



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038

Nuclear Department

November 7, 1983

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20014

Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch 1
Division of Licensing

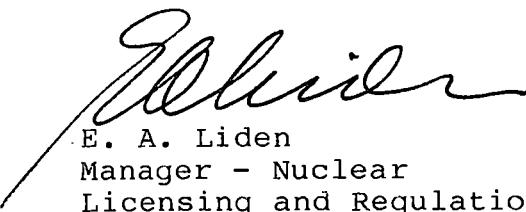
Gentlemen:

SUPPLEMENTAL RESPONSE TO GENERIC LETTER 83-28
NO. 1 AND 2 UNITS
SALEM GENERATING STATION
DOCKET NOS. 50-272 AND 50-311

Public Service Electric and Gas Company's letter dated July 22, 1983 provided our response to Generic Letter 83-28, regarding actions required to address the generic implications of the Salem reactor trip breaker failures on February 22 and February 25, 1983. Our July 22, 1983 response addressed each of the required actions. In most cases, we referenced previous correspondence which had described our programs developed as part of our corrective action program implemented prior to restart of Salem Generating Station Unit Nos. 1 and 2. Additionally, we committed to conducting a detailed review of Generic Letter 83-28 to determine if further actions may be required. The results of this review are attached.

Pursuant to 10 CFR 50.54(f), the required affidavit will be submitted in the near future under separate cover.

Sincerely,


E. A. Liden

Manager - Nuclear
Licensing and Regulation

Attachment


A001
11/1

The Energy People

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

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11/7/83

CC: Mr. Donald C. Fischer
Licensing Project Manager

Mr. James Linville
Senior Resident Inspector

ATTACHMENT

SUPPLEMENTAL RESPONSE TO GENERIC
LETTER 83-28 FOR SALEM GENERATING STATION

1.1 POST-TRIP REVIEW (PROGRAM DESCRIPTION AND PROCEDURE)

Our letter of July 22, 1983 provided the requested information.

1.2 POST-TRIP REVIEW (DATA & INFORMATION CAPABILITY)

Enclosure 1 is provided in response to this request.

2.1 EQUIPMENT CLASSIFICATION & VENDOR INTERFACE
(REACTOR TRIP SYSTEM COMPONENTS)

Our letter of July 22, 1983 identified previous submittals that addressed all points in this position with the following exceptions:

Position: Vendors of these components should be contacted and an interface established. Where vendors can not be identified, have gone out of business, or will not supply the information, the licensee or applicant shall assure that sufficient attention is paid to equipment maintenance, replacement, and repair, to compensate for the lack of vendor backup, to assure reactor trip system reliability.

Response: PSE&G's Vendor Document Control Procedure will be revised by December 31, 1983 to require that System Sponsor Engineers be made aware of the lack of vendor response and assign them responsibility to ensure that an adequate maintenance program exists for this equipment.

Position: The program shall also define the interface and division of responsibilities among the licensees and the nuclear and non-nuclear divisions of their vendors that provide service on reactor trip system components to assure that requisite control of and applicable instructions for maintenance work are provided.

Response: PSE&G's Vendor Document Control Procedure will be revised by December 31, 1983 to require that the vendor confirm that correspondence has been addressed to the proper vendor division/section and that return information supplied to PSE&G is from the vendor's Nuclear Division/Section.

**2.2 EQUIPMENT CLASSIFICATION & VENDOR INTERFACE
(PROGRAMS FOR ALL SAFETY-RELATED COMPONENTS)**

Our letter of July 22, 1983 identified previous submittals that addressed all points in this position with the following exceptions:

Position: A description of the process by which station personnel use this information handling system to determine that an activity is safety-related and what procedures for maintenance, surveillance, parts replacement and other activities defined in the introduction to 10 CFR 50, Appendix B, apply to safety-related components.

Response: Procedures require that Station personnel utilize the MEL System List in conjunction with the Component List for determining whether an activity is safety-related and/or whether the QA Program applies to the activity. The MEL System List and Component List are described in our letter of April 8, 1983.

Once an activity has been determined to be safety-related or applicable to the QA Program, established approved procedures are utilized in the performance of the activity.

Position: A demonstration that appropriate design verification and qualification testing is specified for procurement of safety-related components. The specifications shall include qualification testing for expected safety service conditions and provide support for the licensees' receipt of testing documentation to support the limits of life recommended by the supplier.

Response: Engineering procedures require procurement specifications include special testing and/or qualification testing requirements. The PSE&G Quality Assurance Program requires QA review and approval of safety-related procurement specifications.

As part of this review, QA insures that qualification testing requirements were considered in the specification.

Position: For vendor interface, licensees and applicants shall establish, implement and maintain a continuing program to ensure that vendor information for safety-related components is complete, current and controlled throughout the life of their plants, and appropriately referenced or incorporated in plant instructions and procedures. Vendors of safety-related equipment should be

contacted and an interface established. Where vendors cannot be identified, have gone out of business, or will not supply information, the licensee or applicant shall assure that sufficient attention is paid to equipment maintenance, replacement, and repair, to compensate for the lack of vendor backup, to assure reliability commensurate with its safety function (GDC-1). The program shall be closely coupled with action 2.2.1 above (equipment qualification). The program shall include periodic communication with vendors to assure that all applicable information has been received. The program should use a system of positive feedback with vendors for mailings containing technical information. This could be accomplished by licensee acknowledgement for receipt of technical mailings. It shall also define the interface and division of responsibilities among the licensee and the nuclear and non-nuclear divisions of their vendors that provide service on safety-related equipment to assure that requisite control of and applicable instructions for maintenance work on safety-related equipment are provided.

Response: This item is addressed in our response to Item 2.1 of the generic letter.

3.1 POST-MAINTENANCE TESTING (REACTOR TRIP SYSTEM COMPONENTS)

PSE&G developed a program to assess and upgrade post-maintenance testing requirements for all safety-related equipment; i.e., there was not a separate program for RTS components. Our July 22, 1983 letter identifies those previous letters that describe our programs addressing this issue.

3.2 POST-MAINTENANCE TESTING (ALL OTHER SAFETY-RELATED COMPONENTS)

See our response to Item 3.1.

4.1 REACTOR TRIP SYSTEM RELIABILITY (VENDOR-RELATED MODIFICATIONS)

Our letter of July 22, 1983 identifies the letters that respond to this action.

4.2 REACTOR TRIP SYSTEM RELIABILITY (PREVENTATIVE MAINTENANCE AND SURVEILLANCE PROGRAM FOR REACTOR TRIP BREAKERS)

Our letter of July 22, 1983 provided the requested information.

4.3 REACTOR TRIP SYSTEM RELIABILITY (AUTOMATIC ACTUATION OF SHUNT TRIP ATTACHMENT FOR WESTINGHOUSE AND B&W)

This item is addressed in our letter of July 15, 1983.

4.5 REACTOR TRIP SYSTEM RELIABILITY (SYSTEM FUNCTIONAL TESTING)

Our letter of July 22, 1983 provided the requested information.

ENCLOSURE 1

POST TRIP REVIEW (DATA AND INFORMATION CAPABILITY)

The Salem Units have an existing sequence of events program within the plant computer. The sequence of events routine is initiated by a change in state of any of the inputs which have been designated points within the sequence of events program. (See Enclosure 2).

Upon the receipt of an input change that has been designated a sequence of events input, the plant computer assigns 18 locations in memory where it stores the status of the change of state for any changing sequence of events points. The time interval of the occurrence from the initiating event in cycles or in 16.6 millisecond intervals is also stored. If the number of events is less than or equal to the buffer memory size the events will be printed out 1 minute after the initiating event in chronological order. (Refer to Enclosure 3 for sample sequence of events format). If more events occur than can be stored in the memory buffer area the print out is generated immediately after the buffer locations are filled so that memory space is available for additional changing sequence of events inputs.

The plant computer is powered from an inverter which receives its power from a battery charger fed by the "A" 230 volt vital bus. The "A" bus 125 volt dc battery system is floating on the charger and will automatically feed the inverter in the event the battery charger fails. A manual transfer for a direct feed from the 230 volt vital "B" bus is also available if the inverter were to fail.

A hard copy of a sequence of events printing is available from one of three printers. If the normal printer fails the sequence will be printed on the secondary printer and if both the normal and secondary printer fail the sequence will be printed on a third printer. The computer also stores the last sequence printing which may be recalled and printed if required. The storage capability is only that of the last inputed 18 storage locations.

A general list of plant parameters monitored by the sequence of events routine is given below. A detailed list of each point is also provided in Enclosure 2.

Reactor coolant loop low tavg, (each loop).
Reactor coolant loop low flow, (each loop).
Steam generator low flow, (each steam generator).
Steam generator hi flow, (each steam generator).
Steam line low pressure, (each steam line).
Steam generator low level, (each steam generator).
Steam generator low low level, (each steam generator).
Pressurizer

Pressurizer low level.
Neutron flux hi Q, (each range, ie power, intermediate, source).
Neutron flux low Q, (power range).
Turbine vacuum.
Turbine hydraulic oil low pressure.
Steam line high differential pressure, (each steam line).
Pressurizer high pressure.
Pressurizer low pressure.
Containment high pressure.
Turbine bearing oil pressure.
Turbine thrust bearing oil pressure.
Reactor coolant loop overtemp delta T, (each loop).
Reactor coolant loop overpower delta T, (each loop).
Reactor coolant pump bus undervoltage, (each pump).
Reactor coolant pump bus underfrequency, (each pump).
Turbine stop valve position, (all 4 valves).
Reactor coolant pump breaker positions, (all pumps).
Steam generator low level and low feedwater, (all steam generators).
Manual safety injection switch.
Turbine trip.
Condensate pumps trip, (all pumps).
13 Aux feedwater pump turbine stop valve position.
Steam generator feed pumps main steam stop valve position, (both pumps).
Aux feedwater pumps start & trip, (both motor driven pumps).
13 kv breaker open, (all breakers).
Power range hi Q rate.
Manual reactor trip switches.
Reactor trip breaker positions, (both breakers).
Reactor trip bypass breaker positions, (both breakers).

The Salem Units are also equipped with continuous recording strip chart recorders for use in assessing time history of analog variables. Those variables which are recorded are:

Reactor coolant hot leg and cold leg temperatures, (all loops).
Steam generator steam flow, (all steam generators).
Steam generator feedwater flow, (all steam generators).
Steam generator level (narrow range & wide range all steam generators).
Pressurizer level.
Pressurizer pressure.
Neutron flux, (each range ie power, intermediate source).
Turbine vacuum pressure.
Containment pressure, (wide range & narrow range).
Reactor coolant delta T, (loop selectable).
Reactor overpower.

All of the above recorders are powered from a class 1E source except the Turbine Vacuum pressure recorder which is powered from a non vital source.

SEQUENCE OF EVENTS POINTS

BD /BF/

.01 ST ALL(A) OR CK BCCI(B)? A (Identified by vertical bars in margin)

.0098D CONTROL AND SD ROD BCCI
NOT SEQ OF EVENT;ALM(1)=MOVE , NORM(0)=NTMOVE

.0099D POSITION ROD CCI
NOT SEQ OF EVENT;ALM(1)=NTDROP, NORM(0)=DROP

.0400D 21 RCL LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0401D 21 RCL LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0402D 21 RCL LO F 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0403D RCL LO FLOW +P8 REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

.0404D 21 STM GEN LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0405D 21 STM GEN LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0406D 21 STM LNE HI F 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0407D 21 STM LNE HI F 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0408D 21 RCL LO TAVG PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0409D 21 STM LNE LO P PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0420D 22 RCL LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0421D 22 RCL LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0422D 22 RCL LO F 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0423D RCL LO FLOW +P7 REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

.0424D 22 STM GEN LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

.0425D 22 STM GEN LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

BD /8F/

1ST ALL(A) OR CK BCCI(B)? A

20098D CONTROL AND SD ROD BCCI
NO1 SEQ OF EVENT:ALM(1)=MOVE , NORM(0)=NTMOVE
20099D POSITON ROD CCI
NOT SEQ OF EVENT:ALM(1)=NTDROP, NORM(0)=DROP
F0400D 21 RCL LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0401D 21 RCL LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0402D 21 RCL LO F 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0403D RCL LO FLOW +P8 REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
F0404D 21 STM GEN LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0405D 21 STM GEN LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0406D 21 STM LNE HI F 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0407D 21 STM LNE HI F 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0408D 21 RCL LO TAVG PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0409D 21 STM LNE LO P PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0420D 22 RCL LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0421D 22 RCL LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0422D 22 RCL LO F 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0423D RCL LO FLOW +P7 REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
F0424D 22 STM GEN LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0425D 22 STM GEN LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0426D 22 STM LNE HI F 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0427D 22 STM LNE HI F 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0428D 22 RCL LO TAVG PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
F0429D 22 STM LNE LO P PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

0440D 23 RCL LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0441D 23 RCL LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0442D 23 RCL LO F 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0443D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

F0444D 23 STM GEN LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0445D 23 STM GEN LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0446D 23 STM LNE HI F 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

T0447D 23 STM LNE HI F 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0448D 23 RCL LO TAVG PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0449D 23 STM LNE LO P PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0460D 24 RCL LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0461D 24 RCL LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0462D 24 RCL LO F 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0463D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

F0464D 24 STM GEN LO F 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0465D 24 STM GEN LO F 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0466D 24 STM LNE HI F 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0467D 24 STM LNE HI F 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0468D 24 RCL LO TAVG PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0469D 24 STM LNE LO P PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0490D STM LNE HI F SI TRP BLK A BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET

F0493D STM LNE HI FLOW SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

F0494D STM LNE HI F SI TRP BLK B BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

F0495D PWR RNG 1 PB PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

F0496D PWR RNG 2 PB PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

F0497D PWR RNG 3 PB PRT PRM BCCI

SEQ OF EVENT=ALM UNL ; ALM(1)=RESET , NORM(1)=SET
L0498D PWR RNG 4 P8 PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=RESET , NORM(1)=SET
L0499D PWR RNG P8 PRMSSVE BCCI
SEQ OF EVENT=ALM+RTN ; ALM(1)=RESET , NORM(0)=SET
L0400D 21 STM GEN LO LVL 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0401D 21 STM GEN LO LVL 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0403D 21 STM GEN LO LO L 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0404D 21 STM GEN LO LO L 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0405D 21 STM GEN LO LO L 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0406D 21 STM GEN LO LO L REACTOR BCCI
SEQ OF EVENT=ALM+RTN ; ALM(1)=TRIP , NORM(0)=NT TRP
L0420D 22 STM GEN LO LVL 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0421D 22 STM GEN LO LVL 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0423D 22 STM GEN LO LO L 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0424D 22 STM GEN LO LO L 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0425D 22 STM GEN LO LO L 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0426D 22 STM GEN LO LO L REACTOR BCCI
SEQ OF EVENT=ALM+RTN ; ALM(1)=TRIP , NORM(0)=NT TRP
L0440D 23 STM GEN LO LVL 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0441D 23 STM GEN LO LVL 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0443D 23 STM GEN LO LO L 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0444D 23 STM GEN LO LO L 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0445D 23 STM GEN LO LO L 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0446D 23 STM GEN LO LO L REACTOR BCCI
SEQ OF EVENT=ALM+RTN ; ALM(1)=TRIP , NORM(0)=NT TRP
L0460D 24 STM GEN LO LVL 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0461D 24 STM GEN LO LVL 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0463D 24 STM GEN LO LO L 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0464D 24 STM GEN LO LO L 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET
L0465D 24 STM GEN LO LO L 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ; ALM(1)=SET , NORM(0)=RESET

0466D 24 STM GEN LO LO L REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
0480D PRESSZR HI LVL 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
0481D PRESSZR HI LVL 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
0482D PRESSZR HI LVL 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
0483D PRESSZR HI LVL REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
0484D PRESSZR LO LVL 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
0485D PRESSZR LO LVL 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
0486D PRESSZR LO LVL 3 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
2000D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2001D OIL RESVOIR HI LVL AND TRIP CCI
NOT SEQ OF EVENT;ALM(1)=OFF , NORM(0)=ON
2002D OIL RESVOIR LO LVL AND TRIP CCI
NOT SEQ OF EVENT;ALM(1)=OFF , NORM(0)=ON
2010D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2011D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2200D SEC 2A ACCIDNT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2201D SEC 2A BLCKOUT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2202D SEC 2A BLCKOUT ACCIDNT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2203D SEC 2A ACCIDNT BUS UNDER V CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2204D SEC 2B ACCIDNT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2205D SEC 2B BLCKOUT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2206D SEC 2B BLCKOUT ACCIDNT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2207D SEC 2B ACCIDNT BUS UNDER V CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2208D SEC 2C ACCIDNT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2209D SEC 2C BLCKOUT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2210D SEC 2C BLCKOUT ACCIDNT LOAD CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2211D SEC 2C ACCIDNT BUS UNDER V CCI
NOT SEQ OF EVENT;ALM(1)=SET , NORM(0)=RESET
2212D SPARE CCI CCI

NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2213D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2214D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2215D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2216D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2217D NOT SEQRBFCEVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2230D 21B CNDENSR HOTWELL HI LVL CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
2231D 22B CNDENSR HOTWELL HI LVL CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
2235D 23B CNDENSR HOTWELL HI LVL CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
2300D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2301D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2302D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2303D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2304D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2305D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2306D 21 BLD STM RH COIL RTN TNK LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NORMAL
2307D 22 BLD STM RH COIL RTN TNK LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NORMAL
2320D 21B CNDENSR HOTWELL LO LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NT LOW
2500D 21A CNDENSR HOTWELL HI LVL CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
2501D 22A CNDENSR HOTWELL HI LVL CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
2502D 23A CNDENSR HOTWELL HI LVL CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
2503D 21A CNDENSR HOTWELL LO LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NT LOW
2504D 22A CNDENSR HOTWELL LO LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NT LOW
2505D 23A CNDENSR HOTWELL LO LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NT LOW
2520D 22B CNDENSR HOTWELL LO LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NT LOW
2521D 23B CNDENSR HOTWELL LO LVL CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NT LOW
2700D SPARE CCI CCI

NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2701D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2720D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2858D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2862D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2866D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2867D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2868D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=NORMAL, NORM(0)=LOW
2869D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2870D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2871D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2872D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2873D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2874D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
2875D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
40001D PWR RNG CHAN 1 HI Q PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40002D PWR RNG CHAN 2 HI Q PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40003D PWR RNG CHAN 3 HI Q PRT TRP BCCI
SER OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40004D PWR RNG CHAN 4 HI Q PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40005D PWR RNG CHAN HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
40006D PWR RNG CHAN 1 LO Q PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40007D PWR RNG CHAN 2 LO Q PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40008D PWR RNG CHAN 3 LO Q PRT TRP BCCI
SER OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40009D PWR RNG CHAN 4 LO Q PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
40010D PWR RNG CHAN LO Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
40011D PWR RNG 1 P10 PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

N0012D PWR RNG 2 P10 PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

N0013D PWR RNG 3 P10 PRT PRM BCCI
SEN OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

N0014D PWR RNG 4 P10 PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

N0015D PWR RNG LO Q 1 TRP BLK BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET

N0016D PWR RNG LO Q 2 TRP BLK BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET

N0017D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

N0020D INTERM RNGE 1 HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

N0021D INTERM RNGE 2 HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

N0022D INTERM RNGE HI Q 1 TRP BLK BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

N0023D INTERM RNGE HI Q 2 TRP BLK BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

N0024D INTERM RNGE HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

N0030D SOURCE RNGE 1 HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

N0031D SOURCE RNGE 2 HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

N0032D PG TRP BLK PRT PRM 1 BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

N0033D PG TRP BLK PRT PRM 2 BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET

N0034D SOURCE RNGE HI Q 1 TRP BLK BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=RESET , NORM(1)=SET

N0035D SOURCE RNGE HI Q 2 TRP BLK BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=RESET , NORM(1)=SET

N0036D SOURCE RNGE HI Q REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

N0040D IN CORE MOV THM A 1 H15 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0041D IN CORE MOV THM A 2 K02 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0042D IN CORE MOV THM A 3 L10 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0043D IN CORE MOV THM A 4 P04 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0044D IN CORE MOV THM A 5 H06 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0045D IN CORE MOV THM A 6 D12 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0046D IN CORE MOV THM A 7 B06 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL

N0047D IN CORE MOV THM A 8 E09 CCI

NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
P099D IN CORE MOV THM F 10 SPARE CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
P0301D TURBINE VACUUM TRIP RELAY BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=CLOSED, NORM(0)=OPEN
P0302D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
P0303D TURBINE AUTO STOP RESET RELAY CCI
NOT SEQ OF EVENT;ALM(1)=TRIP , NORM(0)=NT TRP
P0396D TURBINE HYD OIL LO P 1 PRT TRP BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET
P0397D TURBINE HYD OIL LO P 2 PRT TRP BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET
P0398D TURBINE HYD OIL LO P 3 PRT TRP BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET
P0404D 21 STM LNE HI DP 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0405D 21 STM LNE HI DP 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0406D 21 STM LNE HI DP 4 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0407D 21 STM LNE HI DP SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
P0424D 22 STM LNE HI DP 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0425D 22 STM LNE HI DP 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0426D 22 STM LNE HI DP 3 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0427D 22 STM LNE HI DP SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
P0444D 23 STM LNE HI DP 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0445D 23 STM LNE HI DP 3 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0446D 23 STM LNE HI DP 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0447D 23 STM LNE HI DP SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
P0464D 24 STM LNE HI DP 4 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0465D 24 STM LNE HI DP 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0466D 24 STM LNE HI DP 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0467D 24 STM LNE HI DP SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
P0480D PRESSZR HIGH P 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
P0481D PRESSZR HIGH P 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0482D PRESSZR HIGH P 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0483D PRESSZR HI PRESS REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

P0484D PRESSZR LO P 1 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0485D PRESSZR LO P 2 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0486D PRESSZR LO P 3 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0487D PRESSZR LO P 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0488D PRESSZR LO PRESS REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

P0489D PRESSZR LO P 1 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0490D PRESSZR LO P 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0491D PRESSZR LO P 3 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0492D PRESSZR LO P 1 SI TRP PRT BLK BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=RESET , NORM(0)=SET

P0493D PRESSZR LO P 2 SI TRP PRT BLK BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=RESET , NORM(0)=SET

P0494D PRESSZR LO P 3 SI TRP PRT BLK BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=RESET , NORM(0)=SET

P0495D PRESSZR LO P SI 1 TRP BLK BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P0496D PRESSZR LO P SI 2 TRP BLK BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET

P0497D PRESSZR HIGH P 4 PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P1000D CONTAIN HIGH P 2 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P1001D CONTAIN HIGH P 3 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P1002D CONTAIN HIGH P 4 SI PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET

P1003D CONTAIN HI PRESS SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

P2000D GLAND SEAL STEAM HDR PRESS CCI
NOT SEQ OF EVENT;ALM(1)=NORMAL , NORM(0)=LOW

P2002D TURBINE BRG OIL PRESS BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=TRIP , NORM(0)=NT TRP

P2003D TURBINE THRUST BRG OIL PRESS BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=TRIP , NORM(0)=NT TRP

P2004D HP TURB CYLIND GOV HTG STM PRESS CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NORMAL

P2007D TURN GR DISENGD CCI
NOT SEQ OF EVENT;ALM(1)=NT OK , NORM(0)=OK

P2008D TURN GR ENGAGED CCI

NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NORMAL
P200D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2406D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2407D DP SCRN WASH PUMP STRNR CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NORMAL
P2408D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2410D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2600D 21 SGFP TURBINE EXHAUST VACUUM CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NORMAL
P2601D 21 SGFP TURBINE OIL FLT DP CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NORMAL
P2602D 22 SGFP TURBINE EXHAUST VACUUM CCI
NOT SEQ OF EVENT;ALM(1)=LOW , NORM(0)=NORMAL
P2603D 22 SGFP TURBINE OIL FLT DP CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NORMAL
P2610D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2702D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2703D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2900D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2901D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2902D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
P2903D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED , NORM(0)=OPEN
10400D 21 RCL OVERPWR DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10403D 21 RCL OVERTMP DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10420D 22 RCL OVERPWR DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10423D 22 RCL OVERTMP DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10440D 23 RCL OVERPWR DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10443D 23 RCL OVERTMP DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10460D 24 RCL OVERPWR DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE
10463D 24 RCL OVERTMP DT PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESE

10488D RCL OVERPWR DT REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
10499D RCL OVERPWR DT REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
12600D 21 SGFP TURBINE EXH HD TEMP CCI
NO SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NORMAL
12601D 22 SGFP TURBINE EXH HD TEMP CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NORMAL
V0320D 21 RCP BUS UNDER V PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
V0321D 22 RCP BUS UNDER V PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
V0322D 23 RCP BUS UNDER V PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
V0323D 24 RCP BUS UNDER V PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
V0324D RCP BUS UNDER V REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
V0351D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y0001D TRB PWR 1 P13 PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET
Y0002D TRB PWR 2 P13 PRT PRM BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=RESET , NORM(1)=SET
Y0003D REACTOR TRB PWR P7 PRMSSVE BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=RESET , NORM(0)=SET
Y0004D REACTOR MANUAL TRIP 2 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=NT TRP
Y0005D REACTOR MANUAL TRIP 1 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=NT TRP
Y0006D REACTOR MAIN TRIP BKR A BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=NT TRP
Y0007D REACTOR MAIN TRIP BKR B BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=NT TRP
Y0008D IN CORE TEMP COMPUTR CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0026D REACTOR TRIP AUX1 BKR A BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=NT TRP
Y0027D REACTOR TRIP AUX1 BKR B BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=NT TRP
Y0035D IN CORE MOV DET ALL DRY CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0036D IN CORE MOV DET AUTO CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0037D IN CORE MOV DET COMPUTR CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0038D IN CORE MOV DET SCAN BCCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0039D IN CORE MOV DET RECORD BCCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0040D TN CORE MOV DET A ON CCI

NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
0041D IN CORE MOV DET A CLBRATE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
0042D IN CORE MOV DET A FOR B CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0043D IN CORE MOV DET A RNGE 1 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0044D IN CORE MOV DET A RNGE 2 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0045D IN CORE MOV DET A RNGE 3 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0046D IN CORE MOV DET A RNGE 4 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0047D IN CORE MOV DET A RNGE 5 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0048D IN CORE MOV DET A DRIVE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0049D IN CORE MOV DET A COM GRP CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0050D IN CORE MOV DET B ON CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0051D IN CORE MOV DET B CLBRATE CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0052D IN CORE MOV DET B FOR C CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0053D IN CORE MOV DET B RNGE 1 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0054D IN CORE MOV DET B RNGE 2 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0055D IN CORE MOV DET B RNGE 3 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0056D IN CORE MOV DET B RNGE 4 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0057D IN CORE MOV DET B RNGE 5 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0058D IN CORE MOV DET B DRIVE CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0059D IN CORE MOV DET B COM GRP CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0060D IN CORE MOV DET C ON CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0061D IN CORE MOV DET C CLBRATE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0062D IN CORE MOV DET C FOR D CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0063D IN CORE MOV DET C RNGE 1 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0064D IN CORE MOV DET C RNGE 2 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL
Y0065D IN CORE MOV DET C RNGE 3 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(O)=NT SEL

Y0066D IN CORE MOV DET C RNGE 4 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0067D IN CORE MOV DET C RNGE 5 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0068D IN CORE MOV DET C DRIVE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0069D IN CORE MOV DET C COM GRP CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0070D IN CORE MOV DET D ON CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0071D IN CORE MOV DET D CLBRATE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0072D IN CORE MOV DET D FOR E CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0073D IN CORE MOV DET D RNGE 1 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0074D IN CORE MOV DET D RNGE 2 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0075D IN CORE MOV DET D RNGE 3 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0076D IN CORE MOV DET D RNGE 4 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0077D IN CORE MOV DET D RNGE 5 CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0078D IN CORE MOV DET D DRIVE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0079D IN CORE MOV DET D COM GRP CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0080D IN CORE MOV DET E ON CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0081D IN CORE MOV DET E CLBRATE CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0082D IN CORE MOV DET E FOR F CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0083D IN CORE MOV DET E RNGE 1 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0084D IN CORE MOV DET E RNGE 2 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0085D IN CORE MOV DET E RNGE 3 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0086D IN CORE MOV DET E RNGE 4 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0087D IN CORE MOV DET E RNGE 5 CCI
NO SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0088D IN CORE MOV DET E DRIVE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0089D IN CORE MOV DET E COM GRP CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0090D IN CORE MOV DET F ON CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0091D IN CORE MOV DET F CLBRATE CCI

NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0092D IN CORE MOV DET F FOR A CCI
NO: SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0093D IN CORE MOV DET F RNGE 1 CCI
NC SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0094D IN CORE MOV DET F RNGE 2 CCI
NO: SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0095D IN CORE MOV DET F RNGE 3 CCI
NO: SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0096D IN CORE MOV DET F RNGE 4 CCI
NC: SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0097D IN CORE MOV DET F RNGE 5 CCI
NC: SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0098D IN CORE MOV DET F DRIVE CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0099D IN CORE MOV DET F COM GRP CCI
NOT SEQ OF EVENT;ALM(1)=SEL , NORM(0)=NT SEL
Y0100D 21 CHARGE PUMP BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y0101D 22 CHARGE PUMP BREAKER CCI
NC: SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y0102D 23 CHARGE PUMP BREAKER CCI
NC: SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y0103D CHARGE SUCT MAKE UP ALT VA CCI
NO: SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y0104D VOLUME CONTROL TANK MAKE UP VA CCI
NG: SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y0320D 21 RCL UNDER FREQ PRT TRP BCCI
SEN OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y0321D 22 RCL UNDER FREQ PRT TRP BCCI
SEN OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y0322D 23 RCP UNDER FREQ PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y0323D 24 RCP UNDER FREQ PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y0324D RCP BUS UNDER FREQ REACTOR BCCI
SEN OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
Y0335D UNIT ON LINE BCCI
SEN OF EVENT=ALM ONLY ;ALM(0)=OPEN , NORM(1)=CLOSED
Y0390D REACTOR TURBINE TRIP +P7 BCCI
SEN OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
Y0391D TURBINE STOP VA 21 BCCI
SEN OF EVENT=ALM+RTN ;ALM(0)=NT CL , NORM(1)=CLOSED
Y0392D TURBINE STOP VA 22 BCCI
SEN OF EVENT=ALM+RTN ;ALM(0)=NT CL , NORM(1)=CLOSED
Y0393D TURBINE STOP VA 23 BCCI
SEN OF EVENT=ALM+RTN ;ALM(0)=NT CL , NORM(1)=CLOSED
Y0394D TURBINE STOP VA 24 BCCI
SEN OF EVENT=ALM+RTN ;ALM(0)=NT CL , NORM(1)=CLOSED
Y0400D 21 RCP BREAKER BCCI
SEN OF EVENT=ALM+RTN ;ALM(0)=CLOSED, NORM(1)=OPEN

Y401D 21 STM GEN LO LVL + LO FW REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

Y0402D RWST LO LVL CHAN 1 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=LOW , NORM(0)=NT LOW

(0403D 21 STM GEN FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL

(0420D 22 RCP BREAKER BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=CLOSED, NORM(1)=OPEN

Y0421D 22 STM GEN LO LVL + LO FW REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

Y0422D RWST LO LVL CHAN 2 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=LOW , NORM(0)=NT LOW

Y0423D 22 STM GEN FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL

Y0440D 23 RCP BREAKER BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=CLOSED, NORM(1)=OPEN

Y0441D 23 STM GEN LO LVL + LO FW REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

Y0442D RWST LO LVL CHAN 3 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=LOW , NORM(0)=NT LOW

Y0443D 23 STM GEN FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL

Y0450D 25 VACUUM PUMP CCI
NOT SEQ OF EVENT;ALM(1)=TRIP , NORM(0)=NT TRP

Y0460D 24 RCP BREAKER BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=CLOSED, NORM(1)=OPEN

Y0461D 24 STM GEN LO LVL + LO FW REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

Y0462D RWST LO LVL CHAN 4 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=LOW , NORM(0)=NT LOW

(0463D 24 STM GEN FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL

Y0480D PRESSZR LO P SI REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

Y0499D THERM BARRIER COOLING FLOW VA CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

Y0500D 21 RHR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

(0501D 22 RHR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

(0602D 21 COMP COOLING PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

Y0603D 22 COMP COOLING PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

Y0604D 23 COMP COOLING PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

(0610D 22 VACUUM PUMP CCI
NOT SEQ OF EVENT;ALM(1)=TRIP , NORM(0)=NT TRP

Y0920D SI MANUAL TRIP 1 BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP

Y0921D SI MANUAL TRIP 2 BCCI

SEQ OF EVENT=ALM+RIN :ALM(1)=TRIP , NORM(0)=EVENT TRP
Y0922D 21 SAFETY INJECT PUMP CCI
NOT SEQ OF EVENT:ALM(1)=START , NORM(0)=TRIP
Y0923D 22 SAFETY INJECT PUMP CCI
NOT SEQ OF EVENT:ALM(1)=START , NORM(0)=TRIP
Y0924D 21 CONT SPRAY PUMP CCI
NO SEQ OF EVENT:ALM(1)=START , NORM(0)=TRIP
Y0925D 22 CONT SPRAY PUMP CCI
NOT SEQ OF EVENT:ALM(1)=START , NORM(0)=TRIP
Y0930D 23 VACUUM PUMP CCI
NOT SEQ OF EVENT:ALM(1)=TRIP , NORM(0)=NT TRP
Y1016D 21 TURBINE HYD OIL PUMP CCI
NOT SEQ OF EVENT:ALM(1)=START , NORM(0)=TRIP
Y1017D 21 AUX FW PUMP SUCT ALT VA CCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y1018D 22 AUX FW PUMP SUCT ALT VA CCI
NO SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y1019D 23 AUX FW PUMP SUCT ALT VA CCI
NO SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y1044D 22 TURBINE HYD OIL PUMP CCI
NOT SEQ OF EVENT:ALM(1)=START , NORM(0)=TRIP
Y1045D SPARE CCI CCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y1054D 21 CONTAIN VNT FAN UNIT VIB CCI
NO SEQ OF EVENT:ALM(1)=HIGH , NORM(0)=NT HI
Y1055D 22 CONTAIN VNT FAN UNIT VIB CCI
NOT SEQ OF EVENT:ALM(1)=HIGH , NORM(0)=NT HI
Y1056D 23 CONTAIN VNT FAN UNIT VIB CCI
NO SEQ OF EVENT:ALM(1)=HIGH , NORM(0)=NT HI
Y1057D 24 CONTAIN VNT FAN UNIT VIB CCI
NO SEQ OF EVENT:ALM(1)=HIGH , NORM(0)=NT HI
Y1058D 25 CONTAIN VNT FAN UNIT VIB CCI
NO SEQ OF EVENT:ALM(1)=HIGH , NORM(0)=NT HI
Y2003D TURBINE TRIP BCCI
SEQ OF EVENT=ALM ONLY :ALM(1)=TRIP , NORM(0)=NT TRP
Y2004D TURBINE TRIP CONSOLE BCCI
SEQ OF EVENT=ALM ONLY :ALM(1)=TRIP , NORM(0)=NT TRP
Y2005D TURBINE REMOTE EMERG TRIP BCCI
SEQ OF EVENT=ALM ONLY :ALM(1)=TRIP , NORM(0)=NT TRP
Y2006D TURBINE LATCH CCI
NO SEQ OF EVENT:ALM(1)=OFF , NORM(0)=ON
Y2007D SPARE BISTBLE BCCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y2008D SPARE BISTBLE BCCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y2009D SPARE BISTBLE BCCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=OPEN
Y2111D 21W TURBINE BYPASS VA 31 CCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=NT CL
Y2112D 21W TURBINE BYPASS VA 33 CCI
NOT SEQ OF EVENT:ALM(1)=CLOSED, NORM(0)=NT CL

Y213D 22W TURBINE BYPASS VA 33 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y214D 22W TURBINE BYPASS VA 37 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y215D 23W TURBINE BYPASS VA 39 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y216D 23W TURBINE BYPASS VA 41 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y217D 21E TURBINE BYPASS VA 31 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y218D 21E TURBINE BYPASS VA 33 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y219D 22E TURBINE BYPASS VA 35 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2120D 22E TURBINE BYPASS VA 37 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2121D 23E TURBINE BYPASS VA 39 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2122D 23E TURBINE BYPASS VA 41 CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2123D 24 VACUUM PUMP CCI
NOT SEQ OF EVENT;ALM(1)=TRIP , NORM(0)=NT TRIP
Y2124D TURBINE GEN EMERG BRG OIL PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2125D UNIT 1 PRIME TANK VA CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2150D TURBINE HP SO BACKUP PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2210D 21 & 22 FW HTR BYPASS VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2211D 21A HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2214D 21B HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2217D 21C HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2230D 23-25 FW HTR BYPASS VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2231D 23A HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2232D 26 FW HTR BYPASS VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2234D 23B HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2237D 23C HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2253D 21 FW HTR DRAIN PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2256D 22 FW HTR DRAIN PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2259D 23 FW HTR DRAIN PUMP CCI

NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2261D 26A FW HTR FW IN VA CCI
NO SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2264D 26B FW HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2267D 26C FW HTR FW IN VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2270D SPARE BISTBLE CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2401D 21A CIRC CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2402D 21B CIRC CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2403DT 22A DEREVENIGALM(1)=START , NORM(0)=TRIP
Y2404D 22B CIRC CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2405D 23A CIRC CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2406D 23B CIRC CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2409D REACTOR HEAD VNT VLV 2RC40 CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2410D REACTOR HEAD VNT VLV 2RC43 CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2411D REACTOR HEAD VNT VLV 2RC41 CCI
NO SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2412D REACTOR HEAD VNT VLV 2RC42 CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2413D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2414D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2451D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2500D 21 CNDENST PUMP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=TRIP , NORM(1)=START
Y2501D 22 CNDENST PUMP BCCI
SEN OF EVENT=ALM ONLY ;ALM(0)=TRIP , NORM(1)=START
Y2502D 23 CNDENST PUMP BCCI
SER OF EVENT=ALM ONLY ;ALM(0)=TRIP , NORM(1)=START
Y2503D 21 VACUUM BREAKER VA CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2504D 22 VACUUM BREAKER VA CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2505D 23 VACUUM BREAKER VA CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2510D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2511D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2600D 23 AUX FW PUMP TURBINE STOP VA BCCI

SEQ OF EVENT=ALM(1)=
Y2601D BLOWDOWN FLOW CCI
NOT SEQ OF EVENT=ALM(1)= , NORM(0)=CLOSED
Y2602D SPARE CCI C
NOT SEQ OF EVENT= ALM(1)=CLOSED, NORM(0)=OPEN
Y2603D 21 SGFP TURBINE HRH STOP VA BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=CLOSED, NORM(0)=NT CL
Y2604D 22 SGFP TURBINE MS STOP VA BCCI
SEN OF EVENT=ALM ONLY ;ALM(1)=CLOSED, NORM(0)=NT CL
Y2605D 21 AUX FW PUMP BCCI
SEQ OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=START
Y2606D 22 AUX FW PUMP BCCI
SEN OF EVENT=ALM+RTN ;ALM(0)=TRIP , NORM(1)=START
Y2607D 21 BLD STM COIL DRN TNK PU BRKR CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2608D 22 BLD STM COIL DRN TNK PU BRKR CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2609D 22 SGFP TURBINE HRH STOP VA BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=CLOSED, NORM(0)=NT CL
Y2610D 21 SGFP TURBINE MS STOP VA BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=CLOSED, NORM(0)=NT CL
Y2611D 22 SGFP TURBINE INB BRG VIB CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
Y2612D 22 SGFP TURBINE OUT BRG VIB CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
Y2614D 21 SGFP TURBINE INB BRG VIB CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
Y2615D 21 SGFP TURBINE OUT BRG VIB CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
Y2620D 21 SGFP TURBINE OUT BRG EXCENTY CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
Y2621D 22 SGFP TURBINE OUT BRG EXCENTY CCI
NOT SEQ OF EVENT;ALM(1)=HIGH , NORM(0)=NT HI
Y2700D 25 SVC WTR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2701D 26 SVC WTR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2702D 23 SVC WTR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2703D 24 SVC WTR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2704D 21 SVC WTR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2705D 22 SVC WTR PUMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2800D 2E 4KV GROUP BUS 21ESD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2802D 3 UNIT 13KV BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2803D 2 STA AT 110VFS CCI
NOT SEQ START , NORM(0)=TRIP

Y2804D Z 51A AIR COMPRES AUTO CCI
NOT SEQ OF EVENT;ALM(1)=OFF , NORM(0)=ON

Y2805D 2C EMERG DIESEL CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

Y2806D BUS SEC 2-3 13KV BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2808D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=ON , NORM(0)=OFF

Y2809D EXCITER FIELD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2810D BS 3-4 13KV BREAKER BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=OPEN , NORM(1)=CLOSED

Y2811D BS 4-5 13KV BREAKER BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=OPEN , NORM(1)=CLOSED

Y2812D BS 5-6 13KV BREAKER BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=OPEN , NORM(1)=CLOSED

Y2813D BS 6-1 13KV BREAKER BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=OPEN , NORM(1)=CLOSED

Y2814D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2815D SPARE BISTBLE BCCI
SEQ OF EVENT=ALM ONLY ;ALM(0)=OPEN , NORM(1)=CLOSED

Y2816D GEN EXCTATN TRIP CCI
NOT SEQ OF EVENT;ALM(1)=TRIP , NORM(0)=NT TRP

Y2819D 2A VITAL BUS 21ASD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2820D 2A VITAL BUS 22ASD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2821D 2B VITAL BUS 21BSD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2822D 2B VITAL BUS 22BSD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2823D 2C VITAL BUS 21CSD BREAKER CCI
NC SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2824D 2C VITAL BUS 22CSD BREAKER CCI
NC SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2825D 2A EMERG DIESEL CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

Y2826D 2B EMERG DIESEL CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP

Y2827D 2F 4KV GROUP BUS 2BFSD BREAKER CCI
NC SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2828D 2F 4KV GROUP BUS 22FSD BREAKER CCI
NC SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2829D 2G 4KV GROUP BUS 2BGSD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2830D 2G 4KV GROUP BUS 22GSD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2832D 2H 4KV GROUP BUS 2AHGD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

Y2833D 2H 4KV GROUP BUS 21HSD BREAKER CCI

NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2834D 2E 4KV GROUP BUS 2AEGD BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2835D 2A4D 460/230 TRNSFMR BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2836D 2B4D 460/230 TRNSFMR BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2837D 2C4D 460/230 TRNSFMR BREAKER CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2900D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2901D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2902D UNIT 2 PRIME TANK VA CCI
NOT SEQ OF EVENT;ALM(1)=NT CL , NORM(0)=CLOSED
Y2903D UNIT 1 CNDENST VA CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=NT CL
Y2904D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2905D SPARE CCI CCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y2910D 2 EMERG CONTROL AIR CMP CCI
NOT SEQ OF EVENT;ALM(1)=START , NORM(0)=TRIP
Y2912D 2 EMERG CONTROL AIR CMP AUTO CCI
NOT SEQ OF EVENT;ALM(1)=OFF , NORM(0)=ON
Y3000D ANNUNC LOSS OF AC CCI
NOT SEQ OF EVENT;ALM(1)=TRBL , NORM(0)=NOTRBL
Y3001D ANNUNC LOSS OF DC CCI
NOT SEQ OF EVENT;ALM(1)=TRBL , NORM(0)=NOTRBL
Y3002D ANNUNC SYSTEM GRND CCI
NOT SEQ OF EVENT;ALM(1)=TRBL , NORM(0)=NOTRBL
Y8000D OPERATOR CONSOLE KEY SWITCH CCI
NOT SEQ OF EVENT;ALM(1)=ON , NORM(0)=OFF
Y9031D PWR RNG CHAN HI Q RATE REACTOR BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=TRIP , NORM(0)=NT TRP
Y9032D PWR RNG CHAN 1 HI Q RATE PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y9033D PWR RNG CHAN 2 HI Q RATE PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y9034D PWR RNG CHAN 3 HI Q RATE PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y9035D PWR RNG CHAN 4 HI Q RATE PRT TRP BCCI
SEQ OF EVENT=ALM ONLY ;ALM(1)=SET , NORM(0)=RESET
Y9036D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN
Y9037D RWST SI INTRLCK BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET
Y9038D RWST SWOVER SEQ TRIP BCCI
SEQ OF EVENT=ALM+RTN ;ALM(1)=SET , NORM(0)=RESET
Y9039D SPARE BISTBLE BCCI
NOT SEQ OF EVENT;ALM(1)=CLOSED, NORM(0)=OPEN

ENCLOSURE 3

SAMPLE SEQUENCE OF EVENTS PRINTOUT

SEQ OF EVENTS AT 10:36:36

CYCLES → U0000+ P0483D=1 PRESSZR H1 PRESS REACTOR TRIP ← TRIP INITIATED
U0000+ P0480D=1 PRESSZR HIGH P 1 PRF TRP SET
U0000+ P0481D=1 PRESSZR HIGH P 2 PRF TRP SET
U0007+ Y20030=1 TURBINE TRIP TRIP
CYCLES → U0007+ Y0006D=0 REACTOR MAIN TRIP BKR A TRIP ← BKR A OPENED
U251C P0483D=0 PRESSZR HI PRESS REACTOR NF TRP

BREAKER "A" OPENED = IN 7 CYCLES OR 116 MILLISECONDS.