355083	67-1-2ENSA01 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HJ	Y1365083	67-1-2ENSA01 PH 1 CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HJ	Y1375083	67-1-2ENSA01 PH 1 CONT IOC FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HH	Y1385083	67-1-2ENSA01 PH 2 CONT IOC FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HH	Y1395083	67-1-2ENSA01 PH 2 CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HG	Y1465083	67-1-2ENSA01 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HG	Y1475083	67-1-2ENSA01 PH 3 CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HG	Y1485083	67-1-2ENSA01 PH 3 CONT IOC FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-BF	Y4325083	25A-2SYDA02 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-J	Y4335083	52TC-2ENSX10 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-J	Y4345083	52-2ENSX10 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BF	Y4355083	25A-2SYDA01 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FJ	Y4365083	1B-2ENSX10 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FJ 24-9-BF	Y4375083	1B-2ENSX10 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FJ 24-9-BF	Y4385083	1-2ENSX10 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FJ	Y4395083	1-2ENSX10 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BF	Y4405083	1-2ENSX10 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FK	Y4415083	86A-2ENSX01 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FK	Y4425083	86B-2ENSX01 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FP	Y4435083	86C-2ENSX01 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FN	Y4445083	27X2-2ENSX04 CONT 11 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BF	Y4615083	1B-2ENSX10 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BE	Y4715083	52HL-2ENSX11 BRKR LOCKOUT CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BE	Y4725083	86C-2ENSX01 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BE	Y4735083	86A-2ENSX01 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BG	Y4745083	86A-2ENSX02 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BE	Y4755083	86B-2ENSX01 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-BH	Y4765083	86B-2ENSX02 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FH	Y4835083	86-2X-2ENSX10 CONT T1 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FK	Y4845083	94-2ENSX13 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FH	Y4875083	86-2X-2ENSX10 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-FX	Y5105083	62-2ENSX10 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSX10 CONT 3 CLOSED	
24-9-LG	Y5115083	67-1-2ENSA01 CONT D PH 1 FAILED CLOSE	PERIODIC TEST	67-1-2ENSA01 CONT D PH 1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LG	Y5135083	67-1-2ENSA01 CONT IOC PH 1 FAILED CLOSE	PERIODIC TEST	67-1-2ENSA01 CONT IOC PH 1 CLOSED	
24-9-FH	Y5145083	67-1-2ENSA01 CONT D PH 2 FAILED CLOSE	PERIODIC TEST	67-1-2ENSA01 CONT D PH 2 CLOSED	
24-9-FX	Y5165083	62-2ENSX10 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSX10 CONT 3 CLOSED	
24-9-FH	Y5175083	67-1-2ENSA01 CONT IOC PH 2 FAILED CLOSE	PERIODIC TEST	67-1-2ENSA01 CONT IOC PH 2 CLOSED	
24-9-FH	Y5185083	67-1-2ENSA01 CONT D PH 3 FAILED CLOSE	PERIODIC TEST	67-1-2ENSA01 CONT D PH 3 CLOSED	
24-9-FH	Y5205083	67-1-2ENSA01 CONT IOC PH 3 FAILED CLOSE	PERIODIC TEST	67-1-2ENSA01 CONT IOC PH 3 CLOSED	
24-9-BE	Z2445083	52-2EGPX07 CONT 62 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GZ	Y6175093	25A-2SYDB01 CONT 5 FAILED CLOSE	PERIODIC TEST	25A-2SYDB01 CONT 5 CLOSED	
24-9-GZ 24-9-AH	Y6185093	25A-2SYDB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GZ	Y6195093	1-2ENSY10 CONT 1 FAILED CLOSE	PERIODIC TEST	1-2ENSY10 CONT 1 CLOSED	
24-9-GZ	Y6205093	1-2ENSY10 OPERATOR ERROR	PERIODIC TEST	1-2ENSY10 CONT 1 CLOSED	
24-9-GZ	Y6215093	25A-2SYDB02 CONT 5 FAILED CLOSE	PERIODIC TEST	25A-2SYDB02 CONT 5 CLOSED	
24-9-GZ 24-9-AH	Y6225093	25A-2SYDB02 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GZ	Y6235093	1B-2ENSY10 CONT 1 FAILED CLOSE	PERIODIC TEST	1B-2ENSY10 CONT 1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GZ	Y6245093	1B-2ENSY10 OPERATOR ERROR	PERIODIC TEST	1B-2ENSY10 CONT 1 CLOSED	
24-9-D	Y6355093	ACB 103-4 52TC-2ENSY10 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AJ	Y6375091	35A POSITIVE FUSE CKT 2ENSY10 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AJ	Y6385091	35A NEGATIVE FUSE CKT 2ENSY10 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AJ 24-9-Q 24-9-HY 24-9-JN 24-9-DN 24-9-DY 24-9-EJ 24-9-EN 24-9-ES 24-9-EH	Y6395091	LOSS OF 125V DC CONTROL PWR DIV II BUS B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FA 24-9-FE	Y6395091	LOSS OF 125V DC CONTROL PWR DIV II BUS B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AH	Y6405093	TD-1-2ENSY10 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AH	Y6415093	TD-3-2ENSY10 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AJ	Y6425093	62-2ENSY10 T COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AJ	Y6435093	62-2ENSY10 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AJ	Y6445093	60AX-2EGPY02 CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-AK	Y6455093	TD-2-2ENSY10 CONT 2-A FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AJ	Y6465093	62-2ENSY10 CONT 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HB	Y6575093	86A-2ENSY01 CONT 1C FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AK	Y6805093	86B-2ENSY01 CONT 1C FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AH	Y6945093	86C-2ENSY01 CONT 1C FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HE	Y7415093	67-1-2ENSB01 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HD	Y7425093	67-1-2ENSB01 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HE	Y7435093	67-1-2ENSB01 PH 1 CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HE	Y7445093	67-1-2ENSB01 PH 1 CONT IOC FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HD	Y7455093	67-1-2ENSB01 PH 2 CONT IOC FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HD	Y7465093	67-1-2ENSB01 PH 2 CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HC	Y7535093	67-1-2ENSB01 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HC	Y7545093	67-1-2ENSB01 PH 3 CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HC	Y7555093	67-1-2ENSB01 PH 3 CONT IOC FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AH	Z0405093	25A-2SYDB02 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-K	Z0425093	52-2ENSY10 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AH	Z0435093	25A-2SYDB01 CONT 5 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AU	Z0445093	1B-2ENSY10 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AU 24-9-AH	Z0455093	1B-2ENSY10 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AU 24-9-AH	Z0465093	1-2ENSY10 OPERATOR ERROR	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AU	Z0475093	1-2ENSY10 CONT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AH	Z0485093	1-2ENSY10 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AH	Z0495093	1B-2ENSY10 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AX	Z0505093	86A-2ENSY01 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-AX	Z0515093	86B-2ENSY01 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-BD	Z0525093	86C-2ENSY01 CONT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-BC	Z0535093	27X2-2ENSY04 CONT 11 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-AV	Z0785093	52HL-2ENSY11 BRKR LOCKOUT CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AV	Z0795093	86C-2ENSY01 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AV	Z0805093	86A-2ENSY01 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AY	Z0815093	86A-2ENSX02 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AV	Z0825093	86B-2ENSY01 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AZ	Z0835093	86B-2ENSY02 CONT 7C FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BB	Z0905093	86-2X-2ENSY10 CONT T1 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AX	Z0915093	94-2ENSY13 CONT 11 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-BB	Z0945093	86-2X-2ENSY10 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FR	Z1165093	62-2ENSY10 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSY10 CONT 3 CLOSED	
24-9-LC	Z1175093	67-1-2ENSB01 CONT D PH 1 FAILED CLOSE	PERIODIC TEST	67-1-2ENSB01 CONT D PH 1 CLOSED	
24-9-LC	Z1195093	67-1-2ENSB01 CONT IOC PH 1 FAILED CLOSE	PERIODIC TEST	67-1-2ENSB01 CONT IOC PH 1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FQ	Z1205093	67-1-2ENSB01 CONT D PH 2 FAILED CLOSE	PERIODIC TEST	67-1-2ENSB01 CONT D PH 2 CLOSED	
24-9-FR	Z1225093	62-2ENSY10 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSY10 CONT 3 CLOSED	
24-9-FQ	Z1235093	67-1-2ENSB01 CONT IOC PH 2 FAILED CLOSE	PERIODIC TEST	67-1-2ENSB01 CONT IOC PH 2 CLOSED	
24-9-FQ	Z1245093	67-1-2ENSB01 CONT D PH 3 FAILED CLOSE	PERIODIC TEST	67-1-2ENSB01 CONT D PH 3 CLOSED	
24-9-FQ	Z1265093	67-1-2ENSB01 CONT IOC PH 3 FAILED CLOSE	PERIODIC TEST	67-1-2ENSB01 CONT IOC PH 3 CLOSED	
24-9-AV	Z2355093	52-2EGPY07 CONT 62 FAILED OPEN	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-HF	Y0525113	86A-2ENSX01 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HF	Y0535113	TD-1-2ENSX01 CONT 2-J FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HF	Y0545113	TD-1-2ENSX01 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HF	Y0555113	52-2ENSX10 CONT 56 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JC	Y0565113	51-2ENSA01 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JC	Y0575113	51-2ENSA01 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JC	Y0585113	51-2ENSA01 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-JD	Y0595111	35A POSITIVE FUSE CKT 2ENSX01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JD	Y0605111	35A NEGATIVE FUSE CKT 2ENSX01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JG	Y0615113	51-2ENSA01 PH 1 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JE	Y0625113	51-2ENSA01 PH 2 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JF	Y0635113	51-2ENSA01 PH 3 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JG	Y0705113	51-2ENSA01 PH 1 INS CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JE	Y0715113	51-2ENSA01 PH 2 INS CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JF	Y0725113	51-2ENSA01 PH 3 INS CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0765113	86B-2ENSX01 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0775113	TD-2-2ENSX01 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0785113	TD-2-2ENSX01 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0795113	86B-2ENSX01 CONT 12 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AN	Y0805113	86B-2ENSX01 CONT 11 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-CT	Y0815113	50G-2ENSA04 CONT 10 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CT	Y0825113	67N2-2ENSA09 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CT	Y0835113	62-1-2ENSX01 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CT	Y0845113	62-1-2ENSX01 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JJ	Y0855113	67N2-2ENSA09 GND DIR CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JJ	Y0865113	67N2-2ENSA09 GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AP	Y0895113	86C-2ENSX01 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AP	Y0905113	TD-3-2ENSX01 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AP	Y0915113	TD-3-2ENSX01 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AP	Y0925113	86C-2ENSX01 CONT 12 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AP	Y0935113	86C-2ENSX01 CONT 11 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CV	Y0945113	67N1-2ENSA05 TER L GND OC SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-CV	Y0955113	62-2-2ENSX01 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CV	Y0965113	62-2-2ENSX01 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JL	Y0975113	67N1-2ENSA05 TER L DIR CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JL	Y0985113	67N1-2ENSA05 TER L GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AT	Y0995113	94C-2ENSX03 CONT 19 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AS	Y1185113	94D-2ENSX03 CONT 19 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-FK	Y4455113	86A-2ENSX01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FK	Y4465113	86B-2ENSX01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FP	Y4475113	86C-2ENSX01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LF	Y5215113	51-2ENSA01 CONT 51 PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 OC PH 1 CONT CLOSED	
24-9-LJ	Y5235113	51-2ENSA01 CONT 51 PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 OC PH 2 CONT CLOSED	
24-9-LH	Y5255113	51-2ENSA01 CONT 51 PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 OC PH 3 CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LF	Y5275113	51-2ENSA01 CONT OC SI PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 OC PH 1 CONT CLOSED	
24-9-LF	Y5285113	51-2ENSA01 CONT INS PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 INS PH 1 CONT CLOSED	
24-9-LJ	Y5295113	51-2ENSA01 CONT OC SI PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 OC PH 2 CONT CLOSED	
24-9-LJ	Y5305113	51-2ENSA01 CONT INS PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 INS PH 2 CONT CLOSED	
24-9-LH	Y5315113	51-2ENSA01 CONT OC SI PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 OC PH 3 CONT CLOSED	
24-9-LH	Y5325113	51-2ENSA01 CONT INS PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 INS PH 3 CONT CLOSED	
24-9-LF	Y5335113	51-2ENSA01 CONT INS SI PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 INS PH 1 CONT CLOSED	
24-9-LJ	Y5345113	51-2ENSA01 CONT INS SI PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 INS PH 2 CONT CLOSED	
24-9-LH	Y5355113	51-2ENSA01 CONT INS SI PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSA01 INS PH 3 CONT CLOSED	
24-9-FY	Y5515113	62-2-2ENSX01 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2-2ENSX01 CONT 3 CLOSED	
24-9-GH	Y5525113	67N2-2ENSA09 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-GH	Y5535113	67N2-2ENSA09 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FY	Y5545113	62-2-2ENSX01 ENERGIZED BY SHORT	PERIODIC TEST	62-2-2ENSX01 CONT 3 CLOSED	
24-9-GH	Y5555113	67N2-2ENSA09 DIR GND OC CONT D FAILED CLOSE	PERIODIC TEST	67N2-2ENSA09 DIR OC CONT D CLOSED	
24-9-GH	Y5575113	67N2-2ENSA09 GND OC CONT IOC FAILED CLOSE	PERIODIC TEST	67N2-2ENSA09 GND OC CONT IOC CLOSED	
24-9-FZ	Y5665113	94A-2ENSX03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FZ	Y5675113	94B-2ENSX03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FZ	Y5685113	94C-2ENSX03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GA	Y5695113	94D-2ENSX03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GB	Y5705113	62-2-2ENSX01 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2-2ENSX01 CONT 3 CLOSED	
24-9-FZ	Y5715113	94A-2ENSX03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-FZ	Y5725113	94B-2ENSX03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LX	Y5735113	94C-2ENSX03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LY	Y5745113	94D-2ENSX03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GT	Y5765113	67N1-2ENSA05 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNS101	
24-9-GT	Y5775113	67N1-2ENSA05 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNS101	
24-9-GT	Y6015113	67N1-2ENSA05 CONT IOC FAILED CLOSE	PERIODIC TEST	67N1-2ENSA05 CONT IOC CLOSED	
24-9-LB	Z1355113	51-2ENSB01 CONT INS PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 INS PH 1 CONT CLOSED	
24-9-GT	Z2235113	57N1-2ENSA05 CONT D FAILED CLOSE	PERIODIC TEST	67N1-2ENSA05 CONT D CLOSED	
24-9-HR	Y1525123	86A-2ENSX02 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HR	Y1535123	TD-1-2ENSX02 CONT 2-J FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HR	Y1545123	TD-1-2ENSX02 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HR	Y1555123	52-2ENSX11 CONT 56 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JS	Y1565123	51A-2ENSA02 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JS	Y1575123	51A-2ENSA02 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JS	Y1585123	51A-2ENSA02 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JT	Y1595121	35A POSITIVE FUSE CKT 2ENSX02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-JT	Y1605121	35A NEGATIVE FUSE CKT 2ENSX02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JT	Y1615121	LOSS OF 125V DC CONTROL POWER DIV I BUS B (GREEN)	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JW	Y1625123	51A-2ENSA02 PH 1 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JV	Y1635123	51A-2ENSA02 PH 2 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JU	Y1645123	51A-2ENSA02 PH 3 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JW	Y1715123	51A-2ENSA02 PH 1 INS CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JV	Y1725123	51A-2ENSA02 PH 2 INS CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JU	Y1735123	51A-2ENSA02 PH 3 INS CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-U	Y1765123	86B-2ENSX02 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-U	Y1775123	TD-2-2ENSX02 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-U	Y1785123	TD-2-2ENSX02 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-U	Y1795123	86B-2ENSX02 CONT 12 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-U	Y1805123	86B-2ENSX02 CONT 11 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DK	Y1815123	50G-2ENSA04 CONT 4 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DK	Y1825123	67N4-2ENSA10 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DK	Y1835123	62-1-2ENSX02 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT.	
24-9-DK	Y1845123	62-1-2ENSX02 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JY	Y1855123	67N4-2ENSA10 GND DIR CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JY	Y1865123	67N4-2ENSA10 GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-X	Y1895123	86C-2ENSX02 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-X	Y1905123	TD-3-2ENSX02 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-X	Y1915123	TD-3-2ENSX02 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-X	Y1925123	86C-2ENSX02 CONT 12 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-X	Y1935123	86C-2ENSX02 CONT 11 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-V	Y1945123	94C-2ENSX03 CONT 20 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DH	Y1955123	67N3-2ENSA05 TER L GND OC SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DH	Y1965123	62-2-2ENSX02 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-V	Y1975123	94D-2ENSX03 CONT 20 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DH	Y1985123	62-2-2ENSX02 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-KA	Y1995123	67N3-2ENSA05 TER L DIR CONT D FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-KA	Y2005123	67N3-2ENSA05 TER L GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-BR	Y4665123	86A-2ENSX02 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BR	Y4675123	86B-2ENSX02 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BV	Y4685123	86C-2ENSX02 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LP	Y5365123	51A-2ENSA02 CONT 51 PH 1 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 OC PH 1 CONT CLOSED	
24-9-LS	Y5385123	51A-2ENSA02 CONT 51 PH 2 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 OC PH 2 CONT CLOSED	
24-9-LR	Y5405123	51A-2ENSA02 CONT 51 PH 3 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 OC PH 3 CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LP	Y5425123	51A-2ENSA02 CONT OC SI PH 1 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 OC PH 1 CONT CLOSED	
24-9-LP	Y5435123	51A-2ENSA02 CONT INS PH 1 FAILED OPEN	PERIODIC TEST	51A-2ENSA02 INS PH 1 CONT CLOSED	
24-9-LS	Y5445123	51A-2ENSA02 CONT OC SI PH 2 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 OC PH 2 CONT CLOSED	
24-9-LS	Y5455123	51A-2ENSA02 CONT INS PH 2 FAILED OPEN	PERIODIC TEST	51A-2ENSA02 INS PH 2 CONT CLOSED	
24-9-LR	Y5465123	51A-2ENSA02 CONT OC SI PH 3 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 OC PH 3 CONT CLOSED	
24-9-LR	Y5475123	51A-2ENSA02 CONT INS PH 3 FAILED OPEN	PERIODIC TEST	51A-2ENSA02 INS PH 3 CONT CLOSED	
24-9-LP	Y5485123	51A-2ENSA02 CONT INS SI PH 1 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 INS PH 1 CONT CLOSED	
24-9-LS	Y5495123	51A-2ENSA02 CONT INS SI PH 2 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 INS PH 2 CONT CLOSED	
24-9-LR	Y5505123	51A-2ENSA02 CONT INS SI PH 3 FAILED CLOSE	PERIODIC TEST	51A-2ENSA02 INS PH 3 CONT CLOSED	
24-9-GH	Y5585123	62-1-2ENSX02 CONT 3 FAILED CLOSE	PERIODIC TEST	62-1-2ENSX02 CONT 3 CLOSED	
24-9-GP	Y5595123	67N4-2ENSA10 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	
24-9-GP	Y5605123	67N4-2ENSA10 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SNG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GH	Y5615123	62-1-2ENSX02 ENERGIZED BY SHORT	PERIODIC TEST	62-1-2ENSX02 CONT 3 CLOSED	
24-9-GP	Y5625123	67N4-2ENSA10 DIR GND OC CONT D FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GP	Y5645123	67N4-2ENSA10 GND OC CONT IOC FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GB	Y5755123	62-2-2ENSX01 ENERGIZED BY SHORT	PERIODIC TEST	62-2-2ENSX01 CONT 3 CLOSED	
24-9-BY	Y5785123	94A-2ENSX03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BY	Y5795123	94B-2ENSX03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BY	Y5805123	94C-2ENSX03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BY	Y5815123	94D-2ENSX03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BZ	Y5825123	62-2-2ENSX02 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2-2ENSX02 CONT 3 CLOSED	
24-9-BZ	Y5835123	62-2-2ENSX02 ENERGIZED BY SHORT	PERIODIC TEST	62-2-2ENSX02 CONT 3 CLOSED	
24-9-GV	Y5845123	67N3-2ENSA05 CONT D FAILED CLOSE	PERIODIC TEST	67N3-2ENSA05 CONT D CLOSED	
24-9-GV	Y5865123	67N3-2ENSA05 CONT IOC FAILED CLOSE	PERIODIC TEST	67N3-2ENSA05 CONT IOC CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GV	Y5875123	67N3-2ENSA05 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-GV	Y5885123	67N3-2ENSA05 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-JH	Y7635123	51A-2ENSB02 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y7645123	51A-2ENSB02 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y7655123	51A-2ENSB02 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DJ	Y7875123	50G-2ENSB04 CONT 4 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DB	Y1005133	51-2EJSA01 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DA	Y1015133	51-2EJSA01 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AT	Y1025133	R7-2ENSX03 50SL 100N RESISTOR FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AT	Y1035133	94C-2ENSX03 CONT 3-4 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AT	Y1045133	94C-2ENSX03 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AS	Y1095131	35A POSITIVE FUSE CKT 2ENSX03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-AS	Y1105131	35A NEGATIVE FUSE CKT 2ENSX03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AS	Y1115131	LOSS OF 125V DC CONTROL POWER DIV I BUS B (GREEN)	ANNUNCIATED IN CONTROL ROOM	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DB	Y1125133	51-2EJSA01 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CZ	Y1135133	51-2EJSA01 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CZ	Y1145133	51-2EJSA01 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DA	Y1155133	51-2EJSA01 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AS	Y1215133	94D-2ENSX03 CONT 3-4 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AS	Y1225133	94D-2ENSX03 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AS	Y1235133	R10-2ENSX03 50SL 100W RESISTOR FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DH	Y1295133	51-2EJSA04 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DG	Y1305133	51-2EJSA04 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DF	Y1315133	51-2EJSA04 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HA 24-9-HC 24-9-HA	Y5895131	PHASE OC FAULT EXISTS ON BUS 2NNS-SHS014 FDR	ANNUNCIATED IN CONTROL ROOM	51B-2ENSA02 PH OC CONTACTS CLOSED	
24-9-HA	Y5905133	51B-2ENSA02 PH 2 OC CONT 51 FAILED CLOSE	PERIODIC TEST	51B-2ENSA02 PH 2 OC CONT 51 CLOSED	
24-9-HA	Y5915133	51B-2ENSA02 PH 2 CONT INST FAILED CLOSE	PERIODIC TEST	51B-2ENSA02 PH 2 CONT INST CLOSED	
24-9-LZ	Y5925133	71X3-2ENSX04 CONT 7 FAILED CLOSE	PERIODIC TEST	71X3-2ENSX04 CONT 7 CLOSED	
24-9-HC	Y5955133	51B-2ENSA02 PH 3 OC CONT 51 FAILED CLOSE	PERIODIC TEST	51B-2ENSA02 PH 3 OC CONT 51 CLOSED	
24-9-HC	Y5965133	51B-2ENSA02 PH 3 CONT INST CLOSED	PERIODIC TEST	51B-2ENSA02 PH 3 CONT INST CLOSED	
24-9-HA	Y5975133	51B-2ENSA02 PH 1 OC CONT 51 FAILED CLOSE	PERIODIC TEST	51B-2ENSA02 PH 1 OC CONT 51 CLOSED	
24-9-HA	Y5985133	51B-2ENSA02 PH 1 CONT INST FAILED CLOSE	PERIODIC TEST	51B-2ENSA02 PH 1 CONT INST CLOSED	
24-9-GS	Y5995133	62-2ENSX03 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSX03 CONT 3 CLOSED	
24-9-GS	Y6025133	62-2ENSX03 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSX03 CONT 3 CLOSED	
24-9-GX	Y6035133	50G-2ENSA08 CONT 1 ITH FAILED CLOSE	PERIODIC TEST	50G-2ENSA08 CONT 1 ITH OR ICS CLOSED	
24-9-GX	Y6055133	50G-2ENSA08 CONT 1 ICS FAILED CLOSE	PERIODIC TEST	50G-2ENSA08 CONT 1 ITH OR ICS CLOSED	
24-9-GX	Y6065133	50G-2ENSA08 CONT 2 ITH FAILED CLOSE	PERIODIC TEST	50G-2ENSA08 CONT 2 ITH OR ICS CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GX	Y6075133	50G-2ENSA08 CONT 2 ICS FAILED CLOSE	PERIODIC TEST	50G-2ENSA08 CONT 2 ITH OR ICS CLOSED	
24-9-LX	Y6085133	51-2EJSA01 PH 1 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LX	Y6105133	51-2EJSA01 PH 3 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LY	Y6115133	51-2EJSA04 PH 1 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LY	Y6135133	51-2EJSA04 PH 3 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LX	Y6145133	51-2EJSA01 PH 2 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-LY	Y6155133	51-2EJSA04 PH 2 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-HB	Y6585153	86A-2ENSY01 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HB	Y6595153	TD-1-2ENSY01 CONT 2-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HB	Y6605153	TD-1-2ENSY01 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HB	Y6615153	52-2ENSY10 CONT 56 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HX	Y6635153	51-2ENSB01 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HX	Y6645153	51-2ENSB01 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HX	Y6655153	51-2ENSB01 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HY	Y6665151	35A POSITIVE FUSE CKT 2ENSY01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HY	Y6675151	35A NEGATIVE FUSE CKT 2ENSY01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JB	Y6685153	51-2ENSB01 PH 1 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HZ	Y6695153	51-2ENSB01 PH 2 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JA	Y6705153	51-2ENSB01 PH 3 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JB	Y6775153	51-2ENSB01 PH 1 INS CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HZ	Y6785153	51-2ENSB01 PH 2 INS CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JA	Y6795153	51-2ENSB01 PH 3 INS CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AK	Y6835153	86B-2ENSY01 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AK	Y6845153	TD-2-2ENSY01 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AK	Y6855153	TD-2-2ENSY01 CONT 17-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AK	Y6865153	86B-2ENSY01 CONT 12 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-AK	Y6875153	86B-2ENSY01 CONT 11 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CS	Y6885153	50G-2ENSB04 CONT 10 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CS	Y6895153	67N2-2ENSB09 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CS	Y6905153	62-1-2ENSY01 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CS	Y6915153	62-1-2ENSY01 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y6925153	67N2-2ENSB09 GND DIR CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y6935153	67N2-2ENSB09 GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AL	Y6965153	86C-2ENSY01 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AL	Y6975153	TD-3-2ENSY01 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AL	Y6985153	TD-3-2ENSY01 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AL	Y6995153	86C-2ENSY01 CONT 12 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AL	Y7005153	86C-2ENSY01 CONT 11 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-CU	Y7015153	67N1-2ENSB05 TER L GND OC SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CU	Y7025153	62-2-2ENSY01 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CU	Y7035153	62-2-2ENSY01 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JK	Y7045153	67N1-2ENSB05 TER L DIR CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JK	Y7055153	67N1-2ENSB05 TER L GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AR	Y7065153	94C-2ENSY03 CONT 19 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ 24-9-S	Y7255153	94D-2ENSY03 CONT 19 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ	Y7285153	94D-2ENSY03 CONT 3-4 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ	Y7295153	94D-2ENSY03 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ	Y7305153	R10-2ENSY03 50SL 100H RESISTOR FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AX	Z0545153	86A-2ENSY01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-AX	Z0555153	86B-2ENSY01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-BD	Z0565153	86C-2ENSY01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-LB	Z1285153	51-2ENSB01 CONT 51 PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 OC PH 1 CONT CLOSED	
24-9-LE	Z1305153	51-2ENSB01 CONT 51 PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 OC PH 2 CONT CLOSED	
24-9-LD	Z1325153	51-2ENSB01 CONT 51 PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 OC PH 3 CONT CLOSED	
24-9-LB	Z1345153	51-2ENSB01 CONT OC SI PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 OC PH 1 CONT CLOSED	
24-9-LE	Z1365153	51-2ENSB01 CONT OC SI PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 OC PH 2 CONT CLOSED	
24-9-LE	Z1375153	51-2ENSB01 CONT INS PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 INS PH 2 CONT CLOSED	
24-9-LD	Z1385153	51-2ENSB01 CONT OC SI PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 OC PH 3 CONT CLOSED	
24-9-LD	Z1395153	51-2ENSB01 CONT INS PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 INS PH 3 CONT CLOSED	
24-9-LB	Z1405153	51-2ENSB01 CONT INS SI PH 1 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 INS PH 1 CONT CLOSED	
24-9-LE	Z1415153	51-2ENSB01 CONT INS SI PH 2 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 INS PH 2 CONT CLOSED	
24-9-LD	Z1425153	51-2ENSB01 CONT INS SI PH 3 FAILED CLOSE	PERIODIC TEST	51-2ENSB01 INS PH 3 CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FS	Z1585153	62-2-2ENSY01 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2-2ENSY01 CONT 3 CLOSED	
24-9-GL	Z1595153	67N6-2ENSB09 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-GL	Z1605153	67N6-2ENSB09 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FS	Z1615153	62-2-2ENSY01 ENERGIZED BY SHORT	PERIODIC TEST	62-2-2ENSY01 CONT 3 CLOSED	
24-9-GL	Z1625153	67N6-2ENSB09 DIR GND OC CONT D FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-GL	Z1645153	67N6-2ENSB09 GND OC CONT IOC FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FT	Z1715153	94A-2ENSY03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FT	Z1725153	94B-2ENSY03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FT	Z1735153	94C-2ENSY03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FU	Z1745153	94D-2ENSY03 CONT 19 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-FV	Z1755153	62-2-2ENSY01 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2-2ENSY01 CONT 3 CLOSED	
24-9-FT	Z1765153	94A-2ENSY03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-FT	Z1775153	94B-2ENSY03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-LT	Z1785153	94C-2ENSY03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-LU	Z1795153	94D-2ENSY03 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-FV	Z1805153	62-2-2ENSY01 ENERGIZED BY SHORT	PERIODIC TEST	62-2-2ENSY01 CONT 3 CLOSED	
24-9-GR	Z1815153	67N5-2ENSB05 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-GR	Z1825153	67N5-2ENSB05 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-GR	Z2075153	67N1-2ENSB05 CONT IOC FAILED CLOSE	PERIODIC TEST	67N1-2ENSB05 CONT IOC CLOSED	
24-9-GR	Z2085153	67N1-2ENSB05 CONT D FAILED CLOSE	PERIODIC TEST	67N1-2ENSB05 CONT D CLOSED	
24-9-HK	Y7595163	86A-2ENSY02 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HK	Y7605163	TD-1-2ENSY02 CONT 2-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HK	Y7615163	TD-1-2ENSY02 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HK	Y7625163	52-2ENSY11 CONT 56 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JN	Y7665161	35A POSITIVE FUSE CKT 2ENSY02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-JN	Y7675161	35A-NEGATIVE FUSE CKT 2ENSY02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JR	Y7685163	51A-2ENSB02 PH 1 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JQ	Y7695163	51A-2ENSB02 PH 2 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JP	Y7705163	51A-2ENSB02 PH 3 OC CONT 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JR	Y7775163	51A-2ENSB02 PH 1 INS CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JQ	Y7785163	51A-2ENSB02 PH 2 INS CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JP	Y7795163	51A-2ENSB02 PH 3 INS CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y7025163	86B-2ENSY02 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y7835163	TD-2-2ENSY02 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y7845163	TD-2-2ENSY02 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y7855163	86B-2ENSY02 CONT 12 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y7865163	86B-2ENSY02 CONT 11 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DJ	Y7885163	67N8-2ENSB10 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DJ	Y7895163	62-1-2ENSY02 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DJ	Y7905163	62-1-2ENSY02 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JX	Y7915163	67N8-2ENSB10 GND DIR CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JX	Y7925163	67N8-2ENSB10 GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-W	Y7965163	86C-2ENSY02 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-W	Y7975163	TD-3-2ENSY02 CONT 20-J FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-W	Y7985163	TD-3-2ENSY02 CONT 17-I FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-W	Y7995163	86C-2ENSY02 CONT 12 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-W	Y8005163	86C-2ENSY02 CONT 11 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-S	Y8015163	94C-2ENSY03 CONT 20 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DL	Y8025163	67N3-2ENSB05 TER L GND OC SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DL	Y8035163	62-2-2ENSY02 TIMER CONT 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-S	Y8045163	94D-2ENSY03 CONT 20 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DL	Y8055163	62-2-2ENSY02 TIMER COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JZ	Y8065163	67N3-2ENSB05 TER L DIR CONT D FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JZ	Y8075163	67N3-2ENSB05 TER L GND OC IOC CONT FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-BK	Z0735163	86A-2ENSY02 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BK	Z0745163	86B-2ENSY02 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BP	Z0755163	86C-2ENSY02 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LK	Z1435163	51A-2ENSB02 CONT 51 PH 1 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 OC PH 1 CONT CLOSED	
24-9-LN	Z1455163	51A-2ENSB02 CONT 51 PH 2 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 OC PH 2 CONT CLOSED	
24-9-LH	Z1475163	51A-2ENSB02 CONT 51 PH 3 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 OC PH 3 CONT CLOSED	
24-9-LK	Z1495163	51A-2ENSB02 CONT OC SI PH 1 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 OC PH 1 CONT CLOSED	
24-9-LK	Z1505163	51A-2ENSB02 CONT INS PH 1 FAILED OPEN	PERIODIC TEST	51A-2ENSB02 INS PH 1 CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-LN	Z1515163	51A-2ENSB02 CONT INS SI PH 2 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 OC PH 2 CONT CLOSED	
24-9-LN	Z1525163	51A-2ENSB02 CONT INS PH 2 FAILED OPEN	PERIODIC TEST	51A-2ENSB02 INS PH 2 CONT CLOSED	
24-9-LH	Z1535163	51A-2ENSB02 CONT OC SI PH 3 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 OC PH 3 CONT CLOSED	
24-9-LH	Z1545163	51A-2ENSB02 CONT INS PH 3 FAILED OPEN	PERIODIC TEST	51A-2ENSB02 INS PH 3 CONT CLOSED	
24-9-LK	Z1555163	51A-2ENSB02 CONT INS SI PH 1 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 INS PH 1 CONT CLOSED	
24-9-LN	Z1565163	51A-2ENSB02 CONT INS SI PH 2 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 INS PH 2 CONT CLOSED	
24-9-LH	Z1575163	51A-2ENSB02 CONT INS SI PH 3 FAILED CLOSE	PERIODIC TEST	51A-2ENSB02 INS PH 3 CONT CLOSED	
24-9-GE	Z1655163	62-1-2ENSY02 CONT 3 FAILED CLOSE	PERIODIC TEST	62-1-2ENSY02 CONT 3 CLOSED	
24-9-GN	Z1665163	67N8-2ENSB10 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GN	Z1675163	67N8-2ENSB10 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GE	Z1685163	62-1-2ENSY02 ENERGIZED BY SHORT	PERIODIC TEST	62-1-2ENSY02 CONT 3 CLOSED	
24-9-GN	Z1695163	67N9-2ENSB10 DIR GND OC CONT D FAILED CLOSE	PERIODIC TEST	67N8-2ENSB10 DIR OC CONT D CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-BW	Z1835163	94A-2ENSY03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BW	Z1845163	94B-2ENSY03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BW	Z1855163	94C-2ENSY03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BW	Z1865163	94D-2ENSY03 CONT 20 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-BX	Z1875163	62-2-2ENSY02 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2-2ENSY03 CONT 3 CLOSED	
24-9-BX	Z1885163	62-2-2ENSY02 ENERGIZED BY SHORT	PERIODIC TEST	62-2-2ENSY03 CONT 3 CLOSED	
24-9-GU	Z1895163	67N7-2ENSB05 CONT D FAILED CLOSE	PERIODIC TEST	67N7-2ENSB05 CONT D CLOSED	
24-9-GU	Z1905163	67N7-2ENSB05 CONT IOC FAILED CLOSE	PERIODIC TEST	67N7-2ENSB05 CONT IOC CLOSED	
24-9-GU	Z1915163	67N7-2ENSB05 SI CONT FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GU	Z1925163	67N7-2ENSB05 SI COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GN	Z2255163	67N8-2ENSB10 GND OC CONT IOC FAILED CLOSE	PERIODIC TEST	67N8-2ENSB10 GND OC CONT IOC CLOSED	
24-9-CY	Y7075173	51-2EJSB01 PH 1 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-CX	Y7085173	51-2EJSB01 PH 2 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AR	Y7095173	R7-2ENSY03 50SL 100W RESISTOR FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AR	Y7105173	94C-2ENSY03 CONT 3-4 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AR	Y7115173	94C-2ENSY03 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ	Y7165171	35A POSITIVE FUSE CKT 2ENSY03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ	Y7175171	35A NEGATIVE FUSE CKT 2ENSY03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-AQ	Y7185171	LOSS OF 125V DC CONTROL POWER DIV II BUS B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CY	Y7195173	51-2EJSB01 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CH	Y7205173	51-2EJSB01 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CH	Y7215173	51-2EJSB01 PH 3 OC CONT 51 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CX	Y7245173	51-2EJSB01 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DE	Y7365173	51-2EJSB04 PH 1 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-DD	Y7375173	51-2EJSB04 PH 2 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-DC	Y7385173	51-2EJSB04 PH 3 SI COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-LH 24-9-MB 24-9-LM	Z1935171	PHASE OC FAULT EXISTS ON BUS 2NNS-SNG015 FDR	ANNUNCIATED IN CONTROL ROOM	51B-2ENSB02 PH OC CONTACTS CLOSED	
24-9-LH	Z1945173	51B-2ENSB02 PH 2 OC CONT 51 FAILED CLOSE	PERIODIC TEST	51B-2ENSB02 PH 2 OC CONT 51 CLOSED	
24-9-LH	Z1955173	51B-2ENSB02 PH 2 CONT INST FAILED CLOSE	PERIODIC TEST	51G-2ENSB02 PH 2 CONT INST CLOSED	
24-9-LV	Z1965173	71X3-2ENSY04 CONT 7 FAILED CLOSE	PERIODIC TEST	71X3-2ENSY04 CONT 7 CLOSED	
24-9-LV	Z1905173	71X3-2ENSY04 ENERGIZING CKT OPEN	PERIODIC TEST	71X3-2ENSY04 CONT 7 CLOSED	
24-9-MB	Z2005173	51B-2ENSB02 PH 3 OC CONT 51 FAILED CLOSE	PERIODIC TEST	51B-2ENSB02 PH 3 OC CONT 51 CLOSED	
24-9-MB	Z2025173	51B-2ENSB02 PH 3 CONT INST CLOSED	PERIODIC TEST	51B-2ENSB02 PH 3 CONT INST CLOSED	
24-9-LH	Z2035173	51B-2ENSB02 PH 1 OC CONT 51 FAILED CLOSE	PERIODIC TEST	51B-2ENSB02 PH 1 OC CONT 51 CLOSED	
24-9-LH	Z2045173	51B-2ENSB02 PH 1 CONT INST FAILED CLOSE	PERIODIC TEST	51B-2ENSB02 PH 1 CONT INST CLOSED	
24-9-GQ	Z2055173	62-2ENSY03 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSY03 CONT 3 CLOSED	
24-9-GQ	Z2095173	62-2ENSY03 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSY03 CONT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER- REMARKS
24-9-GN	Z2105173	50G-2ENSB08 CONT 1 ITH FAILED CLOSE	PERIODIC TEST	50G-2ENSB08 CONT 1 ITH OR ICS CLOSED	
24-9-GN	Z2125173	50G-2ENSB08 CONT 1 ICS FAILED CLOSE	PERIODIC TEST	50G-2ENSB08 CONT 1 ITH OR ICS CLOSED	
24-9-GN	Z2135173	50G-2ENSB08 CONT 2 ITH FAILED CLOSE	PERIODIC TEST	50G-2ENSB08 CONT 2 ITH OR ICS CLOSED	
24-9-GN	Z2145173	50G-2ENSB08 CONT 2 ICS FAILED CLOSE	PERIODIC TEST	50G-2ENSB08 CONT 2 ITH OR ICS CLOSED	
24-9-LT	Z2155173	51-2EJSB01 PH 1 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LT	Z2175173	51-2EJSB01 PH 3 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LU	Z2185173	51-2EJSB04 PH 1 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LU	Z2205173	51-2EJSB04 PH 3 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LT	Z2215173	51-2EJSB01 PH 2 CONT 51 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-LU	Z2225173	51-2EJSB04 PH 2 CONT 51 CLOSED	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SWG103	
24-9-GK	Y4855193	81-2ENSA24 MEASURING AND TIMING CKT DEFECTIVE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	
24-9-BR	Y4885193	94-2ENSX13 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SWG101	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-GJ	Y4925193	62-2ENSX13 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSX13 CONT 3 CLOSED	
24-9-GJ	Y4945193	62-2ENSX13 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSX13 CONT 3 CLOSED	
24-9-CB	Z0925203	81-2ENSB24 MEASURING AND TIMING CKT DEFECTIVE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-BK	Z0955203	94-2ENSY13 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-CA	Z0995203	62-2ENSY13 CONT 3 FAILED CLOSE	PERIODIC TEST	62-2ENSY13 CONT 3 CLOSED	
24-9-CA	Z1015203	62-2ENSY13 ENERGIZED BY SHORT	PERIODIC TEST	62-2ENSY13 CONT 3 CLOSED	
24-9-FN	Y4495213	27X2-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-BU	Y4705213	27X1-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENS*SHG101	
24-9-LZ	Y5935213	71X3-2ENSX04 COIL FAILED OPEN	PERIODIC TEST	71X3-2ENSX04 CONT 7 CLOSED	
24-9-BC	Z0585223	27X2-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-BN	Z0775223	27X1-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SHG103	
24-9-LV	Z1975223	71X3-2ENSY04 FAILED OPEN	PERIODIC TEST	71X3-2ENSY04 CONT 7 CLOSED	
24-9-HJ	Y1408013	67-1-2ENSA01 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HJ 24-9-HU	Y1418013	CKT 2ENSA15 PT PH 1 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HH 24-9-HV	Y1428013	CKT 2ENSA15 PT PH 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HH	Y1438013	67-1-2ENSA01 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HU 24-9-HV 24-9-HW	Y1448013	PT SECONDARY FUSE CKT 2ENSA15 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HU 24-9-HV 24-9-HW	Y1458013	PT PRIMARY FUSE CKT 2ENSA15 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HG	Y1498013	67-1-2ENSA01 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HG 24-9-HW	Y1508013	CKT 2ENSA15 PT PH 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HU	Y2088013	67-2-2ENSA02 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HW	Y2118013	67-2-2ENSA02 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-GK	Y4898013	81-2ENSA24 AC INPUT CKT DEFECTIVE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENSxSNG101	
24-9-GK	Y4908013	81-2ENSA24 INPUT XFMR DEFECTIVE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENSxSNG101	
24-9-GK	Y4938013	81-2ENSA24 CONT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV I BUS 2ENSxSNG101	
24-9-HE	Y7478023	67-1-2ENSB01 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-HE 24-9-HN	Y7488023	CKT 2ENSB15 PT PH 1 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HD 24-9-HP	Y7498023	CKT 2ENSB15 PT PH 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HD	Y7508023	67-1-2ENSB01 PH 2 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN 24-9-HP 24-9-HQ	Y7518023	PT SECONDARY FUSE CKT 2ENSA15 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN 24-9-HP 24-9-HQ	Y7528023	PT PRIMARY FUSE CKT 2ENSA15 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HC	Y7568023	67-1-2ENSB01 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HC 24-9-HQ	Y7578023	CKT 2ENSB15 PT PH 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HN	Y8158023	67-2-2ENSB02 PH 1 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HQ	Y8188023	67-2-2ENSB02 PH 3 COIL FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-CB	Z0968023	81-2ENSB24 AC INPUT CKT DEFECTIVE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CB	Z0978023	81-2ENSB24 INPUT XFMR DEFECTIVE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-CB	Z1008023	81-2ENSB24 CONT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF 4160V AC TO DIV II BUS 2ENS*SNG103	
24-9-JG	Y0648033	51-2ENSA01 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-JG	Y0658033	CT 2ENSA01 1500-5A PH 1 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JE	Y0668033	51-2ENSA01 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JE	Y0678033	CT-2ENSA01 1500-5A PH 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JF	Y0688033	51-2ENSA01 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JF	Y0698033	CT-2ENSA01 1500-5A PH 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JJ	Y0748033	67N2-2ENSA09 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JJ 24-9-JL	Y0758033	PT 0.5-5A CKT 2ENSA06 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JL	Y0888033	67N1-2ENSA05 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y1658033	51A-2ENSA02 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y1668033	CT 2ENSA02 1500-5A PH 1 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JV	Y1678033	51A-2ENSA02 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JV	Y1688033	CT 2ENSA02 1500-5A PH 2 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JU	Y1698033	51A-2ENSA02 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-JU	Y1708033	CT 2ENSA02 1500-5A PH 3 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JY 24-9-KA	Y1758033	PT 0.5-5A CKT 2ENSA07 FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-KA	Y1888033	67N3-2ENSA05 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JY	Y5658033	67N4-2ENSA10 COIL FAILED OPEN	PERIODIC TEST	DIV I OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JB	Y6718043	51-2ENSB01 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JB	Y6728043	CT 2ENSB01 1500-5A PH 1 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HZ	Y6738043	51-2ENSB01 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-HZ	Y6748043	CT 2ENSB01 1500-5A PH 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JA	Y6758043	51-2ENSB01 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JA	Y6768043	CT 2ENSB01 1500-5A PH 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH	Y6818043	67N2-2ENSB09 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JH 24-9-JK	Y6828043	PT 0.5-5A CKT 2ENSB06 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JK	Y6958043	67N1-2ENSB05 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

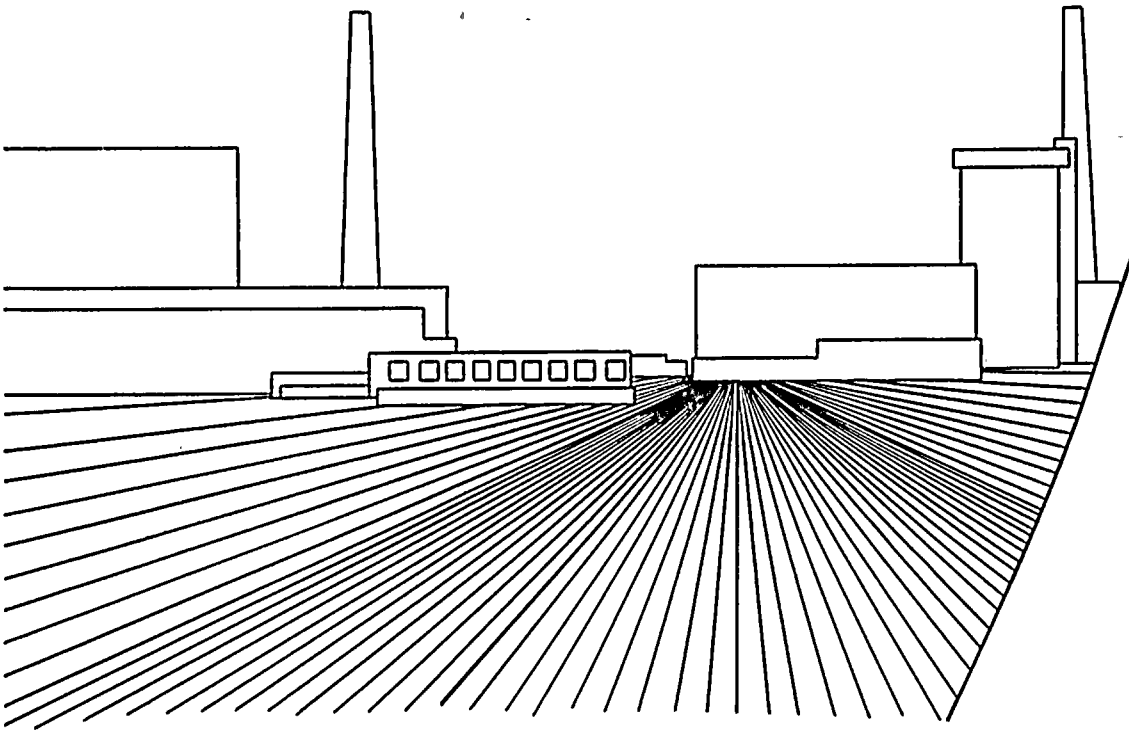
FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9-JR	Y7718043	51A-2ENSB02 PH 1 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JR	Y7728043	CT 2ENSB02 1500-5A PH 1 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JQ	Y7738043	51A-2ENSB02 PH 2 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JQ	Y7748043	CT 2ENSB02 1500-5A PH 2 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JP	Y7758043	51A-2ENSB02 PH 3 OC RLY FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JP	Y7768043	CT 2ENSB02 1500-5A PH 3 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-R	Y7808043	86B-2ENSY02 CONT 1C FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JX	Y7818043	67N8-2ENSB10 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JZ	Y7948043	67N3-2ENSB05 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	
24-9-JX 24-9-JZ	Y7958043	PT 0.5-5A CKT 2ENSB07 FAILED OPEN	PERIODIC TEST	DIV II OFFSITE POWER BRKR FAILS TO TRIP ON BUS FAULT	

FINAL SAFETY ANALYSIS REPORT

NINE MILE POINT NUCLEAR STATION — UNIT 2

FAILURE MODES AND EFFECTS ANALYSIS

NIAGARA MOHAWK



BOOK 2

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-C 24-9.-B	N001EGP3	LOSS OF EMER DSL ENG GEN DIV III POWER SUPPLY	PERIODIC TEST	NONE	
24-9.-K	N004EGP3	2EGS*EG1 SPLY BRKR ACB101-1 MECH FAILURE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-D	N012EGP3	2EGS*EG3 SPLY BRKR ACB103-14 MECH FAILURE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-C 24-9.-L	N020EGP3	ACB101-N1 MECHANICAL FAILURE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-B 24-9.-E	N026EGP3	ACB103-N1 MECHANICAL FAILURE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BH	N447EGP1	2EGS*EG1 GND OC FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BL	N465EGP1	2EGS*EG3 GND OC FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CB	N472EGP3	2EGS*EG1 OC WITH V RESTRAINT FAULT EXISTS ON PH 2	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-CD	N475EGP3	2EGS*EG1 OC WITH V RESTRAINT FAULT EXISTS ON PH 3	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AP	N484EGP3	2EGS*EG3 OC WITH V RESTRAINT FAULT EXISTS ON PH 2	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AQ	N487EGP3	2EGS*EG3 OC WITH V RESTRAINT FAULT EXISTS ON PH 3	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CB	N521EGP3	2EGS*EG1 OC WITH V RESTRAINT FAULT EXISTS ON PH 1	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AP	N534EGP3	2EGS*EG3 OC WITH V RESTRAINT FAULT EXISTS ON PH 1	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-C	N002EGS3	EMER STBY DSL ENG GEN 2EGS*EG1 INOPERATIVE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-B	N003EGS3	EMER STBY DSL ENG GEN 2EGS*EG3 INOPERATIVE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BN	N108EGS1	2EGS*EG3 DIR GND OVERCURRENT EXISTS	ANNUNCIATED IN CONTROL ROOM	67N-2EGPB03 CONTACT "D" AND "IOC" CLOSED	
24-9.-H	N131EGS1	25A-25YDB02 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BS	N161EGS1	2EGS*EG1 LOSS OF FIELD	ANNUNCIATED IN CONTROL ROOM	40-2EGPA05 CONTACT SI CLOSED	
24-9.-BR	N163EGS1	2EGS*EG1 POWER DIRECTION REVERSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BV	N175EGS1	2EGS*EG3 LOSS OF FIELD	ANNUNCIATED IN CONTROL ROOM	40-2EGPB05 CONTACT SI CLOSED	
24-9.-BU	N177EGS1	2EGS*EG3 POWER DIRECTION REVERSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BP	N253EGS1	2EGS*EG1 LEAD VOLTAGE BELOW NORMAL	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BQ	N269EGS1	2EGS*EG3 LEAD VOLTAGE BELOW NORMAL	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AX	N283EGS1	2EGS*EG1 PH 2 DIFFERENTIAL FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AZ	N285EGS1	2EGS*EG1 PH 3 DIFFERENTIAL FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AX	N291EGS1	2EGS*EG1 PH 1 DIFFERENTIAL FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BB	N301EGS1	EGS*EG1 PH 2 DIFFERENTIAL FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BD	N303EGS1	2EGS*EG3 PH 3 DIFFERENTIAL FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N309EGS1	2EGS*EG3 PH 1 DIFFERENTIAL FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-U	N418EGS3	52T1-2EGPX09 CONTACT T1 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-U	N419EGS3	52T1-2EGPX09 CONTACT T2 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-U	N420EGS3	52T2-2EGPX09 CONTACT T1 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-U	N421EGS3	52T2-2EGPX09 CONTACT T2 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-AA	N422EGS3	52T2-2EGPY09 CONTACT T1 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-AA	N423EGS3	52T2-2EGPY09 CONTACT T2 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-AA	N556EGS3	52T1-2EGPY09 CONT T1 FAILED CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AA	N557EGS3	52T1-2EGPY09 CONT T2 FAILED CLOSE	PERIODIC TEST	NONE	
24-9.-AR	N071ENS3	62-1-2ENSX01 CONTACT 10 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AR	N072ENS3	62-1-2ENSX01 TIMER COIL ENERGIZED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AR	N073ENS3	62-1-2ENSX02 TIMER COIL ENERGIZED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AR	N074ENS3	62-1-2ENSX02 CONTACT 10 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AS	N089ENS3	62-1-2ENSY01 CONTACT 10 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AS	N090ENS3	62-1-2ENSY01 TIMER COIL ENERGIZED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AS	N091ENS3	62-1-2ENSY02 TIMER COIL ENERGIZED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AS	N092ENS3	62-1-2ENSY02 CONTACT 10 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BA	N156ENS1	ACB101-13 INADVERTENTLY CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BA	N158ENS1	ACB101-10 INADVERTENTLY CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BE	N169ENS1	52-2ENSY10 CONTACT 67 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	52-2ENSY10 OR 52-2ENSY11 CONTACTS 67 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BE	N170ENS1	ACB103-4 INADVERTENTLY CLOSED	ANNUNCIATED IN CONTROL ROOM	52-2ENSY10 OR 52-2ENSY11 CONTACTS 67 CLOSED	
24-9.-BE	N171ENS1	52-2ENSY11 CONTACT 67 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	52-2ENSY10 OR 52-2ENSY11 CONTACTS 67 CLOSED	
24-9.-BE	N172ENS1	ACB103-2 INADVERTENTLY CLOSED	ANNUNCIATED IN CONTROL ROOM	52-2ENSY10 OR 52-2ENSY11 CONTACTS 67 CLOSED	
24-9.-BH	N178ENS1	2ENSB24 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-R	N182ENS1	86A-2ENSX01 CONTACT 9C FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-R	N183ENS1	86A-2ENSX01 RELAY COIL ENERGIZED INADVERTENTLY	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-R	N184ENS1	86A-2ENSX02 CONTACT 9C FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-R	N185ENS1	86A-2ENSX02 RELAY COIL ENERGIZED INADVERTENTLY	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-G	N190ENS1	86A-2ENSY01 CONTACT 9C FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-G	N191ENS1	86A-2ENSY01 RELAY COIL ENERGIZED INADVERTENTLY	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-G	N192ENS1	86A-2ENSY02 CONTACT 9C FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-G	N193ENS1	86A-2ENSY02 RELAY COIL ENERGIZED INADVERTENTLY	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CE	N203ENS1	27X3-2ENSX04 DE-ENERGIZED ON LOP	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AN	N205ENS1	94D-2ENSX03 ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AN	N207ENS1	94C-2ENSX03 ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AN	N209ENS1	94A-2ENSX03 ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CH	N220ENS1	27X3-2ENSY04 DE-ENERGIZED ON LCP	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-J	N222ENS1	94D-2ENSY03 ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-J	N224ENS1	94C-2ENSY03 ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-J	N226ENS1	94A-2ENSY03 ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CF	N230ENS1	1-2ENSX10 CONTACT 14 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSX10 ACB101-13 MAN SW CONT 14 OR 15 OPEN	
24-9.-CF	N231ENS3	1-2ENSX10 OPERATOR ERROR	PERIODIC TEST	1-2ENSX10 ACB101-13 MAN SW CONT 14 OR 15 OPEN	
24-9.-CF	N232ENS1	1-2ENSX10 CONTACT 15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSX10 ACB101-13 MAN SW CONT 14 OR 15 OPEN	
24-9.-CF	N233ENS1	1-2ENSX11 CONTACT 14 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSX11 ACB101-10 MAN SW CONT 14 OR 15 OPEN	
24-9.-CF	N234ENS3	1-2ENSX11 OPERATOR ERROR	PERIODIC TEST	1-2ENSX11 ACB101-10 MAN SW CONT 14 OR 15 OPEN	
24-9.-CF	N235ENS1	1-2ENSX11 CONTACT 15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSX11 ACB101-10 MAN SW CONT 14 OR 15 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CJ	N236ENS1	1-2ENSY10 CONTACT 14 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSY11 ACB103-4 MAN SW CONT 14 OR 15 OPEN	
24-9.-CJ	N237ENS3	1-2ENSY10 OPERATOR ERROR	PERIODIC TEST	1-2ENSY11 ACB103-4 MAN SW CONT 14 OR 15 OPEN	
24-9.-CJ	N238ENS1	1-2ENSY10 CONTACT 15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSY11 ACB103-4 MAN SW CONT 14 OR 15 OPEN	
24-9.-CJ	N239ENS1	1-2ENSY11 CONTACT 14 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSY11 ACB103-2 MAN SW CONT 14 OR 15 OPEN	
24-9.-CJ	N240ENS3	1-2ENSY11 OPERATOR ERROR	PERIODIC TEST	1-2ENSY11 ACB103-2 MAN SW CONT 14 OR 15 OPEN	
24-9.-CJ	N241ENS1	1-2ENSY11 CONTACT 15 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	1-2ENSY11 ACB103-2 MAN SW CONT 14 OR 15 OPEN	
24-9.-AF	N244ENS1	94B-2ENSX03 RELAY COIL ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AT 24-9.-H 24-9.-BP	N256ENS1	LOSS OF 125V DC DIV I BUS A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AG	N260ENS1	94B-2ENSY03 TRIPPING RELAY COIL ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AU 24-9.-F 24-9.-BQ	N272ENS1	LOSS OF 125V DC DIV II BUS B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BG	N435ENS3	71X2-2ENSX04 EN CKT NOT ESTABLISHED	PERIODIC TEST	71X2-2ENSX04 CONTACT 14 CLOSED	
24-9.-BG	N436ENS3	71X2-2ENSX04 COIL FAIL OPEN	PERIODIC TEST	71X2-2ENSX04 CONTACT 14 CLOSED	
24-9.-BF	N443ENS3	71X3-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	71X3-2ENSX04 CONT 12 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BF	N445ENS3	K110A-2ENSX04 CONTACT FAILED CLOSE	PERIODIC TEST	71X3-2ENSX04 CONT 12 CLOSED	
24-9.-BF	N446ENS3	K110A-2ENSX04 FAILED ENERGIZED	PERIODIC TEST	71X3-2ENSX04 CONT 12 CLOSED	
24-9.-BK	N453ENS3	71X2-2ENSY04 EN CKT NOT ESTABLISHED	PERIODIC TEST	71X2-2ENSY04 CONTACT 14 CLOSED	
24-9.-BK	N454ENS3	71X2-2ENSY04 COIL FAIL OPEN	PERIODIC TEST	71X2-2ENSY04 CONTACT 14 CLOSED	
24-9.-BJ	N461ENS3	71X3-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	71X3-2ENSY04 CONTACT 12 CLOSED	
24-9.-BJ	N463ENS3	K110B-2ENSY04 CONTACT FAILED CLOSE	PERIODIC TEST	71X3-2ENSY04 CONTACT 12 CLOSED	
24-9.-BJ	N464ENS3	K110B-2ENSY04 FAILED ENERGIZED	PERIODIC TEST	71X3-2ENSY04 CONTACT 12 CLOSED	
24-9.-BY	N491ENS3	62X-2ENSX05 COIL ENERGIZED BY SHORT	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-BX	N492ENS3	62Y-2ENSX06 COIL ENERGIZED BY SHORT	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-BY	N493ENS3	62-1-2ENSX05 CONT 10 FAILED CLOSE	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-BY	N494ENS3	62-1-2ENSX05 ENERGIZED	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-BX	N495ENS3	62-2-2ENSX06 CONT 3 FAILED CLOSE	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-BX	N496ENS3	62-2-2ENSX06 ENERGIZED	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-AH	N499ENS3	71X1-2ENSX04 ENERGIZING CKT OPEN	PERIODIC TEST	71X1-2ENSX04 CONTACT 17 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AH	N500ENS3	71X1-2ENSX04 FAILED OPEN	PERIODIC TEST	71X1-2ENSX04 CONTACT 17 CLOSED	
24-9.-CA	N503ENS3	62X-2ENSY05 COIL ENERGIZED BY SHORT	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-BZ	N504ENS3	62Y-2ENSY06 COIL ENERGIZED BY SHORT	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-CA	N505ENS3	62-1-2ENSY05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-BZ	N506ENS3	62-2-2ENSY06 CONTACT 3 FAILED CLOSE	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-BZ	N507ENS3	62-2-2ENSY06 ENERGIZED	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-AK	N510ENS3	71X1-2ENSY04 ENERGIZING CKT OPEN	PERIODIC TEST	71X1-2ENSY04 CONTACT 17 CLOSED	
24-9.-AK	N511ENS3	71X1-2ENSY04 FAILED OPEN	PERIODIC TEST	71X1-2ENSY04 CONTACT 17 CLOSED	
24-9.-CC	N515ENS3	60-2EGPA18 FAILED ENERGIZED	PERIODIC TEST	60BX-2EGPX02 CONTACT 2 CLOSED	
24-9.-CC	N516ENS3	BUS 2ENS*SNG101 V BALANCE FAULT EXISTS	PERIODIC TEST	60BX-2EGPX02 CONTACT 2 CLOSED	
24-9.-CG	N528ENS3	60-2EGPB18 FAILED ENERGIZED	PERIODIC TEST	60BX-2EGPY02 CONT 2 CLOSED	
24-9.-CG	N529ENS3	BUS 2ENS*SNG103 V BALANCE FAULT EXISTS	PERIODIC TEST	60BX-2EGPY02 CONT 2 CLOSED	
24-9.-BC	N543ENS3	71X2-2ENSY04 DE-ENERGIZED ON LOCA	PERIODIC TEST	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AY	N552ENS3	71X2-2ENSX04 DE-ENERGIZED ON LOCA	PERIODIC TEST	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CA	N555ENS3	62-1-2ENSY05 ENERGIZED	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-K	N0055012	2EGS*EG1 SPLY BRKR ACB101-1 52-TC-2EGPX07 EN BY SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N	N0085011	CKT 2EGPX07 35A POS FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N	N0095011	CKT 2EGPX07 15A POS FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N	N0105011	CKT 2EGPX07 35A NEG FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N	N0115011	CKT 2EGPX07 15A NEG FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-Q	N0325011	1B-2EGPX07 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-Q 24-9.-S	N0335011	1B-2EGPX07 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-Q 24-9.-S 24-9.-CE	N0345011	1A-2EGPX07 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-Q	N0355011	1B-2EGPX07 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-U	N0425011	51V-X-2EGPX02 CONTACT 11 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AV	N0435011	86-2EGPX01 CONTACT 1C FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-T	N0445011	86-1-2EGPX02 CONTACT 1C FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AX	N0465011	86-2EGPX01 ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-U	N0935011	94-2EGPX07 CONTACT 20 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-U	N0945011	94-2EGPX07 ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BM	N0955013	71X1-2ENSX04 CONTACT 17 FAILED CLOSE	PERIODIC TEST	71X1-2ENSX04 CONTACT 17 CLOSED	
24-9.-BM	N0965013	71X1-2ENSX04 DE-ENERGIZED ON LOCA	PERIODIC TEST	71X1-2ENSX04 CONTACT 17 CLOSED	
24-9.-S	N1135013	1A-2EGPX07 CONTACT 1 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-S	N1155013	25C-2SYDA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-S	N1165012	25C-2SYDA01 CONTACT 5 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-S	N1175012	25A-2SYDA02 CONTACT 5 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-S	N1185013	25A-2SYDA02 OPERATOR ERROR	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-S	N1205012	1B-2EGPX07 CONTACT 1 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-X	N1215013	2EGS*EG1 RELAY 52C1 CONT T2 OR T3 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ECPA RELAY 52C1 CONT T2 OR T3 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-X	N1225013	2EGS*EG1 RELAY 52C2 CONT T2 OR T3 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ECPA RELAY 52C2 CONT T2 OR T3 OPEN	
24-9.-X	N1365012	59X-2EGPX02 CONTACT 2 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-X	N1375012	86-2EGPX01 CONTACT 11C FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AL	N1385012	86-1-2EGPX02 CONTACT 7C FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-R	N1805011	3Y-2EGPX07 CONTACT 1 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-R	N1815011	86-2-2EGPX02 CONTACT 4C FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CE	N1865011	3Y-2EGPX07 COIL FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-R	N1875011	86-2-2EGPX02 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CE	N2025011	27X3-2ENSX04 CONTACT 20 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AN	N2045011	94D-2ENSX03 CONTACT 11 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AN	N2065011	94C-2ENSX03 CONTACT 11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AN	N2085011	94A-2ENSX03 CONTACT 11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CE	N2105011	1A-2EGPX07 CONTACT 10 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BG	N4325013	71X2-2ENSX04 CONTACT 14 FAIL CLOSED	PERIODIC TEST	71X2-2ENSX04 CONTACT 14 CLOSED	
24-9.-H	N4335013	52-2ENSX10 CONTACT 64 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-H	N4345013	52-2ENSX11 CONTACT 64 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-V	N4375013	52-2ENSX11 CONTACT 64 FAIL CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-V	N4385013	52-2ENSX10 CONTACT 64 FAIL CLOSED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-H	N4395013	52-2ENSX10 CONTACT 64 FAILED CLOSE	PERIODIC TEST	52-2ENSX10 OR 52-2ENSX11 CONT 64 CLOSED	
24-9.-H	N4405013	52-2ENSX11 CONTACT 64 FAILED CLOSE	PERIODIC TEST	52-2ENSX10 OR 52-2ENSX11 CONT 64 CLOSED	
24-9.-BF	N4415013	71X3-2ENSX04 CONTACT 12 FAILED CLOSE	PERIODIC TEST	71X3-2ENSX04 CONT 12 CLOSED	
24-9.-V 24-9.-BH	N4425013	94-2EGPX06 CONTACT 18 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AH	N4975013	59X-2EGPX02 CONTACT 4 FAILED CLOSE	PERIODIC TEST	59X-2EGPX02 CONTACT 4 CLOSED	
24-9.-AH	N4985013	71X1-2ENSX04 CONTACT 17 FAILED CLOSE	PERIODIC TEST	71X1-2ENSX04 CONTACT 17 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BY	N5015013	62X-2ENSX05 CONTACT 1 FAILED CLOSE	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-BX	N5025013	62Y-2ENSX06 CONTACT I FAILED CLOSE	PERIODIC TEST	62X-2ENSX05 OR 62Y-2ENSX06 CONT 1 CLOSED	
24-9.-X	N5395013	2EGS*EG1 RELAY 52C1 COIL FAIL OPEN	PERIODIC TEST	2EGS*EG1 ECPA RELAY 52C1 CONT T2 OR T3 OPEN	
24-9.-X	N5405013	2EGS*EG1 RELAY 52C2 COIL FAIL OPEN	PERIODIC TEST	2EGS*EG1 ECPA RELAY 52C2 CONT T2 OR T3 OPEN	
24-9.-CE	N5465011	52-2ENSX11 CONTACT 54 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CE	N5475011	52-2ENSX10 CONTACT 54 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CE	N5485011	52-2ENSX12 CONTACT 54 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-D	N0135032	2EGS*EG3 SPLY BRKR ACB103-14 52-TC-2EGPY07 EN BY SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-F	N0165031	CKT 2EGPY07 35A POS FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-F	N0175031	CKT 2EGPY07 15A POS FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-F	N0185031	CKT 2EGPY07 35A NEG FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-F	N0195031	CKT 2EGPY07 15A NEG FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-Y	N0365031	1B-2EGPX07 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-Y 24-9.-H	N0375031	1B-2EGPY07 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-Y 24-9.-H 24-9.-CH	N0385031	1A-2EGPY07 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-Y	N0395031	1A-2EGPY07 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AA	N0525031	51V-X-2EGPY02 CONTACT 11 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AB	N0535031	86-2EGPY01 CONTACT 1C FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-Z	N0545031	86-1-2EGPY02 CONTACT 1C FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N0565031	86-2EGPY01 ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AA	N1025031	94-2EGPY07 CONTACT 20 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AA	N1035031	94-2EGPY07 ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BN	N1045033	71X1-2ENSY04 CONTACT 17 FAILED CLOSE	PERIODIC TEST	71X1-2ENSY04 CONTACT 17 CLOSED	
24-9.-BN	N1055033	71X1-2ENSY04 DE-ENERGIZED ON LOCA	PERIODIC TEST	71X1-2ENSY04 CONTACT 17 CLOSED	
24-9.-H	N1265033	1A-2EGPY07 CONTACT 1 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-H	N1285033	25C-2SYDB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-H	N1295032	25C-2SYDB01 CONTACT 5 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-H	N1305032	25A-2SYDB02 CONTACT 5 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-H	N1325032	1B-2EGPY07 CONTACT 1 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AE	N1335033	2EGS*EG3 RELAY 52C1 CONT T2 OR T3 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ECPC RELAY 52C1 CONT T2 OR T3 OPEN	
24-9.-AE	N1345033	2EGS*EG3 RELAY 52C2 CONT T2 OR T3 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ECPC RELAY 52C2 CONT T2 OR T3 OPEN	
24-9.-AE	N1445032	59X-2EGPY02 CONTACT 2 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AE	N1455032	86-2EGPY01 CONTACT 11C FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AH	N1465032	86-1-2EGPY02 CONTACT 7C FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-G	N1885031	3Y-2EGPY07 CONTACT 1 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-G	N1895031	86-2-2EGPY02 CONTACT 4C FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CH	N1945031	3Y-2EGPY07 COIL FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-G	N1955031	86-2-2EGPY02 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CH	N2195031	27X3-2ENSY04 CONTACT 20 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-J	N2215031	94D-2ENSY03 CONTACT 11 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-J	N2235031	94C-2ENSY03 CONTACT 11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-J	N2255031	94A-2ENSY03 CONTACT 11 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CH	N2275031	1A-2EGPY07 CONTACT 10 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BK	N4505033	71X2-2ENSY04 CONTACT 14 FAIL CLOSED	PERIODIC TEST	71X2-2ENSY04 CONTACT 14 CLOSED	
24-9.-AD	N4515033	52-2ENSY10 CONTACT 64 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AD	N4525033	52-2ENSY11 CONTACT 64 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AC	N4555033	52-2ENSY11 CONTACT 64 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AC	N4565033	52-2ENSY10 CONTACT 64 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AD	N4575033	52-2ENSY10 CONTACT 64 FAILED CLOSE	PERIODIC TEST	52-2ENSY10 OR 52-2ENSY11 CONTACT 64 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AD	N4585033	52-2ENSY11 CONTACT 64 FAILED CLOSE	PERIODIC TEST	52-2ENSY10 OR 52-2ENSY11 CONTACT 64 CLOSED	
24-9.-BJ	N4595033	71X3-2ENSY04 CONTACT 12 FAILED CLOSE	PERIODIC TEST	71X3-2ENSY04 CONTACT 12 CLOSED	
24-9.-AC 24-9.-BL	N4605033	94-2EGPY06 CONTACT 18 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AK	N5085033	59X-2EGPY02 CONTACT 4 FAILED CLOSE	PERIODIC TEST	59X-2EGPY02 CONTACT 4 CLOSED	
24-9.-AK	N5095033	71X1-2ENSY04 CONTACT 17 FAILED CLOSE	PERIODIC TEST	71X1-2ENSY04 CONTACT 17 CLOSED	
24-9.-CA	N5125033	62X-2ENSY05 CONTACT 1 FAILED CLOSE	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-BZ	N5135033	62Y-2ENSY06 CONTACT 1 FAILED CLOSE	PERIODIC TEST	62X-2ENSY05 OR 62Y-2ENSY06 CONTACT 1 CLOSED	
24-9.-AE	N5415033	2EGS*EG3 RELAY 52C1 COIL FAIL OPEN	PERIODIC TEST	2EGS*EG3 ECPC RELAY 52C1 CONT T2 OR T3 OPEN	
24-9.-AE	N5425033	2EGS*EG3 RELAY 52C2 COIL FAIL OPEN	PERIODIC TEST	2EGS*EG3 ECPC RELAY 52C2 CONT T2 OR T3 OPEN	
24-9.-CH	N5495031	52-2ENSY11 CONTACT 54 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CH	N5505031	52-2ENSY10 CONTACT 54 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-CH	N5515031	52-2ENSY12 CONTACT 54 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-L	N0215051	2EGS*EG1 NEUT BRKR 101-N1 52TC-2EGPX06 EN BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N	N0225051	1B-2EGPX06 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N 24-9.-L	N0235051	1B-2EGPX06 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N 24-9.-L	N0245051	1A-2EGPX06 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-N	N0255051	1A-2EGPX06 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AR	N0705051	94-2EGPX06 RELAY ENERGIZED BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AR	N1005051	51N-2EGPA06 CONT 51N FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AF	N2425051	94-2EGPX06 CONTACT 19 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AF	N2435051	94B-2ENSX03 CONTACT 11 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AF	N2455051	94-2EGPX07 CONTACT 12 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-L	N3115051	1A-2EGPX06 CONTACT 1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-L	N3125051	1B-2EGPX06 CONTACT 1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AT	N4005051	CKT 2EGPX06 35A POS FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF ENER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AT	N4015051	CKT 2EGPX06 35A NEG FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AT	N4025053	94-2EGPX06 COIL FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-C	N4045053	52TC-2EGPX06 COIL FAILS OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AT	N4065053	51N-2EGPA06 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AT	N4085053	94-2EGPX06 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BH	N4445053	94-2EGPX06 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BH	N4485053	51N-2EGPA06 CONTACT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BH	N4495053	51N-2EGPA06 GND OC RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-E	N0275061	2EGS*EG3 NEUT BRKR 103-N1 52TC-2EGPY06 EN BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-P	N0285061	1B-2EGPY06 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-P 24-9.-E	N0295061	1B-2EGPY06 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-P 24-9.-E	N0305061	1A-2EGPY06 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-P	N0315061	1A-2EGPY06 CONTACT 3 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AS	N0875061	94-2EGPY06 RELAY ENERGIZED BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AS	N1095061	51N-2EGPB06 CONT 51N FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AG	N2585061	94-2EGPY06 CONTACT 19 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AG	N2595061	94B-2ENSY03 CONTACT 11 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AG	N2615061	94-2EGPY07 CONTACT 12 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-E	N3145061	1A-2EGPY06 CONTACT 1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*EG3 NEUT BRKR 103-N1 MAN CLOSE CKT FAILED AT P852	
24-9.-E	N3155061	1B-2EGPY06 CONTACT 1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2EGS*EG3 NEUT BRKR 103-N1 MAN CLOSE CKT FAILED AT EGPC	
24-9.-AU	N4095061	CKT 2EGPY06 35A POS FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AU	N4105061	CKT 2EGPY06 35A NEG FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AU	N4115063	94-2EGPY06 COIL FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-B	N4135063	52TC-2EGPY06 COIL FAILS OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AU	N4155063	51N-2EGPB06 CONT 2 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AU	N4175063	94-2EGPY06 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BL	N4625063	94-2EGPY06 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV. II POWER SUPPLY	
24-9.-BL	N4665063	51N-2EGPB06 CONTACT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BL	N4675063	51N-2EGPB06 GND OC RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BM	N0978011	67N-2EGPA03 CONT IOC FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	67N-2EGPA03 CONT IOC CLOSED	
24-9.-BM	N0988011	67N-2EGPA03 AND RELAY ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	67N-2EGPA03 CONT IOC CLOSED	
24-9.-BM	N0998011	2EGS*EG1 DIR GND OVERCURRENT EXISTS	ANNUNCIATED IN CONTROL ROOM	67N-2EGPA03 CONT IOC CLOSED	
24-9.-AR	N1018011	2EGS*EG1 GND OVERCURRENT FAULT EXIS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BR	N1628011	32-2EGPA05 RELAY COIL ENERGIZED BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AX	N2828011	87G-2EGPA01 PH 2 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AZ	N2848011	87G-2EGPA01 PH 3 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AX	N2908011	87G-2EGPA01 PH 1 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AT	N4058013	CKT 2EGPA06 100-5A CT FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AT	N4078013	51N-2EGPA06 GND OC RELAY FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BS	N1608021	40-2EGPA05 RELAY COIL ENERGIZED BY SHORT	ANNUNCIATED IN CONTROL ROOM	40-2EGPA05 CONTACT SI CLOSED	
24-9.-AU	N4148023	CKT 2EGPB06 100-5A CT FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AU	N4168023	51N-2EGPB06 GND OC RELAY FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BN	N1068031	67N-2EGPB03 CONTACT "D" AND "IOC" FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	67N-2EGPB03 CONTACT "D" AND "IOC" CLOSED	
24-9.-BN	N1078031	67N-2EGPB03 RELAY ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	67N-2EGPB03 CONTACT "D" AND "IOC" CLOSED	
24-9.-AS	N1108031	2EGS*EG3 GND OVERCURRENT FAULT EXISTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BU	N1768031	32-2EGPB05 RELAY COIL ENERGIZED BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N3008031	87G-2EGPB01 PH 2 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BD	N3028031	87G-2EGPB01 PH 3 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N3088031	87G-2EGPB01 PH 1 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BV	N1748041	40-2EGPB05 RELAY COIL ENERGIZED BY SHORT	ANNUNCIATED IN CONTROL ROOM	40-2EGPB05 CONTACT SI CLOSED	
24-9.-AX	N2808051	87G-2EGPA01 PH 2 CONT 87L FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AZ	N2818051	87G-2EGPA01 PH 3 CONT 87L FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AX	N2898051	87G-2EGPA01 PH 1 CONT 87L FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AX	N4268051	87G-2EGPA01 PH 2 CONT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AZ	N4278051	87G-2EGPA01 PH 3 CONT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-AX	N4288051	87G-2EGPA01 PH 1 CONT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BS	N1408062	60BX-2EGPX02 CONTACT 8 FAILED CLOSE	INDICATING LIGHT IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-AY	N1428062	71X2-2ENSX04 CONTACT 17 FAILED CLOSE	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BT	N1528061	60-2EGPA18 CONTACT 9 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-BS	N1538061	40-2EGPA05 CONTACT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	40-2EGPA05 CONTACT SI CLOSED	
24-9.-BR	N1548061	32-2EGPA05 CONTACT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BA	N1558061	52-2ENSX10 CONTACT 67 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BA	N1578061	52-2ENSX11 CONTACT 67 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BT	N1598061	60-2EGPA18 RELAY COIL B FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-BT	N1648061	CKT 2ENSA24 FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-BT	N1658061	VOLT UNBALANCED BETWEEN BUS 2ENS*SHG101 AND 2EGS*EG1	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-AN	N2128061	51V-X-2EGPX02 CONTACT 19 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BP	N2478063	59X-2EGPX02 COIL FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BP	N2558063	59-2EGPA18 CONTACT 8 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BP	N2578061	F1-2EGPX02 POS OR NEG FUSES FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CD	N4698063	51V-2EGPA17 PH 3 SI CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-CB	N4778063	51V-2EGPA17 PH 2 SI CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-CB	N4788063	51V-2EGPA17 PH 2 OC CONT 2 FAILED CLOSE	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AH	N5148063	51V-X-2EGPX02 COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CB	N5188063	51V-2EGPA17 PH 1 SI CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-CB	N5228063	51V-2EGPA17 PH 1 OC CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AW	N5238063	60BX-2EGPX02 CONTACT 2 FAILED CLOSE	PERIODIC TEST	60BX-2EGPX02 CONTACT 2 CLOSED	
24-9.-CC	N5248063	60BX-2EGPX02 COIL ENERGIZED BY SHORT	PERIODIC TEST	60BX-2EGPX02 CONTACT 2 CLOSED	
24-9.-CC	N5258063	60-2EGPA18 CONTACT 9 FAILED CLOSE	PERIODIC TEST	60BX-2EGPX02 CONTACT 2 CLOSED	
24-9.-BT	N5448061	CKT 2ENSA24 XFMR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-CD	N5548063	51V-2EGPA17 PH 3 OC CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-BV	N1488072	60BX-2EGPY02 CONTACT 8 FAILED CLOSE	INDICATING LIGHT IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-BC	N1508072	71X2-2ENSY04 CONTACT 17 FAILED CLOSE	INDICATING LIGHT IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N2988071	87G-2EGPB01 PH 2 CONT 87L FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BD	N2998071	87G-2EGPB01 PH 3 CONT 87L FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N3078071	87G-2EGPB01 PH 1 CONT 87L FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N4298071	87G-2EGPB01 PH 2 CONT SI FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BD	N4308071	87G-2EGPB01 PH 3 CONT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BB	N4318071	87G-2EGPB01 PH 1 CONT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BW	N1668081	60-2EGPB18 CONTACT 9 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-BV	N1678081	40-2EGPB05 CONTACT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	40-2EGPB05 CONTACT SI CLOSED	
24-9.-BU	N1688081	32-2EGPB05 CONTACT SI FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BN	N1738081	60-2EGPB18 RELAY COIL B FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-BH	N1798081	VOLT UNBALANCED BETWEEN BUS 2ENS*SWG103 AND 2EGS*EG3	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-J	N2298081	51V-X-2EGPY02 CONTACT 19 FAILED CLOSE	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BQ	N2638083	59X-2EGPY02 COIL FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BQ	N2718083	59-2EGPB18 CONTACT 8 FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BQ	N2738081	F1-2EGPY02 POS OR NEG FUSES FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AQ	N4818083	51V-2EGPB17 PH 3 SI CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AQ	N4888083	51V-2EGPB17 PH 3 OC CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AP	N4898083	51V-2EGPB17 PH 2 SI CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AP	N4908083	51V-2EGPB17 PH 2 OC CONT 2 FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AJ	N5278083	51V-X-2EGPY02 COIL ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AP	N5318083	51V-2EGPB17 PH 1 SI CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AJ	N5368083	60BX-2EGPY02 CONTACT 2 FAILED CLOSE	PERIODIC TEST	60BX-2EGPY02 CONT 2 CLOSED	
24-9.-CG	N5378083	60BX-2EGPY02 COIL ENERGIZED BY SHORT	PERIODIC TEST	60BX-2EGPY02 CONT 2 CLOSED	
24-9.-CG	N5388083	60-2EGPB18 CONTACT 9 FAILED CLOSE	PERIODIC TEST	60BX-2EGPY02 CONT 2 CLOSED	
24-9.-BH	N5458081	CKT 2ENSB24 XFMR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-AP	N5538083	51V-2EGPB17 PH 1 OC CONT 3 FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-BS	N1438092	60BX-2EGPX02 COIL FAIL OPEN	INDICATING LIGHT IN CONTROL ROOM	60BX-2EGPX02 CONTACT 8 CLOSED	
24-9.-BP	N2528093	59-2EGPA18 COIL FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-BP	N2548093	2EGPA18 GEN METERING XFMR FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BP	N4248093	2EGPA18 XFMR FUSES FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV I POWER SUPPLY	
24-9.-CB	N4718093	51V-2EGPA17 PH 2 FAILED ENERGIZED	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-CD	N4748093	51V-2EGPA17 PH 3 FAILED ENERGIZED	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-CB	N5208093	51V-2EGPA17 PH 1 FAILED ENERGIZED	PERIODIC TEST	51V-2EGPA17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-BV	N1518102	60BX-2EGPY02 COIL FAIL OPEN	INDICATING LIGHT IN CONTROL ROOM	60BX-2EGPY02 CONTACT 8 CLOSED	
24-9.-BQ	N2688103	59-2EGPB18 COIL FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BQ	N2708103	2EGPB18 GEN METERING XFMR FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-BQ	N4258103	2EGPB18 XFMR FUSES FAILED OPEN	PERIODIC TEST	LOSS OF EMER DSL ENG GEN DIV II POWER SUPPLY	
24-9.-AP	N4838103	51V-2EGPB17 PH 2 FAILED ENERGIZED	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AQ	N4868103	51V-2EGPB17 PH 3 FAILED ENERGIZED	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	
24-9.-AP	N5338103	51V-2EGPB17 RELAY FAILED CLOSE	PERIODIC TEST	51V-2EGPB17 GEN OC WITH V RESTRAINT CONT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-C	S007EGA1	2EGS*EG1 LUBRICATION SYSTEM FAILURE	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-D	S008EGA1	2EGS*EG1 COMB AIR INTAKE FLT 2EGA*FLT1A BLOCKED	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-D	S009EGA3	2EGS*EG1 COMB AIR EXHAUST SIL 2EGA*TRP2A BLOCKED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-D	S010EGA3	2EGS*EG1 COMB AIR INTAKE SIL 2EGA*TRP1A BLOCKED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-B	S015EGA1	2EGS*EG3 LUBRICATION SYSTEM FAILURE	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-G	S016EGA1	2EGS*EG3 COMB AIR INTAKE FLT 2EGA*2FLT1B BLOCKED	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-G	S017EGA3	2EGS*EG3 COMB AIR EXHAUST SIL 2EGA*TRP2B BLOCKED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-G	S018EGA3	2EGS*EG3 COMB AIR INTAKE SIL 2EGA*TRP1B BLOCKED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-R	S063EGA3	2EGS*EG1 LOSS OF START AIR PRESSURE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-T	S074EGA3	2EGS*EG3 LOSS OF START AIR PRESSURE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-C	S003EGF1	2EGS*EG1 LOSS OF DSL ENG FUEL OIL SYSTEM	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-B	S011EGF1	2EGS*EG3 LOSS OF DSL ENG FUEL OIL SYSTEM	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-F	S139EGP3	86-2EGPX01 CONT 16C FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-F 24-9.-AN	S140EGP3	86-2EGPX01 ENERGIZED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-AN	S143EGP3	86GX1-2EGPX09 ENERGIZED BY SHORT	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-AN	S146EGP3	86-2EGPX01 CONT 15C FAILED CLOSE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-J	S150EGP3	86-2EGPY01 CONT 16C FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-J 24-9.-AP	S151EGP3	86-2EGPY01 ENERGIZED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AP	S154EGP3	86GX1-2EGPY09 ENERGIZED BY SHORT	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AP	S157EGP3	86-2EGPY01 CONT 15C FAILED CLOSE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-C 24-9.-B	S001EGS3	EMER STBY DSL ENG GEN DIV III 2EGS*EG2 INOPERATIVE	PERIODIC TEST	NONE	
24-9.-E	S019EGS3	2EGS*EG1 GEN FIELD FLASH CKT "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-E	S020EGS3	2EGS*EG1 EXCITER CKT "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-E	S021EGS3	2EGS*EG1 VOLTAGE SENSING CKT "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-E	S022EGS3	2EGS*EG1 MAIN SPEED SENSING CKT "33E01" FAILED	PERIODIC TEST	NONE	
24-9.-E	S023EGS3	2EGS*EG1 REDUND SPEED SENSING CKT "33E02" FAILED	PERIODIC TEST	NONE	
24-9.-U	S024EGS3	2EGS*EG1 COMMON SPEED CONTROL CKT "65 ENG" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-U	S025EGS3	2EGS*EG1 AUTO SPEED CONTROL CKT "N" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-H	S026EGS3	2EGS*EG1 COMMON VOLTAGE CONTROL CKT "3VRC" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-H	S027EGS3	2EGS*EG3 GEN FIELD FLASH CKT "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-H	S028EGS3	2EGS*EG3 EXCITER CKT "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-H	S029EGS3	2EGS*EG3 VOLTAGE SENSING CKT "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-H	S030EGS3	2EGS*EG3 MAIN SPEED SENSING CKT "33E01" FAILED	PERIODIC TEST	NONE	
24-9.-H	S031EGS3	2EGS*EG3 REDUND SPEED SENSING CKT "33E02" FAILED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-W	S032EGS3	2EGS*EG3 COMMON SPEED CONTROL CKT "65 ENG" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-W	S033EGS3	2EGS*EG3 AUTO SPEED CONTROL CKT "M" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-P	S034EGS3	2EGS*EG3 COMMON VOLTAGE CONTROL CKT "3VRC" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-R	S061EGS3	2EGS*EG1 MAIN CKT OVERSPEED TRIP "33E01"	PERIODIC TEST	NONE	
24-9.-R	S062EGS3	2EGS*EG1 REDUND CKT OVERSPEED TRIP "33E02"	PERIODIC TEST	NONE	
24-9.-Q	S064EGS3	2EGS*EG1 MAIN SEQ CKT "48CL1" FAILS	PERIODIC TEST	NONE	
24-9.-Q	S065EGS3	2EGS*EG1 REDUND SEQ CKT "48CL2" FAILS	PERIODIC TEST	NONE	
24-9.-R	S066EGS3	2EGS*EG1 START AIR V 20SL1 AND 20SR1 CLOSED	PERIODIC TEST	NONE	
24-9.-R	S067EGS3	2EGS*EG1 START AIR V 20SL2 AND 20SR2 CLOSED	PERIODIC TEST	NONE	
24-9.-Q	S068EGS3	2EGS*EG1 MAIN POWER BRKR 72DC1 FAILED OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF MAIN CONTROL POWER	
24-9.-Q 24-9.-AJ	S069EGS2	2EGS*EG1 LOSS OF MAIN POWER SUPPLY (NO LATER)	INDICATING LIGHT IN CONTROL ROOM	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-Q 24-9.-AK	S070EGS2	2EGS*EG1 LOSS OF REDUND POWER SUPPLY (NO LATER)	INDICATING LIGHT IN CONTROL ROOM	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-Q	S071EGS3	2EGS*EG1 REDUND POWER BRKR 72DC2 FAILED OPEN	PERIODIC TEST	2EGS*EG1 LOSS OF REDUND CONTROL POWER	
24-9.-T	S072EGS3	2EGS*EG3 MAIN CKT OVERSPEED TRIP "33E01"	PERIODIC TEST	NONE	
24-9.-T	S073EGS3	2EGS*EG3 REDUND CKT OVERSPEED TRIP "33E02"	PERIODIC TEST	NONE	
24-9.-S	S075EGS3	2EGS*EG3 MAIN SEQ CKT "48CL1" FAILS	PERIODIC TEST	NONE	
24-9.-S	S076EGS3	2EGS*EG3 REDUND SEQ CKT "48CL2" FAILS	PERIODIC TEST	NONE	
24-9.-T	S077EGS3	2EGS*EG3 START AIR V 20SL1 AND 20SR1 CLOSED	PERIODIC TEST	NONE	
24-9.-T	S078EGS3	2EGS*EG3 START AIR V 20SL2 AND 20SR2 CLOSED	PERIODIC TEST	NONE	
24-9.-S	S079EGS3	2EGS*EG3 MAIN POWER BRKR 72DC1 FAILED OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF MAIN CONTROL POWER	
24-9.-S 24-9.-AL	S080EGS2	2EGS*EG3 LOSS OF MAIN POWER CKT (NO LATER)	INDICATING LIGHT IN CONTROL ROOM	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-S 24-9.-AM	S081EGS2	2EGS*EG3 LOSS OF REDUND POWER CKT (NO LATER)	INDICATING LIGHT IN CONTROL ROOM	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-S	S082EGS3	2EGS*EG3 REDUND POWER BRKR 72DC2 FAILED OPEN	PERIODIC TEST	2EGS*EG3 LOSS OF REDUND CONTROL POWER	
24-9.-Y	S083EGS3	2EGS*EG1 MAIN COMMON OPERATING CKT "4EX1" FAILS	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-Y	S084EGS3	2EGS*EG1 REDUND COMMON OPERATING CKT "4EX2" FAILS	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-Z 24-9.-AB	S085EGS3	2EGS*EG1 AUX SW OR MCC NOT PROP FOR AUTO OP	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-AJ	S086EGS3	27X1-AUX-2EGPX09 CONT LATER FAILS OPEN ON LOP	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AK	S089EGS3	27X4-AUX-2EGPX10 CONT LTR FAILS OPEN ON LOP	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-AD	S095EGS3	2EGS*EG3 MAIN COMMON OPERATING CKT "4EX1" FAILS	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AD	S096EGS3	2EGS*EG3 REDUND COMMON OPERATING CKT "4EX2" FAILS	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-AE 24-9.-AG	S097EGS3	2EGS*EG3 AUX SW OR MCC NOT PROP FOR AUTO OP	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AL	S098EGS3	27X1-AUX-2EGPY09 CONT LATER FAILS OPEN ON LOP	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AM	S101EGS3	27X4-AUX-2EGPY10 CONT LTR FAILS OPEN ON LOP	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AA 24-9.-AC 24-9.-AA 24-9.-AC 24-9.-AJ 24-9.-AK	S108EGS3	1-2EGSA01 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-AF 24-9.-AH 24-9.-AF 24-9.-AH 24-9.-AL 24-9.-AM	S115EGS3	1-2EGSB01 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AJ	S120EGS3	27X1-AUX-2EGPX09 RELAY COIL FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AK	S121EGS3	27X4-AUX-2EGPX10 RELAY COIL FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-AL	S128EGS3	27X1-AUX-2EGPY09 RELAY COIL FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AM	S129EGS3	27X4-AUX-2EGPY10 RELAY COIL FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-F	S136EGS3	2EGS*EG1 MAIN COMMON CKT "4EX1" FAILED	PERIODIC TEST	NONE	
24-9.-F	S137EGS3	2EGS*EG1 REDUND COMMON CKT "4EX2" FAILED	PERIODIC TEST	NONE	
24-9.-AN	S138EGS3	86GX1-2EGPX09 CONT T1 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-K	S141EGS3	2EGS*EG1 MAIN COIL 5S1 CONTACT FAILED OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-K	S142EGS3	2EGS*EG1 REDUND COIL 5S2 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
24-9.-K	S144EGS3	2EGS*EG1 MAIN COIL 5S1 ENERGIZED BY SHORT	PERIODIC TEST	NONE	
24-9.-K	S145EGS3	2EGS*EG1 REDUND COIL 5S2 ENERGIZED BY SHORT	PERIODIC TEST	NONE	
24-9.-J	S147EGS3	2EGS*EG3 MAIN COMMON CKT "4EX1" FAILED	PERIODIC TEST	NONE	
24-9.-J	S148EGS3	2EGS*EG3 REDUND COMMON CKT "4EX2" FAILED	PERIODIC TEST	NONE	
24-9.-AP	S149EGS3	86GX1-2EGPY09 CONT T1 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-L	S152EGS3	2EGS*EG3 MAIN COIL 5S1 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
24-9.-L	S153EGS3	2EGS*EG3 REDUND COIL 5S2 CONTACT FAILED OPEN	PERIODIC TEST	NONE	
24-9.-L	S155EGS3	2EGS*EG3 MAIN COIL 5S1 ENERGIZED BY SHORT	PERIODIC TEST	NONE	
24-9.-L	S156EGS3	2EGS*EG3 REDUND COIL 5S2 ENERGIZED BY SHORT	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-D	S006ENS3	2EGS*EG1 INADVERTENT LOAD SEQUENCING 2ENS*SHG101	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-G	S014ENS3	2EGS*EG3 INADVERTENT LOAD SEQUENCING 2ENS*SHG103	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-Z	S087ENS3	71X1-2ENSX04 CONTACT 19 FAILS OPEN	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AB	S088ENS3	71X2-2ENSX04 CONTACT 19 FAILS OPEN	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-Z 24-9.-AB	S090ENS3	43LB-2ENSX04 CONT 1T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-Z 24-9.-AB 24-9.-AA 24-9.-AC	S091ENS3	43LB-2ENSX04 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-Z	S092ENS3	71X1-2ENSX04 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-Z 24-9.-AB	S093ENS3	CONT 6 OF K-110A IN P629 FAILS OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-AB	S094ENS3	71X2-2ENSX04 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-AE	S099ENS3	71X1-2ENSY04 CONTACT 19 FAILS OPEN	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AG	S100ENS3	71X2-2ENSY04 CONTACT 19 FAILS OPEN	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-AE 24-9.-AG	S102ENS3	43LB-2ENSY04 CONT 1T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AE 24-9.-AG 24-9.-AF 24-9.-AH	S103ENS3	43LB-2ENSY04 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AE	S104ENS3	71X1-2ENSY04 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AE 24-9.-AG	S105ENS3	CONT 6 OF K-110B IN P629 FAILS OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AG	S106ENS3	71X2-2ENSY04 COIL FAILS OPEN	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-AA	S109ENS3	43LB-2ENSX04 CONT 3T FAILED OPEN	PERIODIC TEST	43LB-2ENSX04 CONTACT 3T OPEN	
24-9.-AC	S111ENS3	43LB-2ENSX04 CONT 3B FAILED OPEN	PERIODIC TEST	43LB-2ENSX04 CONTACT 3B OPEN	
24-9.-AH	S118ENS3	43LB-2ENSY04 CONT 3B FAILED OPEN	PERIODIC TEST	43LB-2ENSY04 CONTACT 3B OPEN	
24-9.-AJ	S122ENS3	27X1-2ENSX04 CONT 20 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AJ	S123ENS3	27X1-2ENSX04 UNDERVOLT RELAY FAILED	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AK	S125ENS3	27X4-2ENSX04 CONT 20 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-AK	S126ENS3	27X4-2ENSX04 UNDERVOLT RELAY FAILED	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-AL	S130ENS3	27X1-2ENSY04 CONT 20 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AL	S131ENS3	27X1-2ENSY04 UNDERVOLT RELAY FAILED	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AH	S133ENS3	27X4-2ENSY04 CONT 20 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-AH	S134ENS3	27X4-2ENSY04 UNDERVOLT RELAY FAILED	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-AF	S158ENS3	43LB-2ENSY04 CONT 3T FAILED OPEN	PERIODIC TEST	43LB-2ENSY04 CONTACT 3T OPEN	
24-9.-C	S004HVP1	2EGS*EG1 LOSS OF DSL ENG GEN ROOM "A" VENT	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-B	S012HVP1	2EGS*EG3 LOSS OF DSL ENG GEN ROOM "B" VENT	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-C	S005SWP1	2EGS*EG1 LOSS OF DSL ENG COOLING WATER FLOW	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-B	S013SWP1	2EGS*EG3 LOSS OF DSL ENG COOLING WATER FLOW	ANNUNCIATED IN CONTROL ROOM	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-M	S0358013	2EGS*EG1 43V-2EGSA01 CONT 1T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-N	S0368013	2EGS*EG1 90CS-2EGSA01 CONT 2 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-M	S0378013	2EGS*EG1 90CS-2EGSA01 CONT 5 FAILED CLOSE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-N 24-9.-V 24-9.-N	S0388013	2EGS*EG1 43V-2EGSA01 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-H 24-9.-V	S0398013	2EGS*EG1 90CS-2EGSA01 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-V	S0408013	2EGS*EG1 43V-2EGSA01 CONT 2T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-V	S0418013	2EGS*EG1 90CS-2EGSA01 CONT 1 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-V	S0428013	2EGS*EG1 90CS-2EGSA01 CONT 6 FAILED CLOSE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-N	S0438013	2EGS*EG1 AUTO VOLTAGE RGLTR "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-N	S0448013	2EGS*EG1 43V-2EGSA01 CONT 2T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-U	S0458013	2EGS*EG1 65CS-2EGSA02 CONT 1 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-U	S0468013	2EGS*EG1 65CS-2EGSA02 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-U	S0478013	2EGS*EG1 65CS-2EGSA02 CONT 2 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV I 2EGS*EG1 INOPERATIVE	
24-9.-AA	S1078013	2EGS*EG1 1-2EGSA01 CONT 9 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AA	S1108013	1-2EGSA01 CONT 7 FAILED OPEN	PERIODIC TEST	1-2EGSA01 CONTACT 7 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AC	S1128013	1-2EGSA01 CONT 14 FAILED OPEN	PERIODIC TEST	1-2EGSA01 CONTACT 14 OPEN	
24-9.-AC	S1138013	2EGS*EG1 1-2EGSA01 CONT 12 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-AJ	S1248013	1-2EGSA01 CONT 6 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC MAIN START SYSTEM FAILED	
24-9.-AK	S1278013	1-2EGSA01 CONT 11 FAILED OPEN	PERIODIC TEST	2EGS*EG1 ELEC REDUND START SYSTEM FAILED	
24-9.-P	S0488023	2EGS*EG3 43V-2EGSB01 CONT 1T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-P	S0498023	2EGS*EG3 90CS-2EGSB01 CONT 2 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-P	S0508023	2EGS*EG3 90CS-2EGSB01 CONT 5 FAILED CLOSE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-P 24-9.-X	S0518023	2EGS*EG3 43V-2EGSB01 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-P 24-9.-X	S0528023	2EGS*EG3 90CS-2EGSB01 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-X	S0538023	2EGS*EG3 43V-2EGSB01 CONT 2T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-X	S0548023	2EGS*EG3 90CS-2EGSB01 CONT 1 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-X	S0558023	2EGS*EG3 90CS-2EGSB01 CONT 6 FAILED CLOSE	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-P	S0568023	2EGS*EG3 AUTO VOLTAGE RGLTR "90VR" FAILED	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-P	S0578023	2EGS*EG3 43V-2EGSB01 CONT 2T FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-H	S0588023	2EGS*EG3 65CS-2EGSB02 CONT 1 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-H	S0598023	2EGS*EG3 65CS-2EGSB02 OPERATOR ERROR	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-H	S0608023	2EGS*EG3 65CS-2EGSB02 CONT 2 FAILED OPEN	PERIODIC TEST	EMER STBY DSL ENG GEN DIV II 2EGS*EG3 INOPERATIVE	
24-9.-AF	S1148023	2EGS*EG3 1-2EGSB01 CONT 9 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AH	S1168023	2EGS*EG3 1-2EGSB01 CONT 12 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	
24-9.-AF	S1178023	1-2EGSB01 CONT 7 FAILED OPEN	PERIODIC TEST	1-2EGSB01 CONTACT 7 OPEN	
24-9.-AH	S1198023	1-2EGSB01 CONT 14 FAILED OPEN	PERIODIC TEST	1-2EGSB01 CONTACT 14 OPEN	
24-9.-AL	S1328023	1-2EGSB01 CONT 6 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC MAIN START SYSTEM FAILED	
24-9.-AH	S1358023	1-2EGSB01 CONT 11 FAILED OPEN	PERIODIC TEST	2EGS*EG3 ELEC REDUND START SYSTEM FAILED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-G	E014CSL3	52-TC-2CSLN01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-G	E015CSL3	BRKR 101-7 BUS 2ENS*SHG101 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-G	E016CSL1	LOSS OF CONTROL POWER CKT 2CSLN01	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-T	E115CSL3	S6-2CSLN01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-T	E116CSL3	S6-2CSLN01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BC	E117CSL3	K12-CONTACT 7 FAILED CLOSE	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-BG	E118CSL3	K1-ENERGIZED BY SHORT	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-BC	E119CSL3	K12-ENERGIZED BY SHORT	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-BC	E120CSL3	K1-CONTACT T1 FAILED CLOSE	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-T	E418CSL3	S6-2CSLN01 CONTACT 10 FAILED CLOSE	PERIODIC TEST	S6-2CSLN01 CONTACT 10 CLOSED	
24-9.-AN	E053EGP3	ACB101-1 CLOSE CKT FAILED	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-AN	E054EGP3	ACB101-1 MECHANICAL FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-AM	E261EGP3	ACB103-14 CLOSE CKT FAILED	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AM	E262EGP3	ACB103-14 MECHANICAL FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-CD	E206EGS2	2EGS*EG1 BRKR ACB101-1 OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CD	E207EGS2	52-2ENSX10 ACB101-13 CLOSED ON LOP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-CB	E414EGS2	2EGS*EG3 BRKR ACB103-14 OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CB	E415EGS2	52-2ENSY10 ACB103-4 CLOSED ON LOP	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-Q	E010ENS3	27X1-2ENSX04 OPERATING CKT OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-R	E023ENS3	27X2-2ENSX04 OPERATING CKT OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-N	E033ENS3	27X3-2ENSX04 OPERATING CKT OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AR	E052ENS3	ACB101-13 MECHANICAL FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BQ	E057ENS3	K110A-2ENSX04 FAILS CLOSED	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AR	E059ENS1	LOSS OF 2ENSX10 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AS	E061ENS1	LOSS OF 2ENSX11 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-C	E194ENS3	52CP CKT 2ENSX04 DE-ENERGIZED	PERIODIC TEST	52CP CONT T4 CKT 2ENSX04 OPEN	
24-9.-C	E195ENS3	52CR CKT 2ENSX04 DE-ENERIGZED	PERIODIC TEST	52CR CONT T4 CKT 2ENSX04 OPEN	
24-9.-CE	E201ENS3	K110A- DE-ENERGIZED	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-CE	E204ENS2	43LB-2ENSX04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-Y	E218ENS3	27X1-2ENSY04 OPERATING CKT OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Z	E231ENS3	27X2-2ENSY04 OPERATING CKT OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-H	E241ENS3	27X3-2ENSY04 OPERATING CKT OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AP	E260ENS3	ACB103-4 MECHANICAL FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AQ	E264ENS3	ACB103-2 MECHANICAL FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-BP	E266ENS3	K110B-2ENSY04 FAILS CLOSED	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AP	E268ENS1	LOSS OF 2ENSY10 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AQ	E270ENS1	LOSS OF 2ENSY11 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-H	E402ENS3	52CP CKT 2ENSY04 DE-ENERGIZED	PERIODIC TEST	52CP CONT T4 CKT 2ENSY04 OPEN	
24-9.-H	E403ENS3	52CR CKT 2ENSY04 DE-ENERIGZED	PERIODIC TEST	52CR CONT T4 CKT 2ENSY04 OPEN	
24-9.-CC	E409ENS3	K110B- DE-ENERGIZED	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-CC	E412ENS2	43LB-2ENSY04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-A 24-9.-B	E417ENS2	LOSS OF LOAD SEQ BUS 2ENS*SHG102 DIV III	INDICATING LIGHT IN CONTROL ROOM	NONE	
24-9.-AS	E422ENS3	ACB101-10 MECHANICAL FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-G	E001RHS3	52-TC-2RHSA01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-G	E002RHS3	BRKR 101-3 BUS 2ENS*SHG101 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-G	E003RHS1	LOSS OF CONTROL PWR CKT 2RHSA01	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BE	E064RHS3	K3A-ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-F	E065RHS3	S3A-CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-F	E066RHS3	S3A-OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BB	E067RHS3	K18A-CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BB	E070RHS3	K18A-ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BB	E074RHS3	K3A-CONTACT M1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-M	E209RHS3	52-TC-2RHSB01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-M	E210RHS3	BRKR 103-12 BUS 2ENS*SHG103 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-M	E211RHS1	LOSS OF CONTROL PWR CKT 2RHSB01	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-M	E222RHS3	52-TC-2RHSC01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-M	E223RHS3	BRKR 103-5 BUS 2ENS*SHG103 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-M	E224RHS1	LOSS OF CONTROL POWER CKT 2RHSC01	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-BD	E273RHS3	K3B-ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AA	E274RHS3	S3B-CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AA	E275RHS3	S3B-OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AH	E276RHS3	K18B-CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AH	E279RHS3	K18B-ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AH	E283RHS3	K3B-CONTACT M1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AE	E322RHS3	S3C-2RHSC01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AE	E323RHS3	S3C-2RHSC01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-AX	E324RHS3	K21-CONTACT 1 FAILED CLOSE	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-BF	E325RHS3	K30B- ENERGIZED BY SHORT	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-AX	E326RHS3	K21-ENERGIZED BY SHORT	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-AX	E327RHS3	K30B-CONTACT T1 FAILED CLOSE	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-AE	E421RHS3	S3C-2RHSC01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	S3C-2RHSC01 CONTACT 1 CLOSED	
24-9.-R	E017SFC3	52-TC-2SFCA01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-R	E018SFC3	BRKR 101-5 BUS 2ENS*SHG101 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-R	E019SFC1	LOSS OF 2SFCA01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-F	E112SFC3	1-2SFCA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	1-2SFCA01 CONTACT 1 CLOSED	
24-9.-F	E113SFC3	1-2SFCA01 OPERATOR ERROR	PERIODIC TEST	1-2SFCA01 CONTACT 1 CLOSED	
24-9.-Z	E225SFC3	52-TC-2SFCB01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Z	E226SFC3	BRKR 103-10 BUS 2ENS*SHG103 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Z	E227SFC1	LOSS OF 2SFCB01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-L	E319SFC3	1-2SFCB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	1-2SFCB01 CONTACT 1 CLOSED	
24-9.-L	E320SFC3	1-2SFCB01 OPERATOR ERROR	PERIODIC TEST	1-2SFCB01 CONTACT 1 CLOSED	
24-9.-Q	E004SHP3	52-TC-2SHPA01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-Q	E005SHP3	BRKR 101-4 BUS 2ENS*SHG101 MECH FAILURE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-Q	E006SHP1	LOSS OF 2SHPA01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-N	E024SHP3	52-TC-2SHPC01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-N	E025SHP3	BRKR 101-8 BUS 2ENS*SHG101 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-N 24-9.-D	E026SHP1	LOSS OF 2SHPE01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-P	E027SHP3	52-TC-2SHPC01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-P	E028SHP3	BRKR 101-6 BUS 2ENS*SHG101 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-P 24-9.-AJ	E029SWP1	LOSS OF 2SWPC01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-D	E034SWP3	3-2SWPC01 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-D	E035SWP3	3-2SWPE01 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AJ	E036SWP3	3-2SWPC01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-D	E037SWP3	3-2SWPE01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AJ	E038SWP3	52-2SWPA01 CONTACT 68 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AK	E039SWP3	52-2SWPC01 CONTACT 72 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AJ	E040SWP3	3-7-2SWPA44 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AK	E041SWP3	3-7-2SWPA44 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AK	E042SWP3	3-7-2SWPA44 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AL	E043SWP3	62-2SWPA44 ENERGIZED INADVERTENTLY	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AL	E044SWP3	62-2SWPA44 CONTACT 5 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-V 24-9.-BV	E077SWP3	2A-2SWPA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-V	E078SWP3	2A-2SWPA01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-V 24-9.-BW	E079SWP3	1-2SWPA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-V	E080SWP3	1-2SWPA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BV	E082SWP3	2C-2SWPA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	2C-2SWPA01 CONTACT 1 CLOSED	
24-9.-BV	E083SWP3	2C-2SWPA01 ENERGIZED BY SHORT	PERIODIC TEST	2C-2SWPA01 CONTACT 1 CLOSED	
24-9.-U 24-9.-BX	E094SWP3	2A-2SWPC01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-U	E095SWP3	2A-2SWPC01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AZ	E096SWP3	1-2SWPC01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AZ	E097SWP3	1-2SWPC01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BX	E099SWP3	2C-2SWPC01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	2C-2SWPC01 CONTACT 1 CLOSED	
24-9.-BX	E100SWP3	2C-2SWPC01 ENERGIZED BY SHORT	PERIODIC TEST	2C-2SWPC01 CONTACT 1 CLOSED	
24-9.-S 24-9.-BY	E103SWP3	2A-2SWPE01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-S	E104SWP3	2A-2SWPE01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BA	E105SWP3	1-2SWPE01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BA	E106SWP3	1-2SWPE01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BY	E108SWP3	2C-2SWPE01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	2C-2SWPE01 CONTACT 1 CLOSED	
24-9.-BY	E109SWP3	2C-2SWPE01 ENERGIZED BY SHORT	PERIODIC TEST	2C-2SWPE01 CONTACT 1 CLOSED	
24-9.-Y	E212SWP3	52-TC-2SWPB01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-Y	E213SWP3	BRKR 103-12 BUS 2ENS*SWG103 MECH FAILURE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-Y	E214SWP1	LOSS OF 2SWPB01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-W	E232SWP3	52-TC-2SWPF01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-W	E233SWP3	BRKR 103-7 BUS 2ENS*SWG103 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-W 24-9.-J	E234SWP1	LOSS OF 2SWPF01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-X	E235SWP3	52-TC-2SWPD01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-X	E236SWP3	BRKR 103-9 BUS 2ENS*SWG103 MECH FLR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-X 24-9.-AF	E237SWP1	LOSS OF 2SWPD01 CONTROL POWER	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-J	E242SWP3	3-2SWPD01 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-J	E243SWP3	3-2SWPF01 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AF	E244SWP3	3-2SWPD01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-J	E245SWP3	3-2SWPF01 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AF	E246SWP3	52-2SWPB01 CONTACT 68 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AG	E247SWP3	52-2SWPD01 CONTACT 72 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AF	E248SWP3	3-7-2SWPB44 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AG	E249SWP3	3-7-2SWPB44 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AG	E250SWP3	3-7-2SWPB44 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AH	E251SWP3	62-2SWPB44 ENERGIZED INADVERTENTLY	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AH	E252SWP3	62-2SWPB44 CONTACT 5 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AB 24-9.-BT	E285SWP3	2A-2SWPB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AB	E286SWP3	2A-2SWPB01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AB 24-9.-BU	E287SWP3	1-2SWPB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AB	E288SWP3	1-2SWPB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BT	E290SWP3	2C-2SWPB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	2C-2SWPB01 CONTACT 1 CLOSED	
24-9.-BT	E291SWP3	2C-2SWPB01 ENERGIZED BY SHORT	PERIODIC TEST	2C-2SWPB01 CONTACT 1 CLOSED	
24-9.-AC 24-9.-BS	E301SWP3	2A-2SWPD01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AC	E302SWP3	2A-2SWPD01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AU	E303SWP3	1-2SWPD01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AU	E304SWP3	1-2SWPD01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BS	E306SWP3	2C-2SWPD01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	2C-2SWPD01 CONTACT 1 CLOSED	
24-9.-BS	E307SWP3	2C-2SWPD01 ENERGIZED BY SHORT	PERIODIC TEST	2C-2SWPD01 CONTACT 1 CLOSED	
24-9.-AD 24-9.-BR	E310SWP3	2A-2SWPF01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AD	E311SWP3	2A-2SWPF01 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AT	E312SWP3	1-2SWPF01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AT	E313SWP3	1-2SWPF01 OPERATOR ERROR	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BR	E315SWP3	2C-2SWPF01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	2C-2SWPF01 CONTACT 1 CLOSED	
24-9.-BR	E316SWP3	2C-2SWPF01 ENERGIZED BY SHORT	PERIODIC TEST	2C-2SWPF01 CONTACT 1 CLOSED	
24-9.-AY	E0685013	2A-2ENSX04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AY 24-9.-BE	E0695013	2A-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AV	E2775023	2A-2ENSY04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AV 24-9.-BD	E2785023	2A-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AS	E0605053	52TC-2ENSX11 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AQ	E2695073	52TC-2ENSY11 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AR	E0585083	52TC-2ENSX10 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AP	E2675093	52TC-2ENSY10 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BN	E1335143	62-1-2ENSX05 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BM	E1375143	62-2-2ENSX05 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BN	E1385143	27AY-2ENSX05 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CJ	E1395143	27AY-2ENSX05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27AY-2ENSX05 CONTACT 10 CLOSED	
24-9.-CJ	E1425143	27AY-2ENSX05 ENERGIZED BY SHORT	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	
24-9.-BN	E1465143	27AZ-2ENSX05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	
24-9.-CK	E1475143	27AZ-2ENSX05 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27AZ-2ENSX05 CONTACT 8 CLOSED	
24-9.-CK	E1505143	27AZ-2ENSX05 ENERGIZED BY SHORT	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	
24-9.-CY	E1545143	27AC-2ENSA24 CONTACT 1 FAILED OPEN	PERIODIC TEST	27AC-2ENSA24 CONTACT 1 OPEN	
24-9.-CY	E1555143	27AC-2ENSA24 CONTACT 3 FAILED CLOSE	PERIODIC TEST	27AC-2ENSA24 CONTACT 3 CLOSED	
24-9.-CK	E1565143	27AX-2ENSX05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-CJ	E1575143	27AX-2ENSX05 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27AX-2ENSX05 CONTACT 8 CLOSED	
24-9.-CJ	E1605143	27AX-2ENSX05 ENERGIZED BY SHORT	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-DA	E1645143	27AA-2ENSA24 CONTACT 1 FAILED OPEN	PERIODIC TEST	27AA-2ENSA24 CONTACT 1 OPEN	
24-9.-DA	E1655143	27AA-2ENSA24 CONTACT 3 FAILED CLOSE	PERIODIC TEST	27AA-2ENSA24 CONTACT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CL	E1665143	27BX-2ENSX06 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27BX-2ENSX06 CONTACT 8 CLOSED	
24-9.-CR	E1675143	27BX-2ENSX06 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27BX-2ENSX06 CONTACT 10 CLOSED	
24-9.-CU	E1705143	27BX-2ENSX06 ENERGIZED BY SHORT	PERIODIC TEST	27BX-2ENSX06 CONTACT 8 CLOSED	
24-9.-CU	E1735143	27BA-2ENSA24 CONTACT 5 FAILED OPEN	PERIODIC TEST	27BA-2ENSA24 CONTACT 5 OPEN	
24-9.-DC	E1745143	27BA-2ENSA24 CONTACT 7 FAILED CLOSE	PERIODIC TEST	27BA-2ENSA24 CONTACT 7 CLOSED	
24-9.-CL	E1755143	27BY-2ENSX06 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27BY-2ENSX06 CONTACT 10 CLOSED	
24-9.-CL	E1765143	27BY-2ENSX06 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27BY-2ENSX06 CONTACT 8 CLOSED	
24-9.-CS	E1795143	27BY-2ENSX06 ENERGIZED BY SHORT	PERIODIC TEST	27BY-2ENSX06 CONTACT 10 CLOSED	
24-9.-CS	E1825143	27BB-2ENSA24 CONTACT 5 FAILED OPEN	PERIODIC TEST	27BB-2ENSA24 CONTACT 5 OPEN	
24-9.-DE	E1835143	27BB-2ENSA24 CONTACT 7 FAILED CLOSE	PERIODIC TEST	27BB-2ENSA24 CONTACT 7 CLOSED	
24-9.-CL	E1845143	27BZ-2ENSX06 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27BZ-2ENSX06 CONTACT 10 CLOSED	
24-9.-CR	E1855143	27BZ-2ENSX06 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27BZ-2ENSX06 CONTACT 8 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CT	E1885143	27BZ-2ENSX06 ENERGIZED BY SHORT	PERIODIC TEST	27BZ-2ENSX06 CONTACT 10 CLOSED	
24-9.-CT	E1905143	27BC-2ENSA24 CONTACT 5 FAILED OPEN	PERIODIC TEST	27BC-2ENSA24 CONTACT 5 OPEN	
24-9.-DG	E1915143	27BC-2ENSA24 CONTACT 7 FAILED CLOSE	PERIODIC TEST	27BC-2ENSA24 CONTACT 7 CLOSED	
24-9.-CH	E4195143	27AB-2ENSA27 CONTACT 1 FAILED OPEN	PERIODIC TEST	27AB-2ENSA24 CONTACT 1 OPEN	
24-9.-CH	E4205143	27AB-2ENSA24 CONTACT 3 FAILED CLOSE	PERIODIC TEST	27AB-2ENSA24 CONTACT 3 CLOSED	
24-9.-BK	E3405183	62-1-2ENSY05 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-BK	E3445183	62-2-2ENSY05 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-BL	E3455183	27AY-2ENSY05 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-CF	E3465183	27AY-2ENSY05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27AY-2ENSY05 CONTACT 10 CLOSED	
24-9.-CF	E3495183	27AY-2ENSY05 ENERGIZED BY SHORT	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-CV	E3535183	27AB-2ENSB27 CONTACT 1 FAILED OPEN	PERIODIC TEST	27AB-2ENSB24 CONTACT 1 OPEN	
24-9.-CV	E3545183	27AB-2ENSB24 CONTACT 3 FAILED CLOSE	PERIODIC TEST	27AB-2ENSB24 CONTACT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BL	E3555183	27AZ-2ENSY05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27AZ-2ENSY05 CONTACT 10 CLOSED	
24-9.-CG	E3565183	27AZ-2ENSY05 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27AZ-2ENSY05 CONTACT 8 CLOSED	
24-9.-CG	E3595183	27AZ-2ENSY05 ENERGIZED BY SHORT	PERIODIC TEST	27AZ-2ENSY05 CONTACT 10 CLOSED	
24-9.-CX	E3635183	27AC-2ENSB24 CONTACT 1 FAILED OPEN	PERIODIC TEST	27AC-2ENSB24 CONTACT 1 OPEN	
24-9.-CX	E3645183	27AC-2ENSB24 CONTACT 3 FAILED CLOSE	PERIODIC TEST	27AC-2ENSB24 CONTACT 3 CLOSED	
24-9.-CG	E3655183	27AX-2ENSY05 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-CF	E3665183	27AX-2ENSY05 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27AX-2ENSY05 CONTACT 8 CLOSED	
24-9.-CF	E3695183	27AX-2ENSY05 ENERGIZED BY SHORT	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-CZ	E3735183	27AA-2ENSB24 CONTACT 1 FAILED OPEN	PERIODIC TEST	27AA-2ENSB24 CONTACT 1 OPEN	
24-9.-CZ	E3745183	27AA-2ENSB24 CONTACT 3 FAILED CLOSE	PERIODIC TEST	27AA-2ENSB24 CONTACT 3 CLOSED	
24-9.-CH	E3755183	27BX-2ENSY06 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27BX-2ENSY06 CONTACT 8 CLOSED	
24-9.-CH	E3765183	27BX-2ENSY06 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27BX-2ENSY06 CONTACT 10 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CQ	E3795183	27BX-2ENSY06 ENERGIZED BY SHORT	PERIODIC TEST	27BX-2ENSY06 CONTACT 8 CLOSED	
24-9.-CQ	E3825183	27BA-2ENSB24 CONTACT 5 FAILED OPEN	PERIODIC TEST	27BA-2ENSB24 CONTACT 5 OPEN	
24-9.-DB	E3835183	27BA-2ENSB24 CONTACT 17 FAILED CLOSE	PERIODIC TEST	27BA-2ENSB24 CONTACT 7 CLOSED	
24-9.-CH	E3845183	27BY-2ENSY06 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27BY-2ENSY06 CONTACT 10 CLOSED	
24-9.-CH	E3855183	27BY-2ENSY06 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27BY-2ENSY06 CONTACT 8 CLOSED	
24-9.-CN	E3885183	27BY-2ENSY06 ENERGIZED BY SHORT	PERIODIC TEST	27BY-2ENSY06 CONTACT 10 CLOSED	
24-9.-CN	E3905183	27BB-2ENSB24 CONTACT 5 FAILED OPEN	PERIODIC TEST	27BB-2ENSB24 CONTACT 5 OPEN	
24-9.-DD	E3915183	27BB-2ENSB24 CONTACT 7 FAILED CLOSE	PERIODIC TEST	27BB-2ENSB24 CONTACT 7 CLOSED	
24-9.-CH	E3925183	27BZ-2ENSY06 CONTACT 10 FAILED CLOSE	PERIODIC TEST	27BZ-2ENSY06 CONTACT 10 CLOSED	
24-9.-CM	E3935183	27BZ-2ENSY06 CONTACT 8 FAILED CLOSE	PERIODIC TEST	27BZ-2ENSY06 CONTACT 8 CLOSED	
24-9.-CP	E3965183	27BZ-2ENSY06 ENERGIZED BY SHORT	PERIODIC TEST	27BZ-2ENSY06 CONTACT 10 CLOSED	
24-9.-CP	E3985183	27BC-2ENSB24 CONTACT 5 FAILED OPEN	PERIODIC TEST	27BC-2ENSB24 CONTACT 5 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DF	E3995183	27BC-2ENSB24 CONTACT 7 FAILED CLOSE	PERIODIC TEST	27BC-2ENSB24 CONTACT 7 CLOSED	
24-9.-G	E0075213	27X1-2ENSX04 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-Q	E0085213	27X1-2ENSX04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-Q	E0095213	27X1-2ENSX04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-CE	E0115211	LOSS OF 125VDC BUS NO. (LTR) (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-CE	E0125212	F1-2ENSX04 POSITIVE FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-CE	E0135212	F1-2ENSX04 NEGATIVE FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-G	E0205213	27X2-2ENSX04 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-R	E0215213	27X2-2ENSX04 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-R	E0225213	27X2-2ENSX04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-N	E0305213	27X3-2ENSX04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-P	E0315213	27X2-2ENSX04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-N	E0325213	27X3-2ENSX04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AL	E0455213	4Y1-2ENSX04 CONTACT 7 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AL	E0465213	4Y1-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AN	E0475213	71X2-2ENSX04 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AN	E0485213	52-2ENSX10 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AN	E0495213	52-2ENSX11 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AN	E0505213	52-2EGPX07 CONTACT 72 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BQ	E0515213	71X2-2ENSX04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BQ	E0555213	71X2-2ENSX04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BQ	E0565213	K110A-2ENSX04 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AR	E0625213	27X2-2ENSX04 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-AS	E0635213	27X1-2ENSX04 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BE	E0715213	2A-2ENSX04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BE	E0725213	2C-2ENSX04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AY 24-9.-BE	E0735213	2C-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-AY	E0755213	2C-2ENSX04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BH	E0815213	3-2ENSX04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	3-2ENSX04 CONTACT 6 CLOSED	
24-9.-BV	E0845213	71X4-2ENSX04 CONTACT 18 FAILED CLOSE	PERIODIC TEST	71X4-2ENSX04 CONTACT 18 CLOSED	
24-9.-BV	E0855213	71X4-2ENSX04 FAILED OPEN	PERIODIC TEST	71X4-2ENSX04 CONTACT 18 CLOSED	
24-9.-BH	E0865213	3-2ENSX04 FAILED OPEN	PERIODIC TEST	3-2ENSX04 CONTACT 8 CLOSED	
24-9.-CA	E0875213	62-2ENSX04 CONT 3 FAILED OPEN	PERIODIC TEST	62-2ENSX04 CONT 3 OPEN	
24-9.-CA	E0885213	62-2ENSX04 FAILED OPEN	PERIODIC TEST	62-2ENSX04 CONT 3 OPEN	
24-9.-CA	E0895213	2B-2ENSX04 INST CONT FAILED OPEN	PERIODIC TEST	2B-2ENSX04 INST CONT OPEN	
24-9.-CA	E0905213	2B-2ENSX04 FAILED OPEN	PERIODIC TEST	2B-2ENSX04 INST CONT OPEN	
24-9.-CA	E0915213	2D-2ENSX04 INST CONT FAILED OPEN	PERIODIC TEST	2D-2ENSX04 INST CONT OPEN	
24-9.-CA	E0925213	2D-2ENSX04 FAILED OPEN	PERIODIC TEST	2D-2ENSX04 INST CONT OPEN	
24-9.-AZ	E0985213	3-2ENSX04 CONTACT 8 FALED CLOSE	PERIODIC TEST	3-2ENSX04 CONTACT 8 CLOSED	
24-9.-BX	E1015213	71X2-2ENSX04 CONTACT 18 FAILED CLOSE	PERIODIC TEST	71X2-2ENSX04 CONTACT 18 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BX	E1025213	71X2-2ENSX04 FAILED OPEN	PERIODIC TEST	71X2-2ENSX04 CONTACT 18 CLOSED	
24-9.-BA	E1075213	3-2ENSX04 CONTACT 10 FALED CLOSE	PERIODIC TEST	3-2ENSX04 CONTACT 10 CLOSED	
24-9.-BY	E1105213	71X3-2ENSX04 CONTACT 18 FAILED CLOSE	PERIODIC TEST	71X3-2ENSX04 CONTACT 18 CLOSED	
24-9.-BY	E1115213	71X3-2ENSX04 FAILED OPEN	PERIODIC TEST	71X3-2ENSX04 CONTACT 18 CLOSED	
24-9.-F	E1145213	3-2ENSX04 CONTACT 4 FAILED CLOSE	PERIODIC TEST	3-2ENSX04 CONTACT 4 CLOSED	
24-9.-BG	E1215213	2B-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-BG	E1225213	2B-2ENSX04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-BG	E1235213	2D-2ENSX04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-BG	E1245213	2D-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	K12-CONTACT 7 CLOSED	
24-9.-E	E1255213	2A-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-E	E1265213	2B-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-E	E1275213	2C-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-E	E1285213	2D-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-BJ	E1295213	52-2ENSX10 CONTACT 72 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CD	E1305213	52-2ENSX11 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-CD	E1315213	4Y1-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BJ	E1325213	27X1-2ENSX04 CONTACT 13 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BJ	E1345213	27X1-2ENSX04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BH	E1355213	62-1-2ENSX05 CONTACT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BH	E1365213	62-2-2ENSX06 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-C	E1925213	DR-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-C	E1935213	52CP CONT T4 CKT 2ENSX04 FAILED OPEN	PERIODIC TEST	52CP CONT T4 CKT 2ENSX04 OPEN	
24-9.-C	E1965213	52CR CONT T4 CKT 2ENSX04 FAILED OPEN	PERIODIC TEST	52CR CONT T4 CKT 2ENSX04 OPEN	
24-9.-BJ	E1975213	71X1-2ENSX04 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-CD	E1985213	71X2-2ENSX04 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-BJ	E1995213	71X1-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-CE	E2005213	71X2-2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CE	E2025213	K110A CONT 6 CKT 2ENSX04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-CE	E2035213	43LB-2ENSX04 CONT 1T FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-CD	E2055213	52-2EGPX07 CONTACT 72 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-CD	E2085213	52-2ENSX10 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG101 DIV I	
24-9.-H	E2155223	27X1-2ENSY04 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Y	E2165223	27X1-2ENSY04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Y	E2175223	27X1-2ENSY04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-CC	E2195221	LOSS OF 125VDC BUS NO. (LTR) (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-CC	E2205222	F1-2ENSY04 POSITIVE FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-CC	E2215222	F1-2ENSY04 NEGATIVE FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-H	E2285223	27X2-2ENSY04 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Z	E2295223	27X2-2ENSY04 CONTACT 12 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-Z	E2305223	27X2-2ENSY04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-W	E2385223	27X3-2ENSY04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-X	E2395223	27X2-2ENSY04 CONTACT 19 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-W	E2405223	27X3-2ENSY04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AH	E2535223	4Y1-2ENSY04 CONTACT 7 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AH	E2545223	4Y1-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AN	E2555223	71X2-2ENSY04 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AN	E2565223	52-2ENSY10 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AN	E2575223	52-2ENSY11 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AN	E2585223	52-2EGPY07 CONTACT 72 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BP	E2595223	71X2-2ENSY04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BP	E2635223	71X2-2ENSY04 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BP	E2655223	K110B-2ENSY04 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-AP	E2715223	27X2-2ENSY04 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AQ	E2725223	27X1-2ENSY04 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BD	E2805223	2A-2ENSY04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BD	E2815223	2C-2ENSY04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-AV 24-9.-BD	E2825223	2C-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-AV	E2845223	2C-2ENSY04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BU	E2895223	3-2ENSY04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	3-2ENSY04 CONTACT 6 CLOSED	
24-9.-BT	E2925223	71X4-2ENSY04 CONTACT 18 FAILED CLOSE	PERIODIC TEST	71X4-2ENSY04 CONTACT 18 CLOSED	
24-9.-BT	E2935223	71X4-2ENSY04 FAILED OPEN	PERIODIC TEST	71X4-2ENSY04 CONTACT 18 CLOSED	
24-9.-BU	E2945223	3-2ENSY04 FAILED OPEN	PERIODIC TEST	3-2ENSY04 CONTACT 8 CLOSED	
24-9.-BZ	E2955223	62-2ENSY04 CONT 3 FAILED OPEN	PERIODIC TEST	62-2ENSY04 CONT 3 OPEN	
24-9.-BZ	E2965223	62-2ENSY04 FAILED OPEN	PERIODIC TEST	62-2ENSY04 CONT 3 OPEN	
24-9.-BZ	E2975223	2B-2ENSY04 INST CONT FAILED OPEN	PERIODIC TEST	2B-2ENSY04 INST CONT OPEN	
24-9.-BZ	E2985223	2B-2ENSY04 FAILED OPEN	PERIODIC TEST	2B-2ENSY04 INST CONT OPEN	
24-9.-BZ	E2995223	2D-2ENSY04 INST CONT FAILED OPEN	PERIODIC TEST	2D-2ENSY04 INST CONT OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BZ	E3005223	2D-2ENSY04 FAILED OPEN	PERIODIC TEST	2D-2ENSY04 INST CONT OPEN	
24-9.-AU	E3055223	3-2ENSY04 CONTACT 8 FALED CLOSE	PERIODIC TEST	3-2ENSY04 CONTACT 8 CLOSED	
24-9.-BS	E3085223	71X2-2ENSY04 CONTACT 18 FAILED CLOSE	PERIODIC TEST	71X2-2ENSY04 CONTACT 18 CLOSED	
24-9.-BS	E3095223	71X2-2ENSY04 FAILED OPEN	PERIODIC TEST	71X2-2ENSY04 CONTACT 18 CLOSED	
24-9.-AT	E3145223	3-2ENSY04 CONTACT 10 FALED CLOSE	PERIODIC TEST	3-2ENSY04 CONTACT 10 CLOSED	
24-9.-BR	E3175223	71X3-2ENSY04 CONTACT 18 FAILED CLOSE	PERIODIC TEST	71X3-2ENSY04 CONTACT 18 CLOSED	
24-9.-BR	E3185223	71X3-2ENSY04 FAILED OPEN	PERIODIC TEST	71X3-2ENSY04 CONTACT 18 CLOSED	
24-9.-L	E3215223	3-2ENSY04 CONTACT 4 FAILED CLOSE	PERIODIC TEST	3-2ENSY04 CONTACT 4 CLOSED	
24-9.-BF	E3285223	2B-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-BF	E3295223	2B-2ENSY04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-BF	E3305223	2D-2ENSY04 CONTACT 1 FAILED CLOSE	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-BF	E3315223	2D-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	K21-CONTACT 7 CLOSED	
24-9.-K	E3325223	2A-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-K	E3335223	2B-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-K	E3345223	2C-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-K	E3355223	2D-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BH	E3365223	52-2ENSY10 CONTACT 72 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-CB	E3375223	52-2ENSY11 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-CB	E3385223	4Y1-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BH	E3395223	27X1-2ENSY04 CONTACT 13 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BH	E3415223	27X1-2ENSY04 ENERGIZED BY SHORT	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BK	E3425223	62-1-2ENSY05 CONTACT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-BK	E3435223	62-2-2ENSY06 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-H	E4005223	DR-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-H	E4015223	52CP CONT T4 CKT 2ENSY04 FAILED OPEN	PERIODIC TEST	52CP CONT T4 CKT 2ENSY04 OPEN	
24-9.-H	E4045223	52CR CONT T4 CKT 2ENSY04 FAILED OPEN	PERIODIC TEST	52CR CONT T4 CKT 2ENSY04 OPEN	
24-9.-BH	E4055223	71X1-2ENSY04 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CB	E4065223	71X2-2ENSY04 CONTACT 12 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-BH	E4075223	71X1-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CC	E4085223	71X2-2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CC	E4105223	K110B CONT 6 CKT 2ENSY04 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CC	E4115223	43LB-2ENSY04 CONT 1T FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CB	E4135223	52-2EGPY07 CONTACT 72 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CB	E4165223	52-2ENSY10 CONTACT 62 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG103 DIV II	
24-9.-CW	E1408013	27AB-2ENSA24 FAILED OPEN	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	
24-9.-CW	E1418013	TSAB-2ENSA24 CONT 1T FAILED OPEN	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	
24-9.-DE	E1438013	2ENS*SWG101 PH2 PT OUTPUT FUSE FAILED OPEN	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	
24-9.-DE	E1448013	2ENS*SWG101 PH2 PT INPUT FUSE FAILED OPEN	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	
24-9.-DE	E1458013	2ENS*SWG101 PH2 PT XFMR FAILED OPEN	PERIODIC TEST	27AY-2ENSX05 CONTACT 8 CLOSED	
24-9.-CY	E1488013	27AC-2ENSA24 FAILED OPEN	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CY	E1498013	TSAC-2ENSA24 CONT 1T FAILED OPEN	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	
24-9.-DG	E1518013	2ENS*SWG101 PH3 PT OUTPUT FUSE FAILED OPEN	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	
24-9.-DG	E1528013	2ENS*SWG101 PH3 PT INPUT FUSE FAILED OPEN	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	
24-9.-DG	E1538013	2ENS*SWG101 PH3 PT XFMR FAILED OPEN	PERIODIC TEST	27AZ-2ENSX05 CONTACT 10 CLOSED	
24-9.-DA	E1588013	27AA-2ENSA24 FAILED OPEN	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-DA	E1598013	TSAA-2ENSA24 CONT 1T FAILED OPEN	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-DC	E1618013	2ENS*SWG101 PH1 PT OUTPUT FUSE FAILED OPEN	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-DC	E1628013	2ENS*SWG101 PH1 PT INPUT FUSE FAILED OPEN	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-DC	E1638013	2ENS*SWG101 PH1 PT XFMR FAILED OPEN	PERIODIC TEST	27AX-2ENSX05 CONTACT 10 CLOSED	
24-9.-DC	E1688013	27BA-2ENSA24 FAILED OPEN	PERIODIC TEST	27BX-2ENSX06 CONTACT 8 CLOSED	
24-9.-DC	E1698013	TSBA-2ENSA24 CONT 1T FAILED OPEN	PERIODIC TEST	27BX-2ENSX06 CONTACT 8 CLOSED	
24-9.-DC 24-9.-DE 24-9.-DG	E1718013	JTD-2ENSA24 CONTACT 20 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SWG101 DIV I	
24-9.-DC	E1728013	TD-2ENSA24 CONTACT 14 FAILED OPEN	PERIODIC TEST	27BX-2ENSX06 CONTACT 8 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DE	E1778013	27SB-2ENSA24 FAILED OPEN	PERIODIC TEST	27BY-2ENSX06 CONTACT 10 CLOSED	
24-9.-DE	E1788013	TSSB-2ENSA24 CONT 1T FAILED OPEN	PERIODIC TEST	27BY-2ENSX06 CONTACT 10 CLOSED	
24-9.-DE	E1818013	TD-2ENSA24 CONTACT 16 FAILED OPEN	PERIODIC TEST	27BY-2ENSX06 CONTACT 10 CLOSED	
24-9.-DG	E1868013	27BC-2ENSA24 FAILED OPEN	PERIODIC TEST	27BZ-2ENSX06 CONTACT 10 CLOSED	
24-9.-DG	E1878013	TSSC-2ENSA24 CONT 1T FAILED OPEN	PERIODIC TEST	27BZ-2ENSX06 CONTACT 10 CLOSED	
24-9.-DG	E1898013	TD-2ENSA24 CONTACT 18 FAILED OPEN	PERIODIC TEST	27BZ-2ENSX06 CONTACT 10 CLOSED	
24-9.-CV	E3478023	27AB-2ENSB24 FAILED OPEN	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-CV	E3488023	TSAB-2ENSB24 CONT 1T FAILED OPEN	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-DD	E3508023	2ENS*SNG103 PH2 PT OUTPUT FUSE FAILED OPEN	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-DD	E3518023	2ENS*SNG103 PH2 PT INPUT FUSE FAILED OPEN	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-DD	E3528023	2ENS*SNG103 PH2 PT XFMR FAILED OPEN	PERIODIC TEST	27AY-2ENSY05 CONTACT 8 CLOSED	
24-9.-CX	E3578023	27AC-2ENSB24 FAILED OPEN	PERIODIC TEST	27AZ-2ENSY05 CONTACT 10 CLOSED	
24-9.-CX	E3588023	TSAC-2ENSB24 CONT 1T FAILED OPEN	PERIODIC TEST	27AZ-2ENSY05 CONTACT 10 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DF	E3608023	2ENS*SNG103 PH3 PT OUTPUT FUSE FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-DF	E3618023	2ENS*SNG103 PH3 PT INPUT FUSE FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-DF	E3628023	2ENS*SNG103 PH3 PT XFMR FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-CZ	E3678023	27AA-2ENSB24 FAILED OPEN	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-CZ	E3688023	TSAA-2ENSB24 CONT 1T FAILED OPEN	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-DB	E3708023	2ENS*SNG103 PH1 PT OUTPUT FUSE FAILED OPEN	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-DB	E3718023	2ENS*SNG103 PH1 PT INPUT FUSE FAILED OPEN	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-DB	E3728023	2ENS*SNG103 PH1 PT XFMR FAILED OPEN	PERIODIC TEST	27AX-2ENSY05 CONTACT 10 CLOSED	
24-9.-DB	E3778023	27BA-2ENSB24 FAILED OPEN	PERIODIC TEST	27BX-2ENSY06 CONTACT 8 CLOSED	
24-9.-DB	E3788023	TSBA-2ENSB24 CONT 1T FAILED OPEN	PERIODIC TEST	27BX-2ENSY06 CONTACT 8 CLOSED	
24-9.-DB 24-9.-DD 24-9.-DF	E3808023	JTD-2ENSB24 CONTACT 20 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SNG103 DIV II	
24-9.-DB	E3818023	TD-2ENSB24 CONTACT 14 FAILED OPEN	PERIODIC TEST	27BX-2ENSY06 CONTACT 8 CLOSED	
24-9.-DD	E3868023	27BB-2ENSB24 FAILED OPEN	PERIODIC TEST	27BY-2ENSY06 CONTACT 10 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DD	E3878023	TSSB-2ENSB24 CONT 1T FAILED OPEN	PERIODIC TEST	27BY-2ENSY06 CONTACT 10 CLOSED	
24-9.-DD	E3898023	TD-2ENSB24 CONTACT 16 FAILED OPEN	PERIODIC TEST	27BY-2ENSY06 CONTACT 10 CLOSED	
24-9.-DF	E3948023	27BC-2ENSB24 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-DF	E3958023	TSSC-2ENSB24 CONT 1T FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	
24-9.-DF	E3978023	TD-2ENSB24 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF LOAD SEQ BUS 2ENS*SHG103 DIV II	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-E	5123E1B3	2EHSxMCC103 BUS A MC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-L	5108E1D1	2EJSxUS1 BUS FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-L	5109E1D1	LOSS OF 4.16KV BUS 2ENSxSWG 101 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-P	5110E1D1	LOSS OF 4.16KV BUS 2ENSxSWG 103 YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-P	5111E1D1	2EJSxUS3 BUS FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-C	5112E1D1	2ENSxMCC101 BUS FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-C	5113E1D3	2EHSxMCC101 MC SUPPLY BRKR FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-C	5114E1D3	2EJSxACB 1-4B MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-F	5115E1D1	2EHSxMCC102 BUS A FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-F	5116E1D3	2EJSxACB 1-3C MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-F	5117E1D3	2EHSxMCC102 BUS A MC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-J	5118E1D1	2EHSxMCC102 BUS C FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-J	5119E1D3	2EJSxACB 1-5D MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-J	5120E1D3	2EHS*MCC102 BUS C NC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-E	5121E1D1	2EHS*MCC103 BUS A FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-E	5122E1D3	2EJS*ACB 1-3D MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-K	5124E1D1	2EHS*MCC103 BUS C FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-K	5125E1D3	2EJS*ACB 1-6D MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-K	5126E1D3	2EHS*MCC 103 BUS C NC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-D	5382E1D1	2EHS*MCC301 BUS FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-D	5383E1D3	2EHS*MCC301 NC SUPPLY BRKR FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-D	5384E1D3	2EJS*ACB3-4B MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-H	5385E1D1	2EHS*MCC302 BUS B FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-H	5386E1D3	2EJS*ACB 3-3C MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-H	5387E1D3	2EHS*MCC302 BUS B NC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-H	5388E1D1	2EHS*MCC302 BUS D FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-H	5389E1D3	2EJS*ACB3-6C MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-H	5390E1D3	2EHS*MCC302 BUS D MC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-G	5391E1D1	2EHS*MCC303 BUS B FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-G	5392E1D3	2EJS*ACB3-3D MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-G	5393E1D3	2EHS*MCC303 BUS B MC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-N	5394E1D1	2EHS*MCC303 BUS D FAULTS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-N	5395E1D3	2EJS*ACB 3-6D MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-N	5396E1D3	2EHS*MCC303 BUS D MC SUPPLY BRKR MECH FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-S	5054E1Z1	2EJS*US1 CKT 4C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-S	5055E1Z1	CONT BLDG CHLD 2HVH*CHL1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-S	5056E1Z1	2EJS*US1 CKT 4D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-S	5057E1Z1	RECOMBINER PNL 2HCS*PNL 22A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-S	5058E1Z1	2EJS*US1 CKT 8D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-P	5059E1Z1	REAC BLDG UNIT CLR 2HVR*UC413B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-P	5060E1Z1	2EJS*US3 CKT 4C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-P	5061E1Z1	CONT BLDG CHLD 2HVR*CHL1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-P	5062E1Z1	2EJS*US3 CKT 4D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-P	5063E1Z1	RECOMBINER PNL 2HCS*PNL 22B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-P	5064E1Z1	2EJS*US3 CKT 8D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-S	5865E1Z1	REAC BLDG UNIT CLR 2HVR*UC413A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-A	5750GES1	LOSS OF DIV III 600V STANDBY VOLTAGE 2EHS*HCC201	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51561AQ1	SVCE HTR PMP PIT UNIT COOLER 2HVY*UC2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51571AQ1	SVCE HTR PMP PIT UNIT CLR 2HVY*UC2C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BQ	51581AQ1	SVCE HTR ISOL TO TURB BLDG V 2SHP*MOV3A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51591AQ1	SVCE HTR STRAINER 2SHP*STR4A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CX	51601AQ1	SVCE HTR STRAINER 2SHP*STR4C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	51611AQ1	SVCE HTR STRAINER 2SHP*STR4E ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51621AQ1	2EHS*MCC101 CKT 4CL FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51631AQ1	2EHS*MCC101 CKT 4CR FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51641AQ1	2EHS*MCC101 CKT 3C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BQ	51651AQ1	2EHS*MCC101 CKT 4A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CX	51661AQ1	2EHS*MCC101 CKT 4B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	51671AQ1	2EHS*MCC101 CKT 5E FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BR	51681AQ1	SVCE HTR PMP P1A DISCH V 2SHP*MOV74A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51691AQ1	SVCE HTR PMP P1C DISCH V 2SHP*MOV74C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51701AQ1	SVCE HTR PMP P1E DISCH V 2SHP*MOV74E ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51711AQ1	SVCE HTR HDR ISOL V 2SHP*MOV50A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CV	51721AQ1	SVCE HTR STR BACKWASH V 2SHP*MOV1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CU	51731AQ1	SVCE HTR STR BACKWASH V 2SHP*MOV1C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51741AQ1	2EHS*MCC101 CKT 2B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51751AQ1	2EHS*MCC101 CKT 2D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51761AQ1	2EHS*MCC101 CKT 3B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BR	51771AQ1	2EHS*MCC101 CKT 3D FDR BRKR FAILS TO TRIP ON OCERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CV	51781AQ1	2EHS*MCC101 CKT 2A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CU	51791AQ1	2EHS*MCC101 CKT 2C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51801AQ1	SVCE HTR STR BACKWASH V 2SWP*MOV1E ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51811AQ1	INTAKE SCREENWELL BYPASS GATE 2SWP*MOV77A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51821AQ1	INTAKE SHAFT GATE 2SWP*MOV30A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51831AQ1	BAR RACK HTRS TNL1 2SWP*SSR 1A-2A-3A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CY	51841AQ1	BAR RACK HTRS TNL 2SWP*SSR4A-5A-6A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51851AQ1	2EHS*MCC101 CKT 3A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51861AQ1	2EHS*MCC101 CKT 5B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BP	51871AQ1	2EHS*MCC101 CKT 5A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BP	51881AQ1	2EHS*MCC101 CKT 5C FDR BRKR FAIL TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CY	51891AQ1	2EHS*MCC101 CKT 5D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54271AQ1	SERVICE WTR PMP PIT UNIT CLR 2HVY*UC2D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54281AQ1	SVCE WTR ISOL TO TURB BLDG V 2SWP*MOV3B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54291AQ1	SVCE WTR STRAINER 2SWP*STR 4D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FU	54301AQ1	SVCE WTR STRAINER 2SWP*STR 4D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FT	54311AQ1	SVCE WTR STRAINER 2SWP*STR 4F ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54321AQ1	2EHS*MCC301 CKT 4CL FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54331AQ1	2EHS*MCC301 CKT 4CR FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54341AQ1	2EHS*MCC301 CKT 3C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EL	54351AQ1	2EHS*MCC301 CKT 4A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FU	54361AQ1	2EHS*MCC301 CKT 4B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FT	54371AQ1	2EHS*MCC301 CKT 5E FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EL	54381AQ1	SVCE WTR PMP PIT UNIT CLR 2HVY*UC28 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EM	54391AQ1	SVCE WTR PMP P1B DISCH V 2SWP*MOV74B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EM	54401AQ1	SVCE WTR PMP P1D DISCH V 2SWP*MOV74D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EM	54411AQ1	SVCE WTR PMP P1F DISCH V 2SWP*MOV74F ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EM	54421AQ1	SVCE WTR HDR ISOL V 2SWP*MOV50B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FS	54431AQ1	SVCE WTR STR BACKWASH V 2SWP*MOV1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FR	54441AQ1	SVCE WTR STR BACKWASH V 2SWP*MOV1D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EH	54451AQ1	2EHS*MCC301 CKT 2B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	54461AQ1	2EHS*MCC301 CKT 2D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	54471AQ1	2EHS*MCC301 CKT 3B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	54481AQ1	2EHS*MCC301 CKT 3D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FS	54491AQ1	2EHS*MCC301 CKT 2A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FR	54501AQ1	2EHS*MCC301 CKT 2C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	54511AQ1	INTAKE SCREEN WELL BYPASS GATE 2SWP*MOV77B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	54521AQ1	INTAKE SHAFT GATE 2SWP*MOV30B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	54531AQ1	BACKRACK HTRS TNL 1 2SWP*SSR1B-2B-3B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FV	54541AQ1	BACKRACK HTRS TNL 2 2SWP*SSR 4B-5B-6B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EK	54551AQ1	2EHS*MCC301 CKT 5B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	54561AQ1	2EHS*MCC301 CKT 5A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	54571AQ1	2EHS*MCC301 CKT 5C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FV	54501AQ1	2EHS*MCC301 CKT 5D FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	58471AQ1	SVCE MTR STR BACKNASH V 2SHP*MOV1F ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EK	58481AQ1	2EHS*MCC301 CKT 3A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AH	50651AR1	2EHS*MCC102 BUS A CKT 5A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AH	50661AR1	2EHS*MCC102 BUS A CKT 5B STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AH	50671AR1	2EHS*MCC102 BUS A CKT 5C STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AH 24-9.-BV	50721AR1	2EHS*MCC102 BUS A CKT 5A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AH 24-9.-DE	50731AR1	2EHS*HCC102 BUS A CKT 5B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AH 24-9.-DD	50741AR1	2EHS*HCC102 BUS A CKT 5C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BV	51901AR1	RECOMBINER OUTLET OUTBD ISOL V 2HCS*HOV1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BV	51911AR1	RECOMBINER INLET OUTBD ISOL V 2HCS*HOV2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BV	51921AR1	RECOMBINER INLET OUTBD ISOL V 2HCS*HOV3A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BV	51931AR1	RECOMBINER OUTLET INBD ISOL V 2HCS*HOV4A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DE	51941AR1	RECOMBINER INLET INBD ISOL V 2HCS*HOV5A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DD	51951AR1	RECOMBINER INLET INBD ISOL V 2HCS*HOV6A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BV	51961AR1	2EHS*HCC102 BUS A CKT 4A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BV	51971AR1	2EHS*HCC102 BUS A CKT 4B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BV	51981AR1	2EHS*MCC102 BUS A CKT 4C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	51991AR1	FEED HTR TO REAC ISOL V 2FHS*MOV21A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	52001AR1	SVCE HTR TO SFC HX VALVE 2SHP*MOV17A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	52011AR1	SVCE HTR FROM SFC HX VALVE 2SHP*MOV18A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	52021AR1	ISOL TO REAC BLDG HX VALVE 2SHP*MOV19A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DA	52031AR1	EMER MAKE-UP TO SFC VALVE 2SHP*MOV21A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CZ	52041AR1	SVCE HTR TO RCS CLRS VALVE 2SHP*MOV38A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	52051AR1	2EHS*MCC102 BUS A CKT 8C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	52061AR1	2EHS*MCC102 BUS A CKT 2A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BX	52071AR1	2EHS*MCC102 BUS A CKT 2B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BX	52081AR1	2EHS*MCC102 BUS A CKT 2C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DA	52091AR1	2EHS*MCC102 BUS A CKT 2D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CZ	52101AR1	2EHS*MCC102 BUS A CKT 3B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	52111AR1	SVCE HTR FROM RCS CLRS V 2SHP*MOV39A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	52121AR1	SVCE HTR TO RHS HX VALVE 2SHP*MOV90A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	52131AR1	GTS FILTER A DISCH FAN 2GTS*FN1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	52141AR1	GTS TRAIN A INLET VALVE 2GTS*MOV1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DC	52151AR1	GTS TRAIN A INLET VALVE 2GTS*MOV2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DB	52161AR1	GTS TRAIN A DISCH V 2GTS*MOV3A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	52171AR1	2EHS*MCC102 BUS A CKT 3C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BN	52181AR1	2EHS*MCC102 BUS A CKT 3D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	52191AR1	2EHS*MCC102 BUS A CKT 10D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	52201AR1	2EHS*MCC102 BUS A CKT 9A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DC	52211AR1	2EHS*MCC102 BUS A CKT 9B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DB	52221AR1	2EHS*MCC102 BUS A CKT 9C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BU	52231AR1	GTS DECAY HT COOL TO TRAIN A V 2GTS*MOV4A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BU	52241AR1	HN STM UPSTREAM DRAIN VALVE 2HSS*MOV208 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BU	52251AR1	HN STM LINE DRAIN OUTBD V 2HSS*MOV112 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BU	52261AR1	RHR HX A TUBE SIDE INLET V 2SHP*MOV33A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DH	52271AR1	RNCU RETURN ISOL VALVE 2HCS*MOV200 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DF	52281AR1	REACTOR VESSEL VENT VALVE 2HSS*HOV119 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BU	52291AR1	2EHS*MCC102 BUS A CKT 9E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BU	52301AR1	2EHS*MCC102 BUS A CKT 7B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BU	52311AR1	2EHS*MCC102 BUS A CKT 7A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BU	52321AR1	2EHS*MCC102 BUS A CKT 3A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DH	52331AR1	2EHS*MCC102 BUS A CKT 7D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DF	52341AR1	2EHS*MCC102 BUS A CKT 6B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DG	52351AR1	CHS H2;02 ANALYZER PMP 2CHS*P2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DG	52361AR1	2EHS*MCC102 BUS A CKT 9D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52371AR1	RC1C NTR LEG PMP 2ICS*P2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BZ	52381AR1	SLS CONTROL STOR TANK OUTLET V 2SLS*MOV1A' ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52391AR1	SLS CONTROL PMP 2SLS*P1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52401AR1	RHCU PMP SUCT ISOL VALVE 2MCS*MOV112 ELECTRICAL	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DL	52411AR1	LPCS MTR LEG PMP 2CSL*P2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DK	52421AR1	LPCS PMP SUCTION VALVE 2CSL*MOV112 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DJ	52431AR1	DHFL DRAIN DISCH ISOL VALVE 2DFR*MOV120 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52441AR1	2EHS*MCC102 BUS C CKT 16B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52451AR1	2EHS*MCC102 BUS C CKT 17D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52461AR1	2EHS*MCC102 BUS C CKT 16D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BZ	52471AR1	2EHS*MCC102 BUS C CKT 17B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DL	52401AR1	2EHS*MCC102 BUS C CKT 16C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DK	52491AR1	2EHS*MCC102 BUS C CKT 15D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DJ	52501AR1	2EHS*MCC102 BUS C CKT 14C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52511AR1	LPCS INJECTION V 2CSL*MOV104 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52521AR1	LPCS TEST BYPASS TO SUPP POOL V 2CSL*FV114 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52531AR1	LPCS MIN FLOW TO SUPP POOL V 2CSL*MOV107 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52541AR1	RCIC STM SPLY LINE ISOL V 2ICS*MOV121 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DN	52551AR1	DRYWELL VENT ISOL V 2DER*MOV131 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DM	52561AR1	DRYWELL EQPT DRAIN ISOL V 2DER*MOV120 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52571AR1	2EHS*MCC102 BUS C CKT 15B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BY	52581AR1	2EHS*MCC102 BUS C CKT 15A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52591AR1	2EHS*MCC102 BUS C CKT 15C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BY	52601AR1	2EHS*MCC102 BUS C CKT 17C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DN	52611AR1	2EHS*MCC102 BUS C CKT 14B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DN	52621AR1	2EHS*MCC102 BUS C CKT 14A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BS	56211AR1	2EJS*PNL 101A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BS	56221AR1	2EJS*PNL 101A SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BS	56231AR1	2EJS*PNL 103A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BS	56241AR1	2EJS*PNL 103A SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BS	56251AR1	2EJS*PNL 104A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BS	56261AR1	2EJS*PNL 104A SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-HB	56271AR1	HVR UNIT CLR 2HVR*UC404B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-HB	56281AR1	HVR UNIT CLR 2HVR*UC401A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HB	56291AR1	HVR UNIT CLR 2HVR*UC402B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HG	56301AR1	HVR UNIT CLR 2HVR*UC404A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HF	56311AR1	HVR UNIT CLR 2HVR*UC401D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HB	56321AR1	2EJS*PNL 101A CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HB	56331AR1	2EJS*PNL 101A CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HB	56341AR1	2EJS*PNL 101A CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HG	56351AR1	2EJS*PNL 101A CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HF	56361AR1	2EJS*PNL 101A CKT 14 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CA	56371AR1	REAC BLDG PERSON AIRLOCK 2KJC*DBRA1 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CA	56381AR1	HVR UNIT CL 2HV*UC412A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CA	56391AR1	2EJS*PNL 101A CKT 19 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CA	56401AR1	2EJS*PNL 101A CKT 20 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56411AR1	HVR UNIT CLR 2HVR*UC407A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56421AR1	HVR UNIT CLR 2HVR*UC405 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56431AR1	HVR UNIT CLR 2HVR*UC415A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56441AR1	HVR UNIT CLR 2HVR*UC407B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HC	56451AR1	HVR UNIT CLR 2HVR*UC407C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56461AR1	2EJS*PNL 103A CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56471AR1	2EJS*PNL 103A CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56481AR1	2EJS*PNL 103A CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CB	56491AR1	2EJS*PNL 103A CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-HC	56501AR1	2EJS*PNL 103A CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56511AR1	HVR UNIT CLR 2HVR*UC408A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56521AR1	HVR UNIT CLR 2HVR*UC410A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56531AR1	HVR UNIT CLR 2HVR*CUC414A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56541AR1	HVR UNIT CLR 1HVR*UC408B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HE	56551AR1	HVR UNIT CLR 2HVR*UC411A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HD	56561AR1	GTS FLT 1A AIR HTR 2GTS*CH1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56571AR1	2EJS*PNL 104A CKT 1 FDR BRKR. FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56581AR1	2EJS*PNL 104A CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56591AR1	2EJS*PNL 104A CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CC	56601AR1	2EJS*PNL 104A CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-HE	56611AR1	2EJS*PNL 104A CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HD	56621AR1	2EJS*PNL 104A CKT 14 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BT	56781AR1	DWFL DRAIN VENT ISOL V 2DFR*MOV139 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BT	56791AR1	FEED WTR TO REAL ISOL V 2FWS*MOV21B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HB	58511AR1	HVR UNIT CLR 2HVR*UC402A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BT	58521AR1	2EHS*MCC102 BUS C CKT 14D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BT	58531AR1	2EHS*MCC102 BUS C CKT 18C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HB	58621AR1	2EJS*PNL 101A CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURREN	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52631AT1	SVCE WTR TO CWS PUMPS V 2SWP*MOV47A ELECTRTICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52641AT1	SWP TO DSL GEN COOLER E3A V 2SWP*MOV66A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CF	52651AT1	CONT BLDG CHLD SVCE HTR SPLY V 2SHP*MOV67A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52661AT1	SHP TO TURB BLDG DISCH ISOL V 2SHP*MOV92A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DH	52671AT1	SHP TO REAC BLDG DISCH ISOL V 2SHP*MOV93A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DV	52681AT1	SHP TO DSL GEN COOLER V 2SHP*MOV95A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52691AT1	2EHS*MCC103 BUS A CKT 2A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52701AT1	2EHS*MCC103 BUS A CKT 2C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52711AT1	2EHS*MCC103 BUS A CKT 2D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CF	52721AT1	2EHS*MCC103 BUS A CKT 3A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DH	52731AT1	2EHS*MCC103 BUS A CKT 3B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DV	52741AT1	2EHS*MCC103 BUS A CKT 3C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CJ	52751AT1	RBCLCH TO SFC HX A VALVE 2CCP*MOV14A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52761AT1	RBCLCH FROM SFC HX A VALVE 2CCP*MOV18A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52771AT1	RBCLCH FROM RCS PUMP 1A CLRS V 2CCP*MOV22A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DQ	52781AT1	RBCLCH TO RCS PMP 1A CLRS V 2CCP*MOV93A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DP	52791AT1	RBCLCH TO RCS PMP 1A CLRS V 2CCP*MOV4A ELECTRICAL FAUT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52801AT1	2EHS*MCC103 BUS A CKT 3D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52811AT1	2EHS*MCC103 BUS A CKT 4A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52821AT1	2EHS*MCC103 BUS A CKT 4B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52831AT1	2EHS*MCC103 BUS A CKT 4C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DQ	52841AT1	2EHS*MCC103 BUS A CKT 4D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DP	52851AT1	2EHS*MCC103 BUS A CKT 5A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CJ	52861AT1	CONT BLDG CHLD COND WTR PMP 2SWP*P2A ELECRTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52871AT1	RBCLCW TO RCS PMP 1B CLRS V 2CCP*MOV4B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52881AT1	RBCLCW TO RCS PMP 1A CLRS V 2CCP*MOV5A ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52891AT1	RBCLCW TO RCS PMP 1B CLRS V 2CCP*MOV5B ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52901AT1	RCCLCW FROM DH CLR ISOL V 2CCP*MOV124 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DS	52911AT1	RBCLCW TO DH CLR ISOL V 2CCP*MOV265 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DR	52921AT1	CHLD WTR CIRC PMP 2HVK*P1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52931AT1	2EHS*MCC103 BUS A CKT 5B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52941AT1	2EHS*MCC103 BUS A CKT 5C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CH	52951AT1	2EHS*MCC103 BUS A CKT 5D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	52961AT1	2EHS*MCC103 BUS A CKT 6A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DS	52971AT1	2EHS*MCC103 BUS A CKT 6B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DR	52981AT1	2EHS*MCC103 BUS A CKT 6C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	52991AT1	CHLD COMPR AUX OIL PMP 2HVR*CHL1A(3) ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	53001AT1	DSL GEN 1 AIR COMPRESSOR 2EGS*C1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	53011AT1	DSL GEN 1 FUEL OIL XFR PMP 2EGF*P1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	53021AT1	DSL GEN 1 FUEL OIL XFR PMP 2EGF*P1C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DU	53031AT1	SHGR FLOOR SPLY AIR FAN 2HVC*FN11A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DT	53041AT1	REMOTE SHTDN RM A;C UNIT 2HVC*ACU3A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CG	53051AT1	2EHS*MCC103 BUS A CKT 6D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	53061AT1	2EHS*MCC103 BUS A CKT 6E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	53071AT1	2EHS*MCC103 BUS A CKT 7A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CG	53081AT1	2EHS*MCC103 BUS A CKT 7C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DU	53091AT1	2EHS*MCC103 BUS A CKT 8A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DT	53101AT1	2EHS*MCC103 BUS A CKT 8B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53111AT1	RLY RM A;C FAN 2HVC*ACU2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53121AT1	CONTROL RM A;C FAN 2HVC*ACU1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53131AT1	CONTROL BLDG A;C FAN 2HVC*FN2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53141AT1	BATT RM A EXHAUST FAN 2HVC*FN4A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-DY	53151AT1	SPECIAL FILTER BYPASS V 2HVC*MOV1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DX	53161AT1	DSL GEN 1 JH CIRC PMP 2EGS*P1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53171AT1	2EHS*MCC103 BUS A CKT 8C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53181AT1	2EHS*MCC103 BUS A CKT 8D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53191AT1	2EHS*MCC103 BUS A CKT 9A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CE	53201AT1	2EHS*MCC103 BUS A CKT 9B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DY	53211AT1	2EHS*MCC103 BUS A CKT 9D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DX	53221AT1	2EHS*MCC103 BUS A CKT 10A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53231AT1	DSL GEN 1 GEN SPACE HTR 2EGS*H2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53241AT1	DSL GEN 1 LUBE OIL HTR 2EGT*CH2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CD	53251AT1	DSL GEN 1 JN HTR 2EGT*CH4 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53261AT1	DSL GEN 1 LUBE OIL CIRC PMP 2EGO*P1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DZ	53271AT1	DSL GEN 1 AIR COMPRESSOR 2EGA*C2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53281AT1	2EHS*MCC103 BUS A CKT 10B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53291AT1	2EHS*MCC103 BUS A CKT 10C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53301AT1	2EHS*MCC103 BUS A CKT 10D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CD	53311AT1	2EHS*MCC103 BUS A CKT 10E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-DZ	53321AT1	2EHS*MCC103 BUS A CKT 10F FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL	50921AU1	2EHS*MCC103 BUS C CKT 22A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL 24-9.-CK	50981AU1	2EHS*MCC103 BUS C CKT 22A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CH	53331AU1	RHR A STEAM LINE ISOL V 2RHS*MOV22A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53341AU1	RHR A STEAM LINE ISOL V 2RHS*MOV23A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53351AU1	RHR INJECTION V 2RHS*MOV24A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53361AU1	RHR HX A FLOW TO RCIC V 2RHS*MOV32A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ED	53371AU1	RHR REAC CONTMNT SPRAY V 2RHS*MOV25A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EC	53381AU1	RHR A SUPPR POOL SPRAY V 2RHS*MOV33A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53391AU1	2EHS*MCC103 BUS C CKT 17A . FOR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53401AU1	2EHS*MCC103 BUS C CKT 17B FOR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53411AU1	2EHS*MCC103 BUS C CKT 17C FOR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CH	53421AU1	2EHS*MCC103 BUS C CKT 18A FOR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-ED	53431AU1	2EHS*MCC103 BUS C CKT 17D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EC	53441AU1	2EHS*MCC103 BUS C CKT 18B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53451AU1	RHR HX A FLOW TO SUPPR POOL V 2RHS*MOV37A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53461AU1	RHS SHUTDOWN CLG INJECTION V 2RHS*MOV40A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53471AU1	RHR HX A SHELL SIDE BYPASS V 2RHS*MOV8A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53481AU1	RHR HX A SHELL SIDE INLET V 2RHS*MOV9A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EB	53491AU1	RHR HX A SHELL SIDE OUTLET V 2RHS*MOV12A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EA	53501AU1	RHR REAC CONTMNT SPRAY V 2RHS*MOV15A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53511AU1	2EHS*MCC103 BUS C CKT 18C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53521AU1	2EHS*MCC103 BUS C CKT 18D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CN	53531AU1	2EHS*MCC103 BUS C CKT 19A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CN	53541AU1	2EHS*MCC103 BUS C CKT 19B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EB	53551AU1	2EHS*MCC103 BUS C CKT 19C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EA	53561AU1	2EHS*MCC103 BUS C CKT 19D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53571AU1	RHR PUMP A SUCTION V 2RHS*MOV1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53581AU1	RHR SUCT SHUTDOWN CLG V 2RHS*MOV2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53591AU1	RHR PMP MIN FL TO SUPPR POOL V 2RHS*MOV4A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53601AU1	RHR HEAD SPRAY ISOL V 2RHS*MOV104 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EF	53611AU1	RHR SHUTDOWN CLG SUCT ISOL V 2RHS*MOV113 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EE	53621AU1	RHR DISCH TO RADWATE V 2RHS*MOV142 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-CL	53631AU1	2EHSxMCC103 BUS C CKT 20A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53641AU1	2EHSxMCC103 BUS C CKT 20B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53651AU1	2EHSxMCC103 BUS C CKT 20C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CL	53661AU1	2EHSxMCC103 BUS C CKT 20D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EF	53671AU1	2EHSxMCC103 BUS C CKT 21A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EE	53681AU1	2EHSxMCC103 BUS C CKT 21B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53691AU1	RHR HX A VEN V 2RHSxMOV26A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53701AU1	RHR HX A VENT V 2RHSxMOV27A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53711AU1	RHR SHTDN CLG BYPASS V 2RHSxMOV67A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53721AU1	DSL GEN ROOM 1 EXHAUST FAN 2HVPxFN1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EJ	53731AU1	DSL GEN ROOM 1 EXHAUST FAN 2HVP*FN1C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53741AU1	2EHS*MCC103 BUS C CKT 21C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53751AU1	2EHS*MCC103 BUS C CKT 21D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CK	53761AU1	2EHS*MCC103 BUS C CKT 22B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EJ	53771AU1	2EHS*MCC103 BUS C CKT 22C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	53781AU1	2EHS*MCC103 BUS C CKT 23D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EG	53791AU1	RHR A;L PCS TRN TO SUPPR POOL ISOL V 2RHS* MOV30A ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EG	53801AU1	2EHS*MCC103 BUS C CKT 23C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	53811AU1	RHR SUPPR POOL CLG V 2RHS*FV30A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AH	50681AV1	2EHS*MCC302 BUS B CKT 5A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BE	50701AV1	2EHS*MCC302 BUS B CKT 5B STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BD	50711AV1	2EHS*MCC302 BUS B CKT 5C STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AM	50751AV1	2EHS*MCC302 BUS B CKT 5A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BE 24-9.-GA	50761AV1	2EHS*MCC302 BUS B CKT 5B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BD 24-9.-FZ	50771AV1	2EHS*MCC302 BUS C CKT 5C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54591AV1	RECOMBINER OUTLET OUTBD ISOL V 2HCS*MOV1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54601AV1	RECOMBINER INLET OUTBD ISOL V 2HCS*MOV2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54611AV1	RECOMBINER INLET OUTBD ISOL V 2HCS*MOV3B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54621AV1	RECOMBINER OUTLET OUTBD ISOL V 2HCS*MOV4B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GA	54631AV1	RECOMBINER INLET OUTBD ISOL V 2HCS*MOV5B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FZ	54641AV1	RECOMBINER INLET OUTBD ISOL V 2HCS*MOV6B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54651AV1	2EHS*MCC302 BUS B CKT4A FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54661AV1	2EHS*MCC302 BUS B CKT4B FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER	54671AV1	2EHS*MCC302 BUS B CKT4C FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EP	54681AV1	SVCE HTR FROM SFC HX V 2SHP*MOV18B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EP	54691AV1	ISOL TO REAC BLDG HX V 2SHP*MOV19B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EP	54701AV1	EMER MAKE-UP TO SFC V 2SHP*MOV21B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EN	54711AV1	SVCE HTR TO RCS CLR V 2SHP*MOV30B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EP	54721AV1	2EHS*MCC302 BUS B CKT 2A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EP	54731AV1	2EHS*MCC302 BUS B CKT 2B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EP	54741AV1	2EHS*MCC302 BUS B CKT 2C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ER 24-9.-EP	54751AV1	2EHS*MCC302 BUS B CKT 2D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FN	54761AV1	2EHS*MCC302 BUS B CKT 3B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54781AV1	SVCE HTR FROM RCS CLRS V 2SNP*MOV39B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54791AV1	SVCE HTR TO RHR HX V 2SNP*MOV90B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54801AV1	GTS FILTER B DISCH FAN 2GTS*FN1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54811AV1	GTS TRAIN B INLET V 2GTS*MOV1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FY	54821AV1	GTS TRAIN B INLET V 2GTS*MOV2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FX	54831AV1	GTS TRAIN B DISCH V 2GTS*MOV3B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54841AV1	2EHS*MCC302 BUS B CKT 3C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-ES	54851AV1	2EHSxMCC302 BUS B CKT 3D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54861AV1	2EHSxMCC302 BUS B CKT 6C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ES	54871AV1	2EHSxMCC302 BUS B CKT 7A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FY	54881AV1	2EHSxMCC302 BUS B CKT 7B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FX	54891AV1	2EHSxMCC302 BUS B CKT 7C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EQ	54901AV1	CMS H2;02 ANALYZER PMP 2CMSxP2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EQ	54911AV1	GTS DECAY HT COOL TO TRAIN B V 2GTSxMOV4B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EQ	54921AV1	RHR HX B TUBE SIDE INLET V 2SHPxMOV33B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EQ	54931AV1	2EHSxMCC302 BUS B CKT 9A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EQ	54941AV1	2EHSxMCC302 BUS B CKT 7E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EQ	54951AV1	2EHS*NCC302 BUS B CKT 3A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EN	56021AV1	2EJS*PNL 302B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-EN	56031AV1	2EJS*PNL 302B SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-EN	56041AV1	2EJS*PNL 303B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-EN	56051AV1	2EJS*PNL 303B SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-EN	56061AV1	2EJS*PNL 304B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-EN	56071AV1	2EJS*PNL 304B SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-EV	56081AV1	HVR UNIT CLR 2HVR*UC401B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EV	56091AV1	HVR UNIT CLR 2HVR*UC401E ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EV	56901AV1	HVR UNIT CLR 2HVR*UC404D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EV	56911AV1	HVR UNIT CLR 2HVR*UC412B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	56921AV1	HVR UNIT CLR 2HVR*UC401C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EV	56941AV1	2EJS*PNL 302B CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EV	56951AV1	2EJS*PNL 302B CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EV	56961AV1	2EJS*PNL 302B CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EV	56971AV1	2EJS*PNL 302B CKT 19 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HH	56981AV1	2EJS*PNL 302B CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HL	57001AV1	HVR UNIT CLR 2HVR*UC401F ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HL	57011AV1	2EJS*PNL 302B CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57021AV1	HVR UNIT CLR 2HVR*UC406 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57031AV1	HVR UNIT CLR 2HVR*UC407E ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57041AV1	HVR UNIT CLR 2HVR*UC407D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57051AV1	HVR UNIT CLR 2HVR*UC415B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57061AV1	2EJS*PNL 303B CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EH	57071AV1	2EJS*PNL 303B CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57081AV1	2EJS*PNL 303B CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EH	57091AV1	2EJS*PNL 303B CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57101AV1	HVR UNIT CLR 2HVR*UC409A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57111AV1	HVR UNIT CLR 2HVR*UC410B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57121AV1	HVR UNIT CLR 2HVR*UC411B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57131AV1	HVR UNIT CLR 2HVR*UC414B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HQ	57141AV1	HVR UNIT CLR 2HVR*UC409B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HP	57151AV1	HVR UNIT CLR 2HVR*UC410C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57161AV1	2EJS*PNL 304B CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57171AV1	2EJS*PNL 304B CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-HN	57181AV1	2EJS*PNL 304B CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HN	57191AV1	2EJS*PNL 304B CKT 19 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HQ	57201AV1	2EJS*PNL 304B CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HP	57211AV1	2EJS*PNL 304B CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EX	57221AV1	HVR UNIT CLR 2HVR*UC411C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EX	57231AV1	GTS FLT 1B AIR HTR 2GTS*CH1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EX	57241AV1	2EJS*PNL 304B CKT 14 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EX	57251AV1	2EJS*PNL 304B CKT 20 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EP	50491AV1	SVCE HTR TO SFC HX V 2SHP*HOV17B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL	50931AH1	2EHS*MCC302 BUS D CKT 14C STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BG	50941AN1	2EHS*MCC302 BUS D CKT 15D STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BF	50951AN1	2EHS*MCC302 BUS D CKT 14A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL 24-9.-EU	50991AN1	2EHS*MCC302 BUS D CKT 14C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BG 24-9.-EU	51001AN1	2EHS*MCC302 BUS D CKT 15D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BF 24-9.-GC	51011AN1	2EHS*MCC302 BUS D CKT 14A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-B	51021AN1	2EHS*MCC302 BUS D CKT 14B STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-B	51031AN1	2EHS*MCC302 BUS D CKT 12B STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-B	51041AN1	2EHS*MCC302 BUS D CKT 12A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-B 24-9.-ET	51051AN1	2EHS*MCC302 BUS D CKT 14B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-B 24-9.-GB	51061AN1	2EHS*MCC302 BUS D CKT 12B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-B 24-9.-ET	51071AN1	2EHS*MCC302 BUS D CKT 12A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EU	54961AN1	MAIN STM LINE DRAIN V 2MSS*MOV111 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EU	54971AN1	SLS CONTROL STOR TANK OUTLET V 2SLS*MOV1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EU	54981AN1	SLS CONTROL PMP 2SLS*P1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EU	54991AN1	RHCU PMP SUCT ISOL V 2HCS*MOV102 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GC	55001AN1	RCIC STM SPLY LINE ISOL V 2ICS*MOV120 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GB	55011AN1	DRYWELL VENT ISOL V 2DER*MOV130 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EU	55021AN1	2EHS*MCC302 BUS D CKT 16B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EU	55031AN1	2EHS*MCC302 BUS D CKT 16C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ET	55041AN1	RCIC STM LINE WARMUP LIN V 2ICS*MOV170 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-ET	55051AH1	REACTOR VESSEL VENT V 2HSS*MOV118 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ET	55061AH1	DRYWELL EQPT DRAIN ISOL V 2DER*MOV119 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ET	55071AH1	DWFL DRAIN DISCH ISOL V 2DFR*MOV121 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GD	55081AH1	DWFL DRAIN VENT ISOL V 2DFR*MOV140 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ET	55091AH1	2EHS*MCC302 BUS D CKT 12C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.	55101AH1	2EHS*MC302 BUS D CKT 13A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-ET	55111AH1	2EHS*MCC302 BUS D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN	50781AX1	2EHS*MCC303 BUS B CKT 5A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN	50791AX1	2EHS*MCC303 BUS B CKT 5B STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN	50801AX1	2EHS*MCC303 BUS B CKT 5C STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AN	50811AX1	2EHS*MCC303 BUS B CKT 10A STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BC	50821AX1	2EHS*MCC303 BUS B CKT 10B STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BB	50831AX1	2EHS*MCC303 BUS B CKT 10C STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN 24-9.-GE 24-9.-FC	50841AX1	2EHS*MCC303 BUS B CKT 5A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN 24-9.-FC	50851AX1	2EHS*MCC303 BUS B CKT 5B FDR BRKR FAILS TO TRIP ON O	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN	50861AX1	2EHS*MCC303 BUS B CKT 5C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AN 24-9.-EY	50871AX1	2EHS*MCC303 BUS B CKT 10A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BC 24-9.-EY	50881AX1	2EHS*MCC303 BUS B CKT 10B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BB 24-9.-EY	50891AX1	2EHS*MCC303 BUS B CKT 10C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55121AX1	SVCE HTR TO CHS PUMPS V 2SHP*MOV47B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FA	55131AX1	SVCE HTR TO DSL GEN CLR E3B V 2SHP*MOV66B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55141AX1	CONT BLDG CHLD SVCE HTR SPLY V 2SHP*MOV67B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55151AX1	SVCE HTR TO TURB BLDG DISCH ISOL V 2SHP*MOV92B ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GH	55161AX1	SVCE HTR TO REAC BLDG DISCH ISOL V 2SHP*MOV93B ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GL	55171AX1	SVCE HTR TO DSL GEN CLR V 2SHP*MOV95B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55181AX1	2EHS*MCC303 BUS B CKT 2A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55191AX1	2EHS*MCC303 BUS B CKT 2C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55201AX1	2EHS*MCC303 BUS B CKT 2D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FA	55211AX1	2EHS*MCC303 BUS B CKT 3A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GH	55221AX1	2EHS*MCC303 BUS B CKT 3B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-GL	55231AX1	2EHS*MCC303 BUS B CKT 3C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55241AX1	CONT BLDG CHLD COND HTR PMP 2SHP*P2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55251AX1	RBCLCH TO SFC HX B V 2CCP*MOV14B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55261AX1	RBCLCH FRM RCS PMP 1B CLRS V 2CCP*MOV22B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GF	55271AX1	RBCLCH TO RCS PMP 1B CLRS V 2CCP*MOV93B ELECTRICL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GE	55281AX1	RBCLCH FROM RCS PMP 1B CLR ISOL V 2CCP*MOV21A ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55291AX1	2EHS*MCC303 BUS B CKT 3D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55301AX1	2EHS*MCC303 BUS B CKT 4A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55311AX1	2EHS*MCC303 BUS B CKT 4B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	55321AX1	2EHS*MCC303 BUS B CKT 4C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-GF	55331AX1	2EHS*MCC303 BUS B CKT 4D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FC	55341AX1	SHGR FLOOR SPLY AIR FAN 2HVC*FN11B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FC	55351AX1	RECLCH TO DH CLRS ISOL V 2CCP*MOV122 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FC	55361AX1	RBCLCH FROM RCS PMP 1B CLR ISOL V 2CCP*MOV21B ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FC	55371AX1	REMOTE SHUTDOWN RM A;C UNIT 2HVC*ACU3B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GH	55381AX1	RLY RM A;C FAN 2HVC*ACU 2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GG	55391AX1	CONTROL RM A;C FAN 2HVC*ACU1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FC	55401AX1	2EHS*MCC303 BUS B CKT 6A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FC	55411AX1	2EHS*MCC303 BUS B CKT 6B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GH	55421AX1	2EHS*MCC303 BUS B CKT 6C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-GG	55431AX1	2EHS*MCC303 BUS B CKT 6D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55441AX1	CONTROL BLDG A;C FAN 2HVC*FN2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55451AX1	BATT RM B EXHAUST FAN 2HVC*FN4B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55461AX1	SPECIAL FILTER BYPASS V 2HVC*MOV1B ELCTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55471AX1	DSL GEN 3 FUEL OIL XFR PMP 2EGF*P1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GK	55481AX1	DSL GEN 3 FUEL OIL XFR PMP 2EGF*P1D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GJ	55491AX1	CHILLED WTR CIRC PMP 2HVK*P1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55501AX1	2EHS*MCC303 BUS B CKT 7A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55511AX1	2EHS*MCC303 BUS B CKT 7B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FB	55521AX1	2EHS*MCC303 BUS B CKT 7D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FB	55531AX1	2EHS*MCC303 BUS B CKT 8A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GK	55541AX1	2EHS*MCC303 BUS B CKT 8C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GJ	55551AX1	2EHS*MCC303 BUS B CKT 8E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55561AX1	CHILLER COMPR AUX OIL PMP 2HVK*CHL1B(3) ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55571AX1	DSL GEN 3 JW CIRC PMP 2EGS*P1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55581AX1	DSL GEN 3 GEN SPACE HTR 2EGS*H3 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55591AX1	DSL GEN 3 LUBE OIL HTR 2EGT*CH3 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GP	55601AX1	DSL GEN 3 JW HTR 2EGT*CH5 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GN	55611AX1	DSL GEN 3 LUBE OIL CIRC PMP 2EGO*P1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55621AX1	2EHS*MCC303 BUS B CKT 8F FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EZ	55631AX1	2EHS*MCC303 BUS B CKT 9A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55641AX1	2EHS*MCC303 BUS B CKT 9B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EZ	55651AX1	2EHS*MCC303 BUS B CKT 9C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GP	55661AX1	2EHS*MCC303 BUS B CKT 9D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GN	55671AX1	2EHS*MCC303 BUS B CKT 9E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EY	55681AX1	RBCLCN TO RCS PMP 1B CLR ISOL V 2CCP*MOV94A ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EY	55691AX1	RBCLCN TO RCS PMP 1B CLR ISOL V 2CCP*MOV94B ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EY	55701AX1	RBCLCN TO DH CLR ISOL V 2CCP*MOV273 ELEC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-EY	57771AX1	D-G 3 AIR COMPRESSOR 1B 2EGA-C1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GQ	57781AX1	D-G 3 AIR COMPRESSOR 2B 2EGA-C2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-EY	57791AX1	2EHS*MCC303 BUS B CKT 12E FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GQ	57801AX1	2EHS*MCC303 BUS B CKT 12F FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FD	58501AX1	RBCLCW FROM SFC HX B V 2CCP*MOV18B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL	50901AY1	2EHS*MCC303 BUS D CKT 20D STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL	50911AY1	2EHS*MCC303 BUS D CKT 21C STARTER FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL 24-9.-FH	50961AY1	2EHS*MCC303 BUS D CKT 20D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AL 24-9.-GT	50971AY1	2EHS*MCC303 BUS D CKT 21C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55711AY1	RHR B STEAM LINE ISOL V 2RHS*MOV22B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55721AY1	RHR B STEAM LINE ISOL V 2RHS*MOV23B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55731AY1	RHR INJECTION V 2RHS*MOV24B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FG	55741AY1	RHR HX B FLOW TO RCIC V 2RHS*MOV32B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GH	55751AY1	RHR REAC CONTMNT SPRAY V 2RHS*MOV25B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GV	55761AY1	RHR B SUPPR POOL SPRAY V 2RHS*MOV33B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55771AY1	2EHS*MCC303 BUS D CKT 14A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55781AY1	2EHS*MCC303 BUS D CKT 14B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55791AY1	2EHS*MCC303 BUS D CKT 14C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FG	55801AY1	2EHS*MCC303 BUS D CKT 15A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GH	55811AY1	2EHS*MCC303 BUS D CKT 14D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GV	55821AY1	2EHS*MCC303 BUS D CKT 15B FDR BRKR FAILS TO TRIP ON O	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55831AY1	RHR HX B FLOW TO SUPPR POOL V 2RHS*MOV37B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FJ	55841AY1	RHR SHUTDOWN CLG INJECTION V 2RHS*MOV40B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55851AY1	RHR HS B SHELL SIDE BYPASS V 2RHS*MOV8B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55861AY1	RHR HX B SHELL SIDE INLET V 2RHS*MOV9B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GS	55871AY1	RHR HX B SHELL SIDE OUTLET V 2RHS*MOV12B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GR	55881AY1	RHR REAC CONTMNT SPRAY V 2RHS*MOV15B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55891AY1	2EHS*MCC303 BUS D CKT 15C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55901AY1	2EHS*MCC303 BUS D CKT 15D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55911AY1	2EHS*MCC303 BUS D CKT 16A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FJ	55921AY1	2EHS*MCC303 BUS D CKT 16B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GS	55931AY1	2EHS*MCC303 BUS D CKT 16C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-GR	55941AY1	2EHS*MCC303 BUS D CKT 16D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	55951AY1	RHR PUMP B SUCTION V 2RHS*MOV1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	55961AY1	RHR SUCT SHUTDOWN CLG V 2RHS*MOV2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	55971AY1	RHR PMP MIN FL TO SUPPR POOL V 2RHS*MOV4B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	55981AY1	RHR PMP MIN FL TO SUPPR POOL V 2RHS*MOV4C ELECTRIC FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GY	55991AY1	RHR SVCE WTR CROSS TIE V 2RHS*MOV115 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GX	56001AY1	RHR SVCE WTR CROSS TIE V 2RHS*MOV116 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	56011AY1	2EHS*MCC303 BUS D CKT 17A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	56021AY1	2EHS*MCC303 BUS D CKT 17B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FF	56031AY1	2EHS*MCC303 BUS D CKT 17C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FF	56041AY1	2EHS*MCC303 BUS D CKT 17D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GY	56051AY1	2EHS*MCC303 BUS D CKT 18A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GX	56061AY1	2EHS*MCC303 BUS D CKT 18B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56071AY1	RHR SUPPR POOL CLG V 2RHS*FV 38B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56081AY1	RHR LOOP C TEST RTN V 2RHS*FV 38C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56091AY1	RHR HX B VENT V 2RHS*MOV26B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56101AY1	RHR INJECTION VALVE 2RHS*MOV24C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HA	56111AY1	RHR HX B VENT V 2RHS*MOV27B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GZ	56121AY1	RHR WATER LEG PUMP 2RHS*P2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56131AY1	2EHS*MCC303 BUS D CKT 18C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56141AY1	2EHS*MCC303 BUS D CKT 18D FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FE	56151AY1	2EHS*MCC303 BUS D CKT 19B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FE	56161AY1	2EHS*MCC303 BUS D CKT 19A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HA	56171AY1	2EHS*MCC103 BUS D CKT 19C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GZ	56181AY1	2EHS*MCC303 BUS D CKT 20A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	56801AY1	2EHS*MCC303 BUS D CKT 21A FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GU	56811AY1	2EHS*MCC303 BUD D CKT 21B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	58541AY1	RHR B;C RTN TO SUPPR POOL V 2RHS*MOV30B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	58551AY1	RHR PMP C SUCTION V 2RHS*MOV1C ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	58561AY1	SHUTDOWN CLG SPLY ISOL V 2RHS*MOV112 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	58571AY1	DSL GEN ROOM 3 EXHAUST FAN 2HVP*FN1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-GU	58581AY1	DSL GEN ROOM 3 EXHAUST FAN 2HVP*FN1D ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-GT	58591AY1	RHR SHUTDOWN BY PASS V 2RHS*MOV67B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	58601AY1	2EHS*MCC303 BUS D CKT 20B FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FH	58611AY1	2EHS*MCC303 BUS D CKT 20C FDR BRKR FAILS TO TRIP ON OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	51271CB1	2LAC*PNL 100A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BH	51281CB1	2LAC*PNL 100A PNL SIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BH	51291CB1	2LAC*PNL 100A EJS BUS SIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BL	51301CB1	2LAC*PNL 100A FDR BRKR CKT 1 FAILS TO TRIP WHEN OC	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BL	51311CB1	2LAC*PNL 100A FDR BRKR CKT 2 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BL	51321CB1	2LAC*PNL 100A FDR BRKR CKT 7 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BL	51331CB1	2LAC*PNL 100A FDR BRKR CKT 8 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CR	51341CB1	2LAC*PNL 100A FDR BRKR CKT 11 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CQ	51351CB1	2LAC*PNL 100A FDR BRKR CKT 14 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CP	51361CB1	2BYS*CHGR 2A1 FDR BRKR FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BL	51371CB1	2LAC*PNL E01 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BL	51381CB1	2LAC*PNL E04 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BL	51391CB1	2SCH*PNL 101A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BL	51401CB1	2LAC*PNL E06 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CR	51411CB1	2SCH*PNL 102A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CQ	51421CB1	2SCH*PNL 103A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CP	51431CB1	2BYS*CHGR 2A1 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BJ	53971CB1	2LAC*PNL 300B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BJ	53981CB1	2LAC*PNL 300B PNL SIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BJ	53991CB1	2LAC*PNL 300B EJS BUSSIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BN	54001CB1	2LAC*PNL 300B FDR BRKR CKT 1 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	54011CB1	2LAC*PNL 300B FDR BRKR CKT 2 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	54021CB1	2LAC*PNL 300B FDR BRKR CKT 7 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	54031CB1	2LAC*PNL 300B FDR BRKR CKT 8 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FN	54041CB1	2LAC*PNL 300B FDR BRKR CKT 11 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FL	54051CB1	2LAC*PNL 300B FDR BRKR CKT 14 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FK	54061CB1	2LAC*PNL 300B FDR BRKR FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	54071CB1	2LAC*PNL E02 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	54081CB1	2LAC*PNL E05 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BN	54091CB1	2SCH*PNL 301B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BH	54101CB1	2LAC*PNL E07 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
-9.-FH	54111CB1	2SCH*PNL 302B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FL	54121CB1	2SCH*PNL 303B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FK	54131CB1	2BYS*CHGR 2B1 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-R	51441CC1	2EJS*PNL 100A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-R	51451CC1	2EJS*PNL 100A PNL SIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-R	51461CC1	2EJS*PNL 100A EJS BUSSIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BK	51471CC1	2EJS*PNL 100A FDR BRKR CKT 8 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BK	51481CC1	2EJA*PNL 100A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	51491CC1	2EJS*PNL 100A FDR BRKR CKT 13 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	51501CC1	2EJA*PNL 101A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	51511CC1	2EJS*PNL 100A FDR BRKR CKT 14 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	51521CC1	2SCV*PNL 101A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-BK	51531CC1	CONT RM SPLY AIR DUCT HTR 2HVC*CH11A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	51541CC1	2EJS*PNL 100A FDR BRKR CKT 20 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	51551CC1	RLY RM SPLY AIR DUCT HTR 2HVC*CH12A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-V	54141CC1	2EJS*PNL 300B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-V	54151CC1	2EJS*PNL 300B PNL SIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-V	54161CC1	2EJS*PNL 300B EJS BUSSIDE FDR BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BM	54171CC1	2EJS*PNL 300B FDR BRKR CKT 8 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BM	54181CC1	2EJA*PNL 300B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BM	54191CC1	2EJS*PNL 300B FDR BRKR CKT 13 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BM	54201CC1	2EJA*PNL 301B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FP	54211CC1	2EJS*PNL 300B FDR BRKR CKT 14 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FP	54221CC1	2SCV*PNL 301B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	54231CC1	2EJS*PNL 300B FDR BRKR CKT 19 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	54241CC1	CONT RM SPLY AIR DUCT HTR 2HVC*CH11B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	54251CC1	2EJS*PNL 300B FDR BRKR CKT 20 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BH	54261CC1	RLY RM SPLY AIR DUCT HTR 2HVC*CH12B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-R	56631CC1	2EJS*PNL 102A BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-R	56641CC1	2EJS*PNL 102A SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-CT	56651CC1	STDBY SWGR EQPT RM UNIT CLR 2HVC*UC103A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	56661CC1	HVC UNIT CLR 2HVC*UC101A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	56671CC1	CONT BLDG FLT 2A HTR 2HVC*CH7A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	56681CC1	ELEC TNL UNIT CLR 2HVC*UC104 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-HK	56691CC1	CABLE AREA BASE UNIT CLR 2HVC*UC106 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HH	56701CC1	HVP UNIT CLR 2HVP*UC1A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	56711CC1	2EJS*PNL 102A CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	56721CC1	2EJS*PNL 102A CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	56731CC1	2EJS*PNL 102A CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HK	56741CC1	2EJS*PNL 102A CKT 8 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HH	56751CC1	2EJS*PNL 102A CKT 14 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HJ	56761CC1	HVC UNIT CLR 2HVC*UC108A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HJ	56771CC1	2EJS*PNL 102A CKT 20 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-V	57261CC1	2EJS*PNL 301B BUS FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-V	57271CC1	2EJS*PNL 301B SUPPLY BRKR MECH FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FQ	57281CC1	ELEC TNL UNIT CLR 2HVC*UC105 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57291CC1	STDBY SNGR A;C EQP RM UNIT CLR 2HVC*UC103B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57301CC1	CONT BLDG FLT 2B HTR 2HVC*CH7B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57311CC1	HVC UNIT CLR 2HVC*UC108B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HT	57321CC1	HVC UNIT CLR 2HVC*UC101B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HR	57331CC1	HVP UNIT CLR 2HVP*UC1B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57341CC1	2EJS*PNL 301B CKT 1 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57351CC1	2EJS*PNL 301B CKT 7 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57361CC1	2EJS*PNL 301B CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-FQ	57371CC1	2EJS*PNL 301B CKT 19 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HT	57381CC1	2EJS*PNL 301B CKT 2 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-HR	57391CC1	2EJS*PNL 301B CKT 14 FOR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HS	57401CC1	CABLE AREA BASE UNIT CLR 2HVC*UC107 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-HS	57411CC1	2EJS*PNL 301B CKT 8 FOR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-R	57631CC1	LOSS OF 600V PNL 2EJS*PNL 105A	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-BK	57641CC1	2EJS*PNL 100A FOR BRKR CKT 1 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BK	57651CC1	2BYS*CHGR 2A2 ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BK	57661CC1	2EJS*PNL 100A FOR BRKR CKT 7 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BK	57671CC1	1VBA*UPS 2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	57681CC1	2HVC*PNL 2A ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CS	57691CC1	2EJS*PNL 100A FOR BRKR CKT 32 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-V	57701CC1	LOSS OF 600V PNL 2EJS*PNL 305B	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-FN	57751CC1	2HVC*PNL 2B ELECTRICAL FAULT	ANNUNCIATED IN CONTROL ROOM	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-FN	57761CC1	2EJS*PNL 300B FDR BRKR CKT 32 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-CT	58631CC1	2EJS*PNL 102A CKT 13 FDR BRKR FAILS TO TRIP ON OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-BK	58691CC1	2EJS*PNL 100A FDR BRKR CKT 19 FAILS TO TRIP WHEN OVERCURRENT	ANNUNCIATED IN CONTROL ROOM	NONE	
24-9.-AP	50155011	2EJS*ACB 101-14 52TC TRIP COIL EN BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AP	50165011	86-2EJSX03 CONTACT 1C FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AP	50175011	1-2EJSX03 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AP	50185011	1-2EJSX03 CONTACT 3 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AT	50205011	50G-2EJSA03 GND OC RELAY CONTACT 1 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AT	50215011	50G-2EJSA03 GND OC RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AT	50225011	50G-2EJSA03 GND OC RELAY ENERGIZED DUE TO FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AH	50305011	50;51-2EJSA02 PHASE 1 INST CONTACT 50 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AN	50315011	50;51-2EJSA02 PHASE 1 TIME CONTACT 51 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AU	50325011	50;51-2EJSA02 PHASE 3 INST CONTACT 50 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AU	50335011	50;51-2EJSA02 PHASE 3 TIME CONTACT 51 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AV	50385011	50;51-2EJSA02 PHASE 2 INST CONTACT 50 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AV	50395011	50;51-2EJSA02 PHASE 2 TIME CONTACT 51 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AN	57485011	SI-2EJSA02 PHASE 1 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AN	57495011	SI-2EJSA02 PHASE 1 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AU	57535011	SI-2EJSA02 PHASE 3 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AU	57545011	SI-2EJSA02 PHASE 3 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AA	57815021	2EJS*ACB 101-2 52TC TRIP COIL EN BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AF	57825021	50;51-2EJSA05 PHASE 1 INST CONTACT 50 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AF	57835021	50;51-2EJSA05 PHASE 1 TIME CONTACT 51 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AA	57865021	86-2EJSX04 CONTACT 1C FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AA	57875021	1-2EJSX04 CONTACT 3 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AA	57885021	1-2EJSX04 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AF	57895021	SI-2EJSA05 PHASE 1 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AF	57905021	SI-2EJSA05 PHASE 1 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AC	57915021	50G-2EJSA06 GND OC RELAY CONTACT 1 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AE	58155021	50;51-2EJSA05 PHASE 2 INST CONTACT 50 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AE	58165021	50;51-2EJSA05 PHASE 2 TIME CONTACT 51 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AD	58175021	50;51-2EJSA05 PHASE 3 INST CONTACT 50 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AD	58105021	50;51-2EJSA05 PHASE 3 TIME CONTACT S1 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AE	58235021	SI-2EJSA05 PHASE 2 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AE	58245021	SI-2EJSA05 PHASE 2 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AD	58255021	SI-2EJSA05 PHASE 3 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AD	58265021	SI-2EJSA05 PHASE 3 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AR	50235031	2EJSxACB 103-1 52 TC TRIP COIL EN BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AR	50245031	86-2EJSY03 CONTACT 1C FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AR	50255031	1-2EJSY03 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AR	50265031	1-2EJSY03 CONTACT 3 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AX	50275031	50G-2EJSB03 GND OC RELAY CONTACT 1 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AX	50285031	50G-2EJSB03 GND OC RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AX	50295031	50G-2EJSB03 GND OC RELAY ENERGIZED DUE TO FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BA	50425031	50;51-2EJSB02 PHASE 1 INST CONTACT 50 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BA	50435031	50;51-2EJSB02 PHASE 1 TIME CONTACT 51 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AY	50445031	50;51-2EJSB02 PHASE 3 INST CONTACT 50 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AY	50455031	50;51-2EJSB02 PHASE 3 TIME CONTACT 51 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AZ	50505031	50;51-2EJSB02 PHASE 2 INST CONTACT 50 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AZ	50515031	50;51-2EJSB02 PHASE 2 TIME CONTACT 51 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BA	57555031	SI-2EJSB02 PHASE 1 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BA	57565031	SI-2EJS302 PHASE 1 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AZ	57575031	SI-2EJSB02 PHASE 2 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AZ	57505031	SI-2EJSB02 PHASE 2 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AY	57595031	SI-2EJSB02 PHASE 3 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AY	57605031	SI-2EJSB02 PHASE 3 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-T	57465043	2EJS*ACB 103-13 MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AB	57945041	2EJS*ACB 103-13 52 TC TRIP COIL EN BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AK	57955041	50;51-2EJSB05 PHASE 1 INST CONTACT 50 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AK	57965041	50;51-2EJSB05 PHASE 1 TIME CONTACT 51 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AB	57995041	86-2EJSY04 CONTACT 1C FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AB	58005041	1-2EJSY04 CONTACT 3 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AB	58015041	1-2EJSY04 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AK	58025041	SI-2EJSB05 PHASE 1 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AK	58035041	SI-2EJSB05 PHASE 1 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AG	58045041	50G-2EJSB06 GND OC RELAY CONTACT 1 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AJ	58355041	50;51-2EJSB05 PHASE 2 INST CONTACT 50 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AJ	58365041	50;51-2EJSB05 PHASE 2 TIME CONTACT 51 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AH	58375041	50;51-2EJSB06 PHASE 3 INST CONTACT 50 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AH	58385041	50;51-2EJSB05 PHASE 3 TIME CONTACT 51 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AJ	58435041	SI-2EJSB05 PHASE 2 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AJ	58445041	SI-2EJSB05 PHASE 2 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AH	58455041	SI-2EJSB05 PHASE 3 NO CONTACT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AH	58465041	SI-2EJSB05 PHASE 3 COIL ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AQ	50076011	2EJS*ACB 1-3B 52 TC TRIP COIL EN BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AQ	50086011	86-2EJSX03 CONTACT 2C FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AQ	50096011	1-2EJSX05 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AQ	50106011	1-2EJSX05 CONTACT 3 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-H	57496023	2EJS*ACB 1-8B MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-Y	58076021	2EJS*ACB 1-8B 52 TC TRIP COIL EN BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-H	58086023	52-2EJSX05 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-Y	58096023	52-2EJSX05 CONTACT 24 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-H	58106023	1-2EJSX06 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-H	58116023	86-2EJSX04 CONTACT 6C FAILS OPEN	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-Y	58126021	86-2EJSX04 CONTACT 2C FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-Y	58136021	1-2EJSX06 CONTACT 3 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-H 24-9.-Y	58146021	1-2EJSX06 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AS	50116031	2EJS*ACB 3-3B 52 TC TRIP COIL EN BY SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AS	50126031	86-2EJSY03 CONTACT 2C FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AS	50136031	1-2EJSY05 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AS	50146031	1-2EJSY05 CONTACT 3 FAIL CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-X	57476043	2EJS*ACB 3-8B MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-Z	50276041	2EJS*ACB 3-8B 52 TC TRIP COIL EN BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-X	50286043	52-2EJSY05 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-Z	50296043	52-2EJSY05 CONTACT 24 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-X	50306043	1-2EJSY06 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-X	50316043	86-2EJSY04 CONTACT 6C FAILS OPEN	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-Z	50326041	86-2EJSY04 CONTACT 2C FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-Z	50336041	1-2EJSY06 CONTACT 3 FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-X 24-9.-Z	50346041	1-2EJSY06 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-L	50018011	4.16KV;600V XFMR 2EJS*X1A FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-L	50028013	2EJS*ACB 101-14 MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-L	50038013	2EJS*ACB 1-3B MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AN	50348011	50;51-2EJSA02 PHASE 1 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AN	50358011	50;51-2EJSA02 PHASE 1 RELAY EN BY FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AU	50368011	50;51-2EJSA02 PHASE 3 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AU	50378011	50;51-2EJSA02 PHASE 3 RELAY EN BY FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AV	50408011	50;51-2EJSA02 PHASE 2 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AV	50418011	50;51-2EJSA02 PHASE 2 RELAY EN BY FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-Q	57428011	4.16KV;600V XFMR 2EJS*X1B FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-Q	57438013	2EJS*ACB 101-2 MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AF	57848011	50;51-2EJSA05 PHASE 1 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AF	57858011	50;51-2EJSA05 PHASE 1 RELAY EN BY A FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AC	57928011	50G-2EJSA06 GND OC RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AC	57938011	50G-2EJSA06 GND OC RELAY ENERGIZED DUE TO FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AE	58190011	50;51-2EJSA05 PHASE 2 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AE	58200011	50;51-2EJSA05 PHASE 2 RELAY EN BY A FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AD	50218011	50;51-2EJSA05 PHASE 3 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-AD	50228011	50;51-2EJSA05 PHASE 3 RELAY EN BY A FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I 600V STANDBY VOLTAGE	
24-9.-U	50048021	4.16KV;600V XFMR 2EJSxX3A FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-U	50058023	2EJSxACB 103-1 MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-U	50068023	2EJSxACB 3-3B MECHANICAL FAILURE	PERIODIC TEST	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BA	50468021	50;51-2EJSB02 PHASE 1 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-BA	50478021	50;51-2EJSB02 PHASE 1 RELAY EN BY FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AY	50488021	50;51-2EJSB02 PHASE 3 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AY	50498021	50;51-2EJSB02 PHASE 3 RELAY EN BY FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AZ	50528021	50;51-2EJSB02 PHASE 2 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AZ	50538021	50;51-2EJSB02 PHASE 2 RELAY EN BY FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-T	57458021	4.16KV;600V XFMR 2EJS*X3B FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AK	57978021	50;51-2EJSB05 PHASE 1 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AK	57988021	50;51-2EJSB05 PHASE 1 RELAY EN BY A FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AG	58058021	50G-2EJSB06 GND OC RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AG	58068021	50G-2EJSB06 GND OC RELAY ENERGIZED DUE TO FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AJ	58398021	50;51-2EJSB05 PHASE 2 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AJ	58408021	50;51-2EJSB05 PHASE 2 RELAY EN BY A FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	
24-9.-AH	58418021	50;51-2EJSB05 PHASE 3 RELAY FAILS ENERGIZED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
24-9.-AH	58428021	50;51-2EJSD05 PHASE 3 RELAY EN BY A FAULT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II 600V STANDBY VOLTAGE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-G	C012RCS3	52TC1-2RCSA14 ACB1-1 TRIP COIL ENERGIZING CKT OPEN	PERIODIC TEST	2EPSxSHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C021RCS3	52TC1-2RCSA16 ACB2-1 TRIP COIL ENERGIZING CKT OPEN	PERIODIC TEST	2EPSxSHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-K	C039RCS3	52TC1-2RCSB16 ACB4-1 TRIP COIL ENERGIZING CKT OPEN	PERIODIC TEST	2EPSxSHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AH	C095RCS3	2RCSxSOV65A VALVE CLOSE LINE FAILED OPEN	PERIODIC TEST	NONE	
25-1-AH	C096RCS3	2RCSxSOV66A VALVE PILOT LINE FAILED OPEN	PERIODIC TEST	NONE	
25-1-AH	C097RCS3	2RCSxSOV67A VALVE OPEN LINE FAILED OPEN	PERIODIC TEST	NONE	
25-1-AH	C100RCS3	2RCSxSOV68A VALVE DRAIN LINE FAILED OPEN	PERIODIC TEST	NONE	
25-1-AC	C105RCS3	CRC BACKUP CHECK VALVE 2RCSxV59A FAILED OPEN	PERIODIC TEST	NONE	
25-1-AC	C106RCS3	IRC CHECK VALVE 2RCSxV60A FAILED OPEN	PERIODIC TEST	NONE	
25-1-AC	C107RCS3	ORC CHECK VALVE 2RCSxV90A FAILED OPEN	PERIODIC TEST	NONE	
25-1-AC	C108RCS3	IRC CHECK VALVE 2RCSxV60B FAILED OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-AC	C109RCS3	ORC CHECK VALVE 2RCS*V90B FAILED OPEN	PERIODIC TEST	NONE	
25-1-AC	C110RCS3	ORC BACK UP CHECK VALVE 2RCS*V59B FAILED OPEN	PERIODIC TEST	NONE	
25-1-J	C143RCS2	F53A-FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-J	C144RCS2	F54A-FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-K	C147RCS2	F53B FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-K	C148RCS2	F54B FUSE FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-J	C152RCS3	52TC1-2RCSA16 ACB 3-1 TRIP COIL ENERGIZING CKT OPEN	PERIODIC TEST	2EPS*SHG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-B	C180RCS2	2RCS*CTV101 ISOLATION VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	2RCS*CTV 101 ISOLATION VALVE OPEN	
25-1-AJ	C181RCS3	S7-OPERATOR ERROR	PERIODIC TEST	2RCS*CTV 101 ISOLATION VALVE OPEN	
25-1-AJ	C182RCS3	S7-CONTACT 2 FAILED CLOSE	PERIODIC TEST	2RCS*CTV 101 ISOLATION VALVE OPEN	
25-1-AJ	C183RCS3	K72B-CONTACT N2 FAILED CLOSE	PERIODIC TEST	2RCS*CTV 101 ISOLATION VALVE OPEN	
25-1-AJ	C184RCS3	K72B- RLY ENERGIZED BY SHORT	PERIODIC TEST	2RCS*CTV 101 ISOLATION VALVE OPEN	
25-1-AJ	C185RCS3	K72B- RLY ENERGIZING CKT INADV ESTABLISHED	PERIODIC TEST	2RCS*CTV 101 ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-B	C186RCS2	2RCS*CT V102 ISOLATION VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	2RCS*CTV 102 ISOLATION VALVE OPEN	
25-1-AK	C187RCS3	S8-OPERATOR ERROR	PERIODIC TEST	2RCS*CTV 102 ISOLATION VALVE OPEN	
25-1-AK	C188RCS3	S8 CONTACT 2 FAILED CLOSE	PERIODIC TEST	2RCS*CTV 102 ISOLATION VALVE OPEN	
25-1-AK	C189RCS3	K72A-CONTACT M2 FAILED OPEN	PERIODIC TEST	2RCS*CTV 102 ISOLATION VALVE OPEN	
25-1-AK	C190RCS3	K72A- RLY ENERGIZED BY SHORT	PERIODIC TEST	2RCS*CTV 102 ISOLATION VALVE OPEN	
25-1-AK	C191RCS3	K72A- RLY ENERGIZING CKT INADV ESTABLISHED	PERIODIC TEST	2RCS*CTV 102 ISOLATION VALVE OPEN	
25-1-AH	C192RCS3	BREACH OF DIV I HYDR ACTR PIPING INTEGRITY	PERIODIC TEST	NONE	
25-1-D	C0015113	2EPS*SNG001(-G) BRKR 1-1 FAILED CLOSE (MECH MALFUNC)	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-G	C0055113	52TC2-2RCSA14 ACB1-1 2EPS*SNG001 TC FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-G	C0065113	52TC1-2RCSA14 ACB1-1 2EPS*SNG001 TC FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-L	C0415113	K157A-2RCSA14 CONTACT T1 FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-D	C0705113	2EPS*SNG001(-G) BRKR-1-1 DIV 1 CLOSING COIL EN BY SHORT	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-D	C0725113	K156A-2RCSA14 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-L	C0905113	35A 125V DC POS FUSE CKT 2RCSA14 FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-L	C0915113	35A 125V DC NEG FUSE CKT 2RCSA14 FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-L 25-1-J 25-1-N	C0925113	125V DC DIV I BUS A (GREEN) AT SNGR POWER FAILURE	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-L	C1115113	86-2RCSA14 CONTACT 1C FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-R	C1125113	86-2RCSA14 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1145113	50;51-2RCSA53 PHASE A RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1165113	50;51-2RCSA53 PHASE C RLY COIL FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-R	C1175113	50G-2RCSA54 CONTACT 2 FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-R	C1185113	50G-2RCSA54 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-L	C1455113	INTERLOCK CONT 52-2RCSA14 OF 52TC2- FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-G	C1465113	INTERLOCK CONT 52-2RCSA14 OF 52TC1- FAILED OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1565113	51-2RCSA53 PH C 'NO' CONTACT FAILS OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1575113	50-2RCSA53 PHC CONTACT 3 FAILS OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1585113	50-2RCSA53 PH C CONTACT 10 FAILS OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1595113	51-2RCSA53 PH A 'NO' CONTACT FAILS OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1605113	50-2RCSA53 PH A CONTACT 3 FAILS OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Y	C1615113	50-2RCSA53 PH A CONTACT 10 FAILS OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Q 25-1-AD	C0425122	S121A-2RCA14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Q	C0435123	S121A-2RCSA14 CONT 3T FAILED OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Q	C0445123	K157A-2RCSA14 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AD	C0715123	AT1-2RCSA14 ISOLATOR FAILED CLOSE	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AD	C0735123	S121A-2RCSA14 CONTACT 1T FAILED CLOSE	PERIODIC TEST	2EPS*SHG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-AD	C0745123	K156A-2RCA14 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-Q	C0945123	AT1-2RCSA14 ISOLATOR FAILED OPEN	PERIODIC TEST	2EPS*SNG001(-G) BRKR 1-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-F	C0035133	2EPS*SNG002(-G) BRKR 3-1 FAILED CLOSE (MECH MALFUNC)	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-F	C0235133	52TC2-2RCSB14 ACB3-1 2EPS*SNG003 TC FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-F	C0245133	52TC1-2RCSB14 ACB3-1 2EPS*SNG003 TC FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-N	C0545133	35A 125V DC POS FUSE CKT 2RCSB14 FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-N	C0555133	35A 125V DC NEG FUSE CKT 2RCSB14 FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-N	C0505133	K157B-2RCSB14 CONTACT T1 FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-F	C0805133	2EPS*SNG003(-G) BRKR-3-1 DIV I CLOSING COIL EN BY SHORT	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-F	C0025133	K156B-2RCSB14 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-N	C1195133	86-2RCSB14 CONTACT 1C FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-V	C1205133	86-2RCSB14 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-Z	C1225133	50;51-2RCSB53 PHASE A RELAY COIL FAILED OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-Z	C1245133	50;51-2RCSB53 PHASE C RLY COIL FAILED OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-V	C1255133	50G-2RCSB54 CONTACT 2 FAILED OPEN	PERIODIC TEST	50G-2RCSB54 CONTACT 2 FAILED TO CLOSE	
25-1-V	C1265133	50G-2RCSB54 RELAY COIL FAILED OPEN	PERIODIC TEST	50G-2RCSB54 CONTACT 2 FAILED TO CLOSE	
25-1-N	C1515133	INTERLOCK CONT 52-2RCSB14 OF 52TC2- FAILED OPEN	PERIODIC TEST	2EPS*SHG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-J	C1535133	INTERLOCK CONT 52-2RCSB14 OF 52TC1 FAILED OPEN	PERIODIC TEST	2EPS*SHG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-Z	C1625133	51-2RCSB53 PH C 'NO' CONTACT FAILS OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-Z	C1635133	50-2RCSB53 PH C CONTACT 3 FAILS OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-Z	C1645133	50-2RCSB53 PH C CONTACT 10 FAILS OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-Z	C1655133	50-2RCSB53 PH A 'NO' CONTACT 3 FAILS OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-Z	C1665133	50-2RCSB53 PH A CONTACT 3 FAILS OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-Z	C1675133	50-2RCSB53 PHA A CONTACT 10 FAILS OPEN	PERIODIC TEST	50;51-2RCSB53 PHASE A OR PH C CONTACTS FAILED TO CLOSE	
25-1-U	C0575143	AT3-2RCSB14 ISOLATOR FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-U 25-1-AF	C0595142	S121B-2RCSB14 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-U	C0605143	S121B-2RCSB14 CONT 3T FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-U	C0615143	S157B-2RCSB14 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AF	C0815143	AT3-2RCSB14 ISOLATOR FAILED CLOSE	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AF	C0835143	S121B-2RCSB14 CONTACT 1T FAILED CLOSE	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AF	C0845143	K156B-2RCSB14 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2EPS*SNG003(-G) BRKR 3-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-C	C0025153	2EPS*SNG002(-Y) BRKR 2-1 FAILED CLOSE (MECH MALFUNC)	PERIODIC TEST	2EPS*SNG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C0145153	52TC2-2RCSA16 ACB2-1 2EPS*SNG002 TC FAILED OPEN	PERIODIC TEST	2EPS*SNG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C0155153	52TC1-2RCSA16 ACB2-1 2EPS*SNG002 TC FAILED OPEN	PERIODIC TEST	2EPS*SNG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C0455153	35A 125V DC POS FUSE CKT 2RCSA16 FAILED OPEN	PERIODIC TEST	2EPS*SNG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-H	C0465153	35A 125V DC NEG FUSE CKT 2RCSA16 FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H 25-1-K 25-1-P	C0475153	125V DC DIV II BUS B (YELLOW) AT SHGR POWER FAILURE	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C0505153	159A-2RCSA16 CONTACT T1 FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-C	C0755153	2EPS*SHG002(-Y) BRKR 2-1 DIV II CLOSING COIL EN BY SHORT	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-C	C0775153	K159A-2RCSA16 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C1275153	86-2RCSA16 CONTACT 1C FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-T	C1285153	86-2RCSA16 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1305153	50;51-2RCSA55 PHASE A RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1325153	50;51-2RCSA55 PHASE C RLY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-T	C1335153	50G-2RCSA56 CONTACT 2 FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-T	C1345153	50G-2RCSA56 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-H	C1495153	INTERLOCK CONT 52-2RCSA16 OF 52TC2- FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-H	C1505153	INTERLOCK CONT 52-2RCSA16 OF 52TC1- FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1685153	51-2RCSA55 PH C 'NO' CONTACT FAILS OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1695153	50-2RCSA55 PH C CONTACT 3 FAILS OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1705153	50-2RCSA55 PH C CONTACT 10 FAILS OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1715153	51-2RCSA55 PH A 'NO' CONTACT FAILS OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1725153	50-2RCSA55 PH A CONTACT 3 FAILS OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AA	C1735153	50-2RCSA55 PH A CONTACT 10 FAILS OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-S	C0495163	AT5-2RCSA16 ISOLATOR FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-S 25-1-AE	C0515162	S117A-2RCSA16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-S	C0525163	S117A-2RCSA16 CONT 3T FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-S	C0535163	K159A-2RCSA16 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-AE	C0765163	AT5-2RCSA16 ISOLATOR FAILED CLOSE	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AE	C0785163	S117A-2RCSA16 CONTACT 1T FAILED CLOSE	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-AE	C0795163	K150A-2RCSA16 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2EPS*SHG002(-Y) BRKR 2-1 OF RCS PMP 2RCS-P1A FAILED TO TRIP	
25-1-E	C0045173	2EPS*SHG004(-Y) BRKR 4-1 FAILED CLOSE (MECH MALFUNC)	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-E	C0325173	52TC2-2RCSB16 ACB4-1 2EPS*SHG004 TC FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-E	C0335173	52TC1-2RCSB16 ACB4-1 2EPS*SHG004 TC FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-P	C0625173	35A 125V DC POS FUSE CKT 2RCSB16 FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-P	C0635173	35A 125V DC NEG FUSE CKT 2RCSB16 FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-P	C0665173	K159B-2RCSB16 CONTACT T1 FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-E	C0855173	2EPS*SHG004(-Y) BRKR 4-1 DIV II CLOSING COIL EN BY SHORT	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-E	C0875173	K150B-2RCSB16 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-P	C1355173	86-2RCSB16 CONTACT 1C FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-X	C1365173	86-2RCSB16 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1385173	50;51-2RCSB55 PHASE A RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1405173	50;51-2RCSB55 PHASE C RLY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-X	C1415173	50G-2RCSB56 CONTACT 2 FAILED TO OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-X	C1425173	50G-2RCSB56 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-P	C1595173	INTERLOCK CONT 52-2RCSB16 OF 52TC2- FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-K	C1555173	INTERLOCK CONT 52-2RCSB16 OF 52TC1- FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1745173	51-2RCSB55 PH C 'NO' CONTACT FAILS OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1755173	50-2RCSB55 PH C CONTACT 3 FAILS OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1765173	50-2RCSB55 PH C CONTACT 10 FAILS OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1775173	51-2RCSB55 PH A 'NO' CONTACT FAILS OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
25-1-AB	C1785173	50-2RCSB55 PH A CONTACT 3 FAILS OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AB	C1795173	50-2RCSB55 PH A CONTACT 10 FAILS OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-H	C0655183	AT7-2RCSB16 ISOLATOR FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-H 25-1-AG	C0675182	S117B-2RCSB16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-H	C0685183	S117B-2RCSB16 CONT 3T FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-H	C0695183	K159B-2RCSB16 RELAY COIL FAILED OPEN	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AG	C0865183	AT7-2RCSB16 ISOLATOR FAILED CLOSE	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AG	C0885183	S117B-2RCSB16 CONTACT 1T FAILED CLOSE	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	
25-1-AG	C0895183	K158B-2RCSB16 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2EPS*SHG004(-Y) BRKR 4-1 OF RCS PMP 2RCS-P1B FAILED TO TRIP	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
26-3-B	F071FWS3	FEEDWATER SYSTEM 2FWS*AOV 23A OPEN	PERIODIC TEST	NONE	
26-3-B	F072FWS6	FEEDWATER SYSTEM 2FWS*V12A OPEN	PERIODIC INSPECTION	NONE	
26-3-B	F073FWS3	FEEDWATER SYSTEM 2FWS*AOV 23B OPEN	PERIODIC TEST	NONE	
26-3-B	F074FWS6	FEEDWATER SYSTEM 2FWS*V12B OPEN	PERIODIC INSPECTION	NONE	
26-3-B	F001WCS3	2WCS*MOV 200 FAILS OPEN	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-F	F002WCS3	2WCS*MOV 102 FAILS OPEN	PERIODIC TEST	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-E	F003WCS3	2WCS*MOV 112 FAILS OPEN	PERIODIC TEST	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-E	F0061122	42O-2WCSN15 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-C	F0046032	42O-2WCSA02 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-F	F0056032	42O-2WCSN01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-F	F0076032	42C-2WCSN01 VALVE DRIVE MOTOR FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-F	F0086031	FUSE F1-2WCSN01 FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-F	F0096031	CONTROL XFMR 575-115 V FAILURE	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-F	F0106031	LOSS OF CONTROL POWER 2EHS*MCC .02D	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-G	F0116033	B22-K26 CONTACT R1 FAIL OPEN	PERIODIC TEST	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
26-3-G	F0126033	42C-2WCSN01 CONTACT 7 FAIL OPEN	PERIODIC TEST	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-G 26-3-H	F0136033	OPERATOR ERROR	PERIODIC TEST	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-G	F0146033	B22-S15 CONTACT 5 FAIL OPEN	PERIODIC TEST	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-H 26-3-G	F0156033	B22-K26 RELAY ENERGIZED	PERIODIC TEST	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-H	F0166033	B22-K26 CONTACT M2 FAILED CLOSE	PERIODIC TEST	B22-K26 CONT M2 CLOSED	
26-3-H	F0176033	B22-S15 CONTACT 3 FAILED CLOSE	PERIODIC TEST	B22-S15 CONT 3 CLOSED	
26-3-M	F0186032	49X-2WCSN01 CONTACT 7 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-M	F0196031	49X-2WCSN01 COIL FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-L	F0206032	42O-2WCSN01 CONTACT 9 FAIL OPEN	INDICATING LIGHT IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN.	
26-3-M	F0226031	49-2WCSN01 OVELOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-M	F0236031	49-2WCSN01 CONTACT FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-H	F0246032	42O-2WCSN01 CONTACT 6 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
26-3-L	F0266032	33-2WCSN01 CONTACT 15 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-L	F0286031	TQS-2WCSN01 OVER TORQUE	ANNUNCIATED IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR WATER CLEANUP

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
26-3-L	F0306032	TQS-2WCSN01 CONTACT 17 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	INS REAC CONTMT ISOLATION 2WCS*MOV 102 OPEN	
26-3-D	F0556032	42C-2WCSA02 VALVE DRIVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-D	F0566031	F1-2WCA02 FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-D	F0576031	2WCSA02 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-D	F0586031	LOSS OF CONTROL POWER 2EHS*MCC 102A	ANNUNCIATED IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-C	F0596033	S12A-2WCSA02 CONT 1 FAILED CLOSE	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-C 26-3-D	F0606033	S12A-2WCSA02 OPERATOR ERROR	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-C	F0616032	42O-2WCSA02 CONTACT 4 FAILED SHORT	INDICATING LIGHT IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-D	F0636033	S12A-2WCSA02 CONTACT 3 FAILED OPEN	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-D	F0646033	42C-2WCSA02 CONTACT 7 FAILED OPEN	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-Q	F0656032	42O-2WCSA02 CONTACT 9 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-Q	F0676033	33-2WCSA02 CONTACT 1 FAILED OPEN	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-Q	F0686031	TQS-2WCSA02 OVER TORQUE	ANNUNCIATED IN CONTROL ROOM	RWCU RTN ISOL 2WCS*MOV 200 OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR WATER CLEANUP

J.O.12177 FMEA-26-3 SH 3

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
26-3-Q	F0706033	TQS-2WCSA02 CONTACT 17 FAILED OPEN	PERIODIC TEST	RWCU RTN ISOL 2WCS*MOV 200 OPEN	
26-3-E	F0316112	42C-2WCSN15 VALVE DRIVE CKT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-E	F0326111	F1-2WCSN15 FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-E	F0336111	2WCSN01 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-E	F0346111	LOSS OF 2EHS*MCC 102C POWER	ANNUNCIATED IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-J	F0356113	B22-K27 CONTACT R1 FAILED OPEN	PERIODIC TEST	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-J	F0366112	42C-2WCSN15 CONTACT 7 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-J 26-3-K	F0376113	B22-S16 OPERATOR ERROR	PERIODIC TEST	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-J	F0386113	B22-S16 CONTACT 5 FAILED OPEN	PERIODIC TEST	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-K 26-3-J	F0396113	B22-K27 RELAY ENERGIZED	PERIODIC TEST	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-K	F0406113	B22-K27 CONTACT M2 FAILED CLOSE	PERIODIC TEST	B22-K27 CONT M2 CLOSED	
26-3-K	F0416113	B22-S16 CONTACT 3 FAILED CLOSE	PERIODIC TEST	B22-S16 CONT 3 CLOSED	
26-3-P	F0426112	49X-2WCSN15 CONTACT 7 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-P	F0436111	49X-2WCSN15 COIL FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR WATER CLEANUP

J.O.12177 FMEA-26-3 SH 4

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
26-3-N	F0446112	420-2WCSN15 CONTACT 9 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-P	F0466111	49-2WCSN15 OVELOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-P	F0476112	49-2WCSN15 CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-K	F0486112	420-2WCSN15 CONTACT 6 FAILED CLOSE	INDICATING LIGHT IN CONTROL ROOM	NONE	
26-3-N	F0506112	33-2WCSN15 CONTACT 15 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-N	F0526111	TQS-2WCSN15 OVER TORQUE	ANNUNCIATED IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	
26-3-N	F0546112	TQS-2WCSN15 CONTACT 17 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	OUT REAC CONTMT ISOLATION 2WCS*MOV 112 OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR WATER CLEANUP

J.O.12177 FMEA-26-3 SH 5

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-N	H014CSH3	2CSH*P 1A HIGH PRESSURE CORE SPRAY PUMP INOPERABLE	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-N	H015CSH3	2CSH*RV 113 PUMP SUCTION LINE VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-N	H016CSH3	2CSH*RV 114 PUMP DISCHARGE LINE VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-R	H017CSH3	2CSH*AOV 108 CONTAINMENT ISOLATION VALVE CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-C	H018CSH3	BREACH OF SUPPRESSION POOL PIPING	PERIODIC TEST	NONE	
27-4-C	H019CSH3	BREACH OF RECIRCULATION PIPING	PERIODIC TEST	NONE	
27-4-C	H020CSH3	2CSH*AOV 108 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC TEST	NONE	
27-4-T	H028CSH2	2CSH*MOV 101 FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-Q	H034CSH2	2CSH*MOV 105 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-R	H041CSH2	2CSH*MOV 107 FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-C	H065CSH2	2CSH*MOV 107 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2CSH*MOV 107 CONTAINMENT ISOLATION VALVE OPEN	
27-4-S	H076CSH2	2CSH*MOV 118 FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-C	H098CSH2	2CSH*MOV 118 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2CSH*MOV 118 CONTAINMENT ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-AB	H103CSH3	2CSH*MOV 110 FAILS OPEN	PERIODIC TEST	2CSH*MOV 110 CONDENSATE TANK RETURN VALVE OPEN	
27-4-AA	H107CSH3	2CSH*MOV 112 FAILS OPEN	PERIODIC TEST	2CSH*MOV 112 CONDENSATE TANK RETURN VALVE OPEN	
27-4-E 27-4-L	H012EGS3	LOSS OF DIVISION I DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF LPCS AND LPCI LOOP A	
27-4-L 27-4-K	H013EGS3	LOSS OF DIVISION II DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-4-N	H111EGS3	LOSS OF DIVISION III DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-L	H126ENS3	LOSS OF DIVISION I OFFSITE POWER	PERIODIC TEST	NONE	
27-4-L	H127ENS3	LOSS OF DIVISION II OFFSITE POWER	PERIODIC TEST	NONE	
27-4-B	H010RHS3	LOSS OF RHS SUPPRESSION POOL COOLING MODE LOOP A	PERIODIC TEST	NONE	
27-4-B	H011RHS3	LOSS OF RHS SUPPRESSION POOL COOLING MODE LOOP B	PERIODIC TEST	NONE	
27-4-B	H112RHS3	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	PERIODIC TEST	NONE	
27-4-B	H113RHS3	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-E	H008SVV3	LOSS OF ADS VALVES	PERIODIC TEST	NONE	
27-4-E	H009SVV3	LOSS OF ADS BACK-UP VALVES	PERIODIC TEST	NONE	
27-4-P	H0216011	2CSHN02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-P	H0226011	2CSHN02 3A FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-P 27-4-R 27-4-S	H0236011	LOSS OF 2EHS*HCC 201 (PURPLE)	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-P	H0246013	49-2CSHN02 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-P	H0256013	42-2CSHN02 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-P	H0266012	S3-2CSHN02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-P	H0276013	S3-2CSHN02 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-T	H0296023	33-2CSHN03 CONTACT 9 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-T	H0306023	42C-2CSHN03 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-T	H0316023	42C-2CSHN03 CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-T	H0326022	S1-2CSHN03 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-T	H0336023	S1-2CSHN03 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-AC	H0356023	420-2CSHN04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AC	H0366023	420-2CSHN04 CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AC	H0376023	S12-2CSHN04 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AC	H0386022	S12-2CSHN04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AC	H0396023	K51- GE SYSTEM-E22 CONTACT R2 FAILS CLOSED	PERIODIC TEST	K51-GE SYSTEM-E22 CONTACT R2 CLOSED	
27-4-AC	H0406023	K51- GE SYSTEM-E22 RELAY NOT ENERGIZED	PERIODIC TEST	K51-GE SYSTEM-E22 CONTACT R2 CLOSED	
27-4-AC	H1146023	K56- GE SYSTEM-E22 CONTACT R2 FAILS CLOSED	PERIODIC TEST	K56-GE SYSTEM-E22 CONTACT R2 CLOSED	
27-4-AC	H1156023	K56- GE SYSTEM-E22 RELAY NOT ENERGIZED	PERIODIC TEST	K56-GE SYSTEM-E22 CONTACT R2 CLOSED	
27-4-R	H0436031	2CSHN05 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-R	H0446031	2CSHN05 575-120V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H	H0456033	33-2CSHN05 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H	H0466033	420-2CSHN05 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-H	H0476033	42C-2CSHN05 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H	H0486033	33-2CSHN05 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H	H0496033	K13- GE SYSTEM-E22 CONTACT H3 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H 27-4-V	H0506033	K13- GE SYSTEM-E22 RELAY ENERGIZED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-V	H0516033	42C-2CSHN05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-V	H0526033	42C-2CSHN05 N-O CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H	H0536033	TQS-2CSHN05 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-H	H0546033	TQS-2CSHN05 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-V	H0556033	S4-2CSHN05 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-V 27-4-X 27-4-AG	H0566032	S4-2CSHN05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-X	H0576033	42D-2CSHN05 CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-X	H0586033	K9-GE SYSTEM-E22 CONTACT T4 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-X	M0596033	K9-GE SYSTEM-E22 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-X	M0606033	S4-2CSHN05 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AF	M0616033	49X-2CSHN05 CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AF	M0626031	49X-2CSHN05 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AF	M0636031	49-2CSHN05 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AF	M0646031	49-2CSHN05 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AE	M0666033	420-2CSHN05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CSHxMOV 107 CONTAINMENT ISOLATION VALVE OPEN	
27-4-AG	M0686033	420-2CSHN05 N-O CONTACT FAILS CLOSED	PERIODIC TEST	2CSHN05 MANUAL OR AUTOMATIC CKT ACTUATED	
27-4-AG	M0696033	K9-GE SYSTEM-E22 CONTACT T4 FAILS CLOSED	PERIODIC TEST	K9-GE SYSTEM-E22 CONTACT T4 CLOSED	
27-4-AG	M0706033	K9-GE SYSTEM-E22 RELAY ENERGIZED	PERIODIC TEST	K9-GE SYSTEM-E22 CONTACT T4 CLOSED	
27-4-AG	M0716033	S4-2CSHN05 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2CSHN05 MANUAL OR AUTOMATIC CKT ACTUATED	
27-4-Z	M0726032	2CSHxMOV 111 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-Z	M0736033	420-2CSHN06 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-Z	H0746033	S23-2CSHN06 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-Z	H0756032	S23-2CSHN06 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-X	H1166033	K14- GE SYSTEM-E22 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-X	H1176033	K14- GE SYSTEM-E22 RELAY ENERGIZED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-V	H1186033	K13- GE SYSTEM-E22 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AE	H1206033	K13- GE SYSTEM-E22 CONTACT H3 FAILS CLOSED	PERIODIC TEST	K13-GE SYSTEM-E22 CONTACT H3 CLOSED	
27-4-AE	H1216033	K13- GE SYSTEM-E22 RELAY NOT ENERGIZED	PERIODIC TEST	K13-GE SYSTEM-E22 CONTACT H3 CLOSED	
27-4-AG	H1226033	K14- GE SYSTEM-E22 CONTACT R2 FAILS CLOSED	PERIODIC TEST	K14-GE SYSTEM-E22 CONTACT R2 CLOSED	
27-4-AG	H1236033	K14- GE SYSTEM-E22 RELAY NOT ENERGIZED	PERIODIC TEST	K14-GE SYSTEM-E22 CONTACT R2 CLOSED	
27-4-AB	H1046043	420-2CSHN07 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CSH*MOV 110 CONDENSATE TANK RETURN VALVE OPEN	
27-4-AB	H1056043	S10-2CSHN07 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2CSH*MOV 110 CONDENSATE TANK RETURN VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-AB	H1066043	S10-2CSHN07 OPERATOR ERROR	PERIODIC TEST	2CSH*MOV 110 CONDENSATE TANK RETURN VALVE OPEN	
27-4-AA	H1086043	420-2CSHN08 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CSH*MOV 112 CONDENSATE TANK RETURN VALVE OPEN	
27-4-AA	H1096043	S11-2CSHN08 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2CSH*MOV 112 CONDENSATE TANK RETURN VALVE OPEN	
27-4-AA	H1106043	S11-2CSHN08 OPERATOR ERROR	PERIODIC TEST	2CSH*MOV 112 CONDENSATE TANK RETURN VALVE OPEN	
27-4-S	H0776051	2CSHN09 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-S	H0786051	2CSHN09 575-120V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	H0796053	33-2CSHN09 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	H0806053	420-2CSHN09 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	H0816053	33-2CSHN07 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	H0826053	42C-2CSHN09 N-C CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	H0836053	33-2CSHN08 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	H0846053	33-2CSHN09 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-S	H0856053	42C-2CSHN09 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-S	M0866053	42C-2CSHN09 N-O CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-Y	M0876053	K31- GE SYSTEM-E22 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	M0886053	TQS-2CSHN09 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-U	M0896053	TQS-2CSHN09 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-S	M0906053	S15-2CSHN09 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-S 27-4-Y 27-4-AD	M0916052	S15-2CSHN09 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-Y	M0926053	42O-2CSHN09 N-O CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-Y	M0936053	S15-2CSHN09 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AH	M0946053	49X-2CSHN09 CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AH	M0956051	49X-2CSHN09 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AH	M0966051	49-2CSHN09 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AH	M0976051	49-2CSHN09 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AD	M0996053	42O-2CSHN09 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CSH*MOV 118 CONTAINMENT ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-4-AD	H1006053	K31- GE SYSTEM-E22 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CSH*MOV 118 CONTAINMENT ISOLATION VALVE OPEN	
27-4-AD	H1016053	420-2CSHN09 N-C CONTACT FAILS CLOSED	PERIODIC TEST	2CSH*MOV 118 CONTAINMENT ISOLATION VALVE OPEN	
27-4-AD	H1026053	S15-2CSHN09 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2CSH*MOV 118 CONTAINMENT ISOLATION VALVE OPEN	
27-4-Y	H1246053	K31- GE SYSTEM-E22 RELAY NOT ENERGIZE	PERIODIC TEST	LOSS OF HPCS EMERGENCY CORE COOLING FUNCTION	
27-4-AD	H1256053	K31- GE SYSTEM-E22 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CSH*MOV 118 CONTAINMENT ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-R	H008CSL3	2CSL*AOV 101 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-N	H009CSL3	BREACH OF SUPPRESSION POOL PIPING	PERIODIC TEST	NONE	
27-5-C	H010CSL3	2CSL*AOV 101 FAILS OPEN	PERIODIC TEST	NONE	
27-5-P	H018CSL3	2CSL*P 1 MECHANICALLY FAILS	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-S	H019CSL3	2CSL*P 1 ACB MECHANICALLY FAILS	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-N	H052CSL3	2CSL*MOV 112 FAILS OPEN	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-R	H059CSL2	2CSL*MOV 112 FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-C	H062CSL2	2CSL*MOV 104 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2CSL*MOV 104 OPEN	
27-5-U	H069CSL3	2CSL*MOV 104 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-T	H089CSL2	2CSL*FV 114 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-P	H103CSL2	2CSL*MOV 107 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-G	H001EGS3	LOSS OF DIVISION III DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF HPCS	
27-5-P 27-5-H	H006EGS3	LOSS OF DIVISION I DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF LPCS AND LPCI LOOP A	
27-5-H 27-5-K	H007EGS3	LOSS OF DIVISION II DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-H	H117ENS3	LOSS OF DIVISION I OFFSITE POWER	PERIODIC TEST	NONE	
27-5-H	H118ENS3	LOSS OF DIVISION II OFFSITE POWER	PERIODIC TEST	NONE	
27-5-B	H004RHS3	LOSS OF RHS SUPPRESSION POOL COOLING MODE LOOP A	PERIODIC TEST	NONE	
27-5-B	H005RHS3	LOSS OF RHS SUPPRESSION POOL COOLING MODE LOOP B	PERIODIC TEST	NONE	
27-5-B	H119RHS3	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	PERIODIC TEST	NONE	
27-5-B	H120RHS3	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	PERIODIC TEST	NONE	
27-5-G	H002SVV3	LOSS OF ADS VALVES	PERIODIC TEST	NONE	
27-5-G	H003SVV3	LOSS OF ADS BACK-UP VALVES	PERIODIC TEST	NONE	
27-5-Z	H0205013	52TC-2CSLN01 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-S	H0215011	LOSS OF 125VDC ENS*SNG 101 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-S	H0225011	2CSLN01 35A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-S	H0235011	2CSLN01 35A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-S	H0245011	2CSLN01 15A POS FUSE FAILS OEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-S	H0255011	2CSLN01 15A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-AA	H0265013	S6-2CSLN01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AA 27-5-Z	H0275012	S6-2CSLN01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-AA	H0285013	S6-2CSLN01 CONTACT 10 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AA	H0295013	K12- GE SYSTEM-E21 CONTACT 7 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AA	H0305013	K12- GE SYSTEM-E21 RELAY NOT ENERGIZED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-Z	H0315013	27X2-2ENSX04 CONTACT 18 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-Z	H0325013	86-2CSLN01 CONTACT 1C FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-Z	H0335013	S6-2CSLN01 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AB	H0345013	86-2CSLN51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AB	H0355013	50G-2CSLN52 GROUND OC CONTACT 2 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-AB	H0365013	GROUND OVERCURRENT EXISTS ON BUS 2ENS*SHG 101	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AB	H0375013	50G-2CSLN52 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AD	H0385013	50-2CSLN51 PHASE A CONTACT 3 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AD	H0395013	INSTANTANEOUS FAULT EXISTS ON PHASE A BUS 2ENS*SHG 101	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AD	H0405013	51-2CSLN51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	51-2CSLN51 PHASE A CONTACT CLOSED	
27-5-AD	H0415013	TIME OVERCURRENT FAULT EXISTS ON PHASE A BUS 2ENS*SHG 101	PERIODIC TEST	51-2CSLN51 PHASE A CONTACT CLOSED	
27-5-AD	H0425013	50-2CSLN51 PHASE A CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2CSLN51 PHASE A CONTACT 9 CLOSED	
27-5-AD	H0435013	SI-2CSLN51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	SI-2CSLN51 PHASE A CONTACT CLOSED	
27-5-AD	H0445013	51-2CSLN51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2CSLN51 PHASE A CONTACT CLOSED	
27-5-AC	H0455013	50-2CSLN51 PHASE C CONTACT 3 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AC	H0465013	INSTANTANEOUS FAULT EXISTS ON PHASE C BUS 2ENS*SHG 101	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-AC	H0475013	51-2CSLN51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	51-2CSLN51 PHASE C CONTACT CLOSED	
27-5-AC	H0485013	TIME OVERCURRENT FAULT EXISTS ON PHASE C BUS 2ENS*SWG 101	PERIODIC TEST	51-2CSLN51 PHASE C CONTACT CLOSED	
27-5-AC	H0495013	50-2CSLN51 PHASE C CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2CSLN51 PHASE C CONTACT 9 CLOSED	
27-5-AC	H0505013	SI-2CSLN51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	SI-2CSLN51 PHASE C CONTACT CLOSED	
27-5-AC	H0515013	SI-2CSLN51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2CSLN51 PHASE C CONTACT CLOSED	
27-5-Q 27-5-X 27-5-U 27-5-T	H0116011	LOSS OF 2EHS*MCC 102C (GREEN)	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-Q	H0126011	2CSLN02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-Q	H0136011	2CSLN02 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-Q	H0146013	S7-2CSLN02 CONTACT 4 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-Q	H0156012	S7-2CSLN02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-Q	H0166011	49-2CSLN02 N-C CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-Q	H0176011	49-2CSLN02 OVERCURRENT PRESENT	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-X	H0536023	42C-2CSLN03 RELAY FAILS OPEN	PERIODIC TEST	2CSL*MOV 112 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-N	W0546023	S1-2CSLN03 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-N	W0556023	42O-2CSLN03 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-X	W0566023	42O-2CSLN03 CONTACT 9 FAILS OPEN	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-X	W0576023	TQS-2CSLN03 OVERTORQUE PRESENT	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-X	W0586023	TQS-2CSLN03 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-R	W0606023	S1-2CSLN03 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-R	W0616022	42C-2CSLN03 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-Y	W0636023	42O-2CSLN04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2CSL*MOV 104 OPEN	
27-5-Y	W0696023	42O-2CSLN04 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2CSL*MOV 104 OPEN	
27-5-Y	W0656023	S2-2CSLN04 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2CSL*MOV 104 OPEN	
27-5-Y 27-5-H 27-5-AE	W0666022	S2-2CSLN04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-Y	W0676023	K14- GE SYSTEM-E21 CONTACT T1 FAILS CLOSED	PERIODIC TEST	2CSL*MOV 104 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-Y	H0686023	K14- GE SYSTEM-E21 RELAY ENERGIZED	PERIODIC TEST	2CSL*MOV 104 OPEN	
27-5-U	H0706023	42O-2CSLN04 RELAY FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-H	H0716023	42C-2CSLN04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-U	H0726021	2CSLN04 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-U	H0736021	2CSLN04 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SHALL LOCA)	
27-5-H	H0746023	42C-2CSLN04 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-H	H0756023	S2-2CSLN04 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-AE	H0766023	42C-2CSLN04 CONTACT 6 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-AE	H0776023	33-2CSLN04 CONTACT 11 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-AE	H0786023	33-2CSLN04 CONTACT 4 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-AE	H0796023	K14- GE SYSTEM-E21 CONTACT T1 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	
27-5-AE	H0806023	K14- GE SYSTEM-E21 RELAY NOT ENERGIZED	PERIODIC TEST	LPCS INOPERABLE (SHALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-AG	W0816023	TQS-2CSLN04 OVERTORQUE PRESENT	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AG	W0826023	TQS-2CSLN04 CONTACT 18 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AE	W0836023	S2-2CSLN04 CONTACT 4 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AE	W0846023	42O-2CSLN04 CONTACT 5 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AH	W0856023	49X-2CSLN04 CONTACT FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AH	W0866021	49X-2CSLN04 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-AH	W0876021	49-2CSLN04 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-AH	W0886021	49-2CSLN04 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-X	W1116021	2CSLN03 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2CSL*MOV 112 OPEN	
27-5-X	W1126021	2CSLN03 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CSL*MOV 112 OPEN	
27-5-X	W1136023	S1-2CSLN03 CONTACT 2 FAILS OPEN	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-X	W1146023	33-2CSLN03 CONTACT 15 FAILS OPEN	PERIODIC TEST	2CSL*MOV 112 OPEN	
27-5-AF	W1156023	K50- GE SYSTEM-E21 CONTACT T2 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-AF	H1166023	K50- GE SYSTEM-E21 RELAY NOT ENERGIZED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-T	H0906033	42C-2CSLN05 RELAY FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-T	H0916033	42O-2CSLN05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-T	H0926031	2CSLN05 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-T	H0936031	2CSLN05 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-T	H0946033	S5-2CSLN05 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-T 27-5-AJ	H0956032	S5-2CSLN05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-AJ	H0966033	42O-2CSLN05 CONTACT 9 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AJ	H0976033	33-2CSLN05 CONTACT 15 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AJ	H0986033	K10- GE SYSTEM-E21 CONTACT T3 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AJ	H0996033	K10- GE SYSTEM-E21 RELAY NOT ENERGIZED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AJ	H1006033	S5-2CSLN05 CONTACT 2 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-5-AJ	H1016033	TQS-2CSLN05 OVERTORQUE PRESENT	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-AJ	H1026033	TQS-2CSLN05 CONTACT 17 FAILS OPEN	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-V	H1046033	42O-2CSLN06 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-V	H1056033	42O-2CSLN06 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-V	H1076033	S4-2CSLN06 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-V	H1086032	S4-2CSLN06 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LPCS INOPERABLE (SMALL LOCA)	
27-5-V	H1096033	K51- GE SYSTEM-E21 CONTACT M2 FAILS CLOSED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	
27-5-V	H1106033	K51- GE SYSTEM-E21 RELAY NOT ENERGIZED	PERIODIC TEST	LPCS INOPERABLE (SMALL LOCA)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-A	P001ICS6	BREACH OF SUPPRESSION POOL PIPING	PERIODIC INSPECTION	NONE	
27-6-A	P002ICS3	2ICS*AOV 156 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC TEST	NONE	
27-6-A	P003ICS3	2ICS*AOV 157 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC TEST	NONE	
27-6-C	P004ICS3	2ICS*MOV 136 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-C	P029ICS3	2ICS*MOV 122 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-G	P046ICS3	2ICS*MOV 143 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-F	P075ICS3	2ICS*MOV 148 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-E	P098ICS3	2ICS*MOV 164 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-K	P120ICS3	2ICS*MOV 128 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-J	P140ICS3	2ICS*MOV 170 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-D	P165ICS3	2ICS*MOV 121 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-B	P190ICS3	2ICS*MOV 126 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-A	P225ICS3	2ICS*MOV 104 OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-H	P0051023	72C-2ICSN05 RELAY FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-C	P0061022	72O-2ICSN05 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-H 27-6-P 27-6-Q 27-6-U 27-6-H	P0071021	LOSS OF 2DHS*MCC A1 (GREEN)	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-H	P0081021	2ICSN05 POS F1-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-H	P0091021	2ICSN05 NEG F1-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Y	P0101023	720-2ICSN05 SEAL-IN CONTACT 5 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Y	P0111023	S3-2ICSN05 REMOTE SHUTDOWN STA CONTACT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-Y	P0121023	S3-2ICSN05 REMOTE SHUTDOWN STA CONTACT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-Y	P0131023	S22-2ICSN05 REMOTE SHUTDOWN STA CONTACT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-6-Y	P0141023	S10-2ICSN05 CONTACT 4 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Y 27-6-X	P0151022	S10-2ICSN05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-X	P0161023	S3-2ICSN05 CONTACT 23 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-X	P0171023	S3-2ICSN05 CONTACT 25 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-X	P0181023	72O-2ICSN05 CONTACT 9 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-X	P0191023	33-2ICSN05 CONTACT 15 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Z	P0201023	TQS-2ICSN05 OVERTORQUE PRESENT	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Z	P0211023	TQS-2ICSN05 CONTACT 17 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-X	P0221023	S10-2ICSN05 CONTACT 6 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-X	P0231023	72C-2ICSN05 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AA	P0241023	72X-2ICSN05 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AA	P0251021	72X-2ICSN05 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AA	P0261021	72-2ICSN05 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AA	P0271021	72-2ICSN05 CONTACT OL1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AA	P0281021	72-ICSN05 CONTACT OL2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-H	P1911053	72C-2ICSN12 RELAY FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-B	P1921052	72O-2ICSN12 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-H	P1931051	F1-2ICSN12 POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-H	P1941051	F1-2ICSN12 NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BC	P1951053	S5-2ICSN12 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BC 27-6-BA	P1961052	S5-2ICSN12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P1971053	72O-2ICSN12 CONTACT 9 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P1981053	S3-2ICSN12 CONTACT 81 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P1991053	S3-2ICSN12 CONTACT 83 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P2001053	33-2ICSN12 CONTACT 15 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AZ	P2011053	TQS-2ICSN12 OVERTORQUE PRESENT	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P2021053	K20- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P2031053	K20- GE SYSTEM-E51 CONTACT R3 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AY	P2041053	K40- GE SYSTEM-E51 RELAY NOT ENERGIZED	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AY	P2051053	K40- GE SYSTEM-E51 CONTACT M2 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BA	P2061053	S5-2ICSN12 CONTACT 6 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BA	P2071053	72C-2ICSN12 CONTACT 8 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-AZ	P2081053	TQS-2ICSN12 CONTACT 17 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BB	P2091053	S3-2ICSN12 REMOTE SHUTDOWN STATION CONT 78 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-BB	P2101053	S3-2ICSN12 REMOTE SHUTDOWN STATION CONT 80 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-BB	P2111053	S52-2ICSN12 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-6-BB	P2121053	K3A- REMOTE SHUTDOWN STATION CONT M4 FAILS CLOSED	PERIODIC TEST	K3A-REMOTE SHUTDOWN STATION CONT M4 CLOSED	
27-6-BB	P2131053	K20A- REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K20A-REMOTE SHUTDOWN STATION CONT M2 CLOSED	
27-6-BB	P2141053	K20- REMOTE SHUTDOWN STATION CONT M2 FAILS CLOSED	PERIODIC TEST	K20A-REMOTE SHUTDOWN STATION CONT M2 CLOSED	
27-6-BC	P2151053	K3-GE SYSTEM-E51 ENERGIZED	PERIODIC TEST	K3-GE SYSTEM-E51 CONTACT M4 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-BC	P2161053	K3-GE SYSTEM-E51 CONTACT N4 FAILS CLOSED	PERIODIC TEST	K3-GE SYSTEM-E51 CONTACT N4 CLOSED	
27-6-BC	P2171053	K20- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	K20-GE SYSTEM-E51 CONTACT N2 CLOSED	
27-6-BC	P2181053	K3-GE SYSTEM-E51 CONTACT N2 FAILS CLOSED	PERIODIC TEST	K20-GE SYSTEM-E51 CONTACT N2 CLOSED	
27-6-BD	P2191053	72X-2ICSN12 CONTACT 8 FAILS OPEN	PERIODIC TEST	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BD	P2201051	72X-2ICSN12 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BD	P2211051	72-2ICSN12 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BD	P2221051	72-2ICSN12 CONTACT OL1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BD	P2231051	72-2ICSN12 CONTACT OL2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 126 OR 2ICS*MOV 104 OPEN	
27-6-BB	P2241053	K3A- REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K3A-REMOTE SHUTDOWN STATION CONT N4 CLOSED	
27-6-P	P0301103	72C-2ICSN04 RELAY FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-N	P0311102	72O-2ICSN04 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-N	P0321103	S35-2ICSN04 CONTACT 4 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-P	P0331101	F1-2ICSN04 POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-P	P0341101	F1-2ICSN04 NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-N	P0351103	S5-2ICSN04 REMOTE SHUTDOWN STA CONTACT 42 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-N	P0361103	S5-2ICSN04 REMOTE SHUTDOWN STA CONTACT 40 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-N	P0371103	S27-2ICSN04 REMOTE SHUTDOWN STA CONTACT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-6-AB	P0381103	720-2ICSN04 CONTACT 9 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0391103	S5-2ICSN04 CONTACT 45 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0401103	S5-2ICSN04 CONTACT 43 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0411103	33-2ICSN04 CONTACT 15 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0421103	S35-2ICSN04 CONTACT 6 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0431102	S35-2ICSN04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0441103	TQS-2ICSN04 OVERTORQUE PRESENT	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AB	P0451103	TQS-2ICSN04 CONTACT 17 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-Q	P0471113	72C-2ICSN06 RELAY FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-G	P0481112	72O-2ICSN06 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Q	P0491111	F1-2ICSN06 POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-Q	P0501111	F1-2ICSN06 NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AD	P0511113	72O-2ICSN06 CONTACT 5 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AD	P0521113	K70- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	K70-GE SYSTEM-E51 CONTACT H1 CLOSED	
27-6-AD	P0531113	K70- GE SYSTEM-E51 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K70-GE SYSTEM-E51 CONTACT H1 CLOSED	
27-6-AD	P0541113	K73- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	K73-GE SYSTEM-E51 CONTACT H1 CLOSED	
27-6-AD	P0551113	K73- GE SYSTEM-E51 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K73-GE SYSTEM-E51 CONTACT H1 CLOSED	
27-6-AD	P0561113	S9-2ICSN06 CONTACT 4 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AD 27-6-AC	P0571112	S9-2ICSN06 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AC	P0581113	72O-2ICSN06 CONTACT 9 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AC	P0591113	33-2ICSN06 CONTACT 15 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AC	P0601113	K71- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AC	P0611113	K71- GE SYSTEM-E51 CONTACT FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AG	P0621113	K49- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AG	P0631113	K49- GE SYSTEM-E51 CONTACT R2 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AF	P0641113	K20- GE SYSTEM-E51 RELAY ENERGIZED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AF	P0651113	K20- GE SYSTEM-E51 CONTACT R1 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AE	P0661113	TQS-2ICSN06 OVERTORQUE PRESENT	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AE	P0671113	TQS-2ICSN06 CONTACT 17 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AC	P0681113	S9-2ICSN06 CONTACT 6 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AC	P0691113	72C-2ICSN06 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P0701113	72X-2ICSN06 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AH	P0711111	72X-2ICSN06 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P0721111	72-2ICSN06 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P0731111	72-2ICSN06 CONTACT OL1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P0741111	72-2ICSN06 CONTACT OL2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-S	P0761133	72C-2ICSN13 RELAY FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-R	P0771132	72O-2ICSN13 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-S	P0781131	LOSS OF 2DHSxHCC B1 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-S	P0791131	F1-2ICSN13 POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-S	P0801131	F1-2ICSN13 NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AJ	P0811133	K34- GE SYSTEM-E51 RELAY NOT ENERGIZED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-R	P0831133	72O-2ICSN13 CONTACT 5 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-R	P0841133	S40-2ICSN13 CONTACT 4 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-R 27-6-AJ	P0851132	S40-2ICSN13 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AJ	P0861133	720-2ICSN13 CONTACT 9 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AJ	P0871133	33-2ISCN13 CONTACT 15 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AJ	P0881133	K34- GE SYSTEM-E51 CONTACT N2 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AK	P0891133	TQS-2ICSN13 OVERTORQUE PRESENT	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AK	P0901133	TQS-2ICSN13 CONTACT 17 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AJ	P0911133	S40-2ICSN13 CONTACT 6 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AJ	P0921133	72C-2ICSN13 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AL	P0931133	72X-2ICSN13 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AL	P0941131	72X-2ICSN13 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AL	P0951131	72-2ICSN13 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AL	P0961131	72-2ICSN13 CONTACT OL1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AL	P0971131	72-2ICSN13 CONTACT OL2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-U	P0991133	72C-2ICSN08 RELAY FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-T	P1001132	720-2ICSN08 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-U	P1011131	F1-2ICS POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-U	P1021131	F1-2ICS NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P1031133	K58- GE SYSTEM-E51 RELAY NOT ENERGIZED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-T	P1051133	720-2ICSN08 CONTACT 5 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-T	P1061133	S39-2ICSN08 CONTACT 4 FAILS CLOSED	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-T 27-6-AH	P1071132	S39-2ICSN08 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P1081133	720-2ICSN08 CONTACT 9 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P1091133	33-2ICSN08 CONTACT 15 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P1101133	K58- GE SYSTEM-E51 CONTACT N2 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AN	P1111133	TQS-2ICSN08 OVERTORQUE PRESENT	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AN	P1121133	TQS-2ICSN08 CONTACT 17 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AH	P1131133	S39-2ICSN08 CONTACT 6 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AH	P1141133	72C-2ICSN08 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AP	P1151133	72X-2ICSN08 CONTACT 8 FAILS OPEN	PERIODIC TEST	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AP	P1161131	72X-2ICSN08 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AP	P1171131	72-2ICSN08 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AP	P1181131	72-2ICSN08 CONTACT OL1 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-AP	P1191131	72-2ICSN08 CONTACT OL2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	SUPPRESSION POOL ISOLATION VALVE OPEN	
27-6-K	P1216023	42C-2ICSN02 RELAY FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-V	P1226022	42D-2ICSN02 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-K 27-6-J	P1236021	LOSS OF 2EHS*MCC 302D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-K	P1246021	2ICSN02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-K	P1256021	F1-2ICSN02 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-V	P1266023	S2-SICSN02 REMOTE SHUTDOWN STATION CONT 2 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-V	P1276023	S19-2ICSN02 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-V	P1286023	2S-2ICSN02 REMOTE SHUTSDOWN STATION CONT 4 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-AQ	P1296023	K33- GE SYSTEM-E51 RELAY NOT ENERGIZED	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1316023	420-2ICSN02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1326023	S2-2ICSN02 CONTACT 7 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1336023	S2-2ICSN02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1346023	33-2ICSN02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1356023	K33- GE SYSTEM-E51 CONTACT M2 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1366023	S1-2ICSN02 CONTACT 6 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AQ	P1376022	S1-2ICSN02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AR	P1386022	TQS-2ICSN02 OVERTORQUE PRESENT	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AR	P1396022	TQS-2ICSN02 CONTACT 17 FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-V	P2266023	S1-2ICSN02 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-D	P1666033	42C-2ICSN11 RELAY FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-L	P1676032	420-2ICSN11 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-D	P1686031	LOSS OF 2EHS*MCC 102C (GREEN)	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-D	P1696031	2ICSN11 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-D	P1706031	F1-2ICSN11 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-L	P1716033	S5-2ICSN11 REMOTE SHUTDOWN STATON CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-L	P1726033	S24-2ICSN11 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-6-L	P1736033	S5-2ICSN11 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-AV	P1746033	K15- GE SYSTEM-E51 RELAY NOT ENERGIZED	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AV	P1766033	420-2ICSN11 CONTACT 9 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AV	P1776033	S5-2ICSN11 CONTACT 65 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AV	P1786033	S5-2ICSN11 CONTACT 67 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	

FTSK .	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AV	P1796033	33-2ICSN11 CONTACT 15 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AV	P1806033	K15 GE SYSTEM-E51 CONTACT N2 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AV	P1816033	TQS-2ICSN11 OVERTORQUE PRESENT	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AV	P1826033	TQS-2ICSN11 CONTACT 17 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AW	P1836032	S2-2ICSN11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AW	P1846033	S2-2ICSN11 CONTACT 6 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AW	P1856033	42C-2ICSN11 CONTACT 8 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AX	P1866033	49X-2ICSN11 CONTACT 8 FAILS OPEN	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AX	P1876031	49X-2ICSN11 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AX	P1886031	49-2ICSN11 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-AX	P1896031	49-2ICSN11 CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-L	P2276033	S2-2ICSN11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2ICS*MOV 121 CONTAINMENT ISOLATION VALVE OPEN	
27-6-J	P1416043	42C-2ICSN42 RELAY FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-H	P1426042	420-2ICSN42 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-J	P1436041	2ICSN24 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-J	P1446041	F1-2ICSN42 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-H	P1456043	S2-2ICSN24 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-H	P1466043	S61-2ICSN24 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-6-H	P1476043	S2-2ICSN24 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-6-AS	P1486043	420-2ICSN24 CONTACT 9 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AS	P1496043	S2-2ICSN24 CONTACT 63 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AS	P1506043	S2-2ICSN24 CONTACT 67 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AS	P1516043	33-2ICSN24 CONTACT 15 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AS	P1526043	K54- GE SYSTEM-E51 RELAY NOT ENERGIZED	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-6-AS	P1536043	K54- GE SYSTEM-E51 CONTACT M1 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AS	P1546043	TQS-2ICSN24 OVERTORQUE PRESENT	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AS	P1556043	TQS-2ICSN24 CONTACT 17 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AT 27-6-H	P1566042	S38-2ICSN24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AT	P1576043	S38-2ICSN24 CONTACT 6 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AT	P1586043	42C-2ICSN24 CONTACT 8 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-H	P1596043	S38-2ICSN24 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AU	P1616043	49X-2ICSN24 CONTACT 8 FAILS OPEN	PERIODIC TEST	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AU	P1626041	49X-2ICSN24 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AU	P1636041	49-2ICSN24 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	
27-6-AU	P1646041	49-2ICSN24 CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2ICS*MOV 128 OR 2ICS*MOV 170 CONTMT ISOL VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AR	U068CSL3	2CSL*P 2 SYSTEM PRESSURE PUMP INOPERABLE	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-H	U001EGS3	LOSS OF DIVISION III DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF HPCS	
27-7-H 27-7-AP	U004EGS3	LOSS OF DIVISION I DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AM 27-7-P	U046EGS3	LOSS OF DIVISION II DIESEL ENGINE GENERATOR.	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-H	U855ENS3	LOSS OF DIVISION I OFFSITE POWER	PERIODIC TEST	NONE	
27-7-H	U856ENS3	LOSS OF DIVISION II OFFSITE POWER	PERIODIC TEST	NONE	
27-7-AC	U007ICS3	2ICS*AOV 157 FAILS OPEN	PERIODIC TEST	NONE	
27-7-CN	U008ICS3	2ICS*AOV 156 FAILS OPEN	PERIODIC TEST	NONE	
27-7-CH	U005RHS6	BREACH OF SUPPRESSION POOL SPRAY RING LINE A PIPING	PERIODIC INSPECTION	NONE	
27-7-CG	U006RHS6	BREACH OF SUPPRESSION POOL SPRAY RING LINE B PIPING	PERIODIC INSPECTION	NONE	
27-7-CH	U011RHS3	2CSH*RV 113 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U012RHS3	2CSH*RV 114 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-CH	U013RHS3	2CSL*RV 123 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U014RHS3	2RHS*RV 61A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U015RHS3	2RHS*RV 139 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U016RHS3	2RHS*RV 20A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U017RHS3	2CSL*RV 105 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U018RHS3	2RHS*RV 110 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CH	U019RHS3	2RHS*RV 56A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CV	U020RHS3	2RHS*RV 61B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CV	U021RHS3	2RHS*RV 108 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CV	U022RHS3	2RHS*RV 56B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CV	U023RHS3	2RHS*RV 61C FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CV	U024RHS3	2RHS*RV 20C FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CD	U025RHS3	2RHS*SV 34A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CD	U026RHS3	2RHS*SV 62A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CD	U027RHS3	2RHS*SV 34B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CD	U028RHS3	2RHS*SV 62B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-CD	U029RHS3	2RHS*MOV 26A OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-CD	U030RHS3	2RHS*MOV 27A OPEN	PERIODIC TEST	NONE	
27-7-CD	U031RHS3	2RHS*MOV 26B OPEN	PERIODIC TEST	NONE	
27-7-CD	U032RHS3	2RHS*MOV 27B OPEN	PERIODIC TEST	NONE	
27-7-CF	U033RHS3	2RHS*AOV 16A FAILS OPEN	PERIODIC TEST	NONE	
27-7-CE	U034RHS3	2RHS*AOV 16B FAILS OPEN	PERIODIC TEST	NONE	
27-7-AD	U035RHS3	2RHS*AOV 16C FAILS OPEN	PERIODIC TEST	NONE	
27-7-AB	U036RHS3	LOSS OF SUPPRESSION POOL SUCTION LINE A WATER SEAL	PERIODIC TEST	NONE	
27-7-AB	U037RHS3	LOSS OF SUPPRESSION POOL SUCTION LINE B WATER SEAL	PERIODIC TEST	NONE	
27-7-AB	U038RHS3	LOSS OF SUPPRESSION POOL SUCTION LINE C WATER SEAL	PERIODIC TEST	NONE	
27-7-CK	U039RHS3	2RHS*AOV 39A FAILS OPEN	PERIODIC TEST	2RHS*AOV 39A OR 2RHS*MOV67A OPEN	
27-7-CK	U040RHS3	2RHS*MOV67A OPEN	PERIODIC TEST	2RHS*AOV 39A OR 2RHS*MOV67A OPEN	
27-7-CJ	U041RHS3	2RHS*AOV 39B FAILS OPEN	PERIODIC TEST	2RHS*AOV 39B OR 2RHS*MOV 67B OPEN	
27-7-CJ	U042RHS3	2RHS*MOV 67B OPEN	PERIODIC TEST	2RHS*AOV 39B OR 2RHS*MOV 67B OPEN	
27-7-AP	U044RHS3	2RHS*AOV16 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AS	U045RHS3	2CSL*V 9 CHECK VALVE FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-AM	U048RHS3	2RHS*AOV 16B FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AW	U049RHS3	2RHS*V 9 CHECK VALVE FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-AW	U050RHS3	2RHS*V 8 CHECK VALVE FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-R	U051RHS3	2RHS*V 3 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Q	U052RHS3	2RHS*AOV 16C CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Y	U053RHS3	2RHS*V 9 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Y 27-7-AV	U055RHS3	2RHS*V 18 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-Y 27-7-AV	U056RHS3	2RHS*V 17 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-Y	U057RHS3	2RHS*V 3 OPEN CAUSES BACKFLOW TO SUPPRESSION POOL	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-CQ	U059RHS3	2RHS*RV 61A RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BC	U060RHS3	2RHS*LV 17A OPEN	PERIODIC TEST	NONE	
27-7-AQ	U061RHS3	2RHS*SOV 35A FAILS OPEN	PERIODIC TEST	NONE	
27-7-AQ	U062RHS3	2RHS*SOV 36A FAILS OPEN	PERIODIC TEST	NONE	
27-7-AQ	U063RHS3	2RHS*PV 21A OPEN	PERIODIC TEST	NONE	
27-7-AQ	U064RHS3	2RHS*SOV 70A OPEN	PERIODIC TEST	NONE	
27-7-AQ	U065RHS3	2RHS*SOV 71A OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AP	U066RHS3	2RHS*V 1 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AR	U067RHS3	2RHS*V 7 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AR	U069RHS3	2RHS*V 48 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AR	U070RHS3	2RHS*V 47 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AR	U071RHS3	2RHS*V 1 OPEN CAUSES BACKFLOW TO SUPPRESSION POOL	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-CP	U073RHS3	2RHS*RV 61B RELIEF VALVE FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BJ	U074RHS3	2RHS*LV 17B OPEN	PERIODIC TEST	NONE	
27-7-AX	U075RHS3	2RHS*AOV 150 FAILS OPEN	PERIODIC TEST	NONE	
27-7-AN	U076RHS3	2RHS*PV 21B OPEN	PERIODIC TEST	NONE	
27-7-AN	U077RHS3	2RHS*SOV 70B OPEN	PERIODIC TEST	NONE	
27-7-AN	U078RHS3	2RHS*SOV 71B OPEN	PERIODIC TEST	NONE	
27-7-AX	U079RHS3	2RHS*SOV 126 FAILS OPEN	PERIODIC TEST	2RHS*MOV 116 OR 2RHS* SOV 126 OPEN	
27-7-AX	U080RHS3	2RHS*SOV 35B FAILS OPEN	PERIODIC TEST	NONE	
27-7-AX	U081RHS3	2RHS*SOV 36B FAILS OPEN	PERIODIC TEST	NONE	
27-7-AN	U082RHS3	2RHS*V 2 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AV	U083RHS3	2RHS*V 8 CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AV	U086RHS3	2RHS*V 2 OPEN CAUSES BACKFLOW TO SUPPRESSION POOL	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BD	U087RHS3	2RHS*P 1A FAILS INOPERABLE	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BE	U088RHS3	2RHS*P 1A ACB MECHANICALLY FAILS	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-R	U128RHS3	2RHS*P 1C FAILS INOPERABLE	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Z	U129RHS3	2RHS*P 1C ACB MECHANICALLY FAILS	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BK	U162RHS3	2RHS*P 1B FAILS INOPERABLE	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-CQ	U197RHS3	2RHS*MOV 1A FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-P	U203RHS3	2RHS*MOV 1C FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AU	U206RHS3	2RHS*MOV 2A FAILS OPEN	PERIODIC TEST	2RHS*MOV 2A OPEN	
27-7-BB	U216RHS3	2RHS*MOV 8A FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-AL	U238RHS3	2RHS*MOV 8A FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AT	U244RHS3	2RHS*MOV 9A FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-AT	U250RHS3	2RHS*MOV 12A FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-CS	U256RHS3	2RHS*MOV 15A FAILS OPEN	PERIODIC TEST	2RHS*MOV 15A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-CU	U263RHS3	2RHS*MOV 15B FAILS OPEN	PERIODIC TEST	2RHS*MOV 15B OPEN	
27-7-EQ	U270RHS3	2RHS*MOV 22B FAILS OPEN	PERIODIC TEST	2RHS*MOV 22B OPEN	
27-7-EE	U274RHS3	2RHS*MOV 22A FAILS OPEN	PERIODIC TEST	2RHS*MOV 22A OPEN	
27-7-ED	U278RHS3	2RHS*MOV 23A FAILS OPEN	PERIODIC TEST	2RHS*MOV 23A OPEN	
27-7-EP	U282RHS3	2RHS*MOV 23B FAILS OPEN	PERIODIC TEST	2RHS*MOV 23B OPEN	
27-7-CF	U286RHS3	2RHS*MOV 24A FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DD	U295RHS3	2RHS*MOV 24A FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-CE	U317RHS3	2RHS*MOV 24B FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-DK	U326RHS3	2RHS*MOV 24B FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DQ	U349RHS3	2RHS*MOV 24C FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-CR	U372RHS3	2RHS*MOV 25A FAILS OPEN	PERIODIC TEST	2RHS*MOV 25A OPEN	
27-7-CT	U379RHS3	2RHS*MOV 25B FAILS OPEN	PERIODIC TEST	2RHS*MOV 25B OPEN	
27-7-BC	U386RHS3	2RHS*MOV 32A FAILS OPEN	PERIODIC TEST	2RHS*MOV 32A OR 2RHS*MOV 37A OPEN	
27-7-BJ	U391RHS3	2RHS*MOV 32B FAILS OPEN	PERIODIC TEST	2RHS*MOV 32B OR 2RHS*MOV 37B OPEN	
27-7-CH	U396RHS3	2RHS*MOV 33A FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-CG	U403RHS3	2RHS*MOV 33B FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BC	U410RHS3	2RHS*MOV 37A FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BJ	U415RHS3	2RHS*MOV 37B FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-AH	U420RHS3	2RHS*FV 38A FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-DW	U429RHS3	2RHS*FV 38A FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-CK	U454RHS3	2RHS*MOV 40A FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DP	U465RHS3	2RHS*FV 38C FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EN	U469RHS3	2RHS*MOV 115 FAILS OPEN	PERIODIC TEST	2RHS*MOV 115 OPEN	
27-7-ER	U473RHS3	2RHS*MOV 116 FAILS OPEN	PERIODIC TEST	2RHS*MOV 116 OR 2RHS* SOV 126 OPEN	
27-7-AE	U477RHS3	2RHS*MOV 113 FAILS OPEN	PERIODIC TEST	2RHS*MOV 113 OPEN	
27-7-AZ	U489RHS3	2RHS*MOV 142 FAILS OPEN	PERIODIC TEST	2RHS*MOV 142 OPEN	
27-7-AL	U522RHS3	2RHS*MOV 4A FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BF	U529RHS3	2RHS*MOV 4A FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-AK	U551RHS3	2RHS*MOV 4B FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BM	U558RHS3	2RHS*MOV 4B FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-P	U580RHS3	2RHS*MOV 4C FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DS	U587RHS3	2RHS*MOV 4C FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-CP	U610RHS3	2RHS*MOV 1B FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BH	U626RHS3	2RHS*MOV 8B FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AK	U645RHS3	2RHS*MOV 8B FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AE	U651RHS3	2RHS*MOV 112 FAILS OPEN	PERIODIC TEST	2RHS*MOV 112 OPEN	
27-7-AY	U663RHS3	2RHS*MOV 12B FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-AJ	U669RHS3	2RHS*FV 38B FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-AY	U703RHS3	2RHS*MOV9B FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-CJ	U734RHS3	2RHS*MOV 40B FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-CN	U745RHS3	2RHS*MOV 104 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AZ	U756RHS3	2RHS*MOV 149 FAILS OPEN	PERIODIC TEST	2RHS*MOV 149 OPEN	
27-7-CX	U768RHS3	RHS*MOV 30A FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-N	U784RHS3	2RHS*MOV 30A FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-Y	U806RHS3	2RHS*MOV 30B FAILS CLOSED	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-BL	U843RHS3	2RHS*P 1B ACB MECHANICALLY FAILS	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BA	U847RHS3	2RHS*MOV 2B FAILS OPEN	PERIODIC TEST	2RHS*MOV 2B OPEN	
27-7-CW	U849RHS3	2RHS*MOV 30B FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-AB	U850RHS3	2RHS*MOV 1A OPEN	PERIODIC TEST	NONE	
27-7-AB	U851RHS3	2RHS*MOV 1B OPEN	PERIODIC TEST	NONE	
27-7-AB	U852RHS3	2RHS*MOV 1C OPEN	PERIODIC TEST	NONE	
27-7-AD	U854RHS3	2RHS*MOV 24C OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AC	U858RHS6	LOSS OF SUPPRESSION POOL PIPING WATER SEAL	PERIODIC INSPECTION	NONE	
27-7-CV	U859RHS3	2RHS*RV 20B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BZ	U860RHS3	2RHS*MOV 15A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CC	U881RHS3	2RHS*MOV 15B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-BY	U902RHS3	2RHS*MOV 25A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CB	U922RHS3	2RHS*MOV 25B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-BX	U942RHS3	2RHS*MOV 33A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CA	U965RHS3	2RHS*MOV 33B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-E	U002SVV3	LOSS OF ADS VALVES	PERIODIC TEST	NONE	
27-7-E	U003SVV3	LOSS OF ADS BACK-UP VALVES	PERIODIC TEST	NONE	
27-7-T	U058SWP3	DIVISION I SERVICE WATER UNAVAILABLE	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-W	U072SWP3	DIVISION II SERVICE WATER UNAVAILABLE	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-DY	U500SWP3	2SWP*MOV 33A FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-EJ	U709SWP3	2SWP*MOV 33B FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-DX	U812SWP3	2SWP*MOV 90A FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EH	U826SWP3	2SWP*MOV 90B FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BD	U994SWP3	LOSS OR DIV I SERVICE WATER TO RHS PUMP SEAL COOLERS	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-R 27-7-BK	U995SWP3	LOSS OF DIV II SERVICE WATER TO RHS PUMP SEAL COOLERS	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-BN	U0845013	86-2RHSA01 CONTACT 1 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BN	U0895011	52TC-2RHSA01 RELAY ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BE	U0905011	LOSS OF 125V DC 2ENS*SNG 101 (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BE	U0915011	2RHSA01 35A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BE	U0925011	2RHSA01 15A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BE	U0935011	2RHSA01 15A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BE	U0945011	2RHSA01 35A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BN 27-7-BP 27-7-BQ	U0955012	S3A-2RHSA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BN	U0965013	S3A-2RHSA01 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BN	U0975013	K19A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BN	U0985013	K19A GE SYSTEM-E12 CONTACT 1 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EU	U0995013	S12-2RHSA01 REMOTE SHUTDOWN STATION CONT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EU	U1005013	S31A-2RHSA01 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EU	U1015013	S12-2RHSA01 REMOTE SHUTDOWN STATION CONT 8 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EU	U1025013	K19AA- REMOTE SHUTDOWN STATION CONT 1 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BT	U0855023	86-2RHSB01 CONTACT 1C FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BT	U1635021	52TC-2RHSB01 RELAY ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BL	U1645021	2RHSB01 35A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BL	U1655021	2RHSB01 15A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BL	U1665021	2RHSB01 15A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BL	U1675021	2RHSB01 35A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BT 27-7-BU 27-7-BV	U1685022	S3B-2RHSB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BT	U1695023	S3B-2RHSB01 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BT	U1705023	K19B GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BT	U1715023	K19B GE SYSTEM-E12 CONTACT 1 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FA	U1725023	S15-2RHSB01 REMOTE SHUTDOWN STATION CONT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FA	U1735023	S31B-2RHSB01 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FA	U1745023	S15-2RHSB01 REMOTE SHUTDOWN STATION CONT 8 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FA	U1755023	K19BB- REMOTE SHUTDOWN STATION CONT 1 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AA	U1305031	52TC-2RHSC01 RELAY ENERGIZED BY A SHORT	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Z 27-7-BL	U1315031	LOSS OF 125V DC 2ENS*SWG 103 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-Z	U1325031	2RHSC01 35A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Z	U1335031	2RHSC01 15A POS FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Z	U1345031	2RHSC01 15A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-Z	U1355031	2RHSC01 35A NEG FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BS	U1365033	S3C-2RHSC01 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BS	U1375033	S3C-2RHSC01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BS 27-7-AA	U1385032	S3C-2RHSC01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BS	U1395033	K21- GE SYSTEM-E21 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BS	U1405033	K21- GE SYSTEM-E21 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BS	U1415033	86-2RHSC01 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AA	U1425033	27X2-2ENSY04 CONTACT 18 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AA	U1435033	33-2RHSC01 CONTACT 12 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AA	U1445033	86-2RHSC01 CONTACT 1 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AA	U1455033	S3C-2RHSC01 CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EX	U1465033	86-2RHSC51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EX	U1475033	50G-2RHSC52 GROUND OC CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EX 27-7-BW	U1485033	GROUND OVERCURRENT EXISTS ON BUS 2ENS*SHG 103	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-EX	U1495033	50G-2RHSC52 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EZ	U1505033	50-2RHSC51 PHASE A CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EZ 27-7-FC	U1515033	INSTANTANEOUS FAULT EXISTS ON PHASE A BUS 2ENS*SHG103	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-EZ 27-7-FC	U1525033	TIME OVERCURRENT FAULT EXISTS ON PHASE A BUS 2ENS*SHG103	PERIODIC TEST	51-2RHSC51 PHASE A CONTACT CLOSED	
27-7-EZ	U1535033	50-2RHSC51 PHASE A CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2RHSC51 PHASE A CONTACT 9 CLOSED	
27-7-EZ	U1545033	SI-2RHSC51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	SI-2RHSC51 PHASE A CONTACT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EZ	U1555033	SI-2RHSC51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2RHSC51 PHASE A CONTACT CLOSED	
27-7-EY	U1565033	50-2RHSC51 PHASE C CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EY 27-7-FB	U1575033	INSTANTANEOUS FAULT EXISTS ON PHASE C BUS 2ENS*SWG103	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-EY	U1585033	51-2RHSC51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	51-2RHSC51 PHASE C CONTACT CLOSED	
27-7-EY 27-7-FB	U1595033	TIME OVERCURRENT FAULT EXISTS ON PHASE C BUS 2ENS*SWG 103	PERIODIC TEST	51-2RHSC51 PHASE C CONTACT CLOSED	
27-7-EY	U1605033	SI-2RHSC51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	SI-2RHSC51 PHASE C CONTACT CLOSED	
27-7-EY	U1615033	SI-2RHSC51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2RHSC51 PHASE C CONTACT CLOSED	
27-7-EZ	U8415033	51-2RHSC51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	51-2RHSC51 PHASE A CONTACT CLOSED	
27-7-EY	U8425033	50-2RHSC51 PHASE C CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2RHSC51 PHASE C CONTACT 9 CLOSED	
27-7-BP 27-7-BQ	U1035043	S12-2RHSA01 REMOTE SHUTDOWN STATION CONT 1 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BP 27-7-BQ	U1045043	S12-2RHSA01 REMOTE SHUTDOWN STATION CONT 3 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BP	U1055043	S3A-2RHSA01 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BP	U1065043	K18A GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BP	U1075043	K18A GE SYSTEM-E12 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BQ	U1085043	S3A-2RHSA01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BQ	U1095043	86-2RHSA01 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BR	U1105043	86-2RHSA51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BR	U1115043	50G-2RHSA52 GROUND OC CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BR	U1125043	GROUND OVERCURRENT EXISTS ON BUS 2ENS*SWG 101	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BR	U1135043	50G-2RHSA52 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EH	U1145043	50-2RHSA51 PHASE A CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EH	U1155043	INSTANTANEOUS FAULT EXISTS ON PHASE A BUS 2ENS*SWG 101	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EH	U1165043	51-2RHSA51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	51-2RHSA51 PHASE A CONTACT CLOSED	
27-7-EH	U1175043	TIME OVERCURRENT FAULT EXISTS ON PHASE A BUS 2ENS*SWG 101	PERIODIC TEST	51-2RHSA51 PHASE A CONTACT CLOSED	
27-7-EH	U1185043	50-2RHSA51 PHASE A CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2RHSA51 PHASE A CONTACT 9 CLOSED	
27-7-EH	U1195043	SI-2RHSA51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	SI-2RHSA51 PHASE A CONTACT CLOSED	
27-7-EH	U1205043	SI-2RHSA51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2RHSA51 PHASE A CONTACT CLOSED	
27-7-EV	U1215043	50-2RHSA51 PHASE C CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EV	U1225043	INSTANTANEOUS FAULT EXISTS ON PHASE C BUS 2ENS*SWG 101	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EV	U1235043	51-2RHSA51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	51-2RHSA51 PHASE C CONTACT CLOSED	
27-7-EV	U1245043	TIME OVERCURRENT FAULT EXISTS ON PHASE C BUS 2ENS*SWG 101	PERIODIC TEST	51-2RHSA51 PHASE C CONTACT CLOSED	
27-7-EV	U1255043	50-2RHSA51 PHASE C CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2RHSA51 PHASE C CONTACT 9 CLOSED	
27-7-EV	U1265043	SI-2RHSA51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	SI-2RHSA51 PHASE C CONTACT CLOSED	
27-7-EV	U1275043	SI-2RHSA51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2RHSA51 PHASE C CONTACT CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BU 27-7-BV	U1765053	S15-2RHSB01 REMOTE SHUTDOWN STATION CONT 3 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BU	U1775053	S3B-2RHSB01 CONTACT 10 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BU	U1785053	K18B GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BU	U1795053	K18B GE SYSTEM-E12 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BV	U1805053	S3B-2RHSB01 CONTACT 1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BV	U1815053	86-2RHSB01 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BU 27-7-BV	U1825053	S15-2RHSB01 REMOTE SHUTDOWN STATION CONT 1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BW	U1845053	86-2RHSB51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BW	U1855053	50G-2RHSB52 GROUND OC CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BW	U1865053	50G-2RHSB52 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FC	U1875053	50-2RHSB51 PHASE A CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FC	U1885053	51-2RHSB51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	51-2RHSB51 PHASE A CONTACT CLOSED	
27-7-FC	U1895053	50-2RHSB51 PHASE A CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2RHSB51 PHASE A CONTACT 9 CLOSED	
27-7-FC	U1905053	SI-2RHSB51 PHASE A CONTACT FAILS CLOSED	PERIODIC TEST	SI-2RHSB51 PHASE A CONTACT CLOSED	
27-7-FC	U1915053	SI-2RHSB51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2RHSB51 PHASE A CONTACT CLOSED	
27-7-FB	U1925053	50-2RHSB51 PHASE C CONTACT 3 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FB	U1935053	51-2RHSB51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	51-2RHSB51 PHASE C CONTACT CLOSED	
27-7-FB	U1945053	50-2RHSB51 PHASE C CONTACT 9 FAILS CLOSED	PERIODIC TEST	50-2RHSB51 PHASE C CONTACT 9 CLOSED	
27-7-FB	U1955053	SI-2RHSB51 PHASE C CONTACT FAILS CLOSED	PERIODIC TEST	SI-2RHSB51 PHASE C CONTACT CLOSED	
27-7-FB	U1965053	SI-2RHSB51 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	SI-2RHSB51 PHASE C CONTACT CLOSED	
27-7-DT	U9886013	2RHS*P 2 FAILS INOPERABLE	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-DT	U9896013	42-2RHSB27 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-DT	U9906011	2RHSB27 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	
27-7-DT	U9916011	2RHSB27 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DT	U9926011	S57-2RHSB27 CONTACT 4 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	
27-7-DT	U9936011	S57-2RHSB27 OPERATOR ERROR	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	
27-7-DC	U1986023	42C-2RHSA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DC	U1996023	S4A-2RHSA02 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DC	U2006023	S6-2RHSA02 REMOTE SHUTDOWN STATION CONT 44 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DC	U2016023	S32A-2RHSA02 REMOTE SHUTDOWN STATION CONT 3 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DC	U2026023	S6-2RHSA02 REMOTE SHUTDOWN STATION CONT 46 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-P	U2046033	S4C-2RHSC02 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-P	U2056033	42C-2RHSC02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-AU	U2076043	42O-2RHSA20 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 2A OPEN	
27-7-FD	U2086043	S6-2RHSA20 REMOTE SHUTDOWN STATION CONT 2 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FD	U2096043	S33A-2RHSA20 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FD	U2106043	S6-2RHSA20 REMOTE SHUTDOWN STATION CONT 4 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FD	U2116043	S6A-2RHSA20 OPERATOR ERROR	PERIODIC TEST	2RHS*MOV 2A S6A-2RHSA20 CONTACT 4 CLOSED	
27-7-FD	U2126043	S6A-2RHSA20 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 2A S6A-2RHSA20 CONTACT 4 CLOSED	
27-7-FD	U2136043	2RHS*MOV 33A 33-2RHSA15 CONTACT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FD	U2146043	2RHS*FV 38A 33-2RHSA17 CONTACT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FD	U2156043	2RHS*MOV 1A 33-2RHSA02 CONTACT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BB	U2176052	42C-2RHSA04 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-BB	U2186053	42O-2RHSA04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-BB 27-7-DD 27-7-DW 27-7-BF 27-7-CX 27-7-BZ 27-7-BY 27-7-BX	U2196051	LOSS OF 2EHS*MCC 103C (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BB	U2206051	2RHSA04 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-BB	U2216051	2RHSA04 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FF 27-7-FG	U2226053	S1-2RHSA04 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FF 27-7-FG	U2236053	S1 2RHSA04 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FF 27-7-FE 27-7-DB	U2256052	S39A-2RHSA04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-FF	U2266053	S39A-2RHSA04 CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FF 27-7-FG	U2276053	K95A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FF	U2286053	K95A GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FF	U2296053	S45A-2RHSA04 REMOTE SHUTDOWN STATION CONT 1 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-FG	U2306053	K95A GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K95A GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FE	U2316053	420-2RHSA04 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FE	U2326053	33-2RHSA04 CONTACT 15 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FE	U2336053	S6-2RHSA04 REMOTE SHUTDOWN STATION CONT 63 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FE	U2346053	S6-2RHSA04 REMOTE SHUTDOWN STATION CONT 65 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FE	U2356053	S39A-2RHSA04 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FE	U2366053	TQS-2RHSA04 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FE	U2376053	TQS-2RHSA04 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DB	U2396053	42C-2RHSA04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DB	U2406053	S39A-2RHSA04 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DB	U2416053	S6-2RHSA04 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DB	U2426053	S45A-2RHSA04 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DB	U2436053	S6-2RHSA04 REMOTE SHUTDOWN STATION CONT 66 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EA	U2456063	42C-2RHSA05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-EA	U2466063	S34A-2RHSA05 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-EA	U2476063	S7-2RHSA05 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EA	U2486063	S46A-2RHSA05 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EA	U2496063	S7-2RHSA05 REMOTE SHUTDOWN STATION CONT 66 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EB	U2516073	42C-2RHSB27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-EB	U2526073	S35A-2RHSA06 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-EB	U2536073	S7-2RHSA06 REMOTE SHUTDOWN STATION CONT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EB	U2546073	S40A-2RHSA06 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EB	U2556073	S7-2RHSA06 REMOTE SHUTDOWN STATION CONT 8 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-CS	U2576083	42O-2RHSA07 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 15A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FH	U2586083	420-2RHSA07 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 15A OPEN	
27-7-FH	U2596083	K60A GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K60A GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FH	U2606083	K60A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60A GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FH	U2616083	S5A-2RHSA07 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 15A OPEN	
27-7-FH 27-7-HX 27-7-JE	U2626082	S5A-2RHSA07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CU	U2646083	420-2RHSB07 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 15B OPEN	
27-7-FJ	U2656083	420-2RHSB07 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 15B OPEN	
27-7-FJ	U2666083	K60B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K60B GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FJ	U2676083	K60B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60B GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FJ	U2686083	S5B-2RHSB07 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 15B OPEN	
27-7-FJ 27-7-JA 27-7-JH	U2696082	S5B-2RHSB07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-BZ	U8616083	420-2RHSA07 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HX	U8626083	42C-2RHSA07 REALY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-BZ	U8636081	2RHSA07 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-BZ	U8646081	2RHSA07 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HX	U8656083	42C-2RHSA07 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HX	U8666083	S5A-2RHSA07 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD	U8676083	42C-2RHSA07 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD	U8686083	33-2RHSA07 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD	U8696083	33-2RHSA07 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD	U8706083	33-2RHSA07 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD	U8716083	K60A- GE SYSTEM-E12 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD 27-7-JK	U8726083	K60A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JD	U8736083	TQS-2RHSA07 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JD	U8746083	TQS-2RHSA07 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JE	U8756083	S5A-2RHSA07 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JE	U8766083	42O-2RHSA07 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JF	U8776081	49X-2RHSA07 CONTACT 2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JF	U8786081	49X-2RHSA07 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JF	U8796081	49-2RHSA07 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JF	U8806081	49-2RHSA07 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CC	U8826083	42O-2RHSB07 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JA	U8836083	42C-2RHSB07 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CC	U8846081	2RHSB07 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CC	U8856081	2RHSB07 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JA	U8866083	42C-2RHSB07 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JA	U8876083	S5B-2RHSB07 CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JG	U8886083	42C-2RHSB07 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG	U8896083	33-2RHSB07 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG	U8906083	33-2RHSB07 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG	U8916083	33-2RHSB07 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG	U8926083	K60B- GE SYSTEM-E12 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG 27-7-JN	U8936083	K60B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG	U8946083	TQS-2RHSB07 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JG	U8956083	TQS-2RHSB07 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JH	U8966083	S5B-2RHSB07 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JH	U8976083	42D-2RHSB07 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JJ	U8986081	49X-2RHSB07 CONTACT 2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JJ	U8996081	49X-2RHSB07 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JJ	U9006081	49-2RHSB07 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JJ	U9016081	49-2RHSB07 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-BY	U9036083	42O-2RHSA11 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HY	U9046083	42C-2RHSA11 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-BY	U9056081	2RHSA11 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-BY	U9066081	2RHSA11 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HY	U9076083	42C-2RHSA11 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HY	U9086083	S68A-2RHSA11 CONTACT FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-EQ	U2716093	42O-2RHSB08 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 22B OPEN	
27-7-EQ	U2726093	S59B-2RSHB08 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 22B OPEN	
27-7-EQ	U2736092	S59B-2RHSB08 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV 22B OPEN	
27-7-EE	U2756093	42O-2RHSA08 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 22A OPEN	
27-7-EE	U2766093	S59A-2RHSA08 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 22A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EE	U2776092	S59A-2RHSA08 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV 22A OPEN	
27-7-ED	U2796103	420-2RHSA09 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 23A OPEN	
27-7-ED	U2806103	S58A-2RHSA09 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 23A OPEN	
27-7-ED	U2816102	S58A-2RHSA09 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV 23A OPEN	
27-7-EP	U2836103	420-2RHSB09 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 23B OPEN	
27-7-EP	U2846103	S58B-2RHSB09 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 23B OPEN	
27-7-EP	U2856103	S58B-2RHSB09 OPERATOR ERROR	PERIODIC TEST	2RHS*MOV 23B OPEN	
27-7-CF	U2876113	420-2RHSA10 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FK	U2886113	420-2RHSA10 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-FK	U2896113	S10A-2RHSA10 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 24 S10A-2RHSA10 CONTACT 4 CLOSED	
27-7-FK 27-7-DE 27-7-FN	U2906112	S10A-2RHSA10 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-FK	U2916113	K115A GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	K115A-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FK	U2926113	K115A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K115A-GE SYSTEM-E12 CONTACT M1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FK	U2936113	K23A GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K23A GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-FK	U2946113	K23A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K23A GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-DD	U2966112	42O-2RHSA10 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-DE	U2976113	42C-2RHSA10 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DD	U2986111	2RHSA10 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-DD	U2996111	2RHSA10 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-DE	U3006113	42C-2RHSA10 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DE	U3016113	S10A-2RHSA10 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3026113	33-2RHSA10 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3036113	33-2RHSA10 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3046113	42C-2RHSA10 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3056113	TQS-2RHSA10 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3066113	TQS-2RHSA10 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FL	U3076113	K115A GE SYSTEM-E12 CONTACT H1 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3086113	K23A- GE SYSTEM-E12 CONTACT H1 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FH	U3096113	S10A-2RHSA10 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FH	U3106113	420-2RHSA10 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3116113	K115A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FL	U3126113	K23A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FN	U3136113	49X-2RHSA10 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FN	U3146111	49X-2RHSA10 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-FN	U3156111	49-2RHSA10 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-FN	U3166111	49-2RHSA10 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-CE	U3186113	420-2RHSB10 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-FP	U3196113	420-2RHSB10 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FP	U3206113	S10B-2RHSB10 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 24B S10B-2RHSB10 CONTACT 4 CLOSED	
27-7-FP 27-7-DL 27-7-FR	U3216112	S10B-2RHSB10 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FP	U3226113	K115B GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	K115B-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FP	U3236113	K115B GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K115B-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FP	U3246113	K23B- GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	K23B-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FP	U3256113	K23B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K23B-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-DK	U3276112	42D-2RHSB10 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DL	U3286113	42C-2RHSB10 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DK 27-7-DQ 27-7-BH 27-7-DS 27-7-BH 27-7-BG 27-7-CH 27-7-CC 27-7-CB 27-7-CA	U3296111	LOSS OF 2EHS*MCC 303D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	
27-7-DT	U3296111	LOSS OF 2EHS*MCC 303D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF TWO LPCI LOOPS	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DK	U3306111	2RHSB10 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DK	U3316111	2RHSB10 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DL	U3326113	42C-2RHSB10 CONTACT B FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DL	U3336113	S10B-2RHSB10 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3346113	33-2RHSB10 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3356113	33-2RHSB10 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3366113	42C-2RHSB10 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3376113	TQS-2RHSB10 OVERTORQUE PRESENT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3386113	TQS-2RHSB10 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3396113	K115B-GE SYSTEM-E1 CONTACT H1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3406113	K23B- GE SYSTEM-E12 CONTACT H1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FR	U3416113	S10B-2RHSB10 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FR	U3426113	42O-2RHSB10 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3436113	K115B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FQ	U3446113	K23B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FS	U3456113	49X-2RHSB10 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FS	U3466111	49X-2RHSB10 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FS	U3476111	49-2RHSB10 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FS	U3486111	49-2RHSB10 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DQ	U3506122	42O-2RHSC04 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DR	U3516123	42C-2RHSC04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DQ	U3526121	2RHSC04 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DQ	U3536121	2RHSC04 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DR	U3546123	42C-2RHSC04 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DR	U3556123	S10C-2RHSC04 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DR 27-7-FU	U3566122	S10C-2RHSC04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3576123	33-2RHSC04 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3586123	33-2RHSC04 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3596123	42C-2RHSC04 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3606123	TQS-2RHSC04 OVERTORQUE PRESENT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3616123	TQS-2RHSC04 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3626123	K115C- GE SYSTEM-E12 CONTACT M1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3636123	K25- GE SYSTEM-E12 CONTACT M1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FU	U3646123	S10C-2RHSC04 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FU	U3656123	42O-2RHSC04 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3666123	K115C- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FT	U3676123	K25- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FV	U3686123	49X-2RHSC04 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FV	U3696121	49X-2RHSC04 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FV	U3706121	49-2RHSC04 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FV	U3716121	49-2RHSC04 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-CR	U3736133	420-2RHSA11 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 25A OPEN	
27-7-FH	U3746133	420-2RHSA11 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 25A OPEN	
27-7-FH	U3756133	K60A-GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	K60A-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FH	U3766133	K60A-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60A-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FH	U3776133	S68A-2RHSA11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 25A OPEN	
27-7-FH 27-7-HY 27-7-JL	U3786132	S68A-2RHSA11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-CT	U3806133	420-2RHSB11 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 25B OPEN	
27-7-FX	U3816133	420-2RHSB11 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 25B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FX	U3826133	K60B- GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	K60B-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FX	U3836133	K60B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60B-GE SYSTEM-E12 CONTACT M1 CLOSED	
27-7-FX	U3846133	S68B-2RHSB11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 25B OPEN	
27-7-FX 27-7-JB 27-7-JP	U3856132	S68B-2RHSB11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9096133	42C-2RHSA11 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9106133	33-2RHSA11 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9116133	33-2RHSA11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9126133	33-2RHSA11 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9136133	K60A- GE SYSTEM-E12 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9146133	TQS-2RHSA11 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JK	U9156133	TQS-2RHSALL CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JL	U9166133	S68A-2RHSA11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JL	U9176133	42O-2RHSA11 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JM	U9186131	49X-2RHSA11 CONTACT 2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JM	U9196131	49X-2RHSA11 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JM	U9206131	49-2RHSA11 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JM	U9216131	49-2RHSA11 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-CB	U9236133	42O-2RHSB11 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JB	U9246133	42C-2RHSB11 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-CB	U9256131	2RHSB11 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-CB	U9266131	2RHSB11 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JB	U9276133	42C-2RHSB11 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JB	U9286133	S66B-2RHSB11 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JN	U9296133	42C-2RHSB11 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JN	U9306133	33-2RHSB11 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JN	U9316133	33-2RHSB11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JN	U9326133	33-2RHSB11 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JN	U9336133	K60B-GE SYSTEM-E12 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JN	U9346133	TQS-2RHSB11 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JN	U9356133	TQS-2RHSB11 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JP	U9366133	S66B-2RHSB11 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JP	U9376133	42O-2RHSB11 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JQ	U9386131	49X-2RHSB11 CONTACT 2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JQ	U9396131	49X-2RHSB11 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JQ	U9406131	49-2RHSB11 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JQ	U9416131	49-2RHSB11 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-EF	U3876163	42O-2RHSA14 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 32A OR 2RHS*MOV 37A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EF	U3886163	420-2RHSA14 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 32A OR 2RHS*MOV 37A OPEN	
27-7-EF	U3896163	S36A-2RHSA14 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 32A OR 2RHS*MOV 37A OPEN	
27-7-EF	U3906163	S36A-2RHSA14 OPERATOR ERROR	PERIODIC TEST	2RHS*MOV 32A OR 2RHS*MOV 37A OPEN	
27-7-ES	U3926163	420-2RHSB14 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 32B OR 2RHS*MOV 37B OPEN	
27-7-ES	U3936163	420-2RHSB14 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 32B OR 2RHS*MOV 37B OPEN	
27-7-ES	U3946163	S36B-2RHSB14 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 32B OR 2RHS*MOV 37B OPEN	
27-7-ES	U3956163	S36B-2RHSB14 OPERATOR ERROR	PERIODIC TEST	2RHS*MOV 32B OR 2RHS*MOV 37B OPEN	
27-7-FY	U0096173	K108A- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K108A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FY	U0106173	K108A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K108A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FZ	U0436173	K108B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K108B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FZ	U0476173	K108B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K108B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-CH	U3976173	420-2RHSA15 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-FY	U3986173	K130A- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K130A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FY	U3996173	K130A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	K130A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FY	U4006173	420-2RHSA15 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-FY	U4016173	S7A-2RHSA15 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S7A-2RHSA15 CONTACT 4 CLOSED	
27-7-FY 27-7-HZ 27-7-JS	U4026172	S7A-2RHSA15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-CG	U4046173	420-2RHSB15 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FZ	U4056173	K130B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K130B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FZ	U4066173	K130B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	K130B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-FZ	U4076173	420-2RHSB15 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-FZ	U4086173	S7B-2RHSB15 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S7B-2RHSB15 CONTACT 4 CLOSED	
27-7-FZ 27-7-JC 27-7-JV	U4096172	S7B-2RHSB15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-BX	U9436173	420-2RHSA15 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HZ	U9446173	42C-2RHSA15 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-BX	U9456171	2RHSA15 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-BX	U9466171	2RHSA15 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-HZ	U9476173	42C-2RHSA15 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-HZ	U9486173	S7A-2RHSA15 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-HZ	U9496173	K130A GE SYSTEM-E12 CONTACT T4 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-HZ 27-7-JR	U9506173	K130A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JR	U9516173	42C-2RHSA15 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JR	U9526173	33-2RHSA15 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JR	U9536173	33-2RHSA15 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JR	U9546173	TQS-2RHSA15 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JR	U9556173	TQS-2RHSA15 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JR	U9566173	K108A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JS	U9576173	S7A-2RHSA15 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JS	U9586173	42O-2RHSA15 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JR	U9596173	K108A GE SYSTEM-E12 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JR	U9606173	K130A- GE SYSTEM-E12 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JT	U9616171	49X-2RHSA15 CONTACT 2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JT	U9626171	49X-2RHSA15 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JT	U9636171	49-2RHSA15 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JT	U9646171	49-2RHSA15 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-CA	U9666173	42O-2RHSB15 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JC	U9676173	42C-2RHSB15 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-CA	U9686171	2RHSB15 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-CA	U9696171	2RHSB15 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JC	U9706173	42C-2RHSB15 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JC	U9716173	S7B-2RHSB15 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JC	U9726173	K130B- GE SYSTEM-E12 CONTACT T4 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JC 27-7-JU	U9736173	K130B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JU	U9746173	42C-2RHSB15 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JU	U9756173	33-2RHSB15 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JU	U9766173	33-2RHSB15 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JU	U9776173	TQS-2RHSB15 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JU	U9786173	TQS-2RHSB15 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JU	U9796173	K108B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-JV	U9806173	S7B-2RHSB15 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-JV	U9816173	420-2RHSB15 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JU	U9826173	K106B- GE SYSTEM-E12 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JU	U9836173	K130B- GE SYSTEM-E12-E12 CONTACT R2 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JH	U9846171	42X-2RHSB15 CONTACT 2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JH	U9856171	49X-2RHSB15 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JH	U9866171	49-2RHSB15 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-JH	U9876171	49-2RHSB15 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-DF	U4116183	420-2RHSA16 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-DF	U4126183	420-2RHSA16 CONTACT 5 FAILS CLOSED	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-DF	U4136183	S37A-2RHSA16 CONTACT 4 FAILS CLOSED	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-DF	U4146182	S37A-2RHSA16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	RHS LOOP A VALVE OPEN	
27-7-DH	U4166183	420-2RHSB16 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	RHS LOOP B VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DH	U4176183	420-2RHSB16 CONTACT 5 FAILS CLOSED	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-DH	U4186183	S37B-2RHSB16 CONTACT 4 FAILS CLOSED	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-DH	U4196182	S37B-2RHSB16 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	RHS LOOP B VALVE OPEN	
27-7-AH	U4216193	420-2RHSA17 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-GA	U4226193	S12A-2RHSA17 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	
27-7-GA 27-7-GC 27-7-GB	U4236192	S12A-2RHSA17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GA	U4246193	S7-2RHSA17 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GA	U4256193	S37A-2RHSA17 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GA	U4266193	S7-2RHSA17 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GA	U4276193	K59A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K59A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-GA	U4286193	K59A- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K59A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-DH	U4306192	420-2RHSA17 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DH	U4316193	42C-2RHSA17 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DH	U4326191	2RHSA17 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DH	U4336191	2RHSA17 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GC 27-7-GF	U4346193	S7-2RHSA17 REMOTE SHUTDOWN STATION CONT 24 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GC 27-7-GF	U4356193	S7-2RHSA17 REMOTE SHUTDOWN STATION CONT 26 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GC	U4366193	S12A-2RHSA17 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GC	U4376193	K109A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GC	U4386193	K109A- GE SYSTEM-E12 CONTACT N3 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GC	U4396193	S37A-2RHSA17 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GF	U4406193	K126A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K126A GE SYSTEM-E12 CONTACT N3 CLOSED	
27-7-GF	U4416193	K126A- GE SYSTEM-E12 CONTACT N3 FAILS CLOSED	PERIODIC TEST	K126A GE SYSTEM-E12 CONTACT N3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GB	U4426193	42C-2RHSA17 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GB	U4436193	33-2RHSA17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GB	U4446193	33-2RHSA17 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GB	U4456193	S12B-2RHSA17 CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GE	U4466193	S7-2RHSA17 REMOTE SHUTDOWN STATION CONT 19 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GE	U4476193	S7-2RHSA17 REMOTE SHUTDOWN STATION CONT 21 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GD	U4486193	TQS-2RHSA17 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GD	U4496193	TQS-2RHSA17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GB	U4506193	K109A GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GB	U4516193	K109A GE SYSTEM-E12 CONTACT H4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GB	U4526193	K59A GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GB	U4536193	K59A GE SYSTEM-E12 CONTACT T2 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-CK	U4556203	420-2RHSA18 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GG	U4566203	S8-2RHSA18 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GG	U4576203	S39A-2RHSA18 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GG	U4586203	S8-2RHSA18 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GG	U4596203	43-2RHSA18 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S43-2RHSA18 CONTACT 4 CLOSED	
27-7-GG	U4606202	S43-2RHSA18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S43-2RHSA18 CONTACT 4 CLOSED	
27-7-GG	U4616203	K53A- GE SYSTEM-E12 CONTACT T2 FAILS CLOSED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-GG	U4626203	K53A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-GG	U4636203	K54AA- REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K54AA-REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-GG	U4646203	K54AA- REMOTE SHUTDOWN STATION CONT T1 FAILS CLOSED	PERIODIC TEST	K54AA-REMOTE SHUTDOWN STATION CONT T1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DP	U4666213	420-2RHSC05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DP	U4676213	S12C-2RHSC05 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DP	U4686212	S12C-2RHSC05 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-EN	U4706223	420-2RHSB22 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 115 OPEN	
27-7-EN	U4716223	S61-2RHSB22 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 115 OPEN	
27-7-EN	U4726222	S61-2RHSB22 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV 115 OPEN	
27-7-ER	U4746223	420-2RHSB23 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 116 OR 2RHS* SOV 126 OPEN	
27-7-ER	U4756223	S60-2RHSB23 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 116 OR 2RHS* SOV 126 OPEN	
27-7-ER	U4766222	S60-2RHSB23 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV 116 OR 2RHS* SOV 126 OPEN	
27-7-AE	U4786233	420-2RHSA21 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 113 OPEN	
27-7-GH	U4796233	420-2RHSA21 CONTACT 5. FAILS CLOSED	PERIODIC TEST	2RHS*MOV 113 OPEN	
27-7-GJ	U4806233	S6-2RHSA21 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GJ	U4816233	S35-2RHSA21 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GJ	U4826233	S6-2RHSA21 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GH	U4836233	S10-2RHSA21 CONTACT FAILS CLOSED	PERIODIC TEST	S10-2RHSA21 CONTACT 4 CLOSED	
27-7-GH	U4846232	S10-2RHSA21 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S10-2RHSA21 CONTACT 4 CLOSED	
27-7-GH	U4856233	K53A-GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-GH	U4866233	K53A-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-GJ	U4876233	K53AA-REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K53AA-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-GJ	U4886233	K53AA-REMOTE SHUTDOWN STATION CONT T2 FAILS CLOSED	PERIODIC TEST	K53AA-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-AZ	U4906243	420-2RHSA23 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 142 OPEN	
27-7-GK	U4916243	S12-2RHSA23 REMOTE SHUTDOWN STATION CONT 40 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GK	U4926243	S59-2RHSA23 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GK	U4936243	S12-2RHSA23 REMOTE SHUTDOWN STATION CONT 42 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GK	U4946243	S14-2RHSA23 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S14-2RHSA23 CONTACT 4 CLOSED	
27-7-GK	U4956242	S14-2RHSA23 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S14-2RHSA23 CONTACT 4 CLOSED	
27-7-GK	U4966243	K59A-GE SYSTEM-E12 CONTACT T4 FAILS CLOSED	PERIODIC TEST	K59A-GE SYSTEM-E12 CONTACT T4 CLOSED	
27-7-GK	U4976243	K59A-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K59A-GE SYSTEM-E12 CONTACT T4 CLOSED	
27-7-GK	U4986243	K59AA-REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K59AA-REMOTE SHUTDOWN STATION CONT 1T CLOSED	
27-7-GK	U4996243	K59AA-REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	K59AA-REMOTE SHUTDOWN STATION CONT 1T CLOSED	
27-7-DY	U5016253	42D-2RHSA19 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DZ	U5026253	42C-2RHSA19 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DZ	U5036253	42C-2RHSA19 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DZ	U5046253	S2A-2RHSA19 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DZ 27-7-GL	U5056252	S2A-2RHS19 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DZ	U5066253	S7-2RHSA19 REMOTE SHUTDOWN STATION CONT 82 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DZ	U5076253	S57A-2RHSA19 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DZ	U5086253	S7-2RHSA19 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GL	U5096253	S7-2RHSA19 REMOTE SHUTDOWN STATION CONT 77 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GL	U5106253	33-2RHSA19 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GL	U5116253	33-2RHSA19 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GL	U5126253	42C-2RHSA19 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GL	U5136253	S7-2RHSA19 REMOTE SHUTDOWN STATION CONT 79 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GM	U5146253	TQS-2RHSA19 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GM	U5156253	TQS-2RHSA19 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GL	U5166253	S2A-2RHSA19 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GL	U5176253	42O-2RHSA19 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GN	U5186253	49X-2RHSA19 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GN	U5196251	49X-2RHSA19 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GN	U5206251	49-2RHSA19 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-GN	U5216251	49-2RHSA19 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DX	U8136253	42D-2SWPA20 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DX	U8146253	42C-2SWPA20 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DX	U8156251	LOSS OF 2EHS*MCC 102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DX	U8166251	2SWPA20 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-HV	U8176253	33-2SWPA20 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-HV	U8186253	33-2SWPA20 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-HV	U8196253	42C-2SWPA20 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DX	U8206253	1-2SWPA20 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DX 27-7-HV	U8216252	1-2SWPA20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DX	U9226251	2SKPA20 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-HV	U8236253	1-2SKPA20 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-HV	U8246253	TQS-2SKPA20 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-HV	U8256253	TQS-2SKPA20 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-EH	U8276253	42D-2SKPB20 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EH	U8286253	42C-2SKPB20 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EH	U8296251	LOSS OF 2EHS*MCC 302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EH	U8306251	2SKPB20 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HW	U8316253	33-2SKPB20 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HW	U8326253	33-2SKPB20 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HW	U8336253	42C-2SKPB20 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EH	U8346253	1-2SKPB20 CONTACT 1T FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EH 27-7-HW	U8356252	1-2SKPB20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EH	U8366251	2SKPB20 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HH	U8376253	1-2SKPB20 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HH	U8386253	TQS-2SKPB20 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HH	U8396253	TQS-2SKPB20 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-DY	U8446251	LOSS OF 2EHS*MCC 102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DY	U8456251	2RHSA19 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DY	U8466251	2RHSA19 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP A	
27-7-DA	U5236263	42O-2RHSA24 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DA	U5246263	42O-2RHSA24 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DA	U5256263	S16A-2RHSA24 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DA 27-7-EG 27-7-GP	U5266263	S16A-2RHSA24 OPERATOR ERROR	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-DA	U5276263	K54A- GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DA	U5286263	K54A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BF	U5306263	42O-2RHSA24 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EG	U5316263	42C-2RHSA24 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-BF	U5326261	2RHSA24 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-BF	U5336261	2RHSA24 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-EG	U5346263	42C-2RHSA24 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EG	U5356263	S16A-2RHSA24 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EG	U5366263	K112A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EG	U5376263	K112A- GE SYSTEM-E12 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GP	U5386263	42C-2RHSA24 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GP	U5396263	33-2RHSA24 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GP	U5406263	33-2RHA24 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GP	U5416263	K54A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GP	U5426263	K54A- GE SYSTEM-E12 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GQ	U5436263	TQS-2RHSA24 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GQ	U5446263	TQS-2RHSA24 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GP	U5456263	S16A-2RHSA24 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GP	U5466263	420-2RHSA24 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GR	U5476263	49X-2RHSA24 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-GR	U5486261	49X-2RHSA24 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-GR	U5496261	49-2RHSA24 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-GR	U5506261	49-2RHSA24 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF LPCI LOOPS A OR C	
27-7-DG	U5526263	420-2RHSB24 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DG	U5536263	420-2RHSB24 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DG	U5546263	S16B-2RHSB24 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DG 27-7-ET 27-7-GS	U5556262	S16B-2RHSB24 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DG	U5566263	K54B- GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DG	U5576263	K54B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BM	U5596263	42D-2RHSB24 RELAY FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-ET	U5606263	42C-2RHSB24 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BM	U5616261	2RHSB24 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-BM	U5626261	2RHSB24 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-ET	U5636263	42C-2RHSB24 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-ET	U5646263	S16B-2RHSB24 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-ET	U5656263	K112B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-ET	U5666263	K112B- GE SYSTEM-E12 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GS	U5676263	42C-2RHSB24 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GS	U5686263	33-2RHSB24 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GS	U5696263	33-2RHSB24 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GS	U5706263	K54B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GS	U5716263	K54B- GE SYSTEM-E12 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GT	U5726263	TQS-2RHSB24 OVERTORQUE PRESENT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GT	U5736263	TQS-2RHSB24 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GS	U5746263	S16B-2RHSB24 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GS	U5756263	42O-2RHSB24 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GU	U5766263	49X-2RHSB24 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GU	U5776261	49X-2RHSB24 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GU	U5786261	49-2RHSB24 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GU	U5796261	49-2RHSB24 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DN	U5816273	42O-2RHSC06 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DN	U5826273	42O-2RHSC06 CONTACT 5 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DN	U5836273	S16C-2RHSC06 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DN 27-7-DU 27-7-GV	U5846272	S16C-2RHSC06 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DN	U5856273	K54C- GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DN	U5866273	K54C- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DS	U5886273	42O-2RHSC06 RELAY FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DU	U5896273	42C-2RHSC06 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DS	U5906271	2RHSC06 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DS	U5916271	2RHSC06 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DU	U5926273	42C-2RHSC06 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DU	U5936273	S16C-2RHSC06 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DU	U5956273	K112C- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DU	U5966273	K112C- GE SYSTEM-E12 CONTACT R2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GV	U5976273	42C-2RHSC06 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GV	U5986273	33-2RHSC06 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GV	U5996273	33-2RHSC06 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GV	U6006273	K54C GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GV	U6016273	K54C GE SYSTEM-E12 CONTACT T1 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GH	U6026273	TQS-2RHSC06 OVERTORQUE PRESENT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GH	U6036273	TQS-2RHSC06 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GV	U6046273	S16C-2RHSC06 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GV	U6056273	42C-2RHSC06 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GX	U6066273	49X-2RHSC06 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GX	U6076271	49X-2RHSC06 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GX	U6086271	49-2RHSC06 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-GX	U6096271	49-2RHSC06 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DJ	U6116293	42C-2RHSB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DJ	U6126293	S4B-2RHSB02 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DJ	U6136293	S1-2RHSB02 REMOTE SHUTDOWN STATION CONT 44 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DJ	U6146293	S32B-2RHSB02 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DJ	U6156293	S1-2RHSB02 REMOTE SHUTDOWN STATION CONT 46 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BA	U6166303	42O-2RHSB20 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 2B OPEN	
27-7-GY	U6186303	S1-2RHSB20 REMOTE SHUTDOWN STATION CONT 2 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GY	U6196303	S33B-2RHSB20 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GY	U6206303	S33B-2RHSB20 REMOTE SHUTDOWN STATION CONT 4 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GY	U6216302	S6B-2RHSB20 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV 2B S6B-2RHSB20 CONTACT 4 CLOSED	
27-7-GY	U6226303	S6B-2RHSB20 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 2B S6B-2RHSB20 CONTACT 4 CLOSED	
27-7-GY	U6236303	2RHS*MOV 33B 33-2RHSB20 CONTACT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GY	U6246303	2RHS*MOV 38B 33-2RHSB20 CONTACT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-GY	U6256303	2RHS*MOV 1B 33-2RHSB20 CONTACT 6 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BH	U6276312	42C-2RHSB04 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BH	U6286313	42O-2RHSB04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BH	U6296311	2RHSB04 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BH	U6306311	2RHSB04 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HA 27-7-HB	U6316313	S1-2RHSB04 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HA 27-7-HB	U6326313	S1-2RHSB04 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HA 27-7-GZ 27-7-DH	U6336312	S39B-2RHSB04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-HA	U6346313	S39B-2RHSB04 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HA	U6356313	K95B- GE SYSTEM-E12 CONTACT M1 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HA	U6366313	S45B-2RHSB04 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HB	U6376313	K95B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K95B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-GZ	U6386313	420-2RHSB04 CONTACT 9 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-GZ	U6396313	33-2RHSB04 CONTACT 15 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-GZ	U6406313	SI-2RHSB04 REMOTE SHUTDOWN STATION CONT 63 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-GZ	U6416313	SI-2RHSB04 REMOTE SHUTDOWN STATION CONT 65 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-GZ	U6426313	S39B-2RHSB04 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-GZ	U6436313	TQS-2RHSB04 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-GZ	U6446313	TQS-2RHSB04 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-DH	U6466313	42C-2RHSB04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DH	U6476313	S39B-2RHSB04 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-DH	U6486313	S1-2RHSB04 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DH	U6496313	S45B-2RHSB04 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DH	U6506313	S1-2RHSB04 REMOTE SHUTDOWN STATION CONT 66 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HA 27-7-HB	U8576313	K95B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-AE	U6526323	42O-2RHSB21 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 112 OPEN	
27-7-HD	U6536323	S1-2RHSB21 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HD	U6546323	S51-2RHSB21 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HD	U6556323	S1-2RHSB21 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HC	U6566323	K53B- GE SYSTEM-E12 CONTACT T3 FAILS CLOSED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T3 CLOSED	
27-7-HC	U6576323	K53B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T3 CLOSED	
27-7-HC	U6586323	420-2RHSB21 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV 112 OPEN	
27-7-HD	U6596323	K53BB- REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K53BB-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-HD	U6606323	K53BB- REMOTE SHUTDOWN STATION CONT T2 FAILS CLOSED	PERIODIC TEST	K53BB-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-HC	U6616323	S9-2RHSB21 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S9-2RHSB21 CONTACT 4 CLOSED	
27-7-HC	U6626322	S9-2RHSB21 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S9-2RHSB21 CONTACT 4 CLOSED	
27-7-EL	U6646333	42C-2RHSB06 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EL	U6656333	S35B-2RHSB06 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EL	U6666333	S13-2RHSB06 REMOTE SHUTDOWN STATION CONT 6 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EL	U6676333	S40B-2RHSB06 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EL	U6686333	S13-2RHSB06 REMOTE SHUTDOWN STATION CONT 8 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AJ	U6706343	420-2RHSB17 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HE	U6716343	S12B-2RHB17 CONTACT 4 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SHALL BREAK)	
27-7-HE 27-7-HG 27-7-HF	U6726342	S12B-2RHSB17 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HE	U6736343	S13-2RHSB17 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HE	U6746343	S37B-2RHSB17 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HE	U6756343	S13-2RHSB17 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HE	U6766343	K59B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K59B-GE SYSTEM-E12 CONTACT T3 CLOSED	
27-7-HE	U6776343	59B- GE SYSTEM-E12 CONTACT T3 FAILS CLOSED	PERIODIC TEST	K59B-GE SYSTEM-E12 CONTACT T3 CLOSED	
27-7-BG	U6786343	2RHS*FV 38B FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BG	U6796342	420-2RHSB17 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BG	U6806343	420-2RHSB17 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BG	U6816341	2RHSB17 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-BG	U6826341	2RHSB17 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HG 27-7-HK	U6836343	S13-2RHSB17 REMOTE SHUTDOWN STATION CONT 24 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HG 27-7-HK	U6846343	S13-2RHSB17 REMOTE SHUTDOWN STATION CONT 26 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HG	U6856343	S12B-2RHSB17 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HG	U6866343	K109B GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HG	U6876343	K109B GE SYSTEM-E12 CONTACT M3 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HG	U6886343	S37B-2RHSB17 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HK	U6896343	K94B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K94B-GE SYSTEM -E12 CONTACT M4 FAILS CLOSED	
27-7-HK	U6906343	K94B- GE SYSTEM-E12 CONTACT M4 FAILS CLOSED	PERIODIC TEST	K94B-GE SYSTEM -E12 CONTACT M4 FAILS CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HF	U6916343	42C-2RHSB17 CONTACT 6 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HF	U6926343	33-2RHSB17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HF	U6936343	33-2RHSB17 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HF	U6946343	S12B-2RHSB17 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HJ	U6956343	S13-2RHSB17 REMOTE SHUTDOWN STATION CONT 19 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HJ	U6966343	S13-2RHSB17 REMOTE SHUTDOWN STATION CONT 21 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HH	U6976343	TQS-2RHSB17 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HH	U6986343	TQS-2RHSB17 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HF	U6996343	K109B GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HF	U7006343	K109B GE SYSTEM-E12 CONTACT N4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HF	U7016343	K59B GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HF	U7026343	K59B GE SYSTEM-E12 CONTACT T3 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EM	U7046353	42C-2RHSB05 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EM	U7056353	S34B-2RHSB05 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EM	U7066353	S13-2RHSB05 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EM	U7076353	S46B-2RHSB05 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EM	U7086353	S13-2RHSB05 REMOTE SHUTDOWN STATION CONT 66 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EJ	U7106363	42O-2RHSB19 RELAY FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EK	U7116363	42C-2RHSB19 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EJ	U7126361	LOSS OF 2EHS*MCC 302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EJ	U7136361	2RHSB19 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EJ	U7146361	2RHSB19 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EK	U7156363	42C-2RHSB19 CONTACT 8 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EK	U7166363	S2B-2RHSB19 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EK 27-7-HL	U7176362	S2B-2RHSB19 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-EK	U7186363	S13-2RHSB19 REMOTE SHUTDOWN STATION CONT 82 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EK	U7196363	S57B-2RHSB19 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EK	U7206363	S13-2RHSB19 REMOTE SHUTDOWN STATION CONT 84 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HL	U7216363	33-2RHSB19 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HL	U7226363	42C-2RHSB19 CONTCT 6 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HL	U7236363	33-2RHSB19 CONTACT 11 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HL	U7246363	S13-2RHSB19 REMOTE SHUTDOWN STATION CONT 77 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HL	U7256363	S13-2RHSB19 REMOTE SHUTDOWN STATION CONT 79 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HM	U7266363	TQS-2RHSB19 OVERTORQUE PRESENT	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HM	U7276363	TQS-2RHSB19 CONTACT 18 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HL	U7286363	S2B-2RHSB19 CONTACT 4 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HL	U7296363	420 2RHSB19 CONTACT 5 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HN	U7306363	49X-2RHSB19 CONTACT 2 FAILS OPEN	PERIODIC TEST	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HN	U7316361	49X-2RHSB19 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HN	U7326361	49-2RHSB19 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-HN	U7336361	49-2RHSB19 THERMAL CUTOUT CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF SUPPRESSION POOL COOLING MODE LOOP B	
27-7-CJ	U7356373	420-2RHSA18 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-HP	U7366373	S14-2RHSB18 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HP	U7376373	S39B-2RHSB18 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HP	U7386373	S14-2RHSB18 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HP	U7396373	S44-2RHSB18 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S44-2RHSB18 CONTACT 4 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HP	U7406372	S44-2RHSB18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S44-2RHSB18 CONTACT 4 CLOSED	
27-7-HP	U7416373	K53B- GE SYSTEM-E12 CONTACT T2 FAILS CLOSED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-HP	U7426373	K53B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-HP	U7436373	K54BB-2RHSB18 REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K54BB-2RHSB18 REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-HP	U7446373	K54BB-2RHSB18 REMOTE SHUTDOWN STATION CONT T1 FAILS CLOSED	PERIODIC TEST	K54BB-2RHSB18 REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-CN	U7466393	420-2RHSA22 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOW PRESSURE SYSTEM(S) DIV II INOPERABLE	
27-7-HQ	U7476393	S8-2RHSA22 REMOTE SHUTDOWN STATION CONT 78 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HQ	U7486393	S55-2RHSA22 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HQ	U7496393	S8-2RHSA22 REMOTE SHUTDOWN STATION CONT 80 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HQ	U7506393	S12-2RHSA22 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S12-2RHSA22 CONTACT 4 CLOSED	
27-7-HQ	U7516392	S12-2RHSA22 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S12-2RHSA22 CONTACT 4 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HQ	U7526393	K54-GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	K54-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-HQ	U7536393	K54-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K54-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-HQ	U7546393	K54AA-2RHSA22 REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K54AA-2RHSA22 REMOTE SHUTDOWN STATION CONT T3 CLOSED	
27-7-HQ	U7556393	K54AA-2RHSA22 REMOTE SHUTDOWN STATION CONT T3 FAILS CLOSED	PERIODIC TEST	K54AA-2RHSA22 REMOTE SHUTDOWN STATION CONT T3 CLOSED	
27-7-AZ	U7576403	420-2RHSB26 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV 149 OPEN	
27-7-HR	U7586403	420-2RHSB26 CONTACT FAILS CLOSED	PERIODIC TEST	2RHS*MOV 149 OPEN	
27-7-HS	U7596403	S15-2RHSB26 REMOTE SHUTDOWN STATION CONT 40 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HS	U7606403	S60-2RHSB26 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HS	U7616403	S15-2RHSB26 REMOTE SHUTDOWN STATION CONT 42 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HR	U7626403	S13-2RHSB26 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S13-2RHSB26 CONTACT 4 CLOSED	
27-7-HR	U7636402	S13-2RHSB26 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S13-2RHSB26 CONTACT 4 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HR	U7646403	K59B-GE SYSTEM-E12 CONTACT T4 FAILS CLOSED	PERIODIC TEST	K59B-GE SYSTEM-E12 CONTACT T4 CLOSED	
27-7-HR	U7656403	K59B-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K59B-GE SYSTEM-E12 CONTACT T4 CLOSED	
27-7-HS	U7666403	K59BB-REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K59BB-REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-HS	U7676403	K59BB-REMOTE SHUTDOWN STATION CONT T1 FAILS CLOSED	PERIODIC TEST	K59BB-REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-CY	U7696413	420-2RHSA27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-CX	U7706411	2RHSA27 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	RHS LOOP A VALVE OPEN	
27-7-CX	U7716411	2RHSA27 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	RHS LOOP A VALVE OPEN	
27-7-CY	U7726413	S73A-2RHSA27 CONTACT 4 FAILS CLOSED	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7736412	S73A-2RHSA27 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	RHS LOOP A VALVE OPEN	
27-7-CY	U7746413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-CY	U7756413	S62A-2RHSA27 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-CY	U7766413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-HT	U7776413	42D-2RHSA27 CONTACT 9 FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7786413	33-2RHSA27 CONTACT 15 FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7796413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 63 FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7806413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 65 FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7816413	S73A-2RHSA27 CONTACT 2 FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7826413	TQS-2RHSA27 OVERTORQUE PRESENT	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-HT	U7836413	TQS-2RHSA27 CONTACT 17 FAILS OPEN	PERIODIC TEST	RHS LOOP A VALVE OPEN	
27-7-EC	U7856413	42C-2RHSA27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EC	U7866413	S73A-2RHSA27 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF LPCI LOOPS A OR C	
27-7-EC	U7876413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-EC	U7886413	S62A-2RHSA27 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-EC	U7896413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 66 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-CX	U8486412	42C-2RHSA27 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	RHS LOOP A VALVE OPEN	
27-7-CH	U7906422	42C-2RHSB27 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	RHS LOOP B VALVE OPEN	
27-7-CZ	U7916423	42O-2RHSB27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-CH	U7926421	2RHSB27 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	RHS LOOP B VALVE OPEN	
27-7-CH	U7936421	2RHSB27 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	RHS LOOP B VALVE OPEN	
27-7-CZ	U7946423	S73B-2RHSB27 CONTACT 4 FAILS CLOSED	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U7956422	S73B-2RHSB27 OPERTOR ERROR	INDICATING LIGHT IN CONTROL ROOM	RHS LOOP B VALVE OPEN	
27-7-CZ	U7966423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-CZ	U7976423	S62B-2RHSB27 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-CZ	U7986423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-HU	U7996423	420-2RHSB27 CONTACT 9 FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U8006423	33-2RHSB27 CONTACT 15 FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U8016423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 63 FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U8026423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 65 FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U8036423	S73B-2RHSB27 CONTACT 2 FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U8046423	TQS-2RHSB27 OVERTORQUE PRESENT	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-HU	U8056423	TQS-2RHSB27 CONTACT 17 FAILS OPEN	PERIODIC TEST	RHS LOOP B VALVE OPEN	
27-7-DV	U8076423	42C-2RHSB27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-DV	U8086423	S73B-2RHSB27 CONTACT 2 FAILS CLOSED	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-DV	U8096423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 64 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-DV	U8106423	S62B-2RHSB27 REMOTE SHUTDOWN STATION CONT 3T FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-DV	U8116423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 66 FAILS CLOSED	PERIODIC TEST	NONE	

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				wmm	RESIDUAL HEAT REMOVAL
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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AC	G014CSH3	2CSH*RV113 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G015CSH3	2CSH*RV114 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G016CSL3	2CSL*RV123 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G020CSL3	2CSL*RV105 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-E	G000EGS3	LOSS OF DIVISION III DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF HPCS	
27-7-E 27-7 27-7	G001EGS3	LOSS OF DIVISION I DIESEL ENGINE GENERATOR	PERIODIC TEST	LPCS INOPERABLE	
27-7-L 27-7-J	G006EGS3	LOSS OF DIVISION II DIESEL ENGINE GENERATOR	PERIODIC TEST	LOSS OF TWO LPCI LOOPS	
27-7-L	G300EGS3	LOSS OF DIVISION I OFFSITE POWER	PERIODIC TEST	NONE	
27-7-L	G301EGS3	LOSS OF DIVISION II OFFSITE POWER	PERIODIC TEST	NONE	
27-7-N	G010ICS3	2ICS*AOV157 FAILS OPEN	PERIODIC TEST	NONE	
27-7-AD	G011ICS3	2ICS*AOV156 FAILS OPEN	PERIODIC TEST	NONE	
27-7-C	G004RHS3	LOSS OF RHS SUPPRESSION POOL COOLING MODE LOOP A	PERIODIC TEST	NONE	
27-7-C	G005RHS3	LOSS OF RHS SUPPRESSION POOL COOLING MODE LOOP B	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-N	G007RHS3	LOSS OF SUPPRESSION POOL PIPING WATER SEAL	PERIODIC TEST	NONE	
27-7-Y	G008RHS1	BREACH OF SUPPRESSION POOL SPRAY RING LINE A PIPING	ANNUNCIATED IN CONTROL ROOM	NONE	
27-7-X	G009RHS1	BREACH OF SUPPRESSION POOL SPRAY RING LINE B PIPING	ANNUNCIATED IN CONTROL ROOM	NONE	
27-7-AC	G017RHS3	2RHS*RV61A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G018RHS3	2RHS*RV139 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G019RHS3	2RHS*RV20A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G021RHS3	2RHS*RV110 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AC	G022RHS3	2RHS*RV56A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AJ	G023RHS3	2RHS*RV61B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AJ	G024RHS3	2RHS*RV108 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AJ	G025RHS3	2RHS*RV56B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AJ	G026RHS3	2RHS*RV61C FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AJ	G027RHS3	2RHS*RV20C FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AJ	G028RHS3	2RHS*RV20B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-T	G029RHS3	2RHS*SV39A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-T	G030RHS3	2RHS*SV62A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-T	G031RHS3	2RHS*SV34B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-T	G032RHS3	2RHS*SV62B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-H	G033RHS3	2RHS*AOV16A FAILS OPEN	PERIODIC TEST	NONE	
27-7-V	G034RHS3	2RHS*AOV16B FAILS OPEN	PERIODIC TEST	NONE	
27-7-U	G035RHS3	2RHS*AOV16C FAILS OPEN	PERIODIC TEST	NONE	
27-7-H	G036RHS3	LOSS OF SUPPRESSION POOL SUCTION LINE A WATER SEAL	PERIODIC TEST	NONE	
27-7-H	G037RHS3	LOSS OF SUPPRESSION POOL SUCTION LINE B WATER SEAL	PERIODIC TEST	NONE	
27-7-H	G038RHS3	LOSS OF SUPPRESSION POOL SUCTION LINE C WATER SEAL	PERIODIC TEST	NONE	
27-7-AY	G039RHS3	2RHS*AOV39A FAILS OPEN	PERIODIC TEST	2RHS*AOV39A OR 2RHS*MOV67A OPEN	
27-7-AZ	G040RHS3	2RHS*AOV39B FAILS OPEN	PERIODIC TEST	2RHS*AOV39B OR 2RHS*MOV67B OPEN	
27-7-AT	G041RHS3	2RHS*MOV1A FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-AV	G059RHS3	2RHS*MOV1C FAILS OPEN	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-H	G086RHS3	2RHS*MOV24A FAILS OPEN	PERIODIC TEST	2RHS*MOV24A OPEN	
27-7-V	G095RHS3	2RHS*MOV24B FAILS OPEN	PERIODIC TEST	2RHS*MOV24B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-U	G104RHS3	2RHS*MOV24C FAILS OPEN	PERIODIC TEST	2RHS*MOV24C OPEN	
27-7-AG	G120RHS3	2RHS*MOV25B FAILS OPEN	PERIODIC TEST	2RHS*MOV25B OPEN	
27-7-AQ	G127RHS3	2RHS*MOV26A FAILS OPEN	PERIODIC TEST	2RHS*MOV26A OPEN	
27-7-AS	G131RHS3	2RHS*MOV26B FAILS OPEN	PERIODIC TEST	2RHS*MOV26B OPEN	
27-7-AP	G135RHS3	2RHS*MOV27A FAILS OPEN	PERIODIC TEST	2RHS*MOV27A OPEN	
27-7-AR	G139RHS3	2RHS*MOV27B FAILS OPEN	PERIODIC TEST	2RHS*MOV27B OPEN	
27-7-Y	G143RHS3	2RHS*MOV33A FAILS OPEN	PERIODIC TEST	2RHS*MOV33A OPEN	
27-7-X	G150RHS3	2RHS*MOV33B FAILS OPEN	PERIODIC TEST	2RHS*MOV33B OPEN	
27-7-AA	G157RHS3	2RHS*MOV40A FAILS OPEN	PERIODIC TEST	2RHS*MOV40A OPEN	
27-7-Q	G168RHS3	2RHS*MOV113 FAILS OPEN	PERIODIC TEST	2RHS*MOV113 OPEN	
27-7-AY	G180RHS3	2RHS*MOV67A FAILS OPEN	PERIODIC TEST	2RHS*AOV39A OR 2RHS*MOV67A OPEN	
27-7-AU	G190RHS3	2RHS*MOV1B FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-Q	G207RHS3	2RHS*MOV112 FAILS OPEN	PERIODIC TEST	2RHS*MOV112 OPEN	
27-7-Z	G219RHS3	2RHS*MOV40B FAILS OPEN	PERIODIC TEST	2RHS*MOV40B OPEN	
27-7-AZ	G230RHS3	2RHS*MOV67B FAILS OPEN	PERIODIC TEST	2RHS*AOV39B OR 2RHS*MOV67B OPEN	
27-7-C	G302RHS3	LOSS OF DIV I CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-C	G303RHS3	LOSS OF DIV II CONTAINMENT SPRAY FUNCTION (SMALL BREAK)	PERIODIC TEST	NONE	
27-7-S	G002SVV3	LOSS OF ADS VALVES	PERIODIC TEST	NONE	
27-7-S	G003SVV3	LOSS OF ADS BACK-UP VALVES	PERIODIC TEST	NONE	
27-7-AT	G0426023	42C-2RHSA02 RELAY FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-AH	G0436023	42D-2RHSA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-AT 27-7-AL	G0446021	LOSS OF 2EHS*MCC103C (GREEN)	ANNUNCIATED IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AT	G0456021	2RHSA02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2RHS*MOV1A OPEN	
27-7-AT	G0466021	2RHSA02 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2RHS*MOV1A OPEN	
27-7-AH	G0476023	S9A-2RHSA02 CONTACT FAILS CLOSED	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0486022	S9A-2RHSA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV1A OPEN	
27-7-AH	G0496023	S6-2RHSA02 REMOTE SHUTDOWN STATION CONT 40 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AH	G0506023	S32A-2RHSA02 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	

ITSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AW	G0516023	S6-2RHSA02 REMOTE SHUTDOWN STATION CONT 42 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BA	G0526023	42O-2RHSA02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0536023	33-2RHSA02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0546023	S6-2RHSA01 REMOTE SHUTDOWN STATION CONT 43 FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0556023	S6-2RHSA02 REMOTE SHUTDOWN STATION CONT 45 FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0566023	S4A-2RHSA02 CONTACT 2 FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0576023	TQS-2RHSA02 OVERTORQUE PRESENT	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-BA	G0586023	TQS-2RHSA02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2RHS*MOV1A OPEN	
27-7-AV	G0606033	42C-2RHSC02 RELAY FAILS OPEN	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-AV	G0616033	42O-2RHSC02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-AV 27-7-AU 27-7-AK	G0626031	LOSS OF 2EHS*MCC303D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AV	G0636031	2RHSC02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2RHS*MOV1C OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AV	G0646031	2RHSC02 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2RHS*MOV1C OPEN	
27-7-BB	G0656033	33-2RHSC02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-AV	G0666033	S4C-2RHSC02 CONTACT 8 FAILS CLOSED	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-BB	G0676032	S4C-2RHSC02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV1C OPEN	
27-7-BB	G0686033	420-2RHSC02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-BB	G0696033	TQS-2RHSC02 OVERTORQUE PRESENT	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-BB	G0706033	TQS-2RHSC02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-BB	G0716033	S4C-2RHSC02 CONTACT 2 FAILS OPEN	PERIODIC TEST	2RHS*MOV1C OPEN	
27-7-AF	G0726083	2RHS*MOV15A FAILS OPEN	PERIODIC TEST	2RHS*MOV15A OPEN	
27-7-AF	G0736083	420-2RHSA07 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV15A OPEN	
27-7-BC	G0746083	420-2RHSA07 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV15A OPEN	
27-7-BC	G0756083	K60A GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K60A GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BC	G0766083	K60A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60A GE SYSTEM-E12 CONTACT M2 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BC	G0776083	S5A-2RHSA07 CONTACT FAILS CLOSED	PERIODIC TEST	2RHS*MOV15A OPEN	
27-7-BC	G0786082	S5A-2RHSA07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV15A OPEN	
27-7-AH	G0796083	2RHS*MOV15B FAILS OPEN	PERIODIC TEST	2RHS*MOV15B OPEN	
27-7-AH	G0806083	420-2RHSB07 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV15B OPEN	
27-7-BD	G0816083	420-2RHSB07 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV15B OPEN	
27-7-BD	G0826083	K60B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K60B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BD	G0836083	K60B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BD	G0846083	S5B-2RHSB07 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV15B OPEN	
27-7-BD	G0856082	S5B-2RHSB07 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV15B OPEN	
27-7-H	G0876113	420-2RHSA10 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV24A OPEN	
27-7-BE	G0886113	420-2RHSA10 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV24A OPEN	
27-7-BE	G0896112	S10A-2RHSA10 CONTACT 4 FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV24 S10A-2RHSA10 CONTACT 4 CLOSED	
27-7-BE	G0906112	S10A-2RHSA10 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV24 S10A-2RHSA10 CONTACT 4 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BE	G0916113	K115A GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K115A-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BE	G0926113	K115A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K115A-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BE	G0936113	K23A GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K23A GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BE	G0946113	K23A GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K23A GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-V	G0966113	420-2RHSB10 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV24B OPEN	
27-7-BF	G0976113	420-2RHSB10 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV24B OPEN	
27-7-BF	G0986113	S10B-2RHSB10 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV24B S10B-2RHSB10 CONTACT 4 CLOSED	
27-7-BF	G0996112	S10B-2RHSB10 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV24B S10B-2RHSB10 CONTACT 4 CLOSED	
27-7-BF	G1006113	K115B GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K115B-GE SYSTEM-E12 CONTACT H1 CLOSED.	
27-7-BF	G1016113	K115B GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K115B-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BF	G1026113	K23B- GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K23B-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BF	G1036113	K23B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K23B-GE SYSTEM-E12 CONTACT H1 CLOSED	

RISK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-U	G1056123	420-2RHSC04 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV24C OPEN	
27-7-BG	G1066123	420-2RHSC04 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV24C OPEN	
27-7-BG	G1076123	S10C-2RHSC04 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV24 S10C-2RHSC04 CONTACT 4 CLOSED	
27-7-BG	G1086122	S10C-2RHSC04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV24 S10C-2RHSC04 CONTACT 4 CLOSED	
27-7-BG	G1096123	K115C GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K115C-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BG	G1106123	K115C GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K115C-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BG	G1116123	K25 GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K25-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BG	G1126123	K25 GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K25-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-AE	G1136133	2RHS*MOV25A FAILS OPEN	PERIODIC TEST	2RHS*MOV25A OPEN	
27-7-AE	G1146133	420-2RHSA11 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV25A OPEN	
27-7-BH	G1156133	420-2RHSA11 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV25A OPEN	
27-7-BH	G1166133	K60A- GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K60A-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BH	G1176133	K60A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60A-GE SYSTEM-E12 CONTACT H1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BH	G1186133	S68A-2RHSA11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV25A OPEN	
27-7-BH	G1196132	S68A-2RHSA11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV25A OPEN	
27-7-AG	G1216133	420-2RHSB11 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV25B OPEN	
27-7-BJ	G1226133	420-2RHSB11 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV25B OPEN	
27-7-BJ	G1236133	K60B-GE SYSTEM-E12 CONTACT H1 FAILS CLOSED	PERIODIC TEST	K60B-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BJ	G1246133	K60B-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K60B-GE SYSTEM-E12 CONTACT H1 CLOSED	
27-7-BJ	G1256133	S68B-2RHSB11 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV25B OPEN	
27-7-BJ	G1266132	S68B-2RHSB11 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV25B OPEN	
27-7-AQ	G1286143	420-2RHSA12 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV26A OPEN	
27-7-AQ	G1296143	S54A-2RHSA12 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV26A OPEN	
27-7-AQ	G1306142	S54A-2RHSA12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV26A OPEN	
27-7-AS	G1326143	420-2RHSB12 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV26B OPEN	
27-7-AS	G1336143	S54B-2RHSB12 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV26B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AS	G1346142	S59B-2RHSB12 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV26B OPEN	
27-7-AP	G1366153	420-2RHSA13 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV27A OPEN	
27-7-AP	G1376153	S40A-2RHSA13 CONTACT FAILS CLOSED	PERIODIC TEST	2RHS*MOV27A OPEN	
27-7-AP	G1386152	S40A-2RHSA13 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV27A OPEN	
27-7-AR	G1406153	420-2RHSB13 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV27B OPEN	
27-7-AR	G1416153	S40B-2RHSB13 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*MOV27B OPEN	
27-7-AR	G1426152	S40B-2RHSB13 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV27B OPEN	
27-7-Y	G1446173	420-2RHSA15 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV33A OPEN	
27-7-BK	G1476173	420-2RHSA15 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV33A OPEN	
27-7-BK	G1486173	S7A-2RHSA15 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S7A-2RHSA15 CONTACT 4 CLOSED	
27-7-BK	G1496172	S7A-2RHSA15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S7A-2RHSA15 CONTACT 4 CLOSED	
27-7-X	G1516173	420-2RHSB15 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV33B OPEN	
27-7-BL	G1546173	420-2RHSB15 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV33B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BL	G1556173	S7B-2RHSB15 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S7B-2RHSB15 CONTACT 4 CLOSED	
27-7-BL	G1566172	S7B-2RHSB15 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S7B-2RHSB15 CONTACT 4 CLOSED	
27-7-BK	G3046173	K130A- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K130A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BK	G3056173	K108A- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K108A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BK	G3066173	K108A- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K108A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BK	G3076173	K130A- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	K130A-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BL	G3086173	K130B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K130B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BL	G3096173	K108B- GE SYSTEM-E12 CONTACT M2 FAILS CLOSED	PERIODIC TEST	K108B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BL	G3106173	K108B- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K108B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-BL	G3116173	K130B- GE SYSTEM-E12 RELAY NOT ENERGIZED	PERIODIC TEST	K130B-GE SYSTEM-E12 CONTACT M2 CLOSED	
27-7-AA	G1586203	420-2RHSA18 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV40A OPEN	

FTSK	COMPONENT IDENTIFICATION	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BH	G1596203	S8-2RHSA18 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BH	G1606203	S39A-2RHSA18 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BH	G1616203	S8-2RHSA18 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BH	G1626203	S43-2RHSA18 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S43-2RHSA18 CONTACT 4 CLOSED	
27-7-BH	G1636202	S43-2RHSA18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S43-2RHSA18 CONTACT 4 CLOSED	
27-7-BH	G1646203	K53A-GE SYSTEM-E12 CONTACT T2 FAILS CLOSED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-BH	G1656203	K53A-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-BH	G1666203	K59AA-REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K59AA-REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-BH	G1676203	K59AA-REMOTE SHUTDOWN STATION CONT T1 FAILS CLOSED	PERIODIC TEST	K59AA-REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-Q	G1696233	420-2RHSA21 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV113 OPEN	
27-7-BH	G1706233	420-2RHSA21 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV113 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BP	G1716233	S6-2RHSA21 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BP	G1726233	S35-2RHSA21 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BP	G1736233	S6-2RHSA21 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BN	G1746233	S10-2RHSA21 CONTACT FAILS CLOSED	PERIODIC TEST	S10-2RHSA21 CONTACT 4 CLOSED	
27-7-BN	G1756232	S10-2RHSA21 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S10-2RHSA21 CONTACT 4 CLOSED	
27-7-BN	G1766233	K53A-GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-BN	G1776233	K53A-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53A-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-BP	G1786233	K53AA-REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K53AA-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-BP	G1796233	K53AA-REMOTE SHUTDOWN STATION CONT T2 FAILS CLOSED	PERIODIC TEST	K53AA-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-AY	G1816283	420-2RHSA25 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*AOV39A OR 2RHS*MOV67A OPEN	
27-7-BQ	G1826283	420-2RHSA25 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*AOV39A OR 2RHS*MOV67A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BQ	G1836283	S69A-2RHSA25 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*AOV39A OR 2RHS*MOV67A OPEN	
27-7-BQ	G1846282	S69A-2RHSA25 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*AOV39A OR 2RHS*MOV67A OPEN	
27-7-BQ	G1856283	S8-2RHSA25 REMOTE SHUTDOWN STATION CONT 2 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BQ	G1866283	S41A-2RHSA25 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BQ	G1876283	S8-2RHSA25 REMOTE SHUTDOWN STATION CONT 4 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BQ	G1886283	K111A- REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K111A-REMOTE SHUTDOWN STATION CONT CLOSED	
27-7-BQ	G1896283	K111A- REMOTE SHUTDOWN STATION CONT M2 FAILS CLOSED	PERIODIC TEST	K111A-REMOTE SHUTDOWN STATION CONT CLOSED	
27-7-AU	G1916293	42C-2RHSB02 RELAY FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-AX	G1926293	42O-2RHSB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-AU	G1936291	2RHSB02 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2RHS*MOV1B OPEN	
27-7-AU	G1946291	2RHSB02 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2RHS*MOV1B OPEN	
27-7-AX	G1956293	S4B-2RHSB02 CONTACT 8 FAILS CLOSED	PERIODIC TEST	2RHS*MOV1B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BR	G1966292	S4B 2RHSB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*MOV1B OPEN	
27-7-AX	G1976293	S1-2RHSB02 REMOTE SHUTDOWN STATION CONT 40 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AX	G1986293	S32B-2RHSB02 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AX	G1996293	S1-2RHSB02 REMOTE SHUTDOWN STATION CONT 42 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BR	G2006293	42O-2RHSB02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-BR	G2016293	33-2RHSB02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-BR	G2026293	S1-2RHSB02 REMOTE SHUTDOWN STATION CONT 43 FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-BR	G2036293	S1-2RHSB02 REMOTE SHUTDOWN STATION CONT 45 FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-BR	G2046293	S4B-2RHSB02 CONTACT 2 FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-BR	G2056293	TQS-2RHSB02 OVERTORQUE PRESENT	PERIODIC TEST	2RHS*MOV1B OPEN	
27-7-BR	G2066293	TQS-2RHSB02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2RHS*MOV1B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-Q	G2086323	420-2RHSB21 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV112 OPEN	
27-7-BT	G2096323	S1-2RHSB21 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BT	G2106323	S51-2RHSB21 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BT	G2116323	S1-2RHSB21 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BS	G2126323	K53B-GE SYSTEM-E12 CONTACT T3 FAILS CLOSED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T3 CLOSED	
27-7-BS	G2136323	K53B-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T3 CLOSED	
27-7-BT	G2156323	K53BB-REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K53BB-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-BT	G2166323	K53BB-REMOTE SHUTDOWN STATION CONT T2 FAILS CLOSED	PERIODIC TEST	K53BB-REMOTE SHUTDOWN STATION CONT T2 CLOSED	
27-7-BS	G2176323	S9-2RHSB21 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S9-2RHSB21 CONTACT 4 CLOSED	
27-7-BS	G2186322	S9-2RHSB21 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S9-2RHSB21 CONTACT 4 CLOSED	
27-7-BS	G3126323	420-2RHSB21 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*MOV112 OPEN	

FISK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-Z	G2206373	420-2RHSB18 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV40B OPEN	
27-7-BU	G2216373	S19-2RHSB18 REMOTE SHUTDOWN STATION CONT 20 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BU	G2226373	S39B-2RHSB18 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BU	G2236373	S14-2RHSB18 REMOTE SHUTDOWN STATION CONT 22 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BU	G2246373	S44-2RHSB18 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S44-2RHSB18 CONTACT 4 CLOSED	
27-7-BU	G2256372	S44-2RHSB18 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S44-2RHSB18 CONTACT 4 CLOSED	
27-7-BU	G2266373	K53B-GE SYSTEM-E12 CONTACT T2 FAILS CLOSED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-BU	G2276373	K53B-GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K53B-GE SYSTEM-E12 CONTACT T2 CLOSED	
27-7-BU	G2286373	K54BB-2RHSB18 REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K54BB-2RHSB18 REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-BU	G2296373	K54BB-2RHSB18 REMOTE SHUTDOWN STATION CONT T1 FAILS CLOSED	PERIODIC TEST	K54BB-2RHSB18 REMOTE SHUTDOWN STATION CONT T1 CLOSED	
27-7-AZ	G2316383	420-2RHSB25 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*AOV39B OR 2RHS*MOV67B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BV	G2326383	420-2RHSB25 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2RHS*AOV39B OR 2RHS*MOV67B OPEN	
27-7-BV	G2336383	S69B-2RHSB25 CONTACT 4 FAILS CLOSED	PERIODIC TEST	2RHS*AOV39B OR 2RHS*MOV67B OPEN	
27-7-BV	G2346382	S69B-2RHSB25 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2RHS*AOV39B OR 2RHS*MOV67B OPEN	
27-7-BV	G2356383	S14-2RHSB25 REMOTE SHUTDOWN STATION CONT 2 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BV	G2366383	S41B-2RHSB25 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BV	G2376383	S14-2RHSB25 REMOTE SHUTDOWN STATION CONT 4 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BV	G2386333	K111B- REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K111B-REMOTE SHUTDOWN STATION CONT M2 CLOSED	
27-7-BV	G2396383	K111B- REMOTE SHUTDOWN STATION CONT M2 FAILS CLOSED	PERIODIC TEST	K111B-REMOTE SHUTDOWN STATION CONT M2 CLOSED	
27-7-AD	G2406393	2RHS*MOV104 FAILS OPEN	PERIODIC TEST	2RHS*MOV104 OPEN	
27-7-AD	G2416393	420-2RHSA22 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	2RHS*MOV104 OPEN	
27-7-BH	G2426393	S8-2RHSA22 REMOTE SHUTDOWN STATION CONT 78 FAILS CLOSED	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BH	G2436393	S55-2RHSA22 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BH	G2446393	S6-2RHSA22 REMOTE SHUTDOWN STATION CONT 80 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BH	G2456393	S12-2RHSA22 CONTACT 4 FAILS CLOSED	PERIODIC TEST	S12-2RHSA22 CONTACT 4 CLOSED	
27-7-BH	G2466393	S12-2RHSA22 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	S12-2RHSA22 CONTACT 4 CLOSED	
27-7-BH	G2476393	K54- GE SYSTEM-E12 CONTACT T1 FAILS CLOSED	PERIODIC TEST	K54-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-BH	G2486393	K54- GE SYSTEM-E12 RELAY ENERGIZED	PERIODIC TEST	K54-GE SYSTEM-E12 CONTACT T1 CLOSED	
27-7-BH	G2496393	K54AA-2RHSA22 REMOTE SHUTDOWN STATION RELAY ENERGIZED	PERIODIC TEST	K54AA-2RHSA22 REMOTE SHUTDOWN STATION CONT T3 CLOSED	
27-7-BH	G2506393	K54AA-2RHSA22 REMOTE SHUTDOWN STATION CONT T3 FAILS CLOSED	PERIODIC TEST	K54AA-2RHSA22 REMOTE SHUTDOWN STATION CONT T3 CLOSED	
27-7-AL	G2516413	2RHS*MOV30A FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AL	G2526412	42C-2RHSA27 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AM	G2536413	42D-2RHSA27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AL	G2546411	2RHSA27 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-AL	G2556411	2RHSA27 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AM	G2566413	S73A-2RHSA27 CONTACT 4 FAILS CLOSED	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BX	G2576412	S73A-2RHSA27 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AM	G2586413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AM	G2596413	S62A-2RHSA27 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AM	G2606413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BX	G2616413	420-2RHSA27 CONTACT 9 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BX	G2626413	33-2RHSA27 CONTACT 15 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BX	G2636413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 63 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BX	G2646413	S12-2RHSA27 REMOTE SHUTDOWN STATION CONT 65 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BX	G2656413	S73A-2RHSA27 CONTACT 2 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BX	G2666413	TQS-2RHSA27 OVERTORQUE PRESENT	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BX	G2676413	TQS-2RHSA27 CONTACT 17 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AK	G2686423	2RHS*MOV30B FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AK	G2696422	42C-2RHSB27 RELAY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AN	G2706423	42D-2RHSB27 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AK	G2716421	2RHSB27 575-115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AK	G2726421	2RHSB27 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AN	G2736423	S73B-2RHSB27 CONTACT 4 FAILS CLOSED	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BY	G2746422	S73B-2RHSB27 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-AN	G2756423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 60 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AN	G2766423	S62B-2RHSB27 REMOTE SHUTDOWN STATION CONT 1T FAILS CLOSED	PERIODIC TEST	NONE	
27-7-AN	G2776423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 62 FAILS CLOSED	PERIODIC TEST	NONE	
27-7-BY	G2786423	42D-2RHSB27 CONTACT 9 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BY	G2796423	33-2RHSB27 CONTACT 15 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-7-BY	G2806423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 63 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BY	G2816423	S15-2RHSB27 REMOTE SHUTDOWN STATION CONT 65 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BY	G2826423	S73B-2RHSB27 CONTACT 2 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BY	G2836423	TQS-2RHSB27 OVERTORQUE PRESENT	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	
27-7-BY	G2846423	TQS-2RHSB27 CONTACT 17 FAILS OPEN	PERIODIC TEST	DISCHARGE LINE TO SUPPRESSION POOL ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-B 27-13-Q 27-13-P	7003HCS3	DIV I 2HCS* RBNR 1A UNIT DEFECTIVE SEAL OR PIPE BREAK	PERIODIC TEST	NONE	
27-13-B 27-13-S 27-13-R	7004HCS3	DIV II 2HCS* RBNR 1B UNIT DEFECTIVE SEAL OR PIPE BREAK	PERIODIC TEST	NONE	
27-13-E	7065HCS3	2HCS*RBNR 1A SCR FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-F	7079HCS3	2HCS*RBNR 1B SCR FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-D	7093HCS3	LOSS OF DIV I COMBL GAS BLOWER START CIRCUIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-G	7095HCS3	2HCS*MOV 25A RECOMBINER INLET VALVE FAILED CLOSED	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-J	7098HCS3	COOLING WATER INLET 2HCS* MOV 26A FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-C	7099HCS3	LOSS OF DIV II COMBL GAS BLOWER UNIT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-C	7100HCS3	LOSS OF DIV II COMBL GAS BLOWER START CIRCUIT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-H	7102HCS3	2HCS*MOV 25B RECOMBINER INLET VALVE FAILED CLOSED	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-H	7105HCS3	COOLING WATER INLET 2HCS* MOV 26B FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-BS	7313HCS3	2HCS*RBNR1A THRU GAS FLOW LESS THAN 50 SCFM	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BU	7322HCS3	2RHCS*RBNR 1B THRU GAS FLOW LESS THAN 50 SCFM	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DC	7425HCS3	2HCS*RBNR 1A BLOWER INLET TEMPERATURE OUT OF LIMIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DC	7426HCS3	2HCS*RBNR 1A RETURN GAS TEMP OUT-OF-LIMIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DE	7429HCS3	HYDROGEN RBNR 1A 2HCS*RBNR 1A INLET HI PRESS EXISTS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DC	7431HCS3	2HCS*RBNR 1A HEATER WALL TEMPERATURE OUT-OF-LIMIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DC	7434HCS3	2HCS*RBNR 1A REACTION CHAMBER SHELL TEMP OUT-OF-LIMITS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DF	7435HCS3	2HCS*RBNR 1B BLOWER INLET TEMPERATURE OUT-OF-LIMIT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DF	7438HCS3	2HCSXRBNR 1B RETURN GAS HIGH TEMP EXIST	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DH	7439HCS3	HYDROGEN RBNR 1B 2HCS*RBNR 1B INLET PRESS EXISTS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-DF	7441HCS3	2HCS*RBNR 1B HEATER WALL TEMPERATURE OUT-OF-LIMITS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DF	7444HCS3	2HCS*RBNR 1B REACTION CHAMBER SHELL HIGH TEMP EXIST	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-D	7511HCS3	LOSS OF DIV I COMBL GAS BLOWER UNIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-F	7602HCS3	2HCS*RBNR1B HTR DIV II FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-E	7603HCS3	2HCS*RBN1A HTR DIV I FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EG	7620HCS2	LOSS OF DIV II 600V BUS 2EJS*US3 POWER	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EG	7621HCS2	2HCS*PNL22B FEEDER BRKR OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DD	7634HCS3	2HCS*RBNR 1A GAS TEMP OUT OF LIMIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DD	7635HCS3	2HCS*RBNR 1A HEATER OUTLET GAS TEMP OUT OF LIMIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DG	7636HCS3	2HCS*RBNR 1B GAS TEMP OUT OF LIMIT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DG	7637HCS3	2HCS*RBNR 1B HEATER OUTLET GAS TEMP OUT OF LIMIT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EP	7657HCS3	2HCS*MOV 3B MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EH	7667HCS3	2HCS*MOV 6A MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BZ	7687HCS3	2HCS*MOV 1A MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CK	7696HCS3	2HCS*MOV 1B MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CC	7705HCS3	2HCS*MOV 4A MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CN	7713HCS3	2HCS*MOV 4B MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CD	7721HCS3	2HCS*MOV 2A MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CP	7729HCS3	2HCS*MOV 2B MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CE	7737HCS3	2HCS*MOV 5A MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CQ	7745HCS3	2HCS*MOV 5B MECHANICAL OVERLOAD EXISTS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-E 27-13-BS 27-13-FM 27-13-FR 27-13-FS 27-13-FN 27-13-FP 27-13-FQ 27-13-FT	7747HCS3	LOSS OF H13 P896 CONTROL POWER	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BS	7748HCS2	2HCS*FSLX21A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-M	7749HCS3	JS-2P1A-2HCSA09 CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-M	7750HCS3	JS-3P1A-2HCSA09 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EF	7751HCS3	2HCS*E;I 20A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DJ	7752HCS3	2HCS*FYY 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EF	7753HCS3	2HCS*TC 20A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DJ	7754HCS3	2HCS*PKRS 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BS	7755HCS3	2HCS*FSL 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EF	7756HCS3	2HCS*TT 20A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EF	7757HCS3	2HCS*TE 20A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DJ	7758HCS3	2HCS*FT 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DJ	7759HCS3	2HCS*FE 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-F 27-13-BU 27-13-FU 27-13-FY 27-13-FZ 27-13-FV 27-13-FW 27-13-FX 27-13-GA	7760HCS3	LOSS OF H13-P897 CONTROL POWER	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BU	7761HCS2	2HCS*FSLX 21B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-N	7762HCS3	JS-3P1B-2HCSB09 CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-N	7763HCS3	JS-3P1B-2HCSB09 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	7764HCS3	2HCS*E;I 20B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DK	7765HCS3	2HCS*FYY 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	7766HCS3	2HCS*TC 20B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DK	7767HCS3	2HCS*PHRS 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BU	7768HCS3	2HCS*FSL 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	7769HCS3	2HCS*TT 20B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	7770HCS3	2HCS*TE 20B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DK	7771HCS3	2HCS*FT 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DK	7772HCS3	2HCS*FE 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FH	7773HCS2	2HCS*TSHX 13A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FR	7774HCS2	2HCS*TSHX 14A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FS	7775HCS2	2HCS*TSHX 15A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FN	7776HCS2	2HCS*TSHX 16A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-FM	7777HCS3	2HCS*TSH 13A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FR	7778HCS3	2HCS*TSH 14A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FS	7779HCS3	2HCS*TSH 15A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FN	7780HCS3	2HCS*TSHH 16A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FM	7781HCS3	2HCS*TT 13A FAILS INOPERATIVE	PERIODIC TEST.	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FM	7782HCS3	2HCS*TE 13A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FR	7783HCS3	2HCS*TT 14A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FR	7784HCS3	2HCS*TE 14A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FS	7785HCS3	2HCS*TT 15A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FS	7786HCS3	2HCS*TE 15A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FN	7787HCS3	2HCS*TT 16A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FN	7788HCS3	2HCS*TT 16A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FU	7789HCS2	2HCS*TSHX 13B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FY	7790HCS2	2HCS*TSHX 14B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FZ	7791HCS2	2HCS*TSHX 15B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-FV	7792HCS2	2HCS*TSHX 16B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FU	7793HCS3	2HCS*TSH 13B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FY	7794HCS3	2HCS*TSH 14B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FZ	7795HCS3	2HCS*TSH 15B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FV	7796HCS3	2HCS*TSHH 16B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FU	7797HCS3	2HCS*TT 13B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FU	7798HCS3	2HCS*TE 13B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FY	7799HCS3	2HCS*TT 14B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FY	7800HCS3	2HCS*TE 14B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FZ	7801HCS3	2HCS*TT 15B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FZ	7802HCS3	2HCS*TE 15B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FV	7803HCS3	2HCS*TT 16B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FV	7804HCS3	2HCS*TE 16B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FP	7806HCS2	2HCS*TSHY 17A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FQ	7807HCS2	2HCS*TSHX 18A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-DE	7808HCS2	2HCS*PSHX 19A CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FT	7809HCS3	2HCS*FE 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FT	7810HCS3	2HCS*PT 19A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FT	7811HCS3	2HCS*FT 21A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FP	7812HCS3	2HCS*TSHH 17A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FQ	7813HCS3	2HCS*TSH 18A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FT	7814HCS3	2HCS*PSH 19A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FP	7815HCS3	2HCS*TT 17A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FP	7816HCS3	2HCS*TE 17A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FQ	7817HCS3	2HCS*TT 18A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FQ	7818HCS3	2HCS*TE 18A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FN	7819HCS2	2HCS*TSHY 17B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FX	7820HCS2	2HCS*TSHX 18B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DH	7821HCS2	2HCS*PSHX 19B CONTACT FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GA	7822HCS3	2HCS*FE 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-GA	7823HCS3	2HCS*PT 19B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GA	7824HCS3	2HCS*FT 21B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FW	7825HCS3	2HCS*TSHH 17B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FX	7826HCS3	2HCS*TSH 18B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GA	7827HCS3	2HCS*PSH 19B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FW	7828HCS3	2HCS*TT 17B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FW	7829HCS3	2HCS*TE 17B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FX	7830HCS3	2HCS*TT 18B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FX	7831HCS3	2HCS*TE 18B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GA	7832HCS3	2HCS*PNRS 19B FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FT	7834HCS3	2HCSXPNR S19A FAILS INOPERATIVE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DN 27-13-AS 27-13-AN 27-13-AT	7110ISC3	3A-6-2ISCA02 RELAY COIL ENERGIZED	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DR 27-13-AV 27-13-AN 27-13-AN	7120ISC3	3B-6-2ISCB02 RELAY COIL ENERGIZED	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DV 27-13-BE 27-13-BF	7130ISC3	3A-7-2ISCA02 RELAY COIL ENERGIZED	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DZ 27-13-BH 27-13-BJ	7138ISC3	3B-7-2ISCB02 RELAY COIL ENERGIZED	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AY 27-13-BL 27-13-AZ 27-13-BM	7155ISC3	3A-8-2ISCA02 RELAY COIL ENERGIZED	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-BB 27-13-BP 27-13-BC 27-13-BQ	7163ISC3	3B-8-2ISCB02 RELAY COIL ENERGIZED	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-AP	7198ISC3	3A-7-2ISCA02 RELAY COIL ENERGIZED	PERIODIC TEST	2HCS*MOV 4A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AQ	7203ISC3	3B-7-2ISCB02 RELAY COIL ENERGIZED	PERIODIC TEST	2HCS*MOV 4B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-D	7001SWP3	LOSS OF DIV I SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-C	7002SWP3	LOSS OF DIV II SERVICE WATER TO DBA HYDROGEN RECOMBINER SYS	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-U	70066012	2HCS*MOV 1A FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-X	70076012	420-2HCSA01 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-U	70086011	3A FUSE CKT 2HCSA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-U	70096011	575-115V 150VA XFMR CKT 2HCSA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-H	70116012	2HCS*MOV 1B FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-AE	70126012	420-2HCSB01 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-H	70136011	3A FUSE CKT 2HCSB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-H	70146011	575-115V 150VA XFMR CKT 2HCS301 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DH	71066013	1-2HCSA01 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-AM 27-13-DM 27-13-CA	71076013	1-2HCSA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DN	71086013	3-1-2HCSA11 CONTACT T2 FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DM	71096013	3A-6-2ISCA02 CONTACT R2 FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DP	71116013	3X-2HCSA07 CONTACT R1 FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DR	71166013	1-2HCSS01 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-AN 27-13-DR 27-13-CL	71176013	1-2HCSB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DS	71186013	3-1-2HCSB11 CONTACT T2 FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DR	71196013	3B-6-2ISCB02 CONTACT R2 FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DT	71216013	3X-2HCSB07 CONTACT R1 FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AH	71866013	1-2HCSA01 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 1A MANUAL OPENING CKT ESTABLISHED	
27-13-AH	71886013	A-6-2ISCA02 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 1A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AH	71896013	3X-2HCSA07 CONTACT T2 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 1A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AN	71916013	1-2HCSB01 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 1B MANUAL OPENING CKT ESTABLISHED	
27-13-AN	71936013	3X-2HCSB07 CONTACT T2 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 1B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-DL	72356013	42-C-2HCSA01 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DL	72366013	42-O-2HCSA01 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-X	72376013	42-O-2HCSA01 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-X	72386013	42-C-2HCSA01 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-DL	72396013	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 1A	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DL	72406013	TQS-C-2HCSA01 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DQ	72416013	42-C-2HCSB01 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-DQ	72426013	42-0-2HCSB01 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-AE	72436013	42-C-2HCSB01 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-DQ	72446013	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 1B	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DQ	72456013	TQS-C-2HCSB01 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-K	73396013	2HCS*MOV 1A Z-55A PEN OUTBD ISOL V FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CA	73416013	1-2HCSA01 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CA	73466013	42C-2HCSA01 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-L	73476013	2HCS*MOV 1B Z-55B PEN OUTBD ISOL V FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CL	73496013	1-2HCSB01 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CL	73546013	42C-2HCSB01 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CA	74796013	3-1-2HCSA11 CONTACT T2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CA	74806013	3X-2HCSAU7 CONTACT R1 FAILED CLOSE	PERIODIC TEST	3X-2HCSA07 CONTACT R1 CLOSED	
27-13-CL	74846013	3-1-2HCSB11 CONTACT T2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CL	74856013	3X-2HCSB07 CONTACT R1 FAILED CLOSE	PERIODIC TEST	3X-2HCSB07 CONTACT R1 CLOSED	
27-13-AN	75086013	3B-6-2ISCB02 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 1B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AE	75126013	42-0-2HCSB01 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-CA	76266013	3A-6-2ISCA02 CONTACT R2 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-CL	76286013	3B-6-2ISCB02 CONTACT R2 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-BZ	76816013	42-0-2HCSA01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BZ	76826013	42-C-2HCSA01 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BZ	76836013	33-2HCSA01 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BZ	76846013	3-3-2HCSA11 CONTACT R1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CR	76856013	1-2HCSA01 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BZ	76866013	TQS-0-2HCSA01 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-GB	76886013	3X-2HCSA07 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CK	76906013	42-O-2HCSB01 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CK	76916013	42-C-2HCSB01 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CK	76926013	33-2HCSB01 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CK	76936013	3-3-2HCSB11 CONTACT R1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CT	76946013	1-2HCSB01 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CK	76956013	TQS-O-2HCSB01 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GC	76976013	3X-2HCSB07 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DL	78336013	33-2HCSA01 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*HOV 1A OPEN	
27-13-DQ	78356013	33-2HCSB01 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*HOV 1B OPEN	
27-13-Q	70266022	2HCS*HOV 2A FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-57A PEN OUTBD ISOL 2HCS*HOV 2A OPEN	
27-13-Z	70276022	42O-2HCSA02 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-57A PEN OUTBD ISOL 2HCS*HOV 2A OPEN	
27-13-CD	70286021	3A FUSE CKT 2HCSA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CD	70296021	575-115V 150VA XFMR CKT 2HCSA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-S	70316022	2HCS*MOV 2B FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-CP	70326021	3A FUSE CKT 2HCSB02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CP	70336021	575-115V 150VA XFMR CKT 2HCSB02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AS	71426023	1-2HCSA02 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AT 27-13-AS 27-13-FE	71436023	1-2HCSA02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AS	71446023	3-1-2HCSA11 CONTACT T3 FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AS	71456023	3A-6-2ISCA02 CONTACT R4 FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AS	71466023	3X-2HCSA07 CONTACT R3 FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AV	71476023	1-2HCSB02 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-AH 27-13-AV 27-13-FJ	71486023	1-2HCSB02 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AV	71496023	3-1-2HCSB11 CONTACT T3 FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AV	71506023	3B-6-2ISCB02 CONTACT R4 FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-AV	71516023	3X-2HCSB07 CONTACT R3 FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-AT	72056023	1-2HCSA02 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 2A MANUAL OPENING CKT ESTABLISHED	
27-13-AT	72066023	3A-6-2ISCA02 CONTACT T3 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 2A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AT	72076023	3X2-2HCSA07 CONTACT T4 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 2A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AW	72086023	1-2HCSB02 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 2B MANUAL OPENING CKT ESTABLISHED	
27-13-AW	72096023	3B-6-2ISCB02 CONTACT T3 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 2B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AW	72106023	3X-2HCSB07 CONTACT T4 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 2B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AR	72586023	42-C-2HCSA02 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AR	72596023	42-O-2HCSA02 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-Z	72606023	42-C-2HCSA02 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AR	72616023	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 2A	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AR	72626023	TQS-C-2HCSA02 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AU	72636023	42-C-2HCSB02 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-AU	72646023	42-O-2HCSB02 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-AU	72676023	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 2B	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-AU	72686023	TQS-C-2HCSB02 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-BW	73556023	2HCS*MOV 2A Z-57A PEN OUTBD ISOL V FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FE	73576023	1-2HCSA02 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BW	73626023	42C-2HCSA02 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CG	73636023	2HCS*MOV 2B Z-57B PEN OUTBD ISOL V FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FJ	73656023	1-2HCSB02 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CG	73706023	42C-2HCSB02 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-FE	74956023	3-1-2HCSA11 CONTACT T3 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FD	74966023	3X-2HCSA07 CONTACT R3 FAILED CLOSE	PERIODIC TEST	3X-2HCSA07 CONTACT R3 CLOSED	
27-13-FJ	74986023	3-1-2HCSB11 CONTACT T3 CLOSED	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FH	74996023	3X-2HCSB07 CONTACT R3 FAILED CLOSE	PERIODIC TEST	3X-2HCSB07 CONTACT R3 CLOSED	
27-13-AG	75076022	2HCS*MOV 2B MANUAL OPENING CKT ESTABLISHED	INDICATING LIGHT IN CONTROL ROOM	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-Z	75136023	42-O-2HCSA02 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AR	76066023	33-2HCSA02 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-57A PEN OUTBD ISOL 2HCS*MOV 2A OPEN	
27-13-AU	76076023	33-2HCSB02 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-57B PEN OUTBD ISOL 2HCS*MOV 2B OPEN	
27-13-FD	76306023	3A-6-2ISCA02 CONTACT R4 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-FH	76326023	3B-6-2ISCB02 CONTACT R4 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-CD	77156023	42-O-2HCSA02 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CD	77166023	42-C-2HCSA02 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CD	77176023	33-2HCSA02 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CW	77186023	3-3-2HCSA11 CONTACT R2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CV	77196023	3X-2HCSA07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CD	77206023	TQS-0-2HCSA02 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CV	77226023	3X-2HCSA07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CP	77236023	42-0-2HCSB02 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CP	77246023	42-C-2HCSB02 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CP	77256023	33-2HCSB02 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CZ	77266023	3-3-2HCSB11 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CY	77276023	3X-2HCSB07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CP	77286023	TQS-0 2HCSB02 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CY	77306023	3X-2HCSB07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-P	70456032	2HCS*MOV 3A FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-AB	70466032	420-2HCSA03 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EJ	70476031	3A FUSE CKT 2HCSA03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EJ	70486031	575-115V 150VA XFMR CKT 2HCSA03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-R	70506032	2HCS*MOV 3B FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-AJ	70516032	420-2HCSB03 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-EP	70526031	3A FUSE CKT 2HCSB03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EP	70536031	575-115V 150VA XFMR CKT 2HCSB03 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BE	71666033	1-2HCSA03 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BF 27-13-BE 27-13-EK	71676033	1-2HCSA03 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BE	71686033	3-1-2HCSA11 CONTACT T4 FAILED OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BE	71696033	3A-7-2ISCA02 CONTACT R2 OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BE	71706033	3X1-2HCSA07 CONTACT R1 FAILED OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BH	71716033	1-2HCSB03 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-BJ 27-13-BH 27-13-EQ	71726033	1-2HCSB03 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BH	71736033	3-1-2HCSB11 CONTACT T4 FAILED OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-BH	71746033	3B-7-2ISCB02 CONTACT R2 OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-BH	71756033	3X1-2HCSB07 CONTACT R1 FAILED OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-BF	72226033	3A-7-2ISCA02 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 3A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BF	72236033	3X1-2HCSSA07 CONTACT T2 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 3A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BJ	72256033	3A-7-2ISCB02 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 3B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BJ	72266033	3X1-2HCSB07 CONTACT T2 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 3B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AG	72656033	42-0-2HCSB02 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AG	72666033	42-C-2HCSB02 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-BD	72816033	42-C-2HCSA03 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BD	72826033	42-0-2HCSA03 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-AB	72836033	42-0-2HCSA03 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AB	72846033	42-C-2HCSA03 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-BD	72856033	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 3A	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BD	72866033	TQS-C-2HCSA03 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BG	72876033	42-C-2HCSB03 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-BG	72886033	42-O-2HCSB03 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-AJ	72896033	42-C-2HCSB03 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-BG	72906033	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 3B	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-BG	72916033	TQS-C-2HCSB03 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-G	73236033	2HCS*MOV 3A 2-56A PEN OUTBD ISOL V FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EK	73256033	1-2HCSA03 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EK	73306033	42C-2HCSA03 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-H	73316033	2HCS*MOV 3B Z-56B PEN OUTBD ISOL V FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EQ	73336033	1-2HCSB03 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EQ	73386033	42C-2HCSB03 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EK	74456033	3-1-2HCSA11 CONTACT T4 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EK	74466033	3X1-2HCSA07 CONTACT R1 FAILED CLOSE	PERIODIC TEST	3X1-2HCSA07 CONTACT R1 CLOSED	
27-13-EQ	74566033	3-1-2HCSB11 CONTACT T4 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EQ	74576033	3X1-2HCSB07 CONTACT R1 FAILED CLOSE	PERIODIC TEST	3X1-2HCSB07 CONTACT R1 CLOSED	
27-13-BF	75166033	1-2HCSA03 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 3A MANUAL OPENING CKT ESTABLISHED	
27-13-BJ	75176033	1-2HCSB03 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 3B MANUAL OPENING CKT ESTABLISHED	
27-13-AJ	75216033	42-0-2HCSB03 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-U 27-13-T 27-13-CD 27-13-EJ 27-13-EH	76006031	575V CONTROL POWER 2EHS*MCC 102B FAILED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-H 27-13-V 27-13-CP 27-13-CQ 27-13-EP	76016031	575V CONTROL POWER 2EHS*MCC 302B FAILED	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BD	76106033	33-2HCSA03 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-56A PEN OUTBD ISOL 2HCS*MOV 3A OPEN	
27-13-BG	76116033	33-2HCSB03 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-56B PEN OUTBD ISOL 2HCS*MOV 3B OPEN	
27-13-EK	76226033	3A-7-2ISCA02 CONTACT R2 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-EQ	76246033	3B-7-2ISCB02 CONTACT R2 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-EJ	76416033	42-0-2HCSA03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EJ	76426033	42-C-2HCSA03 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EJ	76436033	33-2HCSA03 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EJ	76446033	3-3-2HCSA11 CONTACT R3 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EU	76456033	1-2HCSA03 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EU	76496033	3X1-2HCSA07 CONT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EP	76516033	42-0-2HCSB03 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EP	76526033	42-C-2HCSB03 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EP	76536033	33-2HCSB03 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EY	76546033	3-3-2HCSB11 CONTACT R3 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EX	76556033	1-2HCSB03 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EP	76566033	TQS-0-2HCSB01 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EX	76596033	3X1-2HCSB07 CONT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-T	70166042	2HCS*MOV 4A FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-Y	70176042	420-2HCSA04 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-T	70186041	3A FUSE CKT 2HCSA04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-T	70196041	575-115V 150VA XFMR CKT 2HCSA04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-V	70216042	2HCS*MOV 4B FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-AF	70226042	420-2HCSB04 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-V	70236041	3A FUSE CKT 2HCSB04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-V	70246041	575-115V 150VA XFMR CKT 2HCSB04 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DV	71266043	1-2HCSA04 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-AP 27-13-DV 27-13-CB	71276043	1-2HCSA04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DN	71286043	3-2-2HCSA11 CONTACT T1 FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DV	71296043	3A-7-2ISCA02 CONTACT R4 FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DX	71316043	3X1-2HCSA07 CONTACT R3 FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DZ	71346043	1-2HCSB04 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-AQ 27-13-DZ 27-13-CN	71356043	1-2HCSB04 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EA	71366043	3-2-2HCSB11 CONTACT T1 FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-DZ	71376043	3B-7-2ISCB02 CONTACT R4 FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-EB	71396043	3X1-2HCSB07 CONTACT R3 FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-AP	71956043	1-2HCSA04 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 4A MANUAL OPENING CKT ESTABLISHED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AP	71976043	3A-7-2ISCA02 CONTACT T3 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 4A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AP	71996043	3X1-2HCSA07 CONTACT T4 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 4A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AQ	72006043	1-2HCSB04 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 4B MANUAL OPENING CKT ESTABLISHED	
27-13-AQ	72026043	3B-7-2ISCB02 CONTACT T3 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 4B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AQ	72046043	3X1-2HCSB07 CONTACT T4 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 4B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-DU	72466043	42-C-2HCSA04 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DU	72476043	42-O-2HCSA04 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-Y	72486043	42-O-2HCSA04 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-Y	72496043	42-C-2HCSA04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-DU	72506043	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 4A	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DU	72516043	TQS-C-2HCSA04 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-DY	72526043	42-C-2HCSB04 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-DY	72536043	42-O-2HCSB04 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-AF	72546043	42-O-2HCSB04 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AF	72556043	42-C-2HCSB04 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-DY	72566043	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 4B	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-DY	72576043	TQS-C-2HCSB04 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-K	73406043	2HCS*MOV 4A Z-55A PEN INBD ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CB	73436043	1-2HCSA04 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CB	73446043	42C-2HCSA04 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-L	73486043	2HCS*MOV 4B Z-56B PEN INBD ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CH	73516043	1-2HCSB04 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CH	73526043	42C-2HCSB04 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CB	74896043	3-2-2HCSA11 CONTACT T1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FB	74906043	3X1-2HCSA07 CONTACT R3 FAILED CLOSE	PERIODIC TEST	3X1-2HCSA07 CONTACT R3 CLOSED	
27-13-CH	74926043	3-2-2HCSB11 CONTACT T1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FC	74936043	3X1-2HCSB07 CONTACT R3 FAILED CLOSE	PERIODIC TEST	3X1-2HCSB07 CONTACT R3 CLOSED	
27-13-DU	76046043	33-2HCSA04 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*HOV 4A OPEN	
27-13-DY	76056043	33-2HCSB04 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*HOV 4B OPEN.	
27-13-FB	76276043	3A-7-2ISCA02 CONTACT R4 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-FC	76296043	3B-7-2ISCB02 CONTACT R4 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-CC	76996043	42-0-2HCSA04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CC	77006043	42-C-2HCSA04 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CC	77016043	33-2HCSA04 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CC	77026043	3-3-2HCSA11 CONTACT R4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CS	77036043	1-2HCSA04 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CC	77046043	TQS-0-2HCSA04 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CS	77066043	3X1-2HCSA07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CN	77076043	42-0-2HCSB04 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CN	77086043	42-C-2HCSB04 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CN	77096043	33-2HCSB04 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CN	77106043	3-3-2HCSB11 CONTACT R4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CU	77116043	1-2HCSB04 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CN	77126043	TQS-0-2HCSB04 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CU	77146043	3X1-2HCSB07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-Q	70356052	2HCS*HOV 5A FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-57A PEN INBD ISOL 2HCS*HOV 5A OPEN	
27-13-AA	70366052	420-2HCSA05 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-57A PEN INBD ISOL 2HCS*HOV 5A OPEN	
27-13-CE	70376051	3A FUSE CKT 2HCSA05 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CE	70386051	575-115V 150VA XFMR CKT 2HCSA05 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-S	70406052	2HCS*MOV 5B FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-AH	70416052	420-2HCSB05 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-CQ	70426051	3A FUSE CKT 2HCSB05 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CQ	70436051	575-115V 150VA XFMR CKT 2HCSB05 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AY	71526053	1-2HCSA05 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-AZ 27-13-AY 27-13-BX	71536053	1-2HCSA05 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AY	71546053	3-2-2HCSA11 CONTACT T2 FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-EC	71566053	3X2-2HCSA07 CONTACT R1 FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-AY	71586053	3A-8-2ISCA02 CONTACT R2 FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-BB	71596053	1-2HCSB05 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-BC 27-13-BB 27-13-CH	71606053	1-2HCSB05 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BB	71616053	3-2-2HCSB11 CONTACT T2 FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-BB	71626053	3B-8-2ISCB02 CONTACT R2 FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-ED	71646053	3X2-2HCSB07 CONTACT R1 FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-AZ	72116053	1-2HCSA05 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 5A MANUAL OPENING CKT ESTABLISHED	
27-13-AZ	72136053	3A-8-2ISCB02 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 5A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AZ	72146053	3X2-2HCSA07 CONTACT T2 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 5A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BC	72166053	1-2HCSB05 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 5B MANUAL OPENING CKT ESTABLISHED	
27-13-BC	72186053	3B-8-2ISCB02 CONTACT T1 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 5B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BC	72196053	3X2-2HCSB07 CONTACT T2 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 5B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-AX	72696053	42-C-2HCSA05 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-AX	72706053	42-O-2HCSA05 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-AA	72716053	42-O-2HCSA05 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AA	72726053	42-C-2HCSA05 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AX	72736053	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 5A	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-AX	72746053	TQS-C-2HCSA05 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-BA	72756053	42-C-2HCSB05 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-BA	72766053	42-O-2HCSB05 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-AH	72776053	42-O-2HCSB05 CONTACT 5 FAILED CLOSE	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-AH	72786053	42-C-2HCSB05 CONTACT 6 FAILED CLOSE	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-BA	72796053	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 5B	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-BA	72806053	TQS-C-2HCSB05 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-BX	73566053	2HCS*MOV 5A Z-57A PEN INBD ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BX	73596053	1-2HCSA05 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BX	73606053	42C-2HCSA05 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CH	73646053	2HCS*MOV 5B Z-57B PEN INBD ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CH	73676053	1-2HCSB05 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CH	73686053	42C-2HCSB05 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FG	75016053	3-2-2HCSA11 CONTACT T2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FF	75026053	3X2-2HCSA07 CONTACT R1 FAILED CLOSE	PERIODIC TEST	3X2-2HCSA07 CONTACT R1 CLOSED	
27-13-FL	75046053	3-2-2HCSB11 CONTACT T2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FK	75056053	3X2-2HCSB07 CONTACT R1 FAILED CLOSE	PERIODIC TEST	3X2-2HCSB07 CONTACT R1 CLOSED	
27-13-AX	76086053	33-2HCSA05 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-BA	76096053	33-2HCSB05 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-FF	76316053	3A-8-2ISCA02 CONTACT R2 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-FK	76336053	3B-8-2ISCB02 CONTACT R2 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-CE	77316053	42-0-2HCSA05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CE	77326053	42-C-2HCSA05 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CE	77336053	33-2HCSA05 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CE	77346053	3-4-2HCSA11 CONTACT R1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CX	77356053	3X2-2HCSA07 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CE	77366053	TQS-0-2HCSA05 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CX	77386053	3X2-2HCSA07 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CQ	77396053	42-0-2HCSB05 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CQ	77406053	42-C-2HCSB05 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CQ	77416053	33-2HCSB05 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DB	77426053	3-4-2HCSB11 CONTACT R1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DA	77436053	3X2-2HCSB07 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CQ	77446053	TQS-0 2HCSB05 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DA	77466053	3X2-2HCSB07 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-P	70556062	2HCS*MOV 6A FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-AC	70566062	420-2HCSA06 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-EH	70576061	3A FUSE CKT 2HCSA06 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	70586061	575-115V 150VA XFMR CKT 2HCSA06 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-R	70606062	2HCS*MOV 6B FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-AK	70616062	420-2HCSB06 ENERGIZED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-EN	70626061	3A FUSE CKT 2HCSB06 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EN	70636061	575-115V 150VA XFMR CKT 2HCSB06 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BL	71766063	1-2HCSA06 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BN 27-13-BL 27-13-EL	71776063	1-2HCSA06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BL	71786063	3-2-2HCSA11 CONTACT T3 FAILED OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BL	71796063	3A-8-2ISCA02 CONTACT R4 OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BL	71806063	3X2-2HCSA07 CONTACT R3 FAILED OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-BP	71816063	1-2HCSB06 CONTACT 2T FAILED OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-BQ 27-13-BP 27-13-ER	71826063	1-2HCSB06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BP	71836063	3-2-2HCSB11 CONTACT T3 FAILED OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-BP	71846063	3B-8-2ISCB02 CONTACT R4 OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-BP	71856063	3X2-2HCSB07 CONTACT R3 FAILED OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-BM	72276063	1-2HCSA06 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 6A MANUAL OPENING CKT ESTABLISHED	
27-13-BM	72296063	3A-8-2ISCA02 CONTACT T3 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 6A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BM	72306063	3X2-2HCSA07 CONTACT T4 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 6A AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BQ	72316063	1-2HCSB06 CONTACT 2B FAILED CLOSE	PERIODIC TEST	2HCS*MOV 6B MANUAL OPENING CKT ESTABLISHED	
27-13-BQ	72336063	3B-8-2ISCB02 CONTACT T3 FAILED OPEN	PERIODIC TEST	2HCS*MOV 6B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BQ	72346063	3X2-2HCSB07 CONTACT T4 FAILED CLOSE	PERIODIC TEST	2HCS*MOV 6B AUTOMATIC OPENING CKT ESTABLISHED	
27-13-BK	72926063	42-C-2HCSA06 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BK	72936063	42-O-2HCSA06 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AC	72946063	42-O-2HCSA06 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AC	72956063	42-C-2HCSA06 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-BK	72966063	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 4A	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BK	72976063	TQS-C-2HCSA06 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BN	72986063	42-C-2HCSB06 CLOSING COIL FAILED OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-BN	72996063	42-O-2HCSB06 CONTACT 9 FAILED OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-AK	73006063	42-O-2HCSB06 CONTACT 5 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-AK	73016063	42-C-2HCSB06 CONTACT 6 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-BN	73026063	MECHANICAL OVERLOAD EXIST IN CLOSING PATH OF 2HCS*MOV 6B	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-BN	73036063	TQS-C-2HCSB06 CONTACT 17 FAILED OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-G	73246063	2HCS*MOV 6A 2-56A PEN INBD ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EL	73276063	1-2HCSA06 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EL	73286063	42C-2HCSA06 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EN	73326063	2HCS*MOV 6B Z-56B PEN INBD ISOL FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ER	73356063	1-2HCSB06 CONTACT 2T FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ER	73366063	42C-2HCSB06 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EL	74676063	3-2-2HCSA11 CONTACT T3 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EL	74686063	3X2-2HCSA07 CONTACT R3 FAILED CLOSE	PERIODIC TEST	3X2-2HCSA07 CONTACT R3 CLOSED	
27-13-ER	74736063	3-2-2HCSB11 CONTACT T3 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ER	74746063	3X2-2HCSB07 CONTACT R3 FAILED CLOSE	PERIODIC TEST	3X2-2HCSB07 CONTACT R3 CLOSED	
27-13-BK	76126063	33-2HCSA06 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-56A PEN INBD ISOL 2HCS*MOV 6A OPEN	
27-13-BN	76136063	33-2HCSB06 CONTACT 15 FAILS OPEN	PERIODIC TEST	Z-56B PEN INBD ISOL 2HCS*MOV 6B OPEN	
27-13-EL	76236063	3A-8-2ISCA02 CONTACT R4 FAILED CLOSE	PERIODIC TEST	NONE	
27-13-ER	76256063	3B-8-2ISCB02 CONTACT R4 FAILED CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EH	76616063	42-O 2HCSA06 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	76626063	42-C-2HCSA06 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	76636063	33-2HCSA06 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	76646063	3-4-2HCSA11 CONTACT R2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EV	76656063	1-2HCSA06 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	76666063	TQS-O 2HCSA06 CONTACT 18 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EV	76696063	3X2-2HCSA07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EN	76716063	42-O-2HCSB06 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EN	76726063	42-C-2HCSB06 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EN	76736063	33-2HCSB06 CONTACT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FA	76746063	3-4-2HCSB11 CONTACT R2 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EZ	76756063	1-2HCSB06 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EZ	76796063	3X2-2HCSB07 CONTACT T4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-BR	70686071	CB-12A-2HCSA09 30 A MAIN CKT BREAKER FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BR	70696071	SHORT CIRCUIT FAULT EXISTS IN 2HCSA09 CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AD	70706073	YY-6PA-2HCSA09 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EE	70736071	575V 120V 3KVA XFMR CKT 2HCSA09 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AD	70746073	1-2HCSA09 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AD	70756073	1-2HCSA09 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BR	70766073	F1-2HCSA09 3A FUSE FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BR	70776073	SHORT CKT EXISTS ON YY-6PA-2HCSA09 CIRCUIT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BR	70786073	CB-2A-2HCSA09 15A CIRCUIT BREAKER FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BV	70976073	42-C-2HCSA09 (JS-1-C)CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EE	73046071	CB-11A PH B CIRCUIT BRKR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EE	73056071	CB-11A PH C CIRCUIT BRKR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EE	73076073	3X4-2HCSA09 CONTACT T1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ES	73106073	3X4-2HCSA09 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BV	73716073	3X2-2HCSA09 (YY-18)CONTACT R1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BV	73726073	1A-2HCSA09 CONTACT 2T FALED CLOSE	PERIODIC TEST	1A-2HCSA09 CONTACT 2T CLOSED	
27-13-BV	73736073	1A-2HCSA09 OPERATOR ERROR	PERIODIC TEST	1A-2HCSA09 CONTACT 2T CLOSED	
27-13-BV	73746073	HS-11-2HCSA09 DISCONNECT SH FAILED CLOSE	PERIODIC TEST	HS-11-2HCSA09 DISCONNECT SHITCH CLOSED	
27-13-BV	73756073	HS-11-2HCSA09 OPERATOR ERROR	PERIODIC TEST	HS-11-2HCSA09 DISCONNECT SHITCH CLOSED	
27-13-BY	73766073	3X2-2HCSA09 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BY	73776073	JS-3PA-2HCSA09 CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BY	73786073	CB-3A-2HCSA09 15A BREAKER FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BY	75186073	F4-2HCSA09 1A FUSE FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AD	76146073	33-2HCSA09 (2S-10B) MOV 26A CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AD	76156073	33-2HCSA09 2HCS*SOV 10A CONTACT FAIL OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ES	74096083	F6-2HCSA09 1A FUSE FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ES	74106083	2HCS*TSH X-14A CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ES	74116083	2HCS*RBNR 1A HEATER GAS TEMP HIGH	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ES	74146083	2HCS*TSHX 15A CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ES	74156083	2HCS*RBNR 1A HEATER OUTLET GAS TEMP HIGH	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AL	70826091	CB-12B-2HCSB09 30A MAIN CKT BREAKER FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AL	70836091	SHORT CIRCUIT FAULT EXISTS IN 2HCSB09 CONTROL CKT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AL	70846093	YY-6PB-2HCSB09 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EG	70876091	575-120V 3KVA XFMR CKT 2HCSB09 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BT	70886093	1-2HCSB09 CONTACT 2B FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BT	70896093	1-2HCSB09 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-AL	70906093	F1-2HCSB09 3A FUSE FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AL	70916093	SHORT CKT EXISTS ON YY-6PB-2HCSB09 CIRCUIT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-AL	70926093	CB-2B-2HCSB09 15A CIRCUIT BREAKER FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CF	71046093	42-C-2HCSB09 (JS-1-C)CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EG	73146091	CB-11B PH B CIRCUIT BRKR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EG	73156091	CB-11B PH C CIRCUIT BRKR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BT	73166093	3X4-2HCSB09 CONTACT T1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ET	73196093	3X4-2HCSB09 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CF	73796093	3X2-2HCSB09 (YY-18)CONTACT R1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CF	73806093	1A-2HCSB09 CONTACT 2T FAILED CLOSE	PERIODIC TEST	1B-2HCSB09 CONTACT 2T CLOSED	
27-13-CF	73816093	1A-2HCSB09 OPERATOR ERROR	PERIODIC TEST	1B-2HCSB09 CONTACT 2T CLOSED	
27-13-CF	73826093	HS-11-2HCSB09 DISCONNECT SW FAILED CLOSE	PERIODIC TEST	HS-11-2HCSB09 DISCONNECT SWITCH CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-CF	73836093	HS-11-2HCSB09 OPERATOR ERROR	PERIODIC TEST	HS-11-2HCSB09 DISCONNECT SWITCH CLOSED	
27-13-CJ	73846093	3X2-2HCSB09 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CJ	73856093	JS-3PA-2HCSB09 CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CJ	73866093	CB-3A-2HCSB09 15A BREAKER FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-CJ	75196093	F4-2HCSB09 1A FUSE FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BT	76186093	33-2HCSB07 (2S-10)MOV 26B CONTACT FAILS OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-BT	76196093	33-2HCSB09 2HCS*SOV 10B CONTACT FULL OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ET	74176103	F6-2HCSB09 1A FUSE FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ET	74186103	2HCS*TSHX-14B CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ET	74196103	2HCS*RBNR 1B HEATER GAS TEMP HIGH	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ET	74226103	2HCS*TSHX 15B CONTACT FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-ET	74236103	2HCS*RBNR 1B HEATER OUTLET GAS TEMP HIGH	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-M	73876113	42-C-2HCSA09 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-M	73926113	1A-2HCSA09 RBNR 1A HTR INLET SW OPERATOR ERROR	PERIODIC TEST	1A-2HCSA09 CONTACT 2T CLOSED	
27-13-M	73936113	1A-2HCSA09 RECOMBINER HTR INLET SW CONT 2T FAILED CLOSE	PERIODIC TEST	1A-2HCSA09 CONTACT 2T CLOSED	
27-13-M	73946113	HS13-2HCSA09 CONTACT OF DISCONNECT SW FAILED CLOSE	PERIODIC TEST	HS 13-2HCSA09 CONTACT CLOSED	
27-13-M	73956113	HS13-2HCSA09 DISCONNECT SW OPERATOR ERROR	PERIODIC TEST	HS 13-2HCSA09 CONTACT CLOSED	
27-13-N	73966113	42-C-2HCSB09 CLOSING COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-N	74016113	1A-2HCSB09 RECOMBINER HTR INLET SW CONT 2T FAILED CLOSE	PERIODIC TEST	1A-2HCSB09 CONTACT 2T CLOSED	
27-13-N	74026113	HS13-2HCSB09 CONTACT OF DISCONNECT SW FAILED CLOSE	PERIODIC TEST	HS 13-2HCSB09 CONTACT CLOSED	
27-13-N	74036113	HS13-2HCSB09 DISCONNECT SW OPERATOR ERROR	PERIODIC TEST	HS 13-2HCSB09 CONTACT CLOSED	
27-13-N	75206113	1A-2HCSB09 RBNR 1B HTR INLET SW OPERATOR ERROR	PERIODIC TEST	1A-2HCSB09 CONTACT 2T CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-DP	71137013	3X-2HCSA07 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DT	71237013	3X-2HCSB07 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DX	71337013	3X1-2HCSA07 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-EB	71417013	3X1-2HCSB07 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-EC	71577013	3X2-2HCSA07 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	Z-57A PEN INBD ISOL 2HCS*MOV 5A OPEN	
27-13-ED	71657013	3X2-2HCSB07 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	Z-57B PEN INBD ISOL 2HCS*MOV 5B OPEN	
27-13-DP 27-13-DX 27-13-EC	74047013	1B-2HCSA07 CONTACT 2T FAILED CLOSE	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DP 27-13-DX 27-13-EC	74057013	1B-2HCSA07 OPERATOR ERROR	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DT 27-13-EB 27-13-ED	74067013	1B-2HCSB07 CONTACT 2T FAILED CLOSE	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DT 27-13-EB 27-13-ED	74077013	1B-2HCSB07 OPERATOR ERROR	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-FB	74507013	3X1-2HCSA07 RELAY COIL FAILED OPEN	PERIODIC TEST	3X1-2HCSA07 CONTACT R1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-GB	74527011	LOSS OF POWER TO CKT #23 2SCH*PNL 101A 120V DIV I BUS A	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GB	74537011	F1-2HCSA07 3A FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GB	74547013	1B-2HCSA07 CONTACT 2T FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GB	74557013	1B-2HCSA07 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FC	74617013	3X1-2HCSB07 RELAY COIL FAILED OPEN	PERIODIC TEST	3X1-2HCSB07 CONTACT R1 CLOSED	
27-13-GC	74637011	LOSS OF POWER TO CKT #22 2SCH*PNL 301B 120 V DIV II BUS B	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GC	74647011	F1-2HCSB07 3A FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GC	74657013	1B-2HCSB07 CONTACT 2T FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GC	74667013	1B-2HCSB07 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FF	74727013	3X2-2HCSA07 RELAY COIL FAILED OPEN	PERIODIC TEST	3X2-2HCSA07 CONTACT R3 CLOSED	
27-13-FK	74787013	3X2-2HCSB07 RELAY COIL FAILED OPEN	PERIODIC TEST	3X2-2HCSB07 CONTACT R3 CLOSED	
27-13-FD	74837013	3X-2HCSA07 RELAY COIL FAILED OPEN	PERIODIC TEST	3X-2HCSA07 CONTACT R1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-FH	74887013	3X-2HCSB07 RELAY COIL FAILED OPEN	PERIODIC TEST	3X-2HCSB07 CONTACT R1 CLOSED	
27-13-EU	76507013	3X1-2HCSA07 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EX	76607013	3X1-2HCSB07 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EV	76707013	3X2-2HCSA07 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EZ	76807013	3X2-2HCSB07 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GB	76897013	3X-2HCSA07 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-GC	76987013	3X-2HCSB07 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DN	71127043	3-1-HCSA11 RELAY COIL FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DH	71147043	LOSS OF 120V AC DIV I BUS A 2SCH*PNL 102A CONTROL PWR	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DH	71157043	F1-2HCSA11 3A CONTROL PWR FUSE FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DS	71227043	3-1-HCSB11 RELAY COIL FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-EA	71247043	LOSS OF 120V AC DIV II BUS B 2SCH*PNL 303B CONTROL PWR	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EA	71257043	F1-2HCSB11 3A CONTROL PWR FUSE FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DW	71327043	3-2-2HCSA11 RELAY COIL FAILED OPEN	PERIODIC TEST	Z-55A PEN INBD ISOL 2HCS*MOV 4A OPEN	
27-13-EA	71407043	3-2-2HCSB11 RELAY COIL FAILED OPEN	PERIODIC TEST	Z-55B PEN INBD ISOL 2HCS*MOV 4B OPEN	
27-13-DN	73887043	3-1-2HCSA11 CONTACT T1 FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DN 27-13-DW 27-13-EA	73897043	1-2HCSA11 CONTACT A FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DN 27-13-DW 27-13-EW 27-13-FG	73907043	1-2HCSA11 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DN	73917043	1-2HCSA11 CONTACT B FAILED OPEN	PERIODIC TEST	Z-55A PEN OUTBD ISOL 2HCS*MOV 1A OPEN	
27-13-DS	73977043	3-1-2HCSA11 CONTACT T1 FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DS	73987043	1-2HCSB11 CONTACT A FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-DS 27-13-EA 27-13-FA 27-13-FL	73997043	1-2HCSB11 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-DS	74007043	1-2HCSA11 CONTACT B FAILED OPEN	PERIODIC TEST	Z-55B PEN OUTBD ISOL 2HCS*MOV 1B OPEN	
27-13-FE	74497043	3-1-2HCSA11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-EH 27-13-FG	74517043	1-2HCSA11 CONTACT A FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL. GAS CONTROL SYSTEM	
27-13-FJ	74607043	3-1-2HCSB11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FA 27-13-FL	74627043	1-2HCSB11 CONTACT A FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FG	74717043	3-2-2HCSA11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FL	74777043	3-2-2HCSB11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FA	76387043	3-1-2HCSB11 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FG	76397043	3-1-2HCSA11 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-FL	76407043	3-1-2HCSB11 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EJ	76487043	3-3-2HCSA11 RELAY COIL ENRGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EY	76587043	3-3-2HCSB11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	76687043	3-4-2HCSA11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-13-FA	76787043	3-4-2HCSB11 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II DBA HCS COMBL GAS CONTROL SYSTEM	
27-13-EH	78367043	3-1-2HCSA11 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I DBA HCS COMBL GAS CONTROL SYSTEM	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-B	V003GTS3	2GTS*DMP1A RELIEF DAMPER FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-H	V004GTS3	2GTS*FLT1A FLTR TRAIN FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-H	V005GTS3	2GTS*FN1A FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AK	V006GTS3	2GTS*FN1A FAN MTR WDG FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AM	V043GTS3	33-2GTSA04 TRAIN A DISCH V LIMIT SW FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-H	V053GTS3	2GTS*MOV3A TRAIN A DISCH V FAILS CLOSED MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-A	V075GTS3	2GTS*MOV1A FAILS CLOSED MECH	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AP	V083GTS3	EXCESS TORQUE 2GTS*MOV1A	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-E	V096GTS3	2GTS*PV5A SERVO VALVE FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-D	V101GTS3	2GTS*CH1A 20KW 575V 3 PH HTR ELEMENTS FAIL	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-D	V102GTS3	2GTS*CH1A SCR CONTROL ASSY FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-D	V103GTS1	LOSS OF 2GTS*CH1A 2EJS*PNL104	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-D	V104GTS3	2FPW*V596 BALL VALVE FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-D	V105GTS3	2FPH*V536 BALL VALVE LEFT OPEN BY OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-H	V106GTS3	2GTS*MOV2A TRAIN A FILTER INL VALVE FAILS CLOSED MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AZ	V122GTS3	2GTS*MOV 4A FAILS CLOSED MECH	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BD	V130GTS3	33-2GTSA02 MOV 2A LIMIT SW ACTUATOR FAILS MECH	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BS	V131GTS3	EXCESS TORQUE 2GTS*MOV4A	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BC	V142GTS3	33-2GTSA02 MOV2A LIMIT SW ACTUATOR FAILS MECH	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-J	V149GTS3	2GTS*MOV4A FAILS OPEN MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BK	V152GTS3	33-2GTSA02 MOV2A LIMIT SW ACTUATOR FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V156GTS3	EXCESS TORQUE 2GTS*MOV4A	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V161GTS3	3X-2GTSA06 START MEM RLY FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V163GTS3	3X1-2GTSA06 START MEM RLY FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V165GTS3	3X2-2GTSA06 AUTO RESTART MEM RLY FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-B	V166GTS3	2GTS*DMP1B RELIEF DAMPER FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-P	V167GTS3	2GTS*FLT1B FLTR TRAIN FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-P	V168GTS3	2GTS*FN1B FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AS	V169GTS3	2GTS*FN1B FAN MTR WDG FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AU	V208GTS3	33-2GTSB04 TRAIN A DISCH V LIMIT SW FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-P	V218GTS3	2GTS*MOV3B TRAIN A DISCH V FAILS CLOSED MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-A	V238GTS3	2GTS*MOV1B FAILS CLOSED MECH	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AH	V246GTS3	EXCESS TORQUE 2GTS*MOV1B	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-G	V259GTS3	2GTS*PV5B SERVO VALVE FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-F	V264GTS3	2GTS*CH1B 20KW 575V 3 PH HTR ELEMENTS FAIL	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-F	V265GTS3	2GTS*CH1B SCR CONTROL ASSY FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-F	V266GTS1	LOSS OF 2GTS*CH1B 2EJS*PNL304	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-F	V267GTS3	2FPH*V597 BALL VALVE FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-F	V268GTS3	2FPH*V597 BALL VALVE LEFT OPEN BY OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-P	V269GTS3	2GTS*MOV2B TRAIN B FILTER INL VALVE FAILS CLOSED MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-C	V285GTS3	2GTS*MOV4B FAILS CLOSED MECH	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BG	V293GTS3	33-2GTSB02 MOV 2B LIMIT SW ACUTATOR FAILS MECH	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V294GTS3	EXCES TORQUE 2GTS*MOV4B	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BF	V305GTS3	33-2GTSB02 MOV2B LIMIT SW ACTUATOR FAILS MECH	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-Q	V308GTS3	2GTS*MOV4B FAILS OPEN MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BV	V311GTS3	33-2GTSB02 MOV2B LIMIT SW ACTUATOR FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CT	V315GTS3	EXCESS TORQUE 2GTS*MOV4B	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BX	V320GTS3	3X-2GTSB06 START MEM RLY FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BX	V322GTS3	3X1-2GTSB06 START MEM RLY FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BX	V324GTS3	3X2-2GTSB06 AUTO RESTART MEM RLY FAILS MECH	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BB	V328GTS3	2GTS*MOV 3A MECHANICALLY FAILS CLOSE	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-C	V347GTS3	2GTS*FN1A MECHANICALLY FAILS INOP	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BA	V359GTS3	2GTS*MOV 3B MECHANICALLY FAILS CLOSE	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-AZ	V378GTS3	2GTS*FN1B MECHANICALLY FAILS INOP	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BN 27-15-BP	V025HVR3	3-1-2HVRA90 LOCA HI-RAD;LO-FLOW ISO RLY DE-ENERGIZED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BY 27-15-BZ	V190HVR3	3-2-2HVRB90 LOCA HI-RAD;LO-FLOW ISO RLY DE-ENERGIZED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BQ	V0330051	2GTS*PDSL5A NEST ALARM RLY OUTPUT CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BQ 27-15-CF	V0370055	2GTS*PNRS5A I-V INPUT CONVERTER MODULE FAILS	ANALOG INDICATION	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BQ 27-15-CF	V0380051	2GTS*PDIT5A RX BLDG IN-OUT DIFF PRESS XMTR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BQ 27-15-E	V0390051	LOSS OF DIV I BUS A 2SCV*PNL 101A CKT #2	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CF	V0970053	2GTS*E-I 5A VOLTAGE TO CURRENT CONV MODULE FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CF	V0990053	2GTS*PDC5A PROP+INTEGRAL MODULE FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CA	V1980051	2GTS*PDSL5B NEST ALARM RLY OUTPUT CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CA 27-15-CP	V2020055	2GTS*PHRS5B I-V INPUT CONVERTER MODULE FAILS	ANALOG INDICATION	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CA 27-15-CP	V2030051	2GTS*PDIT5B RX BLDG IN-OUT DIFF PRESS XMTR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CA 27-15-G	V2040051	LOSS OF DIV I BUS B 2SCV*PNL301B CKT #2	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CP	V2600053	2GTS*E 1-5B VOLTAGE TO CURRENT CONV MODULE FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CP	V2620053	2GTS*PDC-5B PROP+INTEGRAL MODULE FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BP	V0300233	2GTS*TIS23B FLT1B HI TEMP RLY CONT FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BP	V0310233	2GTS*TIS23B CHARCOAL ABSORB HI TEMP PRI ELEM FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BZ	V1950233	2GTS*TIS23A FLT1B HI TEMP RLY CONT FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BZ	V1960233	2GTS*TIS23A CHARCOAL ABSORB HI TEMP PRI ELEM FAILS	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BN 27-15-AN 27-15-AN	V0206013	1-2GTSA01 SEL SW OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AL	V0406011	42-2GTSA01 FN1A MOTOR STARTER COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AL	V0416011	49-2GTSA01 FN1A MOTOR STARTER OL TRIP CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AL	V0426011	LOSS OF 2EHS*MCC102A 575VAC PWR SPLY CKT 2GTSA01	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AN	V0446013	33-2GTSA04 TRAIN A DISCH V LIMIT SW CONT 1 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AN	V0456013	1-2GTSA01 SEL SW CONT 1-2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AN	V0466013	1-2GTSA01 SEL SW CONT 13-14 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AN	V0476013	1-2GTS01 SEL SW CONT 9-10 OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AN	V0486013	3X1-2GTSA06 AUTO START MEM RLY CONT 11-12 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AL	V0496011	2EHS*MCC102A 575V-115VAC CKT 2GTSA01 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AL	V0506011	FUSE 3A-2GTSA0L 2EHS*MCC 102A FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AN	V0516011	42-2GSA01 NOT START SEAL IN CONT 3-4 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AN	V0526013	1-2GTSA01 SEL SW CONT 17-18 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-Z	V0696013	42X-2GTSA01 AUX RLY COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-Z	V0706011	42-2GTSA01 FN1A NOT STARTER AUX CONT 12-13 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-D	V1006013	42X-2GTSA01 AUX RLY CONT N3-T3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AT	V2056011	42-2GTSB01 FN1A MOTOR STARTER COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AT	V2066011	49-2GTSB01 FN1A MOTOR STARTER OVLD TRIP CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AT	V2076011	LOSS OF 2EHS*MCC302B 575VAC PWR SPLY CKT 2GTSB01	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AU	V2096013	33-2GTSB04 TRAIN A DISCH V LIMIT SW CONT 1 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AU	V2106013	1-2GTSB01 SEL SW CONT 1-2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AU	V2116013	1-2GTSB01 SEL SW CONT 13-14 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AU	V2126013	1-2GTSB01 SEL SW CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AU	V2136013	3X1-2GTSB06 AUTO START NEH RLY CONT 11-12 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AT	V2146011	2EHS*MCC302B 575V-115VAC CKT 2GTSB01 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AT	V2156011	FUSE 3A-2GTSB01 2EHS*MCC302B FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AV	V2166011	42-2GTSB01 HOT START SEAL IN CONT 3-4 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AV	V2176013	1-2GTSB01 SEL SW CONT 17-18 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AE	V2326013	42X-2GTSB01 AUX RLY COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AE	V2336011	42-2GTSB01 FN1B HOT STARTER AUX CONT 12-13 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-F	V2636013	42X-2GTSB01 AUX RLY CONT M3-T3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BJ	V3496011	2GTSA01 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BJ	V3496011	3A-2GTSA01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BJ	V3506013	42-2GTSA01 CONTACT 4 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BH	V3516013	33-2GTSA04 CONTACT 1 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BH	V3526013	42-2GTSA01 COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BH	V3536013	49-2GTSA01 NC CONTACT FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BU 27-15-BJ 27-15-BH	V3546012	1-2GTSA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BJ	V3556013	1-2GTSA01 CONTACT 18 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BH	V3566013	1-2GTSA01 CONTACT 15 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BH	V3576013	1-2GTSA01 CONTACT 9 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BH	V3586013	3X1-2GTSA06 CONTACT 12 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-AZ	V3796011	2GTSB01 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-AZ	V3806011	3A-2GTSB01 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BE	V3816013	42-2GTSB01 CONTACT 4 FAIL OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BE	V3826013	33-2GTSB04 CONTACT 1 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BE	V3836013	42-2GTSB01 COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BE	V3846013	49-2GTSB01 NC CONTACT FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BE 27-15-CE	V3856012	1-2GTSB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BE	V3866013	1-2GTSB01 CONTACT 2 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BE	V3876013	1-2GTSB01 CONTACT 18 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CE	V3886013	1-2GTSB01 CONTACT 13 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CE	V3896013	1-2GTSB01 CONTACT 9 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CE	V3906013	3X1-2GTSB06 CONTACT 12 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BU	V3916013	1-2GTSA01 CONTACT 2 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-AF	V0766023	42C-2GTSA02 STARTER CLOSING COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AG	V0776021	LOSS OF 2EHS*MCC102A 575VAC PWR SPLY CKT 2GTSA02	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1A CLOSED	
27-15-AG	V0786021	2EHS*MCC102A 575-115VAC CKT 2GTSA02 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1A CLOSED	
27-15-AG	V0796021	FUSE 3A-2GTSA02 2EHS*MCC102A FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1A CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AG	V0806023	1-2GTSA02 SEL SH CONT 2B FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AG 27-15-AF	V0816023	1-2GTSA02 SEL SH OPERATOR ERROR	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AG	V0826023	3-2GTSA06 AUTO START MEM RLY CONT 9-10 FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AP	V0846023	33-2GTSA02 OPENING TORQUE SW CONT 1B FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AP	V0856021	49X-2GTSA02 OVLD AUX RLY CONT 1-2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1A CLOSED	
27-15-AP	V0866023	42C-2GTSA02 STARTER AUX CONT 6 FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AQ	V0876023	42O-2GTSA02 STARTER SEAL IN CONTACT 4-5 FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AQ	V0886023	42O-2GTSA02 STARTER OPENING COIL FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AP	V0896021	49X-2GTSA02 OVLD AUX RLY COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1A CLOSED	
27-15-AP	V0906021	49X-2GTSA02 OVLD TRIPPING CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1A CLOSED	
27-15-AF	V0916023	42C-2GTSA02 STARTER SEAL IN CONT 7-8 FAILS CLOSED	PERIODIC TEST	2GTS*MOV1A CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AF	V0926023	1-2GTSA02 SEL SW CONT 2T FAILS CLOSED	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AF	V0936023	3X-2GTSA06 AUTO START MEN RLY CONT 7-8 FAILS CLOSED	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AP	V0946023	33-2GTSA02 MOV1A OPENING LIMIT SW CONT 4 FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AP	V0956023	33-2GTSA02 MOV1A OPENING BYPASS LS CONT 11 FAILS OPEN	PERIODIC TEST	2GTS*MOV1A CLOSED	
27-15-AH	V2396023	42C-2GTSB02 STARTER CLOSING COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AJ	V2406021	LOSS OF 2EHS*MCC302B 575VAC PWR SPLY CKT 2GTSB02	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1B CLOSED	
27-15-AJ	V2416021	2EHS*MCC302B 575-115VAC CKT 2GTSB02 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1B CLOSED	
27-15-AJ	V2426021	FUSE 3A-2GTSB02 2EHS*MCC102A FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1B CLOSED	
27-15-AJ	V2436023	1-2GTSB02 SEL SW CONT 2B FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AJ 27-15-AH	V2446023	1-2GTSB02 SEL SW OPERATOR ERROR	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AJ	V2456023	3X-2GTSB06 AUTO START MEN RLY CONT 9-10 FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AH	V2476023	33-2GTSB02 OPENING TORQUE SH CONT 1B FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AH	V2486021	49X-2GTSB02 OVLD AUX RLY CONT 1-2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1B CLOSED	
27-15-AH	V2496023	42C-2GTSB02 STARTER AUX CONT 6 FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AX	V2506023	42O-2GTSB02 STARTER SEAL IN CONTACT 4-5 FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AX	V2516023	42O-2GTSB02 STARTER OPENING COIL FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AH	V2526021	49X-2GTSS02 OVLD AUX RLY COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1B CLOSED	
27-15-AH	V2536021	49X-2GTSB02 OVLD TRIPPING CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2GTS*MOV1B CLOSED	
27-15-AH	V2546023	42C-2GTSB02 STARTER SEAL IN CONT 7-8 FAILS CLOSED	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AH	V2556023	1-2GTSB02 SEL SW CONT 2T FAILS CLOSED	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AH	V2566023	3X-2GTSB06 AUTO START MEN RLY CONT 7-8 FAILS CLOSED	PERIODIC TEST	2GTS*MOV1B CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AH	V2576023	33-2GTSB02 MOV1A OPENING LIMIT SW CONT 4 FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-AH	V2586023	33-2GTSB02 MOV1A OPENING BYPASS LS CONT 11 FAILS OPEN	PERIODIC TEST	2GTS*MOV1B CLOSED	
27-15-K	V1076033	42-2GTSA03 MOV 2A MOT STARTER COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-K	V1086031	LOSS OF 2EHS*MCC102A 575VAC PWR SPLY CKT 2GTSA03	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-K	V1096031	2EHS*MCC102A 575V-115VAC CKT 2GTSA03 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-K	V1106031	FUSE 3A-2GTSA03 2EHS*MCC102A FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-L	V1116033	1-2GTSA03 SEL SW CONT 1-2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-L 27-15-M 27-15-L	V1126033	1-2GTSA03 SEL SW OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-M	V1136033	42-2GTSA03 MOV 2A MOT START SEAL IN CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-M	V1146033	1-2GTSA03 SEL SW CONT 17-18 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-L	V1156033	1-2GTSA03 SEL SW CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-L	V1166033	1-2GTSA03 SEL SW CONT 13-14 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-N	V1176033	3X-2GTSA03 AUX RLY CONT M1-R1 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-L	V1186033	3X1-2GTSA06 AUTO START MEM RLY CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-N	V1196033	3X-2GTSA03 AUX RLY ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-N	V1206033	42X-2GTSA01 AUX RLY CONT M1-R1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-N	V1216033	3X4-2GTSA06 TIMED AUX RLY CONT M1-R1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-R	V2706033	42-2GTSB03 MOV2B MOT STARTER COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-R	V2716031	LOSS OF 2EHS*MCC302B 575VAC PWR SPLY CKT 2GTSB03	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-R	V2726031	2EHS*MCC302B 575V-115VAC CKT 2GTSB03 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-R	V2736031	FUSE 3A-2GTSB03 2EHS*MCC302B FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-S	V2746033	1-2GTSB03 SEL SW CONT 1-2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-S 27-15-T 27-15-S	V2756033	1-2GTSB03 SEL SW OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-T	V2766033	42-2GTSB03 MOV 2B NOT START SEAL IN CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-T	V2776033	1-2GTSB03 SEL SW CONT 17-18 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-S	V2786033	1-2GTSB03 SEL SW CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-S	V2796033	1-2GTSB03 SEL SW CONT 13-14 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-U	V2806033	3X-2GTSB03 AUX RLY CONT M1-R1 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-S	V2816033	3X1-2GTSB06 AUTO START MEM RLY CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-U	V2826033	3X-2GTSB03 AUX RLY ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-U	V2836033	42X-2GTSB01 AUX RLY CONT M1-R1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-U	V2846033	3X4-2GTSB06 TIMED AUX RLY CONT M1-R1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-V	V0546043	42-GTSA04 HOV3A MOT STARTER COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-V	V0556041	LOSS OF 2EHS*MCC 102A 575VAC PWR SPLY CKT 2GTSA04	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-V	V0566041	2EHS*MCC 102A 575V-115VAC CKT 2GTSA04 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-V	V0576041	FUSE 3A-2GTSA04 2EHS*MCC 102A FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-W	V0586043	1-2GTSA04 SEL SW CONT 1-2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-W 27-15-X 27-15-W	V0596043	1-2GTSA04 SEL SW OPERATOR ERROR.	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-X	V0606043	42-2GTSA04 MOV 3A MOT START SEAL IN CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-X	V0616043	1-2GTSA04 SEL SW CONT 17-18 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-W	V0626043	1-2GTSA04 SEL SW CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-W	V0636043	1-2GTSA04 SEL SW CONT 13-14 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-Y	V0646043	3X-2GTSA04 AUX RLY CONT M2-R2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-Y	V0666043	3X-2GTSA04 AUX RLY ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-Z	V0676043	42X-2GTSA01 AUX RLY CONT N2-R2 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-Y	V0686043	3X4-2GTSA06 TIMED AUX RLY CONT N2-R2 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AA	V2196043	42-2GTSB04 MOV3B MOT STARTER COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AA	V2206041	LOSS OF 2EHS*MCC302B 575VAC PWR SPLY CKT 2GTSB04	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AA	V2216041	2EHS*MCC302B 575-115VAC CKT 2GTSB04 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AA	V2226041	FUSE 3A-2GTSB04 2EHS*MCC302B FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AB	V2236043	1-2GTS04 SEL SW CONT 1-2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AB 27-15-AC 27-15-AB	V2246043	1-2GTSB04 SEL SW OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AC	V2256043	42-2GTSB04 MOV3B MOT START SEAL IN CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AC	V2266043	1-2GTSB04 SEL SW CONT 17-18 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AD	V2276043	3X-2GTSB04 AUX RLY CONT M2-R2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AD	V2296043	3X-2GTSB04 AUX RLY ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AE	V2306043	42X-2GTSB01 AUX RLY CONT M2-R2 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AD	V2316043	3X4-2GTSB06 TIMED AUX RLY CONT M2-R2 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AB	V3266043	1-2GTSB04 SEL SH CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AB	V3276043	1-2GTSB04 SEL SH CONT 13-14 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BB	V3296043	42-2GTSA04 COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BB	V3306041	2GTSA04 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BB	V3316041	3A-2GTSA04 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CL 27-15-CM 27-15-CL	V3326042	1-2GTSA04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CL	V3336043	1-2GTSA04 CONTACT 2 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CM	V3346043	42-2GTSA04 CONTACT 4 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CN	V3356043	1-2GTSA04 CONTACT 18 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CL	V3366043	1-2GTSA04 CONTACT 14 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CL	V3376043	1-2GTSA04 CONTACT 10 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3386043	3X1-2GTSA06 CONTACT 10 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CL	V3396043	3X-2GTSA04 CONTACT R2 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BA	V3606043	42-2GTSB04 COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BA	V3616041	2GTSB04 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BA	V3626041	3A-2GTSB04 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CU 27-15-CV 27-15-CU	V3636042	1-2GTSB04 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CU	V3646043	1-2GTSB04 CONTACT 2 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CV	V3656043	42-2GTSB04 CONTACT 4 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CV	V3666043	1-2GTSB04 CONTACT 18 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CU	V3676043	1-2GTSB04 CONTACT 14 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CU	V3686043	1-2GTSB04 CONTACT 10 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CH	V3696043	3X1-2GTSB06 CONTACT 10 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CU	V3706043	3X-2GTSB04 CONTACT R2 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BC	V1236053	42C-2GTSA05 STARTER CLOSING COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BK 27-15-BS 27-15-BJ	V1246051	LOSS OF 2EHS*MCC102A (GREEN)	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BK	V1256051	2EHS*MCC102A 575-115VAC CKT 2GTSA05 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BK	V1266051	FUSE 3A-2GTSA05 2EHS*MCC102A FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BD	V1276053	1-2GTSA05 SEL SW CONT 2B FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BD 27-15-BC 27-15-BK	V1286053	1-2GTSA05 SEL SW OPERATOR ERROR	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BD	V1296053	33-2GTSA02 MOV2A FULLY CL LIMIT SW CONT 7 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BS	V1326053	33-2GTSA05 OPENING TORQUE SW CONT 1B FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BS	V1336051	49X-2GTSA05 OVLD AUX RLY CONT 1-2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BS	V1346053	42C-2GTSA05 STARTER AUX CONT 6 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BT	V1356053	20-2GTSA05 STARTER SEAL IN CONTACT 4-5 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BT	V1366053	42O-2GTSA05 STARTER OPENING COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BS	V1376051	49X-2GTSA05 OVLD AUX RLY COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BS	V1386051	49X-2GTSA05 OVLD TRIPPING CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BC	V1396053	42C-2GTSA05 STARTER SEAL IN CONT 7-8 FAILS CLOSED	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BC	V1406053	1-2GTSA05 SEL SW CONT 2T FAILS CLOSED	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BC	V1416053	33-2GTSA02 MOV2A FULLY OPEN LIMIT SW CONT 3 FAILS CLOSED	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BS	V1436053	33-2GTSA05 MOV4A OPENING LIMIT SW CONT 4 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BS	V1446053	33-2GTSA05 MOV4A OPENING BYPASS LS CONT 11 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BK	V1506053	1-2GTSA05 SEL SH CONT 2T FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BK	V1516053	33-2GTSA02 MOV2A FULLY OPEN LIMIT SH CONT 3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V1536053	42C-2GTSA05 STARTER CLOSING COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V1546053	42O-2GTSA05 STARTER OPENING COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V1556053	42O-2GTSA05 STARTER AUX CONT 9 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V1576053	33-2GTSA05 CLOSING TORQUE SH CONT 17 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V1586053	33-2GTSA05 MOV 4A CLOSE LIMIT SH CONT 8 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CK	V1596053	33-2GTSA05 MOV 4A CLOSING BYPASS LS CONT 1 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BF	V2866053	42-2GTSB05 STARTER CLOSING COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BV 27-15-BA 27-15-AZ	V2876051	LOSS OF 2EHS*MCC302B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BV	V2886051	2EHS*MCC302B 575-115VAC CKT 2GTSB05 CONT XFMR FAILS	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BV	V2896051	FUSE 3A-2GTSB05 2EHS*MCC302B FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BG	V2906053	1-2GTSB05 SEL SW CONT 2B FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BG 27-15-BF 27-15-BV	V2916053	1-2GTSB05 SEL SW OPERATOR ERROR	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BG	V2926053	33-2GTSB02 MOV 2B FULLY CLOSE LIMIT SW CONT 7 FAILS OP	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V2956053	33-2GTSB05 OPENING TORQUE SW CONT 1B FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V2966051	49X-2GTSB05 OVLD AUX RLY CONT 1-2 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V2976053	42C-2GTSB05 STARTER AUX CONT 6 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CD	V2986053	42O-2GTSB05 STARTER SEAL IN CONTACT 4-5 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CD	V2996053	42O-2GTSB05 STARTER OPENING COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CC	V3006051	49X-2GTSB05 OVLD AUX RLY COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V3016051	49X-2GTSB05 OVLD TRIPPING CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BF	V3026053	42C-2GTSB05 STARTER SEAL IN CONT 7-8 FAILS CLOSED	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BF	V3036053	1-2GTSB05 SEL SW CONT 2T FAILS CLOSED	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BF	V3046053	33-2GTSB02 MOV2B FULLY OPEN LIMIT SW CONT 3 FAILS CLOSED	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V3066053	33-2GTSB05 MOV4B OPENING LIMIT SW CONT 4 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CC	V3076053	33-2GTSB05 MOV4B OPENING BYPASS LS CONT 11 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-BV	V3096053	1-2GTSB05 SEL SW CONT 2T FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BV	V3106053	33-2GTSB02 MOV2B FULLY OPEN LIMIT SW CONT 3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CT	V3126053	42C-2GTSB05 STARTER CLOSING COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CT	V3136053	420-2GTSB05 STARTER OPENING COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CT	V3146053	420-2GTSB05 STARTER AUX CONT 9 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CT	V3166053	33-2GTSB05 CLOSING TORQUE SH CONT 17 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CT	V3176053	33-2GTSB05 MOV4B CLOSE LIMIT SH CONT 8 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CT	V3186053	33-2GTSB05 MOV4B CLOSING BYPASS LS CONT 1 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BL	V0077011	FUSE F1-2GTSA06 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BL	V0087011	LOSS OF 120VAC DIV I BUS A 2SCH*PNL101A CKT #24	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BL 27-15-BQ 27-15-AL 27-15-V 27-15-AG 27-15-E 27-15-D 27-15-K 27-15-BK	V0097011	LOSS OF 600V LC 2EJS*US1 UNIT SUBSTATION EMER SNGR RM A	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CH 27-15-AR 27-15-BN	V0107013	1-2GTSA06 SEL SW OPERATOR ERROR	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CH	V0117012	1-2GTSA06 SEL SW CONT 2T FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CG	V0127013	3X3-2GTSA06 HI-TEMP AUX RLY CONT M2-T2 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-AK 27-15	V0137013	3X1-2GTSA06 START MEM RLY RESET BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CG	V0157013	3X3-2GTSA06 HI-TEMP AUX RLY ENERGIZED BY DIRECT SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CG	V0167011	2GTS*TIS9A CHARCOAL ADSORB HI-TEMP RLY CONT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CG	V0177011	2GTS*T1S9A CHARCOAL ADSORB HI-TEMP PRI ELEM FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BR	V0187013	3X3-2GTSA06 HI-TEMP AUX RLY CONT M3-R3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BN	V0197013	1-2GTSA01 SEL SH CONT 5-6 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BN	V0217013	1-2GTSA01 SEL SH CONT 19-20 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BN	V0227013	1-2GTSA06 SEL SH CONT 1B FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BN	V0237013	3X2-2GTSA06 AUTO RESTART MEM RLY OPR CONT 5-6 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BN	V0247013	3-1-2HVRA90 LOCA HI-RAD;LO-FLOW ISO RLY CONT M3-T3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CH	V0267013	3X2-2GTSA06 AUTO RESTART MEM RLY COIL LATCHED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CH	V0277012	3-1-2HVRA90 LOCA HI RAD;LO-FLOW ISO RLY CONT M2-T2 FAIL CLOSE	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BP	V0287013	3X2-2GTSA06 AUTO RESTART MEM RLY OPR CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BQ	V0297011	2GTS*PDSX5A RX BLDG NEG DIFF PRESS AUX RLY CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BP	V0327013	3-1-2HVRA90 LOCA HI-RAD;LO-FLOW ISO RLY CONT M2-T2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BP	V0357013	3X2-2GTSA06 RESET COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BP	V0367013	3-1-2HVRA90 LOCA HI-RAD;LO-FLOW RLY CONT M1-R1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-H	V0657013	3X1-2GTSA06 AUTO START MEM RLY CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CJ	V0717013	3X4-2GTSA06 TIMED AUX RLY ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CJ	V0727013	62-2GTSA06 TIMER CONT 5-1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CJ	V0737013	3X-2GTSA06 START MEM RLY CONT 11-12 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CJ	V0747013	62-2GTSA06 TIMER ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V1607013	3X-2GTSA06 START MEM RLY OPR COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V1627013	3X1-2GTSA06 START MEM RLY OPR COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V1647013	3X2-2GTSA06 AUTO RESTART MEM RLY OPR COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-BM	V1707011	FUSE F1-2GTSB06 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BM	V1717011	LOSS OF 120VAC DIV 1 BUS B 2SCM*PNL 301B CKT #23	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BM 27-15-CA 27-15-AT 27-15-AA 27-15-AJ 27-15-G 27-15-F 27-15-R 27-15-BV	V1727011	LOSS OF 600V LC 2EJS*US3 UNIT SUBSTATION EMER SNGR RM B	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CR 27-15-AY 27-15-BY	V1747012	1-2GTSB06 SEL SW OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CR	V1757012	SEL SW CONT 2T FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CQ	V1767013	3X3-2GTSB06 HI-TEMP AUX RLY CONT N2-T2 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AS 27-15	V1777013	3X1-2GTSB06 START MEM RLY RESET BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CQ	V1797013	3X3-2GTSB06 HI TEMP AUX RLY ENERGIZED BY DIRECT SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CQ	V1807011	2GTS*TIS9B CHARCOAL ADSORB HI-TEMP RLY CONT FAILS CLOSED	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CQ	V1817011	2GTS*TIS9B CHARCOAL ADSORB HI-TEMP PRI ELEM FAILS	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CB	V1827013	3X3-2GTSB06 HI-TEMP AUX RLY CONT N3-R3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-DY	V1837013	1-2GTSB01 SEL SW CONT 5-6 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BY 27-15-AU 27-15-AV	V1847012	1-2GTSB01 SEL SW OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AY	V1857013	1-2GTSB06 SEL SW CONT 2B FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BY	V1867013	1-2GTSB01 SEL SW CONT 19-20 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-BY	V1877013	1-2GTSB06 SEL SH CONT 1B FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BY	V1887013	3X2-2GTSB06 AUTO RESTART MEM RLY CPR CONT 5-6 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BY	V1897013	3-2-2HVRB90 LOCO HI RAD;LO-FLOW ISO RLY CONT M3-T3 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CR	V1917013	3X2-2GTSB06 AUTO RESTART MEM RLY COIL LATCHED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CR	V1927012	3-2-2HVRB90 LOCA HI RAD;LO-FLOW ISO RLY CONT M2-T2 FAIL CLOSE	INDICATING LIGHT IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BZ	V1937013	3X2-2GTSB06 AUTO RESTART MEM RLY CPR CONT 3-4 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CA	V1947011	2GTS*PDSX5B RX BLDG NEG DIFF PRESS AUX RLY CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BZ	V1977013	3-2-2HVRB90 LOCA HI-RAD;LO-FLOW ISO RLY CONT M2-T2 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BZ	V2007013	3X2-2GTSB06 RESET COIL ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BZ	V2017013	3-1-2HVRB90 LOCA HI RAD	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-AB	V2287013	3X1-2GTSB06 AUTO START MEM RLY CONT 9-10 FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CS	V2347013	3X4-2GTSB06 TIMED AUX RLY ENERGIED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CS	V2357013	62-2GTSB06 TIMER CONT 5-1 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CS	V2367013	3X-2GTSB06 AUTO START MEM RLY CONT 11-12 FAILS CLOSED	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-CS	V2377013	62-2GTSB06 TIMER ENERGIZED BY DIR SHORT	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BX	V3197013	3X-2GTSB06 START MEM RLY OPR COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BX	V3217013	3X1-2GTSB06 START MEM RLY OPR COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-BX	V3237013	3X2-2GTSB06 AUTO RESTART MEM RLY OPR COIL FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	
27-15-AR	V3257013	1-2GTSA06 SEL SW CONT 2B FAILS OPEN	PERIODIC TEST	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-CL	V3407013	3X-2GTSA04 COIL ENERGIZED BY A SHORT	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3417013	2GTS*TIS23B NO CONTACT FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-15-CN	V3427013	3X1-2GTSA06 COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3437013	1-2GTSA06 CONTACT 1B FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3447013	1-2GTSA01 CONTACT 20 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3457011	F1-2GTSA06 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3467011	LOSS OF 2SCN*PNL101A CKT#24 (GREEN)	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CU	V3717013	3X-2GTSB04 COIL ENERGIZED BY A SHORT	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3727013	2GTS*TIS23A NO CONTACT FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3737013	3X1-2GTSB06 COIL FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3747013	1-2GTSB06 CONTACT 1B FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3757013	1-2GTSB01 CONTACT 20 FAILS OPEN	PERIODIC TEST	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3767011	F1-2GTSB06 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-CN	V3777011	LOSS OF 2SCN*PNL301B CKT#23 (YELLOW)	ANNUNCIATED IN CONTROL ROOM	STAND-BY GAS TREATMENT SYSTEM INOPERATIVE	SINGLE FAILURE
27-15-E	V0987031	FUSE F1-2GTSA11 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN A 2GTS*FLT1A	
27-15-G	V2617031	FUSE F1-2GTSB11 FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF 2GTS FLTR TRAIN B 2GTS*FLT1B	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-AD 27-16-AG	4044HCV3	2SLS*HCV 111 INADVERTENTLY OPEN	PERIODIC TEST	MNL SW S1A-2SLSA02 CONT 5 OR 2SLS*HCV 111 CONT 33-4 OPEN	
27-16-AD	4045HCV3	2SLS*HCV 111 TEST TANK V LIMIT SW 33-4 FAILED OPEN	PERIODIC TEST	MNL SW S1A-2SLSA02 CONT 5 OR 2SLS*HCV 111 CONT 33-4 OPEN	
27-16-AG	4115HCV3	2SLS*HCV 111 TEST TANK V LIMIT SW 33-5 FAILED OPEN	PERIODIC TEST	MNL SW S1B-2SLSB02 CONT 5 OR 2SLS*HCB 111 CONT 33-5 OPEN	
27-16-A	4001RDS3	LOSS OF CONT ROD DRIVE SYS RDS	PERIODIC TEST	NONE	
27-16-A	4002SLS3	CHECK VALVE 2SLS*V10(+-) FAILED OPEN	PERIODIC TEST	NONE	
27-16-C	4003SLS3	2SLS*VEX 3A DIV I EXPLOSIVE VALVE FAILED OPEN	PERIODIC TEST	LOSS OF SLS DISCH EXPLOSIVE VALVE ISOLATION	
27-16-D	4011SLS3	2SLS*P 1A PUMP DEFECTIVE	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-E	4012SLS3	2SLS*STRT 1A PMP INLET STRAINER BLOCKED	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-H	4013SLS3	2SLS*P 1A PMP DRIVE MOTOR FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-H	4014SLS3	42-2SLSA01 575V TO PMP MOTOR CONTACTS FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-H	4015SLS3	42-2SLSA01 STARTER CLOSING COIL FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-L	4016SLS3	2SLS*MOV 1A PMP INLET VALVE FAILED CLOSED	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-E	4017SLS3	2SLS*V12 PMP DISCH CHECK VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-E 27-16-F	4018SLS3	2SLS*V11 DISCH CHECK FAILED CLOSE	PERIODIC TEST	LOSS OF SLS STANDBY LIQUID CONT SYSTEM	
27-16-E 27-16-F	4019SLS3	2SLS*V10 REACT VESSEL INLET CHECK FAILED CLOSE	PERIODIC TEST	LOSS OF SLS STANDBY LIQUID CONT SYSTEM	
27-16-H	4023SLS3	THERMAL OVERLOAD EXIST IN CKT 2SLSA01	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-E	4025SLS3	2SLS*VEX 3A PMP DISCH VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-K	4056SLS3	2SLS*V9 INLET DRAIN VALVE FAILED OPEN	PERIODIC TEST	LOSS OF SLS STANDBY LIQUID CONT SYSTEM	
27-16-K	4057SLS3	2SLS*V40 PMP P 1A INLET VALVE FAILED OPEN	PERIODIC TEST	LOSS OF SLS STANDBY LIQUID CONT SYSTEM	
27-16-K	4058SLS3	2SLS*V41 PMP P 1B INLET VALVE FAILED OPEN	PERIODIC TEST	LOSS OF SLS STANDBY LIQUID CONT SYSTEM	
27-16-D	4059SLS3	2SLS*RV2A RELIEF VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-D	4060SLS3	2SLS*RV2A RELIEF VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-K	4061SLS3	2SLS*V24 SLS PMP P 1B DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-K	4062SLS3	2SLS*V25 SLS PMP P 1B DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-K	4063SLS3	2SLS*V22 SLS PMP P 1A DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-K	4064SLS3	2SLS*V23 SLS PMP P 1A DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-K	4065SLS3	2SLS*V32 COMBINED PMPS DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-K	4066SLS3	2SLS*V33 COMBINED PMPS DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-AA	4067SLS3	2SLS*V34 COMBINED PMPS DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-AA	4068SLS3	2SLS*V35 COMBINED PMPS DISCH VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-Z	4069SLS3	2SLS*V30 COMBINED PMPS TEST LINE FAILED OPEN	PERIODIC TEST	NONE	
27-16-Z	4070SLS3	2SLS*V31 COMBINED PMPS TEST LINE FAILED OPEN	PERIODIC TEST	NONE	
27-16-Y	4071SLS3	2SLS*V36 INSIDE PRIMARY CONTAINMENT V FAILED OPEN	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-Y	4072SLS3	2SLS*V37 INSIDE PRIMARY CONTAINMENT FAILED OPEN	PERIODIC TEST	NONE	
27-16-X	4073SLS3	2SLS*V38 REACTOR VESSEL INLET VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-X	4074SLS3	2SLS*V39 REACTOR VESSEL INLET VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-C	4075SLS3	2SLS*VEX3B DIV II EXPLOSIVE VALVE FAILED OPEN	PERIODIC TEST	LOSS OF SLS DISCH EXPLOSIVE VALVE ISOLATION	
27-16-B	4083SLS3	SLS*P 1B PUMP DEFECTIVE	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-F	4084SLS3	2SLS*STRT1B PMP INLET STRAINER BLOCKED	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-V	4085SLS3	2SLS*P 1B PMP DRIVE MOTOR FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-V	4086SLS3	42-SLSB01 575V TO PMP MOTOR CONTACTS FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-V	4087SLS3	42-SLSB01 STARTER CLOSING COIL FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-R	4088SLS3	2SLS*MOV 1B PMP INLET VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-F	4089SLS3	2SLS*V14 PMP DISCH CHECK VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-V	4093SLS3	THERMAL OVERLOAD EXISTS IN CKT 2SLSB01	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-V	4094SLS3	49-2SLSB01 OVERLOAD CONT FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-F	4095SLS3	2SLS*VEX 3B PMP DISCH VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-D	4128SLS3	2SLS*V19 COMBINED PMP DISCH LINE FAILED OPEN	PERIODIC TEST	NONE	
27-16-D	4129SLS3	2SLS*V19 COMBINED PMP DISCH LINE FAILED OPEN	PERIODIC TEST	NONE	
27-16-D	4130SLS3	2SLS*V17 TEST TANIC INLET VALVE FAILED OPEN	PERIODIC TEST	NONE	
27-16-C	4132SLS3	CHECK VALVE 2SLS*V11(X-) FAILED OPEN	PERIODIC TEST	NONE	
27-16-J	40046013	K2A-2SLSA01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF SLS DISCH EXPLOSIVE VALVE ISOLATION	
27-16-J	40056013	S1A-2SLSA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	S1A-2SLSA01 CONTACT 1 CLOSED	
27-16-J	40066013	S1A-2SLSA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF SLS DISCH EXPLOSIVE VALVE ISOLATION	
27-16-J	40076013	S1A-2SLSA01 CONTACT 2 FAILED CLOSE	PERIODIC TEST	S1A-2SLSA01 CONTACT 2 CLOSED	
27-16-G	40086013	K2A-2SLSA01 CONTACT T1 FAILED CLOSE	PERIODIC TEST	K2A-2SLSA01 CONTACT T1 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-G	40096013	K2A-2SLSA01 CONTACT T3 FAILED CLOSE	PERIODIC TEST	K2A-2SLSA01 CONTACT T3 CLOSED	
27-16-G	40106013	K2A-2SLSA01 CONTACT T2 RELAY COIL ENERGIZED	PERIODIC TEST	K2A-2SLSA01 CONTACT T2 CLOSED	
27-16-P	40216011	575 115V XFMR CKT 2SLSA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-P	40226011	F1-2SLSA01 10A FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-H	40246013	49-2SLSA01 OVERLOAD CONT FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-P	40266013	K2A-2SLSA01 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-H	40276011	R5-2SLSA01 RESISTOR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3A PMP DISCH VALVE	
27-16-H	40286011	2SLS*VEX 3A SQUIB MAIN IGNITION COIL FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3A PMP DISCH VALVE	
27-16-H	40296011	R6-2SLSA01 RESISTOR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3A PMP DISCH VALVE	
27-16-H	40306011	F2-2SLSA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3A PMP DISCH VALVE	
27-16-P	40316013	S1A-2SLSA01 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AC 27-16-P	40326013	S1A-2SLSA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-P	40336013	S1A-2SLSA01 CONTACT 1 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-N	40346013	K2A-2SLSA01 CONTACT T3 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-N	40356011	F3-2SLSA01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF BACKUP OPENING CKT TO 2SLS*VEX 3A PMP DISCH VALVE	
27-16-N	40366013	K2A-2SLSA01 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF BACKUP OPENING CKT TO 2SLS*VEX 3A PMP DISCH VALVE	
27-16-AC	40546013	S1A*2SLSA01 PMP 2SLS*P0001B "RUN" SW CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-H 27-16-AF	41266013	K2A-2SLSA01 CONTACT T1 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-Q	40766023	K2B-2SLSB01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF SLS DISCH EXPLOSIVE VALVE ISOLATION	
27-16-Q	40776023	S1B-2SLSB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	NONE	
27-16-Q	40786023	S1B-2SLSB01 OPERATOR ERROR	PERIODIC TEST	S1B-2SLSB01 CONTACT 2 CLOSED	
27-16-Q	40796023	S1B-2SLSB01 OPERATOR ERROR	PERIODIC TEST	S1B-2SLSB01 CONTACT 2 CLOSED	
27-16-H	40806023	K2B-2SLSB01 CONTACT T1 FAILED CLOSE	PERIODIC TEST	K2B-2SLSB01 CONTACT T1 CLOSED	
27-16-H	40816023	K2B-2SLSB01 CONTACT T3 FAILED CLOSE	PERIODIC TEST	K2B-2SLSB01 CONTACT T3 CLOSED	
27-16-H	40826023	K2B-2SLSB01 CONTACT T2 FAILED CLOSE	PERIODIC TEST	K2B-2SLSB01 CONTACT T2 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-U	40916021	575 115V XFMR CKT 2SLSB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-U	40926021	F1-2SLSB01 10A FUSE FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-U	40966023	K2B-2SLSB01 RELAY COIL FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-S	40976021	R5-2SLSB01 RESISTOR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	
27-16-S	40986021	2SLS*VEX 3B SQUIB MAIN IGNITION COIL FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	
27-16-S	40996021	R6-2SLSB01 RESISTOR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	
27-16-S	41006021	F2-2SLSB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	
27-16-U	41016023	S1A-2SLSB01 CONTACT 2 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-U	41026023	S1A-2SLSB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-U	41036023	S1B-2SLSB01 CONTACT 1 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-S	41046023	K2B-2SLSB01 CONTACT T1 FAILED OPEN	PERIODIC TEST	LOSS OF MAIN OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	
27-16-T	41056023	K2B-2SLSB01 CONTACT T3 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-T	41066021	F3-2SLSB01 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF BACKUP OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-T	41076023	K2B-2SLSB01 CONTACT T2 FAILED OPEN	PERIODIC TEST	LOSS OF BACKUP OPENING CKT TO 2SLS*VEX 3B PMP DISCH VALVE	
27-16-AF	41246023	S1B-2SLSB01 PMP 2SLS*P0001B "RUN" SW CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-P 27-16-AB	40206031	LOSS OF 575V POWER AT 2EHS*MCC102C	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AB	40406031	3A-FUSE CKT 2SLSA02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AB	40416031	150VA 575V TO 115V CONTROL XFMR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AC	40426033	2SLS*MOV 1A LIMIT SW 33-4 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AC	40436033	2SLS*MOV 1A TQS CONT 17 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AB	40466033	42C-2SLSA02 CLOSE COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-AD	40496033	S1A-2SLSA02 OPERATOR ERROR	PERIODIC TEST	MNL SW S1A-2SLSA02 CONT 5 OR 2SLS*HCV 111 CONT 33-4 OPEN	
27-16-AD	40506033	S1A-2SLSA02 CONTACT 5 FAILED OPEN	PERIODIC TEST	MNL SW S1A-2SLSA02 CONT 5 OR 2SLS*HCV 111 CONT 33-4 OPEN	
27-16-L	40516033	42C-2SLSA02 CLOSE COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-L	40526033	S1A-2SLSA02 CONT 3 FAILED CLOSE	PERIODIC TEST	NONE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-L	40536033	S3A-2SLSA02 CONT 2 FAILED CLOSE	PERIODIC TEST	NONE	
27-16-AC	40556033	2SLS*MOV 1A PMP INLET V LIMIT SW 33-2 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	
27-16-U 27-16-AE	40906031	LOSS OF 575V AC POWER AT 2EHS*MCC302D	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AE	41116031	3A-FUSE CKT 2SLSB02 FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AE	41126031	150VA 575V TO 115V CONTROL XFMR FAILED OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AF	41136033	2SLS*MOV 1B LIMIT SW 33-2 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AF	41146033	2SLS*MOV 1B TQS CONT 17 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AE	41166033	42C-2SLSB02 CLOSE COIL ENERGIZED BY SHORT CIRCUIT	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AG	41176033	S3B-2SLSB02 CONT 3 FAILED OPEN	PERIODIC TEST	MANUAL BYPASS 53B-2SLSB02 CONTACT 3 OPEN	
27-16-AG	41186033	S3B-2SLSB02 OPERATOR ERROR	PERIODIC TEST	MANUAL BYPASS 53B-2SLSB02 CONTACT 3 OPEN	
27-16-AG	41196033	S1B-2SLSB02 OPERATOR ERROR	PERIODIC TEST	MNL SW S1B-2SLSB02 CONT 5 OR 2SLS*MCB 111 CONT 33-5 OPEN	
27-16-AG	41206033	S1B-2SLSB02 CONTACT 5 FAILED OPEN	PERIODIC TEST	MNL SW S1B-2SLSB02 CONT 5 OR 2SLS*MCB 111 CONT 33-5 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-16-R	41216033	42C-2SLSB02 CLOSE COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-R	41226033	S1B-2SLSB02 CONT 3 FAILED CLOSE	PERIODIC TEST	NONE	
27-16-R	41236033	S3B-2SLSB02 CONT 2 FAILED CLOSE	PERIODIC TEST	NONE	
27-16-AF	41256033	2SLS*HOV 1B PMP INLET V LIMIT SW 33-2 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AE	41276033	42C-2SLSB02 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV II SLS REACTIVITY CONT FUNCTION	
27-16-AB	41316033	42C-2SLSA02 CONTACT 6 FAILED OPEN	PERIODIC TEST	LOSS OF STBY DIV I SLS REACTIVITY CONT FUNCTION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-19-A	J067AAS6	2AAS*HCV134 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC INSPECTION	NONE	
27-19-A	J068AAS6	2AAS*HCV136 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC INSPECTION	NONE	
27-19-A	J069AAS6	2AAS*HCV135 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC INSPECTION	NONE	
27-19-A	J070AAS6	2AAS*HCV137 CONTAINMENT ISOLATION VALVE OPEN	PERIODIC INSPECTION	NONE	
27-19-A	J071SAS2	2SAS*HCV161 OUTBOARD ISOL VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
27-19-A	J072SAS2	2SAS*HCV163 INBOARD ISOL VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
27-19-A	J073SAS2	2SAS*HCV160 OUTBOARD ISOL VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
27-19-A	J074SAS2	2SAS*HCV162 INBOARD ISOL VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
27-19-D 27-19-Y 27-19-Q 27-19-S	J0011113	3A-2 TO 3A-11 2ISCA02 ONE OR MORE RELAYS EN BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-Z	J0051113	3A-2ISCA02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-Z	J0071113	3A-1-2ISCA02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-19-H 27-19-U 27-19-T 27-19-G	J0021123	3A-12 TO 3A-23 2ISCA02 ONE OR MORE RELAYS EN BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-M 27-19-L	J0021123	3A-12 TO 3A-23 2ISCA02 ONE OR MORE RELAYS EN BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-T	J0191123	3A-1-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-F 27-19-AA 27-19-R 27-19-V	J0041133	3B-2 TO 3B-11 2ISCB02 ONE OR MORE RELAYS EN BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-AB	J0381133	3B-1-2ISCB02 CONTACT T1 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-AB	J0401133	3B-1-2ISCB02 RELAY ENERGIZED BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-K 27-19-X 27-19-H 27-19-J	J0061143	3B-12 TO 3B-23 2ISCB02 ONE OR MORE RELAY EN BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-P 27-19-N	J0061143	3B-12 TO 3B-23 2ISCB02 ONE OR MORE RELAY EN BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-H	J0521143	3B-1-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-C	J0031153	3A-24 TO 3A-27 2ISCA02 ONE OR MORE RELAYS EN BY A SHORT	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-C	J0331153	3A-1-2ISCA02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
27-19-E	J0111163	3B-24 TO 3B-27 2ISCB02 ONE OR MORE RELAYS EN BY A SHORT	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-E	J0661163	3B-1-2ISCB02 CONTACT T3 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-Z	J0087013	99-5-2ISCA01 OPTICAL ISOLATOR SHORTS	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-Z	J0097013	K66A- GE SYSTEM B22 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-Z	J0107013	K66A- GE SYSTEM B22 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV I CONTAINMENT ISOLATION SIGNAL	
27-19-AB	J0417013	99-5-2ISCB01 OPTICAL ISOLATOR SHORTS	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-AB	J0427013	K66B- GE SYSTEM B22 CONTACT T2 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	
27-19-AB	J0437013	K66B- GE SYSTEM B22 RELAY ENERGIZED	PERIODIC TEST	LOSS OF DIV II CONTAINMENT ISOLATION SIGNAL	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-H	C001DER3	2DER*MOV 120 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-B	C020DER3	2DER*MOV 131 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-J	C051DER3	2DER*MOV 119 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-C	C070DER3	2DER*MOV 130 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-L 32-9-K 32-9-Q 32-9-D	C0071023	3A-19-2ISCA02 RELAY ENERGIZED	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-T 32-9-S 32-9-X 32-9-F	C0571043	3B-19-2ISCB02 RELAY ENERGIZED	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-B	C0216013	42C-2DERA01 RELAY FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-B	C0226012	42O-2DERA01 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-B	C0236011	2DERA01 575/115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-B	C0246011	2DERA01 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-Q	C0256013	42O-2DERA01 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2DER*MOV 131 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-Q	C0266013	1-2DERA01 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DER*MOV 131 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-Q 32-9-D	C0276012	1-2DERA01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-D	C0286013	42O-2DERA01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-D	C0296013	33-2DERA01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-D	C0306013	3A-19-2ISCA02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-E	C0316013	TQS-2DERA01 OVER TORQUE PRESENT	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-E	C0326013	TQS-2DERA01 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-D	C0336013	1-2DERA01 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-D	C0346013	42C-2DERA01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-D	C0356013	3-1-2DERA08 CONTACT T2 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-R	C0446013	49X-2DERA01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-R	C0466011	49X-2DERA01 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-R	C0496011	49-2DERA01 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-R	C0506011	49-2DERA01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-C	C0716013	42C-2DERB01 RELAY FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-C	C0726012	42O-2DERB01 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-C	C0736011	2DERB01 575/115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-C	C0746011	2DERB01 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-X	C0756013	3B-19-2ISCB02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3B-19-2ISCB02 CONTACT T2 CLOSED	
32-9-X	C0766013	42O-2DERB01 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2DER*MOV 130 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-X	C0776013	1-2DERB01 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DER*MOV 130 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-X 32-9-F	C0786012	1-2DERB01 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-F	C0796013	42O-2DERB01 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-F	C0806013	33-2DERB01 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-F	C0816013	3B-19-2ISCB02 CONTACT R1 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-G	C0826013	TQS-2DERB01 OVER TORQUE PRESENT	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-G	C0836013	TQS-2DERB01 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-F	C0846013	1-2DERB01 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-F	C0856013	42C-2DERB01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING EQUIPMENT DRAINS

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-F	C0866013	3-1-2DERB08 CONTACT T2 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-Y	C0956013	49X-2DERB01 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-Y	C0976011	49X-2DERB01 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-Y	C1006011	49-2DERB01 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-Y	C1016011	49-2DERB01 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-Q	C1026013	3A-19-2ISCA02 CONTACT T2 FAILS CLOSED	PERIODIC TEST	3A-19-2ISCA02 CONTACT T2 CLOSED	
32-9-H	C0026023	42C-2DERA02 RELAY FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-H	C0036022	42O-2DERA02 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-H 32-9-B	C0046021	LOSS OF 2EHS*MCC 102C (GREEN)	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-H	C0056021	2DERA02 575/115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-H	C0066021	2DERA02 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-L	C0086023	3A-19-2ISCA02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3A-19-2ISCA02 CONTACT T4 CLOSED	
32-9-L	C0096023	42O-2DERA02 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2DER*MOV 120 CKT SEAL-IN OR MANUAL CONTACT CLOSED	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-L	C0106023	1-2DERA02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DER*MOV 120 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-L 32-9-K	C0116022	1-2DERA02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-K	C0126023	42O-2DERA02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-K	C0136023	33-2DERA02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-K	C0146023	3A-19-2ISCA02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-M	C0156023	TQS-2DERA02 OVER TORQUE PRESENT	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-M	C0166023	TQS-2DERA02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-K	C0176023	1-2DERA02 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-K	C0186023	42C-2DERA02 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-K	C0196023	3-1-2DERA08 CONTACT T3 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-N	C0436023	49X-2DERA02 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-N	C0456021	49X-2DERA02 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-N	C0476021	49-2DERA02 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	

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REACTOR BUILDING EQUIPMENT DRAINS

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-N	C0486021	49-2DERA02 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 120 OUTBOARD DRAIN ISOLATION VALVE OPEN	
32-9-J	C0526023	42C-2DERB02 RELAY FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-J	C0536022	42O-2DERB02 RELAY ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-J 32-9-C	C0546021	LOSS OF 2EHS*MCC 302D (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-J	C0556021	2DERB02 575/115V TRANSFORMER FAILURE	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-J	C0566021	2DERB02 3A-FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-T	C0586023	3B-19-2ISCB02 CONTACT T4 FAILS CLOSED	PERIODIC TEST	3B-19-2ISCB02 CONTACT T4 CLOSED	
32-9-T	C0596023	42O-2DERB02 CONTACT 5 FAILS CLOSED	PERIODIC TEST	2DER*MOV 119 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-T	C0606023	1-2DERB02 CONTACT 2B FAILS CLOSED	PERIODIC TEST	2DER*MOV 119 CKT SEAL-IN OR MANUAL CONTACT CLOSED	
32-9-T 32-9-S	C0616022	1-2DERB02 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-S	C0626023	42O-2DERS02 CONTACT 9 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-S	C0636023	33-2DERB02 CONTACT 15 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-S	C0646023	3B-19-2ISCB02 CONTACT R3 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING EQUIPMENT DRAINS

J.O.12177 FMEA-32-9 SH 6

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-U	C0656023	TQS-2DERB02 OVER TORQUE PRESENT	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-U	C0666023	TQS-2DERB02 CONTACT 17 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-S	C0676023	1-2DERB02 CONTACT 2T FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-S	C0686023	42C-2DERB02 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-S	C0696023	3-1-2DERB08 CONTACT T3 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-V	C0946023	49X-2DERB02 CONTACT 8 FAILS OPEN	PERIODIC TEST	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-V	C0966021	49X-2DERB02 RELAY FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-V	C0986021	49-2DERB02 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-V	C0996021	49-2DERB02 NC CONTACT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 119 INBOARD DRAIN ISOLATION VALVE OPEN	
32-9-P	C0367033	3-1-2DERA08 RELAY FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-P	C0377031	LOSS OF 2SCM*PNL 103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-P	C0387033	2DERA08 3A-FUSE FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-P	C0397033	1-2DERA08 CONTACT B FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	

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FAILURE MODES AND EFFECTS ANALYSIS
REACTOR BUILDING EQUIPMENT DRAINS

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
32-9-P	C0407033	3-1-2DERA08 CONTACT T1 FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-P	C0417032	1-2DERA08 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-P	C0427033	1-2DERA08 CONTACT A FAILS OPEN	PERIODIC TEST	2DER*MOV 131 OUTBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0877033	3-1-2DERB08 RELAY FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0887031	LOSS OF 2SCM*PNL 303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0897033	2DERB08 3A-FUSE FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0907033	1-2DERB08 CONTACT B FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0917033	3-1-2DERB08 CONTACT T1 FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0927032	1-2DERB08 OPERATOR ERROR	INDICATING LIGHT IN CONTROL ROOM	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	
32-9-W	C0937033	1-2DERB08 CONTACT A FAILS OPEN	PERIODIC TEST	2DER*MOV 130 INBOARD VENT ISOLATION VALVE OPEN	

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FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
33-1-D	B003LHS2	2LHS*SOV 153 MECHANICALLY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 153 OPEN	
33-1-E	B015LHS2	2LHS*SOV 157 MECHANICALLY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 157 OPEN	
33-1-C	B025LHS2	2LHS*SOV 152 MECHANICALLY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 152 OPEN	
33-1-B	B037LHS2	2LHS*SOV 156 MECHANICALLY FAILS OPEN	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 156 OPEN	
33-1-F 33-1-G	B0141103	3A-22-2ISCA02 COIL ENERGIZED	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-J 33-1-K	B0361103	3B-22-2ISCB02 COIL ENERGIZED	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-H	B0017023	3-2LHSA01 CONTACT T1 FAILS OPEN	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-H	B0027023	3-2LHSA01 COIL FAILS OPEN	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-H	B0047023	1-2LHSA01 CONTACT NO FAILS OPEN	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-H	B0057023	1-2LHSA01 CONTACT NC FAILS OPEN	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-H	B0067023	1-2LHSA01 OPERATOR ERROR	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-D	B0077022	2LHS*SOV 153 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 153 OPEN	
33-1-D	B0087023	3X-2LHSA01 CONTACT T1 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 153 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
33-1-D	B0097023	1A-2LHSA01 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-F	B0107022	3X-2LHSA01 CONTACT T2 FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 153 OPEN	
33-1-F	B0117022	3X-2LHSA01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 153 OPEN	
33-1-F	B0127023	3-2LHSA01 CONTACT R2 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-F	B0137023	3A-22-2ISCA02 CONTACT T1 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 153 OPEN	
33-1-E	B0167022	2LHS*SOV 157 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 157 OPEN	
33-1-E	B0177023	3X1-2LHSA01 CONTACT T1 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 157 OPEN	
33-1-E	B0187023	1B-2LHSA01 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2LHS*SOV 157 OPEN	
33-1-G	B0197022	3X1-2LHSA01 CONTACT T2 FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 157 OPEN	
33-1-G	B0207022	3X1-2LHSA01 COIL ENEGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 157 OPEN	
33-1-H	B0217023	3-2LHSA01 CONTACT R3 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 157 OPEN	
33-1-G	B0227023	3A-22-2ISCA02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 157 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
33-1-L	B0237023	3-2LHSB01 CONTACT T1 FAILS OPEN	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-L	B0247023	3-2LHSB01 COIL FAILS OPEN	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-L	B0267023	1-2LHSB01 CONTACT NO FAILS OPEN	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-L	B0277023	1-2LHSB01 CONTACT NC FAILS OPEN	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-L	B0287023	1-2LHSB01 OPERATOR ERROR	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-C	B0297022	2LHS*SOV 152 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 152 OPEN	
33-1-C	B0307023	3X-2LHSB01 CONTACT T1 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-C	B0317023	1A-2LHSS01 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-J	B0327022	3X-2LHSB01 CONTACT T2 FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 152 OPEN	
33-1-J	B0337022	3X-2LHSB01 COIL ENEGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 152 OPEN	
33-1-J	B0347023	3-2LHSB01 CONTACT R2 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-J	B0357023	3B-22-2ISCB02 CONTACT T1 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 152 OPEN	
33-1-B	B0387022	2LHS*SOV 156 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 156 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
33-1-B	B0397023	3X1-2LHSB01 CONTACT T1 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 156 OPEN	
33-1-B	B0407023	1B-2LHSB01 CONTACT 2B FAILS CLOSE	PERIODIC TEST	2LHS*SOV 156 OPEN	
33-1-K	B0417022	3X1-2LHSB01 CONTACT T2 FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 156 OPEN	
33-1-K	B0427022	3X1-2LHSB01 COIL ENERGIZED BY A SHORT	INDICATING LIGHT IN CONTROL ROOM	2LHS*SOV 156 OPEN	
33-1-L	B0437023	3-2LHSB01 CONTACT R3 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 156 OPEN	
33-1-K	B0447023	3B-22-2ISCB02 CONTACT T2 FAILS CLOSE	PERIODIC TEST	2LHS*SOV 156 OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-K	2386CCP2	2CCP*V161 CHECK VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
34-2-BA	2388CCP2	2CCP*MOV14A FAILS MECH OPEN	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-L	2397CCP2	2CCP*V14B CHECK VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	NONE	
34-2-BE	2399CCP2	2CCP*MOV14B FAILS MECH OPEN	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-BC	2404CCP3	420-2CCPA04 CONT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BG	2415CCP3	420-2CCPB04 CONT 9 FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-CE	2426CCP3	420-2CCPA06 CONT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG	2437CCP3	420-2CCPB06 CONT 9 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AF	2049ENS3	LOSS OF 4160V 2ENS*SWG101 TO 2SFC*P1A PUMP	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AH	2057ENS3	LOSS OF 4160V 2ENS*SWG103 TO 2SFC*P1B PUMP	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AK	2064ENS3	3-2ENSX04 RELAY COIL ENERGIZED BY A SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BR	2065ENS3	2B-2ENSX04 INST CONTACT FAILED CLOSE	PERIODIC TEST	2B-2ENSX04 OR 2D-2ENSX04 INST CONTACTS CLOSED	
34-2-BR	2066ENS3	2B-2ENSX04 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2B-2ENSX04 OR 2D-2ENSX04 INST CONTACTS CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BR	2067ENS3	2D-2ENSX04 INST CONTACT FAILED CLOSE	PERIODIC TEST	2B-2ENSX04 OR 2D-2ENSX04 INST CONTACTS CLOSED	
34-2-BR	2068ENS3	2D-2ENSX04 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2B-2ENSX04 OR 2D-2ENSX04 INST CONTACTS CLOSED	
34-2-AH	2076ENS3	3-2ENSY04 RELAY COIL ENERGIZED BY A SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BT	2077ENS3	2B-2ENSY04 INST CONTACT FAILED CLOSE	PERIODIC TEST	2B-2ENSY04 OR 2D-2ENSY04 INST CONTACTS CLOSED	
34-2-BT	2078ENS3	2B-2ENSY04 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2B-2ENSY04 OR 2D-2ENSY04 INST CONTACTS CLOSED	
34-2-BT	2079ENS3	2D-2ENSY04 INST CONTACT FAILED CLOSE	PERIODIC TEST	2B-2ENSY04 OR 2D-2ENSY04 INST CONTACTS CLOSED	
34-2-BT	2080ENS3	2D-2ENSY04 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	2B-2ENSY04 OR 2D-2ENSY04 INST CONTACTS CLOSED	
34-2-V	2256ENS3	27X2-2ENSX04 SUSTAINED UV RELAY COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-Z	2265ENS3	27X2-2ENSY04 SUSTAINED UV RELAY COIL ENERGIZED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BR	2301ENS3	62-2ENSX04 CONT 3 FAILS CLOSED	PERIODIC TEST	62-2ENSX04 CONT 3 CLOSED	
34-2-BR	2302ENS3	62-2ENSX04 COIL FAILS OPEN	PERIODIC TEST	62-2ENSX04 CONT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BT	2307ENS3	62-2ENSY04 CONTACT 3 FAILS CLOSED	PERIODIC TEST	62-2ENSY04 CONT 3 CLOSED	
34-2-BT	2308ENS3	62-2ENSY04 COIL FAILS OPEN	PERIODIC TEST	62-2ENSY04 CONT 3 CLOSED	
34-2-T 34-2-AF	2003SFC3	SFC DIV I PMP 2SFC*P1A PUMP DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-U 34-2-AH	2007SFC3	SFC DIV II PMP 2SFC*P1B PUMP DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AG 34-2-AF	2032SFC2	LOSS OF 125VDC DIV I BUS A AT SWGR (NO LTR)	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AJ 34-2-AH	2043SFC2	LOSS OF 125VDC DIV II BUS B AT SWGR (NO LTR)	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BS	2071SFC3	2SFC*P1A PMP SUCTION PRESS LOW	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BU	2083SFC3	2SFC*P1B PMP SUCTION PRESS LOW	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AP	2091SFC3	GROUND OC FAULT EXISTS ON PMP FDR ACB101-5 BUS 2ENS*SWG101	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AU	2104SFC3	GROUND OC FAULT EXISTS ON PMP FDR ACB103-10 BUS 2ENS*SWG103	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-M	2134SFC3	2SFC*V13A PUMP SUCTION VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-M	2138SFC3	2SFC*V256A SURGE TANK OUTLET VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-P	2146SFC3	2SFC*V13B PUMP SUCTION VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-P	2150SFC3	2SFC*V256B SURGE TANK OUTLET VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BH	2178SFC3	2SFC*HV35A SURGE TANK INLET VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I WATER INPUT FR SPENT FUEL POOL	
34-2-BH	2188SFC3	1C-2SFCA06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I WATER INPUT FR SPENT FUEL POOL	
34-2-BL	2191SFC3	2SFC*HV17A HTR BYPASS VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BH	2195SFC3	2SFC*HV35B SURGE TANK INLET VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II WATER INPUT FR SPENT FUEL POOL	
34-2-BH	2205SFC3	1C-2SFCB06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II WATER INPUT FR SPENT FUEL POOL	
34-2-BQ	2208SFC3	2SFC*HV17B HTR BYPASS VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-T	2250SFC3	SFC DIV I PMP 2SFC*P1A DRIVE MOTOR DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-T	2252SFC3	DIV I ACB101-5 BUS 2ENS*SNG101 BRKR FAILED OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-U	2259SFC3	SFC DIV II PMP 2SFC*P1B DRIVE MOTOR DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-U	2261SFC3	DIV II ACB103-10 BUS 2ENS*SNG103 BRKR FAILED OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BX	2269SFC3	2SFC*P1A PMP DISCHARGE PRESS LOW	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CB	2274SFC3	2SFC*P1A PMP DISCH FLOW LOW	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CA	2279SFC3	2SFC*P1B PMP DISCH PRESS LOW	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CC	2284SFC3	SFC*P1B PMP DISCH FLOW LOW	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-N	2290SFC3	2SFC*LS33A LOW LEVEL CONT FAILED CLOSE	PERIODIC TEST	2SFC*AOV33A OPEN	
34-2-M	2293SFC3	SFC DIV I HT EXCH 2SFC*E1A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-Q	2295SFC3	2SFC*LS33B LOW LEVEL CONT FAILED CLOSE	PERIODIC TEST	2SFC*AOV33B OPEN	
34-2-P	2298SFC3	SFC DIV II HT EXCH 2SFC*E1B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BS	2299SFC3	2SFC*PSL3A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BS	2300SFC3	H13-P837 LOSS OF POWER SUPPLY	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BS	2303SFC3	2SFC*PT3A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BS	2304SFC3	2SFC*PNRS3A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BU	2305SFC3	2SFC*PSL3B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BU	2306SFC3	H13-P831 LOSS OF POWER SUPPLY	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BU	2309SFC3	2SFC*PT3B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BU	2310SFC3	2SFC*PNRS3B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AR	2315SFC3	INSTANTANEOUS OC FAULT EXISTS ON PH C FDR 101-5 2ENS*SNG101	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AS	2318SFC3	AC TIME OC FAULT EXISTS ON PH C FDR 101-5 2ENS*SNG101	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AQ	2321SFC3	INSTANTANEOUS OC FAULT EXISTS ON PH A FDR 101-5 2ENS*SNG101	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AT	2323SFC3	AC TIME OC FAULT EXISTS ON PH A FDR 101-5 2ENS*SNG101	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AW	2329SFC3	INSTANTANEOUS OC FAULT EXISTS ON PH C FDR 103-10 2ENS*SNG103	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AX	2332SFC3	AC TIME OC FAULT EXISTS ON PH C FDR 103-10 2ENS*SNG103	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AV	2335SFC3	INSTANTANEOUS OC FAULT EXISTS ON PH A FDR 103-10 2ENS*SNG103	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AY	2337SFC3	AC TIME OC FAULT EXISTS ON PH A FDR 103-10 2ENS*SNG103	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH A CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BJ	2343SFC2	2SFC*V100A BUTTERFLY VALVE FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BJ	2344SFC2	2SFC*V20A CHECK VALVE FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BJ	2345SFC2	2SFC*V21A BUTTERFLY VALVE FAILS CLOSED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BJ	2346SFC3	2SFC*V39A BUTTERFLY VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BJ	2347SFC3	2SFC*V37A HEAT EXCHANGER DISCH VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BJ	2348SFC3	2SFC*V9(A-) CHECK VALVE FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BN	2349SFC3	2SFC*V100B BUTTERFLY VALVE FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BN	2350SFC2	2SFC*V20B CHECK VALVE FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BN	2351SFC2	2SFC*V21B BUTTERFLY VALVE FAILS CLOSE	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BN	2352SFC3	2SFC*V39B BUTTERFLY VALVE FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BN	2353SFC3	2SFC*V37B HEAT EXCHANGER DISCH VALVE FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BN	2354SFC3	2SFC*V11(B-) CHECK VALVE FAILS CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-CB	2363SFC3	2SFC*FT58A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BX	2364SFC3	2SFC*PSL30A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BX 34-2-BV 34-2-BH	2365SFC3	H13-P828 LOSS OF POWER SUPPLY	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER.	
34-2-BX	2366SFC3	2SFC*PNRS30A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BX	2367SFC3	2SFC*PT30A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BV	2368SFC3	2SFC*FSL58A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BH	2369SFC3	2SFC*FSLL58A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CB	2370SFC3	2SFC*FE58A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CB	2371SFC3	2SFC*PNRS58A DEFECTIVE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CC	2372SFC3	2SFC*FT58B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CA	2373SFC3	2SFC*PSL30B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CA 34-2-BY 34-2-BZ	2374SFC3	H13-P828 LOSS OF POWER SUPPLY	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CA	2375SFC3	2SFC*PNRS30B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CA	2376SFC3	2SFC*PT30B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BY	2377SFC3	2SFC*FSL58B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BZ	2378SFC3	2SFC*FSLL58B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-CC	2379SFC3	2SFC*FE58B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CC	2380SFC3	2SFC*PNRS58B DEFECTIVE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-B 34-2-N	2463SFC3	LOSS OF SERVICE WATER TO SPENT FUEL POOL DIV I	PERIODIC TEST	LOSS OF DIV I WATER INPUT FR SPENT FUEL POOL	
34-2-B 34-2-Q	2464SFC3	LOSS OF SERVICE WATER TO SPENT FUEL POOL DIV II	PERIODIC TEST	LOSS OF DIV II WATER INPUT FR SPENT FUEL POOL	
34-2-K	2381SWP3	LOSS OF DIV I SERVICE WATER TO SPENT FUEL POOL HT EXCH	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-L	2392SWP3	LOSS OF DIV II SERVICE WATER TO SPENT FUEL COOL HT EXCH	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AK 34-2-H	20285013	1-2SFCA01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AG 34-2-AF	20315012	+ FUSE 35A CKT 2SFCA01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AG 34-2-AF	20335012	- FUSE 35A CKT 2SFCA01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-E	20455012	52-TC-2SFCA01 TRIP COIL ENERGIZED BY SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AK	20505013	1-2SFCA01 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AF	20515012	+ FUSE 15A CKT 2SFCA01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AF	20525012	- FUSE 15A CKT 2SFCA01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-AK	20615013	3-2ENSX04 CONT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AL	20635013	3-2SFCA01 RELAY COIL ENERGIZED BY A SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AL	20705013	2SFC*PSLX3A CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AK	20845013	86-2SFCA01 CONT 6C FAILED OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AP	20855013	50G-2SFCA52 CONTACT N-O FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AK	20865012	86-2SFCA01 RELAY FAILED ENERGIZED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AR	20875013	50-2SFCA51 CONTACT 9 PH C FAILED CLOSED	PERIODIC TEST	50-2SFCA51 CONT 9 PH C CLOSED	
34-2-AQ	20905013	50-2SFCA51 CONTACT 9 PH A FAILED CLOSED	PERIODIC TEST	50-2SFCA51 CONT 9 PH A CLOSED	
34-2-AP	20925013	50G-2SFCA52 RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AG	21595013	3-2SFCA01 RELAY COIL FAILED OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	
34-2-AG	21615013	3-2SFCA01 RELAY COIL FAILED OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	
34-2-AG	21635013	2SFC*PSLX3A CONTACT FAILED OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-V	22515013	86-2SFCA01 CONTACT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-H	22535013	1-2SFCA01 CONTACT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-V	22545013	3-2SFCA01 CONTACT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-V	22555013	27X2-2ENSX04 CONTACT 12 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-X	22575013	62-2SFCA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-X	22585013	62-2SFCA01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-X	22685013	2SFCxPSLX30A CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-V	22705013	62-2-2SFCA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-Y	22715013	62-3-2SFCA01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BV	22725013	62-2-2SFCA01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BH	22735013	62-3-2SFCA01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BV	22755013	2SFCxFSLX58A CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BW	22775013	2SFC*FSLY58A CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AL	22685013	3-2SFCA01 CONT 3 FAILED OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AS	23115013	51-2SFCA51 CONT N-O PH C FAILED CLOSE	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AS	23125013	SI-2SFCA51 CONT N-O PH C FAILED CLOSE	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AS	23135013	SI-2SFCA51 PHC SI RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AR	23145013	50-2SFCA51 PH C RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AT	23165013	SI-2SFCA51 CONT N-O PH A FAILED CLOSE	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AT	23175013	SI-2SFCA51 PH A SI RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AS	23195013	51-2SFCA51 PH C RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AQ	23205013	50-2SFCA51 PH A RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AT	23225013	51-2SFCA51 CONT N-O PH A FAILED CLOSE	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AT	23245013	51-2SFCA51 PH A RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCA51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AD	23395013	52-2SFCA01 CONTACT 68 FAILS OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-AP	24595013	50-2SFCA51 CONT 3 PH A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AP	24605013	50-2SFCA51 CONT 3 PH C FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AM 34-2-AA	20395023	1-2SFCB01 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AJ 34-2-AH	20425022	+ FUSE 35A CKT 2SFCB01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AJ 34-2-AH	20445022	- FUSE 35A CKT 2SFCB01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-J	20535022	52-TC-2SFCB01 TRIP COIL ENERGIZED BY SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AM	20585023	1-2SFCB01 CONT 1 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AH	20595022	+ FUSE 15A CKT 2SFCB01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AH	20605022	- FUSE 15A CKT 2SFCB01 FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AN	20725023	3-2SFCB01 CONT 3 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AM	20735023	3-2ENSY04 CONT 4 FAILED OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AN	20755023	3-2SFCB01 RELAY COIL ENERGIZED BY A SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AN	20825023	2SFC*PSLX3B CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-AH	20975023	86-2SFCB01 CONT 6C FAILED OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AU	20985023	50G-2SFCB52 CONTACT N-O FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AH	20995022	86-2SFCB01 RELAY FAILED ENERGIZED	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AH	21005023	50-2SFCB51 CONTACT 9 PH C FAILED CLOSED	PERIODIC TEST	50-2SFCB51 CONT 9 PH C CLOSED	
34-2-AV	21035023	50-2SFCB51 CONTACT 9 PH A FAILED CLOSED	PERIODIC TEST	50-2SFCB51 CONT 9 PH A CLOSED	
34-2-AU	21055023	50G-2SFCB52 RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AJ	21715023	3-2SFCB01 RELAY COIL FAILED OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-AJ	21735023	3-2SFCB01 RELAY COIL FAILED OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-AJ	21755023	2SFC*PSLX3B CONTACT FAILED OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-Z	22605023	86-2SFCB01 CONTACT 1C FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AA	22625023	1-2SFCB01 CONTACT 3 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-Z	22635023	3-2SFCB01 CONTACT 2 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-Z	22645023	27X2-2ENSY04 CONTACT 12 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AB	22665023	62-2SFCB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AB	22675023	62-2SFCB01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AB	22785023	2SFC*PSLX30B CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-Z	22805023	62-2-2SFCB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AC	22815023	62-3-2SFCB01 CONTACT 1 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BY	22825023	62-2-2SFCB01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BZ	22835023	62-3-2SFCB01 RELAY COIL ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BY	22855023	2SFC*FSLX56B CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BZ	22875023	2SFC*FSLY58B CONTACT FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AX	23255023	51-2SFCB51 CONT N-O PH C FAILED CLOSE	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AX	23265023	SI-2SFCB51 CONT N-O PH C FAILED CLOSE	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH C CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-AX	23275023	SI-2SFCB51 PH C SI RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AH	23285023	50-2SFC51 PH C RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AY	23305023	SI-2SFCB51 CONT N-O PH A FAILED CLOSE	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AY	23315023	SI-2SFCB51 PH A SI RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AX	23335023	51-2SFCB51 PH C RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH C CLOSED	
34-2-AV	23345023	50-2SFCB51 PH A RELAY FAILED ENERGIZED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AY	23365023	51-2SFCB51 CONT N-O PH A FAILED CLOSE	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AY	23385023	51-2SFCB51 PH A RELAY FAILS ENERGIZED	PERIODIC TEST	51-2SFCB51 CONT N-O OR CONT SI PH A CLOSED	
34-2-AE	23415023	52-2SFCB01 CONTACT 68 FAILS OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-AU	24615023	50-2SFCB51 CONT 3 PH A FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AU	24625023	50-2SFCB51 CONT 3 PH C FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BA	23826073	42C-2CCPA04 COIL FAILS OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BA	23836071	2CCPA04 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-BA	23856071	F-2CCPA04 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-AZ	23876073	2CCP*MOV18A FAILS MECH OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BE	23936073	42C-2CCPB04 COIL FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-BE	23946071	2CCPB04 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-BE	23966071	F-2CCPB04 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-BD	23986073	2CCP*MOV18B FAILS MECH OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BC	24036073	33-2CCPA04 CONT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-CH	24056071	49X-2CCPA04 COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-BC	24066073	TQS-2CCPA04 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BC	24076071	TQS-2CCPA04 OV TORQ PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-CH	24086071	49-2CCPA04 CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-CH	24096071	49-2CCPA04 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-BC	24106073	1-2CCPA04 CONTACT 2T FAIL OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BC 34-2-BB	24116073	1-2CCPA04 OPERATOR ERROR	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BC	24126073	42C-2CCPA04 CONT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-CH	24136073	49X-2CCPA04 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV14A OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BG	24146073	33-2CCPB04 CONT 15 FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-CJ	24166071	49X-2CCPB04 COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-BG	24176073	TQS-2CCPB04 CONTACT 17 FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-BG	24186071	TQS-2CCPB04 OV TORQ PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-CJ	24196071	49-2CCPB04 CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-CJ	24206071	49-2CCPB04 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-BG	24216073	1-2CCPA04 CONTACT 2T FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-BG 34-2-BF	24226073	1-2CCPB04 OPERATOR ERROR	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-BG	24236073	42C-2CCPB04 CONT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-CJ	24246073	49X-2CCPB04 CONTACT 8 FAILS OPEN	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-BB	24476072	42O-2CCPA04 COIL EN BY SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV14A OPEN	
34-2-BB	24496073	42O-2CCPA04 CONT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BB	24516073	1-2CCPA04 CONT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV14A OPEN	
34-2-BF	24536072	42O-2CCPB04 COIL EN BY SHORT	INDICATING LIGHT IN CONTROL ROOM	2CCP*MOV14B OPEN	
34-2-BF	24556073	42O-2CCPB04 CONT 5 FAILS CLOSED	PERIODIC TEST	2CCP*MOV14B OPEN	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BF	24576073	1-2CCPB04 CONT 2B FAILS CLOSED	PERIODIC TEST	2CCP*MOV14B OPEN	
34-2-BA 34-2-AZ	23846091	LOSS OF 2EHS*MCC103A (GREEN)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AZ	23896093	42C-2CCPA06 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AZ	23906091	2CCPA06 575-115 XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-AZ	23916091	F-2CCPA06 FUSE FAIL OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BE 34-2-BD	23956091	LOSS OF 2EHS*MCC303B (YELLOW)	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BD	24006093	42C-2CCPB06 COIL FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BD	24016091	2CCPB06 575-115V XFMR FAILURE	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BD	24026091	F-2CCPB06 FUSE FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CE	24256093	33-2CCPA06 CONT 15 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CK	24276091	49X-2CCPA06 COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CE	24286093	TQS-2CCPA06 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CE	24296091	TQS-2CCPA06 OV TORQ PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CK	24306091	49-2CCPA06 CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CK	24316091	49-2CCPA06 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-CE	24326093	1-2CCPA06 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CE 34-2-CD	24336093	1-2CCPA06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CE	24346093	42C-2CCPA06 CONT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CK	24356093	49X-2CCPA06 CONTACT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG	24366093	33-2CCPB06 CONT 15 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CL	24386091	49X-2CCPB06 COIL FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG	24396093	TQS-2CCPB06 CONTACT 17 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG	24406091	TQS-2CCPB06 OV TORQ PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CL	24416091	49-2CCPB06 CONT FAILS OPEN	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CL	24426091	49-2CCPB06 OVERLOAD PRESENT	ANNUNCIATED IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG	24436093	1-2CCPB06 CONTACT 2T FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG 34-2-CF	24446093	1-2CCPB06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CG	24456093	42C-2CCPB06 CONT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CL	24466093	49X-2CCPB06 CONTACT 8 FAILS OPEN	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CD	24486092	42O-2CCPA06 COIL EN BY SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-CD	24506093	420-2CCPA06 CONT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CD	24526093	1-2CCPA06 CONT 2B FAILS CLOSED	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CF	24546092	420-2CCPB06 COIL EN BY SHORT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CF	24566093	420-2CCPB06 CONT 5 FAILS CLOSED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-CF	24586093	420-2CCPB06 CONT 5 FAIL CLOSED	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BL	22167013	2SFC*SOV17A SOLENOID VALVE ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BL	22177013	1A-2SFCA05 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BL	22187013	1A-2SFCA05 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-C	22267013	2SFC*SOV18A SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	FILTER INLET VALVE 2SFC*HV18A FAILED TO CLOSE	
34-2-F	22297013	2SFC*SOV37A SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	HEAT EXCHANGE CROSS CONNECT 25FC*HV37A FAILED TO CLOSE	
34-2-D	22307013	2SFC*SOV6A SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	SURGE TANK CROSSOVER HTR 2SFC*HV6A FAILED TO CLOSE	
34-2-D	22317013	2SFC*SOV6B SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	SURGE TANK CROSSOVER HTR 2SFC*HV6B FAILED TO CLOSE	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-C	22327013	1B-2SFCA05 CONTACT 2 FAILED CLOSE	PERIODIC TEST	FILTER INLET VALVE 2SFC*HV18A FAILED TO CLOSE	
34-2-C	22337013	1B-2SFCA05 OPERATOR ERROR	PERIODIC TEST	FILTER INLET VALVE 2SFC*HV18A FAILED TO CLOSE	
34-2-F	22387013	1D-2SFCA05 OPERATOR ERROR	PERIODIC TEST	HEAT EXCHANGE CROSS CONNECT 2SFC*HV37A FAILED TO CLOSE	
34-2-F	22397013	1D-2SFCA05 CONTACT 2 FAILED CLOSE	PERIODIC TEST	HEAT EXCHANGE CROSS CONNECT 2SFC*HV37A FAILED TO CLOSE	
34-2-H	22447013	2SFC*SOV19A SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	FILTER OUTLET VALVE 2SFC*HV19A FAILED TO CLOSE	
34-2-N	22897012	2SFC*AOV33A FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	2SFC*AOV33A OPEN	
34-2-N	22917013	1E-2SFCA05 CONT 2 FAILED CLOSE	PERIODIC TEST	2SFC*AOV33A OPEN	
34-2-N	22927013	1E-2SFCA05 OPERATOR ERROR	PERIODIC TEST	2SFC*AOV33A OPEN	
34-2-G	23557013	1C-2SFCB05 OPERATOR ERROR	PERIODIC TEST	1C-2SFCB05 CONT 2 CLOSE	
34-2-G	23567013	1C-2SFCB05 CONT 2 FAILS CLOSE	PERIODIC TEST	1C-2SFCB05 CONT 2 CLOSE	
34-2-H	23607013	1C-2SFCA05 CONT 2 FAILS CLOSE	PERIODIC TEST	1C-2SFCA05 CONT 2 CLOSED	
34-2-H	23617013	1C-2SFCA05 OPERATOR ERROR	PERIODIC TEST	1C-2SFCA05 CONT 2 CLOSED	
34-2-H	23627013	62-2SFCA06 CONT 3 FAILS CLOSE	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	
34-2-BQ	22237023	2SFC*SOV17B SOLENOID VALVE ENERGIZED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BQ	22247023	1A-2SFCB05 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BQ	22257023	1A-2SFCB05 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-C	22277023	2SFC*SOV18B SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	FILTER INLET VALVE 2SFC*HV18B FAILED TO CLOSE	
34-2-G	22287023	2SFC*SOV19B SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	FILTER OUTLET VALVE 2SFC*HV19B FAILED TO CLOSE	
34-2-C	22347023	1B-2SFCB05 CONTACT 2 FAILED CLOSE	PERIODIC TEST	FILTER INLET VALVE 2SFC*HV18B FAILED TO CLOSE	
34-2-C	22357023	1B-2SFCB05 OPERATOR ERROR	PERIODIC TEST	FILTER INLET VALVE 2SFC*HV18B FAILED TO CLOSE	
34-2-F	22457023	2SFC*SOV37B SOLENOID COIL ENERGIZED BY SHORT	PERIODIC TEST	HEAT EXCHANGE CROSS CONNECT 25FC*HV37B FAILED TO CLOSE	
34-2-F	22487023	1D-2SFCB05 CONTACT 2 FAILED CLOSE	PERIODIC TEST	HEAT EXCHANGE CROSS CONNECT 25FC*HV37B FAILED TO CLOSE	
34-2-F	22497023	1D-2SFCB05 OPERATOR ERROR	PERIODIC TEST	HEAT EXCHANGE CROSS CONNECT 25FC*HV37B FAILED TO CLOSE	
34-2-Q	22947022	2SFC*AOV33B FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	2SFC*AOV33B OPEN	
34-2-Q	22967023	1E-2SFCB05 CONT 2 FAILED CLOSE	PERIODIC TEST	2SFC*AOV33B OPEN	
34-2-Q	22977023	1E-2SFCB05 OPERATOR ERROR	PERIODIC TEST	2SFC*AOV33B OPEN	
34-2-B	21327092	2SFC*AOV153 FILTER INLET ISOLATION VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF FILTER INLET LINE DIV I ISOLATION	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-BK	21337093	2SFC*HV54A SURGE TANK OUTLET VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-R	21367092	2SFC*SOV153 SOLENOID VALVE OPERATED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF FILTER INLET LINE DIV I ISOLATION	
34-2-BK	21377093	2SFC*SOV54A OPERATED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BK	21407093	1A-2SFCA06 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BK	21417093	1A-2SFCA06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV I SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-R	21547093	1D-2SFCA06 CONTACT 2 FAILED CLOSE	PERIODIC TEST	1D-2SFCA06 CONTACT 2 CLOSED	
34-2-R	21557093	1D-2SFCA06 OPERATOR ERROR	PERIODIC TEST	1D-2SFCA06 CONTACT 2 CLOSED	
34-2-R	21587093	62-2SFCA06 CONTACT 4 FAILED CLOSE	PERIODIC TEST	62-2SFCA06 CONTACT 4 CLOSED.	
34-2-AD	21607093	62-2SFCA06 TIMER RELAY FAILED OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	
34-2-AD	21657093	3-2SFCA01 CONTACT 10 FAILED OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	
34-2-BH	21837093	2SFC*SOV35A SURGE TANK INLET SOLENOID ENER BY SHORT	PERIODIC TEST	LOSS OF DIV I WATER INPUT FR SPENT FUEL POOL	
34-2-BH	21877093	1C-2SFCA06 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV I WATER INPUT FR SPENT FUEL POOL	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-D	22407093	1B-2SFCA06 OPERATOR ERROR	PERIODIC TEST	SURGE TANK CROSSOVER HTR 2SFCxHV6A FAILED TO CLOSE	
34-2-D	22417093	1B-2SFCA06 CONTACT 2 FAILED CLOSE	PERIODIC TEST	SURGE TANK CROSSOVER HTR 2SFCxHV6A FAILED TO CLOSE	
34-2-AD	23407093	F5-2SFCA06 3A FUSE FAILS OPEN	PERIODIC TEST	62-2SFCA06 CONT 3 CLOSED	
34-2-B	21447102	2SFCxAOV154 FILTER INLET ISOLATION VALVE FAILED OPEN	INDICATING LIGHT IN CONTROL ROOM	LOSS OF FILTER INLET LINE DIV II ISOLATION	
34-2-BP	21457103	2SFCxHV54B SURGE TANK OUTLET VALVE FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-S	21487102	2SFCxSOV154 SOLENOID VALVE OPERATED BY SHORT CKT	INDICATING LIGHT IN CONTROL ROOM	LOSS OF FILTER INLET LINE DIV II ISOLATION	
34-2-BP	21497103	2SFCxSOV54B OPERATED BY SHORT CKT	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BP	21527103	1A-2SFCB06 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-BP	21537103	1A-2SFCB06 OPERATOR ERROR	PERIODIC TEST	LOSS OF DIV II SFC POOL COOLING SYS IN EMER MODE OF OPER	
34-2-S	21667103	1D-2SFCB06 CONTACT 2 FAILED CLOSE	PERIODIC TEST	1D-2SFCB06 CONTACT 2 CLOSED	
34-2-S	21677103	1D-2SFCB06 OPERATOR ERROR	PERIODIC TEST	1D-2SFCB06 CONTACT 2 CLOSED	
34-2-S	21707103	62-2SFCB06 CONTACT 4 FAILED CLOSE	PERIODIC TEST	62-2SFCB06 CONTACT 4 CLOSED	

FTSK	COMPONENT IDENTIFIER	COMPONENT AND FAILURE MODE	METHOD OF FAILURE DETECTION	EFFECT ON SYSTEM	OTHER REMARKS
34-2-AE	21727103	62-2SFCB06 TIMER RELAY FAILED OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-AE	21777103	3-2SFCB01 CONTACT 10 FAILED OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-BH	22007103	2SFC*SOV35B SURGE TANK INLET SOLENOID ENER BY SHORT	PERIODIC TEST	LOSS OF DIV II WATER INPUT FR SPENT FUEL POOL	
34-2-BH	22047103	1C-2SFCB06 CONTACT 6 FAILED CLOSE	PERIODIC TEST	LOSS OF DIV II WATER INPUT FR SPENT FUEL POOL	
34-2-D	22427103	1B-2SFCB06 OPERATOR ERROR	PERIODIC TEST	SURGE TANK CROSSOVER WTR 2SFC*HV6B FAILED TO CLOSE	
34-2-D	22437103	1B-2SFCB06 CONTACT 2 FAILED CLOSE	PERIODIC TEST	SURGE TANK CROSSOVER WTR 2SFC*HV6B FAILED TO CLOSE	
34-2-AE	23427103	F5-2SFCB06 3A FUSE FAILS OPEN	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	
34-2-G	23597103	62-2SFCB06 CONT 3 FAILS CLOSE	PERIODIC TEST	62-2SFCB06 CONT 3 CLOSED	

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EJS*US1 (CONTROL BUILDING)	GREEN	2EHS*MCC101	SCREENWELL BUILDING
		2EHS*MCC102 (BUS A)	AUXILIARY BUILDING
		2EHS*MCC102 (BUS C)	AUXILIARY BUILDING
		2EHS*MCC103 (BUS A)	CONTROL BUILDING
		2EHS*MCC103 (BUS C)	CONTROL BUILDING
		2LAC*PNL100A	CONTROL BUILDING
		2EJS*PNL100A	CONTROL BUILDING
		2HVR*UC413A	REACTOR BUILDING UNIT COOLER
		2HVK*CHL1A	CONTROL BUILDING CHILLER
		2HCS*PNL22A	HYDROGEN RECOMBINER POWER CABINET
2EHS*MCC101 (SCREENWELL BUILDING)	GREEN	2SWP*MOV1A	SERVICE WATER STRAINER BACKWASH MOV
		2SWP*MOV1C	SERVICE WATER STRAINER BACKWASH MOV
		2SWP*MOV1E	SERVICE WATER STRAINER BACKWASH MOV
		2SWP*MOV3A	SERVICE WATER TO TURBINE BUILDING ISOLATION MOV
		2SWP*MOV30A	INTAKE SHAFT GATE MOV
		2SWP*MOV50A	SERVICE WATER HEADER ISOLATION MOV
		2SWP*MOV74A	SERVICE WATER PUMP P1A DISCHARGE MOV
		2SWP*MOV74C	SERVICE WATER PUMP P1C DISCHARGE MOV
		2SWP*MOV74E	SERVICE WATER PUMP P1E DISCHARGE MOV
		2SWP*STR4A	SERVICE WATER STRAINER
		2SWP*STR4C	SERVICE WATER STRAINER
		2SWP*STR4E	SERVICE WATER STRAINER
		2SWP*SSR1A	BACK RACK HEATERS TUNNEL 1
		2SWP*SSR2A	BACK RACK HEATERS TUNNEL 1
		2SWP*SSR3A	BACK RACK HEATERS TUNNEL 1
		2SWP*SSR4A	BACK RACK HEATERS TUNNEL 2
		2SWP*SSR5A	BACK RACK HEATERS TUNNEL 2
		2SWP*SSR6A	BACK RACK HEATERS TUNNEL 2
		2HVY*UC2A	SERVICE WATER PUMP PIT UNIT COOLER
		2HVY*UC2C	SERVICE WATER PUMP PIT UNIT COOLER
		2SWP*MOV77A	INTAKE SCREENWELL BYPASS GATE MOV

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC102 BUS A (AUXILIARY BUILDING)	GREEN	2EJS*PNL101A	SWGR ROOM A EMERGENCY DISTRIBUTION PANEL
		2EJS*PNL103A	AUXILARY BUILDING NORTH-EMERGENCY DISTRIBUTION PANEL
		2EJS*PNL104A	AUXILARY BUILDING NORTH-EMERGENCY DISTRIBUTION PANEL
		2WCS*MOV200A	REACTOR WATER CLEANUP ISOLATION MOV
		2FWS*MOV21A	FEEDWATER TO REACTOR ISOLATION MOV
		2MSS*MOV112	MAIN STEAM LINE DRAIN MOV
		2MSS*MOV119	REACTOR VESSEL VENT MOV
		2MSS*MOV208	MAIN STEAM UPSTREAM DRAIN VALVE
		2CMS*P2A	HYDROGEN/OXYGEN ANALYZER PUMP
		2HCS*MOV1A	HYDROGEN RECOMBINER OUTLET OUTBOARD ISOLATION MOV
		2HCS*MOV2A	HYDROGEN RECOMBINER INLET OUTBOARD ISOLATION MOV
		2HCS*MOV3A	HYDROGEN RECOMBINER INLET OUTBOARD ISOLATION MOV
		2HCS*MOV4A	HYDROGEN RECOMBINER OUTLET INBOARD ISOLATION MOV
		2HCS*MOV5A	HYDROGEN RECOMBINER INLET INBOARD ISOLATION MOV
		2HCS*MOV6A	HYDROGEN RECOMBINER INLET INBOARD ISOLATION MOV
		2SWP*MOV17A	SERVICE WATER TO SPENT FUEL POOL HEAT EXCHANGER MOV
		2SWP*MOV18A	SERVICE WATER FROM SPENT FUEL POOL HEAT EXCHANGER MOV
		2SWP*MOV19A	REACTOR BUILDING HEAT EXCHANGER ISOLATION MOV
		2SWP*MOV33A	RHR HEAT EXCHANGER A TUBE SIDE OUTLET MOV
		2SWP*MOV38A	SERVICE WATER TO REACTOR RECIRCULATION PUMP COOLERS MOV
		2SWP*MOV39A	SERVICE WATER DISCHARGE FROM REACTOR RECIRCULATION PUMP COOLERS MOV
		2SWP*MOV90A	SERVICE WATER TO RHR HEAT EXCHANGER MOV
		2GTS*FN1A	CHARCOAL FILTER TRAIN A DISCHARGE FAN
		2GTS*MOV1A	CHARCOAL FILTER TRAIN A INLET MOV
		2GTS*MOV2A	CHARCOAL FILTER TRAIN A INLET MOV
		2GTS*MOV3A	CHARCOAL FILTER TRAIN A INLET MOV
		2GTS*MOV4A	CHARCOAL FILTER TRAIN A DISCHARGE MOV
		2SWP*MOV21A	EMERGENCY MAKEUP TO SPENT FUEL POOL MOV

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC102 BUS C (AUXILIARY BUILDING)	GREEN	2SLS*P1A	STANDBY LIQUID CONTROL PUMP A
		2SLS*MOV1A	STANDBY LIQUID CONTROL STORAGE TANK OUTLET MOV
		2WCS*MOV112	REACTOR WATER CLEANUP PUMP SUCTION ISOLATION MOV
		2FWS*MOV21B	FEEDWATER TO REACTOR ISOLATION MOV
		2DER*MOV120	DRYWELL EQUIPMENT DRAIN ISOLATION MOV
		2DER*MOV131	DRYWELL VENT ISOLATION MOV
		2DFR*MOV120	DRYWELL FLOOR DRAIN DISCHARGE ISOLATION MOV
		2DFR*MOV139	DRYWELL FLOOR DRAIN VENT ISOLATION MOV
		2ICS*P2	RC1C WATER LEG PUMP
		2ICS*MOV121	RC1C STEAM SUPPLY LINE ISOLATION MOV
		2CSL*P2	LPCS WATER LEG PUMP
		2CSL*MOV104	LPCS INJECTION MOV
		2CSL*MOV107	LPCS MINIMUM FLOW TO SUPPRESION POOL MOV
		2CSL*MOV112	LPCS PUMP SUCTION MOV
		2CSL*FV114	LPCS TEST BYPASS TO SUPPRESSION POOL MOV

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC103 BUS A (CONTROL BUILDING)	GREEN	2CCP*MOV4A	RBCLCW TO REACTOR RECIRCULATION PUMP 1A COOLERS MOV
		2CCP*MOV4B	RBCLCW TO REACTOR RECIRCULATION PUMP 1B COOLERS MOV
		2CCP*MOV5A	RBCLCW TO REACTOR RECIRCULATION PUMP 1A COOLERS MOV
		2CCP*MOV5B	RBCLCW TO REACTOR RECIRCULATION PUMP 1B COOLERS MOV
		2CCP*MOV14A	RBCLCW TO SPENT FUEL POOL COOLING HEAT EXCHANGER MOV
		2CCP*MOV18A	RBCLCW FROM SPENT FUEL POOL COOLING HEAT EXCHANGER MOV
		2CCP*MOV22A	RBCLCW FROM REACTOR RECIRCULATION PUMP P1A COOLERS MOV
		2CCP*MOV93A	RBCLCW TO REACTOR RECIRCULATION PUMP P1A COOLERS MOV
		2CCP*MOV124	RBCLCW FROM DRYWELL COOLERS ISOLATION MOV
		2CCP*MOV265	RBCLCW TO DRYWELL COOLERS ISOLATION MOV
		2SWP*P2A	CONTROL BUILDING CHILLER CONDENSING WATER PUMP
		2SWP*MOV47A	SERVICE WATER MAKEUP TO CW MOV
		2SWP*MOV66A	SERVICE WATER TO STANDBY DIESEL GENERATOR COOLERS MOV
		2SWP*MOV67A	CONTROL BUILDING CHILLER SERVICE WATER SUPPLY MOV
		2SWP*MOV92A	SERVICE WATER TO TURBINE BUILDING DISCHARGE ISOLATION MOV
		2SWP*MOV93A	SERVICE WATER TO REACTOR BUILDING DISCHARGE ISOLATION MOV
		2SWP*MOV95A	SERVICE WATER TO STANDBY DIESEL GENERATOR COOLERS MOV
		2HVK*P1A	CONTROL BUILDING CHILLED WATER CIRCULATING PUMP
		2HVK*CHL1A(3)	CHILLER COMPRESSOR AUXILIARY OIL PUMP
		2EGS*P1A	STANDBY DIESEL GENERATOR JACKET WATER CIRCULATING PUMP
		2EGA*C1A	STANDBY DIESEL GENERATOR AIR COMPRESSOR
		2EGS*H2	STANDBY DIESEL GENERATOR SPACE HEATER
		2EGT*CH2	STANDBY DIESEL GENERATOR LUBE OIL HEATER
		2EGT*CH4	STANDBY DIESEL GENERATOR JACKET WATER HEATER
		2EGO*P1A	STANDBY DIESEL GENERATOR LUBE OIL CIRCULATING PUMP

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC103 BUS A (CONTROL BUILDING)	GREEN	2EGA*C2A	STANDBY DIESEL GENERATOR AIR COMPRESSOR
		2EGF*P1A	STANDBY DIESEL GENERATOR FUEL OIL TRANSFER PUMP
		2EGF*P1C	STANDBY DIESEL GENERATOR FUEL OIL TRANSFER PUMP
		2HVC*MOV1A	SPECIAL FILTER BYPASS MOV
		2HVC*ACU1A	CONTROL ROOM A/C FAN
		2HVC*ACU2A	RELAY ROOM A/C FAN
		2HVC*ACU3A	REMOTE SHUTDOWN ROOM A/C FAN
		2HVC*FN2A	CONTROL BUILDING A/C BOOSTER FAN
		2HVC*FN4A	BATTERY ROOM A EXHAUST FAN
		2HVC*FN11A	MAKEUP AIR SWITCHGEAR FLOOR SUPPLY AIR FAN

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC103 BUS C (CONTROL BUILDING)	GREEN	2RHS*MOV1A	RHR PUMP A SUCTION MOV
		2RHS*MOV2A	RHR SUCTION SHUTDOWN COOLING MOV
		2RHS*MOV4A	RHR PUMP MINIMUM FLOW TO SUPPRESSION POOL MOV
		2RHS*MOV8A	RHR HEAT EXCHANGER SHELL SIDE BYPASS MOV
		2RHS*MOV9A	RHR HEAT EXCHANGER SHELL SIDE INLET MOV
		2RHS*MOV12A	RHR HEAT EXCHANGER SHELL SIDE OUTLET MOV
		2RHS*MOV15A	RHR REACTOR CONTAINMENT SPRAY MOV
		2RHS*MOV22A	RHR A STEAM LINE ISOLATION MOV
		2RHS*MOV23A	RHR A STEAM LINE ISOLATION MOV
		2RHS*MOV24A	RHR INJECTION MOV
		2RHS*MOV25A	RHR REACTOR CONTAINMENT SPRAY MOV
		2RHS*MOV26A	RHR HEAT EXCHANGER VENT MOV
		2RHS*MOV27A	RHR HEAT EXCHANGER VENT MOV
		2RHS*MOV30A	RHR A/L RETURN TO SUPPRESSION POOL ISOLATION MOV
		2RHS*MOV32A	RHR HEAT EXCHANGER FLOW TO RC1C MOV
		2RHS*MOV33A	RHR SUPPRESSION POOL SPRAY MOV
		2RHS*MOV37A	RHR HEAT EXCHANGER FLOW TO SUPPRESSION POOL MOV
		2RHS*FV38A	RHR SUPPRESSION POOL COOLING MOV
		2RHS*MOV40A	RHR SHUTDOWN COOLING INJECTION MOV
		2RHS*MOV104	RHR HEAD SPRAY ISOLATION MOV
		2RHS*MOV113	SHUTDOWN COOLING SUCTION ISOL MOV
		2RHS*MOV142	RHR DISCHARGE TO RADWASTE MOV
		2RHS*MOV67A	RHR SHUTDOWN COOLING CHECK VALVE BYPASS MOV
		2HVP*FN1A	STANDBY DIESEL GENERATOR EXHAUST FAN
		2HVP*FN1C	STANDBY DIESEL GENERATOR EXHAUST FAN
2LAC*PNL100A (CONTROL BUILDING)	GREEN	2LAC*PNLE01	LIGHTING DISTRIBUTION PANEL
		2LAC*PNLE04	LIGHTING DISTRIBUTION PANEL
		2SCM*PNL101A	RELAY ROOM EMERGENCY DISTRIBUTION PANEL
		2LAC*PNLE06	LIGHTING DISTRIBUTION PANEL
		2SCM*PNL102A	RELAY ROOM EMERGENCY DISTRIBUTION PANEL
		2SCM*PNL103A	RELAY ROOM EMERGENCY DISTRIBUTION PANEL
		2VBA*UPS2A	UNINTERRUPTIBLE ALTERNATE POWER SUPPLY
		2BYS*CHGR2A1	BATTERY CHARGER

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EJS*PNL100A (CONTROL BUILDING)	GREEN	2BYS*CHGR2A2	BATTERY CHARGER
		2EJS*PNL102A	UNIT HEATERS AND UNIT COOLERS EMERGENCY DISTRIBUTION PANEL
		2VBA*UPS2A	UNINTERRUPTIBLE POWER SUPPLY
		2EJA*PNL100A	REACTOR BUILDING EMERGENCY DISTRIBUTION PANEL
		2EJA*PNL101A	CONTROL BUILDING EMERGENCY DISTRIBUTION PANEL
		2SCV*PNL101A	STANDBY GAS TREATMENT BUILDING EMERGENCY DISTRIBUTION PANEL
		2HVC*CH11A	CONTROL ROOM SUPPLY AIR DUCT HEATER
		2HVC*CH12A	RELAY ROOM SUPPLY AIR DUCT HEATER
		2HVC*PNL2A	CONTROL BUILDING EMERGENCY PANEL
		2EJS*PNL105A	RMS EMERGENCY DISTRIBUTION PANEL
2EJS*PNL101A (AUXILIARY BUILDING)	GREEN	2HVR*UC402A	REACTOR BUILDING UNIT COOLER
		2HVR*UC404B	REACTOR BUILDING UNIT COOLER
		2HVR*UC401A	REACTOR BUILDING UNIT COOLER
		2KJB*DRA1	REACTOR BUILDING PERSON AIRLOCK
		2HVR*UC402B	REACTOR BUILDING UNIT COOLER
		2HVR*UC404A	REACTOR BUILDING UNIT COOLER
		2HVR*UC401D	REACTOR BUILDING UNIT COOLER
		2HVR*UC412A	REACTOR BUILDING UNIT COOLER
2EJS*PNL102A (CONTROL BUILDING)	GREEN	2HVC*UC101A	CONTROL BUILDING UNIT COOLER
		2HVC*UC103A	STANDBY SWITCHGEAR A/C EQUIPMENT ROOM UNIT COOLER
		2HVC*UC104	ELECTRICAL TUNNEL UNIT COOLER
		2HVC*UC106	CABLE AREA BASE UNIT COOLER
		2HVC*UC108A	CONTROL BUILDING UNIT COOLER
		2HVC*CH7A	CONTROL BUILDING CHARCOAL FLTR HTR
		2HVP*UC1A	STANDBY DIESEL GENERATOR BUILDING UNIT COOLER
2EJS*PNL103A (AUXILIARY BUILDING)	GREEN	2HVR*UC407A	REACTOR BUILDING UNIT COOLER
		2HVR*UC407B	REACTOR BUILDING UNIT COOLER
		2HVR*UC407C	REACTOR BUILDING UNIT COOLER
		2HVR*UC415A	REACTOR BUILDING UNIT COOLER
		2HVR*UC405	REACTOR BUILDING UNIT COOLER

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EJS*PNL104A (AUXILIARY BUILDING)	GREEN	2HVR*UC408A	REACTOR BUILDING UNIT COOLER
		2HVR*UC408B	REACTOR BUILDING UNIT COOLER
		2HVR*UC410A	REACTOR BUILDING UNIT COOLER
		2HVR*UC411A	REACTOR BUILDING UNIT COOLER
		2HVR*UC414A	REACTOR BUILDING UNIT COOLER
		2GTS*CH1A	STANDBY GAS TREATMENT FILTER AIR HEATER
2EJS*US3 (CONTROL BUILDING)	YELLOW	2EHS*MCC301	SCREENWELL BUILDING
		2EHS*MCC302 (BUS B)	AUXILIARY BUILDING
		2EHS*MCC302 (BUS D)	AUXILIARY BUILDING
		2EHS*MCC303 (BUS B)	CONTROL BUILDING
		2EHS*MCC303 (BUS D)	CONTROL BUILDING
		2LAC*PNL300A	CONTROL BUILDING
		2EJS*PNL300B	CONTROL BUILDING
		2HVR*UC413B	REACTOR BUILDING UNIT COOLER
		2HVK*CHL1B	CONTROL BUILDING CHILLER
		2HCS*PNL22B	HYDROGEN RECOMBINER POWER CABINET
2EHS*MCC301 (SCREENWELL BUILDING)	YELLOW	2SWP*MOV1B	SERVICE WATER STRAINER BACKWASH MOV
		2SWP*MOV1D	SERVICE WATER STRAINER BACKWASH MOV
		2SWP*MOV1F	SERVICE WATER STRAINER BACKWASH MOV
		2SWP*MOV3B	SERVICE WATER TO TURBINE
		2SWP*MOV30B	INTAKE SHAFT GATE MOV
		2SWP*MOV50B	SERVICE WATER HEADER ISOLATION MOV
		2SWP*MOV74B	SERVICE WATER PUMP P1B DISCHARGE MOV
		2SWP*MOV74D	SERVICE WATER PUMP P1D DISCHARGE MOV
		2SWP*MOV74F	SERVICE WATER PUMP P1F DISCHARGE MOV
		2SWP*STR4B	SERVICE WATER STRAINER
		2SWP*STR4D	SERVICE WATER STRAINER
		2SWP*STR4F	SERVICE WATER STRAINER
		2SWP*SSR1B	BACK RACK HEATERS TUNNEL 1
		2SWP*SSR2B	BACK RACK HEATERS TUNNEL 1
		2SWP*SSR3B	BACK RACK HEATERS TUNNEL 1
		2SWP*SSR4B	BACK RACK HEATERS TUNNEL 2
		2SWP*SSR5B	BACK RACK HEATERS TUNNEL 2
		2SWP*SSR6B	BACK RACK HEATERS TUNNEL 2
		2HVY*UC2B	SERVICE WATER PUMP PIT UNIT COOLER
		2HVY*UC2D	SERVICE WATER PUMP PIT UNIT COOLER
		2SWP*MOV77B	INTAKE SCREENWELL BYPASS GATE MOV

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC302 BUS B (AUXILIARY BUILDING)	YELLOW	2EJS*PNL302B	AUX BUILDING SOUTH-EMERGENCY DISTRIBUTION PANEL
		2CMS*P2B	HYDROGEN/OXYGEN ANALYZER PUMP
		2HCS*MOV1B	HYDROGEN RECOMBINER OUTLET OUTBOARD ISOLATION MOV
		2HCS*MOV2B	HYDROGEN RECOMBINER INLET OUTBOARD ISOLATION MOV
		2HCS*MOV3B	HYDROGEN RECOMBINER INLET OUTBOARD ISOLATION MOV
		2HCS*MOV4B	HYDROGEN RECOMBINER OUTLET INBOARD ISOLATION MOV
		2HCS*MOV5B	HYDROGEN RECOMBINER INLET INBOARD ISOLATION MOV
		2HCS*MOV6B	HYDROGEN RECOMBINER INLET INBOARD ISOLATION MOV
		2SWP*MOV17B	SERVICE WATER TO SPENT FUEL POOL HEAT EXCHANGER MOV
		2SWP*MOV18B	SERVICE WATER FROM SPENT FUEL POOL HEAT EXCHANGER MOV
		2SWP*MOV19B	REACTOR BUILDING HEAT EXCHANGER MOV
		2EJS*PNL303B	AUXILIARY BUILDING SOUTH-EMERGENCY DISTRIBUTION PANEL
		2SWP*MOV21B	EMERGENCY MAKEUP TO SPENT FUEL POOL MOV
		2SWP*MOV33B	RHR HEAT EXCHANGER B TUBE SIDE OUTLET MOV
		2SWP*MOV38B	SERVICE WATER TO REACTOR RECIRCULATION PUMP COOLERS MOV
		2SWP*MOV39B	SERVICE WATER DISCHARGE FROM REACTOR RECIRCULATION PUMP COOLERS MOV
		2SWP*MOV90B	SERVICE WATER TO RHR HEAT EXCHANGER MOV
		2GTS*FN1B	CHARCOAL FILTER TRAIN B DISCHARGE FAN
		2GTS*MOV1B	CHARCOAL FILTER TRAIN B INLET MOV
		2GTS*MOV2B	CHARCOAL FILTER TRAIN B INLET MOV
		2GTS*MOV3B	CHARCOAL FILTER TRAIN B INLET MOV
		2GTS*MOV4B	CHARCOAL FILTER TRAIN B DISCHARGE MOV
		2EJS*PNL304B	AUXILIARY BUILDING SOUTH-EMERGENCY DISTRIBUTION PANEL

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC302 BUS D (AUXILIARY BUILDING)	YELLOW	2SLS*P1B	STANDBY LIQUID CONTROL PUMP B
		2SLS*MOV1B	STANDBY LIQUID CONTROL STORAGE TANK OUTLET MOV
		2WCS*MOV102	REACTOR WATER CLEANUP SUCTION ISOLATION MOV
		2DER*MOV119	DRYWELL EQUIPMENT DRAIN ISOLATION MOV
		2DER*MOV130	DRYWELL VENT ISOLATION MOV
		2DFR*MOV121	DRYWELL FLOOR DRAIN DISCHARGE ISOLATION MOV
		2DFR*MOV140	DRYWELL FLOOR DRAIN VENT ISOLATION MOV
		2ICS*MOV128	RC1C STEAM SUPPLY LINE ISOLATION MOV
		2ICS*MOV170	RC1C STEAMLINE WARMUP LINE ISOLATION VALVE
		2MSS*MOV111	MAIN STEAM LINE DRAIN MOV
		2MSS*MOV118	REACTOR VESSEL VENT MOV

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600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC303 BUS B (CONTROL BUILDING)	YELLOW	2CCP*MOV14B	RBCLCW TO SPENT FUEL POOL COOLING HEAT EXCHANGER MOV
		2CCP*MOV18B	RBCLCW FROM SPENT FUEL POOL COOLING HEAT EXCHANGER MOV
		2CCP*MOV21A	RBCLCW FROM REACTOR RECIRULATION PUMP 1A COOLERS ISOLATION MOV
		2CCP*MOV21B	RBCLCW FROM REACTOR RECIRCULATION PUMP 1B COOLERS ISOLATION MOV
		2CCP*MOV22B	RBCLCW FROM REACTOR RECIRCULATION PUMP P1B COOLERS MOV
		2CCP*MOV93B	RBCLCW TO REACTOR RECIRCULATION PUMP P1B COOLERS MOV
		2CCP*MOV94A	RBCLCW TO REACTOR RECIRCULATION PUMP P1A COOLERS ISOLATION MOV
		2CCP*MOV94B	RBCLCW TO REACTOR RECIRCULATION PUMP P1B COOLERS ISOLATION MOV
		2CCP*MOV122	RBCLCW TO DRYWELL COOLERS ISOLATION MOV
		2CCP*MOV273	RBCLCW TO DRYWELL COOLERS ISOLATION MOV
		2SWP*P2B	CONTROL BUILDING CHILLER CONDENSING WATER PUMP
		2SWP*MOV47B	SERVICE WATER MAKEUP TO CW MOV
		2SWP*MOV66B	SERVICE WATER TO STANDBY DIESEL GENERATOR COOLERS MOV
		2SWP*MOV67B	CONTROL BUILDING CHILLER SERVICE WATER SUPPLY MOV
		2SWP*MOV92B	SERVICE WATER TO TURBINE BUILDING DISCHARGE ISOLATION MOV
		2SWP*MOV93B	SERVICE WATER TO REACTOR BUILDING DISCHARGE ISOLATION MOV
		2SWP*MOV95B	SERVICE WATER TO STANDBY DIESEL GENERATOR COOLERS MOV
		2HVK*P1B	CONTROL BUILDING CHILLED WATER CIRCULATING PUMP
		2HVK*CHL1B(3)	CHILLER COMPRESSOR AUXILIARY OIL PUMP
		2EGS*P1B	STANDBY DIESEL GENERATOR JACKET WATER CIRCULATING PUMP
		2EGS*H3	STANDBY DIESEL GENERATOR SPACE HEATER
		2EGT*CH3	STANDBY DIESEL GENERATOR LUBE OIL HEATER
		2EGT*CH5	STANDBY DIESEL GENERATOR JACKET WATER HEATER
		2EGO*P1B	STANDBY DIESEL GENERATOR LUBE OIL CIRCULATING PUMP

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC303 BUS B (CONTROL BUILDING)	YELLOW	2EGF*P1B	STANDBY DIESEL GENERATOR FUEL OIL TRANSFER PUMP
		2EGF*P1D	STANDBY DIESEL GENERATOR FUEL OIL TRANSFER PUMP
		2HVC*MOV1B	SPECIAL FILTER BYPASS MOV
		2HVC*ACU1B	CONTROL ROOM A/C FAN
		2HVC*ACU2B	RELAY ROOM A/C FAN
		2HVC*ACU3B	REMOTE SHUTDOWN ROOM A/C FAN
		2HVC*FN2B	CONTROL BUILDING A/C BOOSTER FAN
		2HVC*FN4B	BATTERY ROOM B EXHAUST FAN
		2HVC*FN11B	MAKEUP AIR SWITCHGEAR FLOOR SUPPLY AIR FAN
		2EGA-C1B	STANDBY DIESEL GENERATOR AIR COMPRESSOR 1B
		2EGA-C2B	STANDBY DIESEL GENERATOR AIR COMPRESSOR 2B

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600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EHS*MCC303 BUS D (CONTROL BUILDING)	YELLOW	2RHS*MOV1B	RHR PUMP B SUCTION MOV
		2RHS*MOV2B	RHR SUCTION SHUTDOWN COOLING MOV
		2RHS*MOV4B	RHR PUMP MINIMUM FLOW TO SUPPRESSION POOL MOV
		2RHS*MOV8B	RHR HEAT EXCHANGER SHELL SIDE BYPASS MOV
		2RHS*MOV9B	RHR HEAT EXCHANGER SHELL SIDE INLET MOV
		2RHS*MOV12B	RHR HEAT EXCHANGER SHELL SIDE OUTLET MOV
		2RHS*MOV15B	RHR REACTOR CONTAINMENT SPRAY MOV
		2RHS*MOV22B	RHR B STEAM LINE ISOLATION MOV
		2RHS*MOV23B	RHR B STEAM LINE ISOLATION MOV
		2RHS*MOV24B	RHR INJECTION MOV
		2RHS*MOV24C	RHR INJECTION MOV
		2RHS*MOV25B	RHR REACTOR CONTAINMENT SPRAY MOV
		2RHS*MOV26B	RHR HEAT EXCHANGER VENT MOV
		2RHS*MOV27B	RHR HEAT EXCHANGER VENT MOV
		2RHS*MOV30B	RHR B/C RETURN TO SUPPRESSION POOL ISOLATION MOV
		2RHS*MOV32B	RHR HEAT EXCHANGER B FLOW TO RC1C MOV
		2RHS*MOV33B	RHR SUPPRESSION POOL SPRAY MOV
		2RHS*MOV37B	RHR HEAT EXCHANGER FLOW TO SUPPRESSION POOL MOV
		2RHS*FV38B	RHR SUPPRESSION POOL COOLING MOV
		2RHS*MOV40B	RHR SHUTDOWN COOLING INJECTION MOV
		2RHS*MOV67B	RHR SHUTDOWN COOLING CHECK VALVE BYPASS MOV
		2RHS*MOV112	RHR SHUTDOWN COOLING SUCTION ISOLATION MOV
		2RHS*MOV115	RHR SERVICE WATER CROSS-TIE MOV
		2RHS*MOV116	RHR SERVICE WATER CROSS-TIE MOV
		2RHS*MOV149	RHR DISCHARGE TO RADWASTE MOV
		2RHS*MOV1C	RHR PUMP C SUCTION MOV
		2RHS*MOV4C	RHR PUMP MINIMUM FLOW TO SUPPRESSION POOL
		2RHS*FV38C	RHR LOOP C TEST RETURN MOV
		2HVP*FN1B	STANDBY DIESEL GENERATOR EXHAUST FAN
		2HVP*FN1D	STANDBY DIESEL GENERATOR EXHAUST FAN
		2RHS*P2	RHR WATER LEG PUMP

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2LAC*PNL300B (CONTROL BUILDING)	YELLOW	2LAC*PNLE02	LIGHTING DISTRIBUTION PANEL
		2LAC*PNLE05	LIGHTING DISTRIBUTION PANEL
		2SCM*PNL301B	RELAY ROOM EMERGENCY DISTRIBUTION PANEL
		2LAC*PNLE07	LIGHTING DISTRIBUTION PANEL
		2SCM*PNL302B	RELAY ROOM EMERGENCY DISTRIBUTION PANEL
		2SCM*PNL303B	RELAY ROOM EMERGENCY DISTRIBUTION PANEL
		2VBA*UPS2B	UNINTERRUPTIBLE ALTERNATE POWER SUPPLY
		2BYS*CHGR2B1	BATTERY CHARGER
2EJS*PNL300B (CONTROL BUILDING)	YELLOW	2BYS*CHGR2B2	BATTERY CHARGER
		2EJS*PNL301B	UNIT HEATERS AND UNIT COOLER EMERGENCY DISTRIBUTION PANEL
		2VBA*UPS2B	UNINTERRUPTIBLE POWER SUPPLY
		2EJA*PNL300B	REACTOR BUILDING EMERGENCY DISTRIBUTION PANEL
		2EJA*PNL301B	CONTROL BUILDING EMERGENCY DISTRIBUTION PANEL
		2HVC*CH11B	CONTROL ROOM SUPPLY AIR DUCT HEATER
		2HVC*CH12B	RELAY ROOM SUPPLY AIR DUCT HEATER
		2SCV*PNL301B	STANDBY GAS TREATMENT BUILDING EMERGENCY DISTRIBUTION PANEL
		2HVC*PNL2B	CONTROL BUILDING EMERGENCY DISTRIBUTION PANEL
		2EJS*PNL305B	RMS EMERGENCY DISTRIBUTION PANEL
2EJS*PNL301B (CONTROL BUILDING)	YELLOW	2HVC*UC101B	CONTROL BUILDING UNIT COOLER
		2HVC*UC103B	STANDBY SWITCHGEAR A/C EQUIPMENT ROOM UNIT COOLER
		2HVC*UC105	ELECTRICAL TUNNEL UNIT COOLER
		2HVC*UC107	CABLE AREA BASE UNIT COOLER
		2HVC*UC108B	CONTROL BUILDING UNIT COOLER
		2HVC*CH7B	CONTROL BUILDING CHARCOAL FILTER HEAT
		2HVP*UC1B	STANDBY DIESEL GENERATOR BUILDING UNIT COOLER
2EJS*PNL302B (AUXILIARY BUILDING)	YELLOW	2HVR*UC401B	REACTOR BUILDING UNIT COOLER
		2HVR*UC401C	REACTOR BUILDING UNIT COOLER
		2HVR*UC401E	REACTOR BUILDING UNIT COOLER
		2HVR*UC401F	REACTOR BUILDING UNIT COOLER
		2HVR*UC404C	REACTOR BUILDING UNIT COOLER
		2HVR*UC404D	REACTOR BUILDING UNIT COOLER
		2HVR*UC412B	REACTOR BUILDING UNIT COOLER

APPENDIX B

600VAC LOAD CENTER/MOTOR CONTROL CENTER LOADS

LOAD CENTER/MCC NO.	COLOR	COMPONET	SYSTEM FUNCTION
2EJS*PNL303B (AUXILIARY BUILDING)	YELLOW	2HVR*UC406	REACTOR BUILDING UNIT COOLER
		2HVR*UC407D	REACTOR BUILDING UNIT COOLER
		2HVR*UC407E	REACTOR BUILDING UNIT COOLER
		2HVR*UC415B	REACTOR BUILDING UNIT COOLER
2EJS*PNL304B (AUXILIARY BUILDING)	YELLOW	2HVR*UC409A	REACTOR BUILDING UNIT COOLER
		2HVR*UC409B	REACTOR BUILDING UNIT COOLER
		2HVR*UC410B	REACTOR BUILDING UNIT COOLER
		2HVR*UC410C	REACTOR BUILDING UNIT COOLER
		2HVR*UC411B	REACTOR BUILDING UNIT COOLER
		2HVR*UC411C	REACTOR BUILDING UNIT COOLER
		2HVR*UC414B	REACTOR BUILDING UNIT COOLER
		2GTS*CH1B	STANDBY GAS TREATMENT FILTER AIR HEATER