3. INSTRUCTOR INTERFACE

CONTENTS

3.A Initial Conditions

There are 48 Initial Conditions (IC) sets available for use on the IP3 simulator. Of these, 12 IC's are maintained and protected for use in training programs and simulator certification testing. The remaining 36 IC's are snapshot areas that are reserved for use by various work groups at IP3.

The attached document, INITIAL CONDITION SETS, defines the parameters and conditions of the protected IC's (nos. 1 - 12) and IC numbers assigned to the different work groups.

NEW YORK POWER AUTHORITY

INDIAN POINT 3 NUCLEAR TRAINING SIMULATOR

INITIAL CONDITION SETS

6.3.1

Rev. 1: 02/20/90

Author: W. Robinson

1. IC-1 Refueling Shutdown

- Moderator Temp = 140°F
- PRZR Pressure = 90 psig
- PRZR Level = Solid
- Reactor Power = 60 cps
- Reactivity = 10% Shutdown
- Decay Heat = 15 MW
- Rod Position = All rods in
- Xenon = Free
- Core Life = Beginning of Life

RHR in operation

2. IC-2 Cold Shutdown

- Moderator Temp = 190°F
- PRZR Pressure = 400 psig
- PRZR Level = Solid
- Reactor Power = 500 cps
- Reactivity = 1% Shutdown
- Decay Heat = 14 MW
- Rod Position = All rods in
- Xenon = Free
- Core Life = Middle of Life

RHR in Operation
34 Reactor Coolant Pump in Operation

3. IC-3 Cold Shutdown with Bubble in Pressurizer

- Moderator Temp = 190°F
- PRZR Press = 400 psig
- PRZR Level = 60%
- Reactor Power = 70 cps
- Reactivity = 1% Shutdown
- Decay Heat = 14 MW

- Rod Position = All rods in
- Xenon = Free
- Core Life = Beginning of Life

RHR in operation

34 Reactor Coolant Pump in operation

4. IC-4 Hot Shutdown

- Moderator Temp = 547
- PRZR Press = 2235 psig
- PRZR Level = 23%
- Reactor Power = 250 cps
- Reactivity = To be determined
- Decay Heat = 13 MW
- Rod Position = Shutdown Banks out, Control Banks in
- Xenon = Free
- Core Life = Beginning of Life

5. IC-5 Hot Shutdown

- Moderator Temp = 547
- PRZR Press = 2235 psig
- PRZR Level = 23%
- Reactor Power = 8000 cps
- Reactivity = Critical
- Decay Heat = 14MW
- Rod Position = Shutdown Banks out, Control Banks in
- Xenon = Free
- Core Life = End of Life

6. IC-6 Low Power, Load Escalation in Progress

- Moderator Temp = 550°F
- PRZR Press = 2235 psig
- PRZR Level = 28%
- Reactor Power = 30%

- Reactivity = To be determined
- Rod Position = Control Bank D at 197 steps
- Xenon = Free
- Core Life = Beginning of Life

7. IC-7 Low Power, Plant Shutdown in Progress

- Moderator Temp = 549°F
- PRZR Press = 2235 psig
- PRZR Level = 26%
- Reactor Power = 25%
- Reactivity = Critical
- Rod Position = Control Bank D at 150 steps
- Xenon = increasing
- Core Life = End of Life

8. IC-8 Medium Power

- Moderator Temp = 555°F
- PRZR Press = 2235 psig
- PRZR Level = 32%
- Reactor Power = 25%
- Reactivity = Critical
- Rod Position = Control Bank D at 183 Steps
- Xenon = Equilibrium
- Core Life = Beginning of Life

9. IC-9 Medium Power

- Moderator Temp = 554°F
- PRZR Press = 2235 psig
- PRZR Level = 33%
- Reactor Power = 45%
- Reactivity = Critical
- Rod Position = Control Bank D at 180 Steps
- Xenon = Equilibrium
- Core Life = End of Life

10. IC-11, IC-12 Full Power

- Moderator Temp = 566°F
- PRZR Press = 2235 psig
- PRZR Level = 46%
- Reactor Power = 100%
- Reactivity = Critical
- Rod Position = Control Bank D at 223 Steps
- Xenon = Equilibrium
- Core Life = See note

Note: IC-11 and IC-12 are established from IC-10 and are middle of life and end of life full power conditions.

11. IC-10 100% Full Power

This is the basic simulator initialization condition which is established by calculation during model development. All other simulator initial conditions shall be established from IC-10 by actual real time operation of the simulated nuclear power plant. The exceptions to this real time operation are the middle and end of life 100% full power IC's. In these IC's the core model in IC-10 is initialized for the middle (IC-11) and end (IC-12) of life conditions and by real time operation are stabilized, then the remaining middle and end of life IC's are established, from these IC's, the same way as the beginning of life IC's are established from IC-10.

The status of the various plant systems in IC-10 shall be as follows:

a. Plant Electrical Distribution. All busses energized with the normal full power electrical lineup. Emergency generators are in standby and the main generator is in normal full power lineup.

b. Main Turbine and Associated Auxiliaries. Main turbine at 1800 RPM; all lubricating and control oil systems running.

c. Condensate and Feedwater System. Vacuum in main condenser, circulating water system in operation, all condensate and feedwater pumps running, normal at power plant valve lineup.

d. Reactor and Associated Auxiliaries. All control rods withdrawn with the possible exception of bank D. All nuclear instrumentation systems in normal full power lineup. Moderator temperature approximately 566°F, RCS at 2235 psig. Control rod system in automatic. All reactor coolant pumps operating. Reactor core at BOL, and critical.

e. Engineered Safeguards System. All emergency core cooling systems in their normal full power lineup, all containment isolation valves open.

12. IC-13 through IC-20 Spare Snapshots reserved for Requalification Operator training.

13. IC-21 through IC-28 Spare Snapshots reserved for Initial Licensed Operator training.

14. IC-29 through IC-34 Spare Snapshots reserved for Procedure Verfication and Validation.

15. IC-35 through IC-38 Spare Snapshots reserved for Technical Staff training.

16. IC-39 through IC-48 Spare Snapshots reserved for Simulator Support Services.

SIM TIME = 0.0

INITIAL CONDITION SELECTION MENU

11:04:18

#	DATE	TIME	DESCRIPTION						
CORE	LIFE	%RX PWR	TAVG	RCS PRS	PZR TEMP	PZR PRS	BORON	XENON	REACTIVITY
1	04/20/90	01:59	BOL - COLD SHUTDOWN ON RHR, S/G DRAINDOWN I/P						
	BOL	0.00	137.6	92.1	126.1	83.7	1575.		-8647.57
2	04/20/90	01:51	MOL - CSD ON RHR AT 190F, READY TO DRAW BUBBLE, 3# RCP I/S						
	MOL	0.00	189.7	394.8	378.7	388.8	1175.		-7705.51
3	04/20/90	01:35	BOL - CSD ON RHR AT 190F, BUBBLE IN PRZR, 3# RCP I/S						
	BOL	0.00	188.9	409.3	452.6	414.7	1574.		-8288.28
4	04/30/90	06:54	BOL - HSD, S/D BANKS OUT, MSIV'S OPEN						
	BOL	0.00	545.3	2245.2	652.7	2250.7	1440.		-2863.69
5	04/30/90	06:57	EOL - HSD, S/D BANKS OUT, MSIV'S OPEN						
	EOL	0.00	544.9	2245.9	652.8	2251.4	490.0		-2778.37
6	04/30/90	07:04	BOL - 30% POWER, UNIT STARTUP I/P AT STEP 4.41 OF POP 1.3						
	BOL	29.78	551.5	2241.0	655.0	2245.8	1454.		-0.26689
7	04/30/90	07:09	EOL - 25% POWER, UNIT SHUTDOWN I/P AT STEP 4.10 OF POP 3.1						
	EOL	24.92	549.5	2246.0	652.7	2251.2	263.9		-0.10478
8	04/29/90	06:59	BOL - 45% POWER, XE EQUIL, BELOW P-8						
	BOL	44.93	553.8	2246.6	652.7	2251.2	1184.		1.548E-02
9	04/29/90	06:56	EOL - 45% POWER, XE EQUIL, BELOW P-8						
	EOL	45.26	555.6	2246.8	652.7	2251.2	259.3		-1.840E-03
10	04/29/90	13:50	BOL - 100% POWER , XE EQUIL						
	BOL	99.99	566.5	2248.0	652.7	2251.0	1060.		1.086E-02
11	04/29/90	13:47	MOL - 100% POWER , XE EQUIL						
	MOL	99.94	566.6	2247.8	652.7	2250.8	671.8		1.028E-03
12	04/29/90	13:37	EOL - 100% POWER , XE EQUIL						
	EOL	100.01	566.3	2248.1	652.7	2251.2	229.3		1.191E-02

SELECT IC: 50

RESET | CONT. | PAGE FORWRD | PAGE BACK

3.B Malfunctions

The IP3 simulator presently has over 220 individually selectable malfunctions and is capable of inserting more than 20 "active" malfunctions during a simulation scenario. This has proven to be sufficient to accommodate any of the IP3 training or evaluation exercises.

The malfunctions available on the IP3 simulator have been established based on the following criteria;

1) Required to support the licensed operator training and requalification programs.

2) Required to support compliance with associated simulator regulations and standards.

These malfunctions are tested in accordance with the regulation standards. This testing regimen is described and documented under section 5 of this document.

Listings of the IP3 simulator malfunctions which reference the applicable section of the ANSI/ANS 3.5 standard are provided in sections 5.A and 5.B of this document.

3.C Controls For Items Outside The Control Room

These items are commonly referred to in the industry as Remote Functions. The IP3 simulator specifies these as Local Operator Actions (LOA's).

The LOA's available on the IP3 simulator have been established based on the following criteria:

1) Required to support the licensed operator training and requalification programs.

2) Required to support compliance with associated simulator regulations and standards.

Using these criteria, the type and number of LOA's will vary dependent upon changes to any of the related subjects. To ensure the functional requirements of LOA's have been met, they are tested as part of the simulator Systems Tests.

Attached is a listing of the IP3 simulator LOA's sorted alphabetically by simulator system name.

AFW-1
TAG #:
TITLE: AFW PUMP 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LAFWP31)

AFW-2
TAG #:
TITLE: AFW PUMP 33 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LAFWP33)

AFW-3
TAG #: 48-1
TITLE: AFW PUMP 32 SG 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV481)

AFW-4
TAG #: 48-3
TITLE: AFW PUMP 32 SG 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV483)

AFW-5
TAG #: 48-5
TITLE: AFW PUMP 32 SG 33 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV485)

AFW-6
TAG #: 48-7
TITLE: AFW PUMP 32 SG 34 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV487)

AFW-7

TAG #: 38
TITLE: AFW PUMP 31 SG 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV38)

AFW-8

TAG #: 36
TITLE: AFW PUMP 31 SG 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV36)

AFW-9

TAG #: 41
TITLE: AFW PUMP 33 SG 33 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV41)

AFW-10

TAG #: 43
TITLE: AFW PUMP 33 SG 34 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV43)

AFW-11

TAG #: BFD-78
TITLE: AFW PUMP 35 TO CST HEATING
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV78)

AFW-12

TAG #: BFD-77
TITLE: AFW PUMP 31 TO CST HEATING
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RAFV77)

AFW-13

TAG #: NONE

TITLE: SUPPLY N2 TO PCV-1187,1188 & 1189

RANGE: T=ON F=OFF

VARIABLE: (JAFWNITR)

AIR-1
TAG #: IA4
TITLE: INST AIR HEADER TO TURBINE BLDG ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA4)

AIR-2
TAG #: IA53
TITLE: INST AIR HEADER TO AUX FEED PUMP HOUSE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA53)

AIR-3
TAG #: IA59
TITLE: INST AIR HEADER TO CONTAINMENT ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA59)

AIR-4
TAG #: IA9
TITLE: REFRIG DRYER 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA9)

AIR-5
TAG #: IA10
TITLE: REFRIG DRYER 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA10)

AIR-6
TAG #: IA71
TITLE: REFRIG DRYER BYPASS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA71)

AIR-7
TAG #: SA5
TITLE: STATION AIR RECEIVER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVSA5)

AIR-8
TAG #: SA14
TITLE: STATION AIR TO AUX BLDG ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVSA14)

AIR-9
TAG #: SA34
TITLE: STATION AIR TO AUX FEED PUMP BLDG ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVSA34)

AIR-10
TAG #: IA54
TITLE: INSTR AIR TO PCV-1228 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAVIA54)

AIR-11
TAG #: NNE-1817
TITLE: N2 TO WCCPP BACKUP N2 BOTTLES
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCAV1817)

AIR-12
TAG #: NONE
TITLE: LOA TO RESET PCV-1140
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1140)

AIR-13
TAG #: NONE
TITLE: LOA TO RESET PCV-1141
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1141)

AIR-14
TAG #: NONE
TITLE: LOA TO RESET PCV-1142
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1142)

AIR-15
TAG #: NONE
TITLE: LOA TO RESET PCV-1143
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1143)

AIR-16
TAG #: NONE
TITLE: LOA TO RESET PCV-1542
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1542)

AIR-17
TAG #: NONE
TITLE: LOA TO RESET SOV-1194
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1194)

AIR-18
TAG #: NONE
TITLE: LOA TO RESET SOV-1195
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1195)

AIR-19
TAG #: NONE
TITLE: LOA TO RESET SOV-1196
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1196)

AIR-20
TAG #: NONE
TITLE: LOA TO RESET SOV-1197
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1197)

AIR-21
TAG #: NONE
TITLE: LOA TO RESET SOV-1211
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1211)

AIR-22
TAG #: NONE
TITLE: LOA TO RESET SOV-1212
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1212)

AIR-23
TAG #: NONE
TITLE: LOA TO RESET SOV-1213
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1213)

AIR-24
TAG #: NONE
TITLE: LOA TO RESET SOV-1214
RANGE: T=RESET VALVE F=NO ACTION
VARIABLE: (KCAV1214)

AIR-25
TAG #: PCV-1201
TITLE: N2 BACKUP TO WCCP ZN 1
RANGE: T=AUTO F=CLOSED
VARIABLE: (KCAV1201)

AIR-26
TAG #: PCV-1202
TITLE: N2 BACKUP TO WCCP ZN 2
RANGE: T=AUTO F=CLOSED
VARIABLE: (KCAV1202)

AIR-27
TAG #: PCV-1203
TITLE: N2 BACKUP TO WCCP ZN 3
RANGE: T=AUTO F=CLOSED
VARIABLE: (KCAV1203)

AIR-28
TAG #: PCV-1204
TITLE: N2 BACKUP TO WCCP ZN 4
RANGE: T=AUTO F=CLOSED
VARIABLE: (KCAV1204)

AIR-29
TAG #:
TITLE: SERVICE AIR COMPRESSOR SWITCH
RANGE: 0=OFF 1=ON
VARIABLE: (LCASAC8K)

AIR-30
TAG #:
TITLE: RUN INDT AIR COMPRESSOR 31
RANGE: 0=OFF 1=ON 2=AUTO
VARIABLE: (LCASIAC1)

AIR-31
TAG #:
TITLE: RUN INST AIR COMPRESSOR 32
RANGE: 0=OFF 1=ON 2=AUTO
VARIABLE: (LCASTAC2)

AIR-32
TAG #:
TITLE: RESTART HOT PENETRATION BLOWER
RANGE: T=START F=STOP
VARIABLE: (KCASHTP6)

AIR-33
TAG #:
TITLE: MAN ISO VLV FOR N2 BOTTLES TO AFW CNTL VLS HDR
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JCASAN2)

AIR-34
TAG #:
TITLE: N2 BOTTLED PRESS TO AFW CNTL VLVS HEADER
RANGE: RANGE 0.0 TO 100.0 PSIG
VARIABLE: (PCASAN2)

ASB-1
TAG #:
TITLE: STEAM SUPPLY TO T/G LOW PRESSURE LOADS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RASVUH1)

ASB-2
TAG #:
TITLE: STEAM SUPPLY TO PAB LOW PRESSURE LOADS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RASVUH44)

ASB-3
TAG #:
TITLE: LOA TO SELECT STEAM SUPPLY
RANGE: 1=MAIN STM HDR WEST 2=IP3 HOUSE SERVICE BOILER
VARIABLE: (NASBIN)

ASB-4
TAG #:
TITLE: STEAM SUPPLY TO WATERBOX PRIME EJECT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RASVSB1)

ASB-5
TAG #:
TITLE: STEAM SUPPLY TO DEICING PMP EJECTORS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RASVSB33)

ASB-6
TAG #:
TITLE: MS-187 AUX BOILER STEAM SUPPLY TO GLAND SEAL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RASVM187)

ASB-7

TAG #:

TITLE: MS-79 PRIMING EJECTOR SUPPLY

RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED

VARIABLE: (RASVMS79)

ATS-1
TAG #: MS-176
TITLE: STM TO AFWP 32 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RATVS176)

ATS-2
TAG #: MS-177
TITLE: STM TO AFWP 32 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RATVS177)

ATS-3
TAG #: MS-177
TITLE: BFPT 31 BRG OIL ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RATVIS31)

ATS-4
TAG #: MS-177
TITLE: BFPT 32 BRG OIL ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RATVIS32)

ATS-5
TAG #:
TITLE: FW PUMP DRIP TANK PUMP 31
RANGE: 1=PREF 2=OFF 3=STBY
VARIABLE: (KATPDT31)

ATS-6
TAG #:
TITLE: FW PUMP DRIP TANK PUMP 32
RANGE: 1=PREF 2=OFF 3=STBY
VARIABLE: (KATPDT32)

ATS-7
TAG #:
TITLE: MAIN OIL PUMP 31
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KATPMU31)

ATS-8
TAG #:
TITLE: MAIN OIL PUMP 32
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KATPMU32)

ATS-9
TAG #:
TITLE: EMERGENCY DC OIL PUMP
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KATPEMOC)

ATS-10
TAG #: NONE
TITLE: MBFP#31 MANUAL CONTROL REGULATOR
RANGE: RANGE 3.0 TO 15.0 PSIG
VARIABLE: (RATMFU31)

ATS-11
TAG #: NONE
TITLE: MBFP#32 MANUAL CONTROL REGULATOR
RANGE: RANGE 3.0 TO 15.0 PSIG
VARIABLE: (RATMFU32)

ATS-12
TAG #:
TITLE: OIL RESERVOIR LEVEL
RANGE: RANGE 0.0 TO 120.0 INCHES
VARIABLE: (BATSOILR)

ATS-13
TAG #:
TITLE: ABFPT 32 OVERSPEED TRIP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JATSABF32)

ATS-14
TAG #:
TITLE: MBFPT 31 LOCAL RESET
RANGE: T=MBFPT TRIP RESET F=MBFPT TRIP NOT RESET
VARIABLE: (JATSLRS1)

ATS-15
TAG #:
TITLE: MBFPT 32 LOCAL RESET
RANGE: T=MBFPT TRIP RESET F=MBFPT TRIP NOT RESET
VARIABLE: (JATSLRS2)

ATS-16
TAG #:
TITLE: MBFPT 31 TURNING GEAR OPERATIONAL
RANGE: T=OPERATIONAL F=INOPERATIONAL
VARIABLE: (NATSTG31)

ATS-17
TAG #:
TITLE: MBFPT 32 TURNING GEAR OPERATIONAL
RANGE: T=OPERATIONAL F=INOPERATIONAL
VARIABLE: (NATSTG32)

ATS-18
TAG #:
TITLE: MBFPT OIL COOLER 3-WAY VALVE SELECTION
RANGE: 1=OIL COOLER 1 2=OIL COOLER 2
VARIABLE: (NATVOCLR)

CCW-1
TAG #: NONE
TITLE: AUX CCW PUMP NO. 31 CONTROL SWITCH
RANGE: T=START F=STOP
VARIABLE: (KCCWA31)

CCW-2
TAG #: NONE
TITLE: AUX CCW PUMP NO. 32 CONTROL SWITCH
RANGE: T=START F=STOP
VARIABLE: (KCCWA32)

CCW-3
TAG #: NONE
TITLE: AUX CCW PUMP NO. 33 CONTROL SWITCH
RANGE: T=START F=STOP
VARIABLE: (KCCWA33)

CCW-4
TAG #: NONE
TITLE: AUX CCW PUMP NO. 34 CONTROL SWITCH
RANGE: T=START F=STOP
VARIABLE: (KCCWA34)

CCW-5
TAG #: 764A
TITLE: CCW TANK 31 RECIRC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV764A)

CCW-6
TAG #: 764B
TITLE: CCW TANK 32 RECIRC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV764B)

CCW-7
TAG #: 760A
TITLE: CCW PUMPS SUCTION HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV760A)

CCW-8
TAG #: 760B
TITLE: CCW PUMPS SUCTION HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV760B)

CCW-9
TAG #: 760A
TITLE: CCW PUMP 31 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV760A)

CCW-10
TAG #: 760B
TITLE: CCW PUMP 32 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV760B)

CCW-11
TAG #: 760C
TITLE: CCW PUMP 33 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV760C)

CCW-12
TAG #: 762A
TITLE: CCW PUMP 31 DISCHARGE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV762A)

CCW-13
TAG #: 762B
TITLE: CCW PUMP 32 DISCHARGE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV762B)

CCW-14
TAG #: 762C
TITLE: CCW PUMP 33 DISCHARGE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV762C)

CCW-15
TAG #: 759C
TITLE: CCW PUMPS DISCHARGE HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV759C)

CCW-16
TAG #: 759D
TITLE: CCW PUMPS DISCHARGE HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV759D)

CCW-17
TAG #: 759A
TITLE: CCW HX 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV759A)

CCW-18
TAG #: 759B
TITLE: CCW HX 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV759B)

CCW-19
TAG #: 765A
TITLE: CCW HX OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV765A)

CCW-20
TAG #: 765B
TITLE: CCW HX OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV765B)

CCW-21
TAG #: 752F
TITLE: AUX CCW PUMPS 31 & 32 DISCHARG ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV752F)

CCW-22
TAG #: 818A
TITLE: CCW TO RHR HX 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV818A)

CCW-23
TAG #: 803
TITLE: SPENT FUEL PIT HEAT EXCHANGER
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV803)

CCW-24
TAG #: 1854
TITLE: PRODUCT COOLER OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV1854)

CCW-25
TAG #: 820A
TITLE: RHR HX 31 CCW FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV820A)

CCW-26
TAG #: 1899A
TITLE: GFED INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCC1899A)

CCW-27
TAG #: 1899B
TITLE: GFED OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCC1899B)

CCW-28
TAG #: 753F
TITLE: AUX CCW PUMPS 33 & 34 DISCHARGE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV753F)

CCW-29
TAG #: 818C
TITLE: CCW TO RHR HX 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV818C)

CCW-30
TAG #: 820B
TITLE: RHR HX 32 CCW FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV820B)

CCW-31
TAG #: 805
TITLE: SEAL WATER HX INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV805)

CCW-32
TAG #: 809
TITLE: SEAL WATER HX OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV809)

CCW-33
TAG #: 810
TITLE: NON-REGEN HX INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV810)

CCW-34
TAG #: 814
TITLE: NON-REGEN HX OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV814)

CCW-35
TAG #: 766C
TITLE: CCW HX OUTLET HDR CROSSTIE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV766C)

CCW-36
TAG #: 766D
TITLE: CCW HX OUTLET HDR CROSSTIE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCCV766D)

CCW-37
TAG #: NONE
TITLE: CCW PUMP NO. 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCCW31)

CCW-38
TAG #: NONE
TITLE: CCW PUMP NO. 32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCCW32)

CCW-39
TAG #: NONE
TITLE: CCW PUMP NO. 33 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCCW33)

CCW-40
TAG #: NONE
TITLE: TO SELECT PUMP 32 POWER SUPPLY AS MCC312
RANGE: T=ON F=OFF
VARIABLE: (LCCP32)

CFW-1
TAG #: CD-7A
TITLE: FEEDWATER HEATER 31A INLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD7A)

CFW-2
TAG #: CD-7B
TITLE: FEEDWATER HEATER 31B INLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD7B)

CFW-3
TAG #: CD-7C
TITLE: FEEDWATER HEATER 31C INLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD7C)

CFW-4
TAG #: CD-8A
TITLE: FEEDWATER HEATER 32A OUTLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD8A)

CFW-5
TAG #: CD-8B
TITLE: FEEDWATER HEATER 32B OUTLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD8B)

CFW-6
TAG #: CD-8C
TITLE: FEEDWATER HEATER 32C OUTLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD8C)

CFW-7
TAG #: CD-11
TITLE: LOW PRESSURE HEATER BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD11)

CFW-8
TAG #: CD-28A
TITLE: EXHAUST HOOD SPRAY VLV TCV-1114 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD28A)

CFW-9
TAG #: CD-28B
TITLE: EXHAUST HOOD SPRAY VLV TCV-1111 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD28B)

CFW-10
TAG #: CD-28C
TITLE: EXHUAST HOOD SPRAY VLV TCV-1112 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD28C)

CFW-11
TAG #: CT-64
TITLE: COND STORAGE TANK TO AFW PUMPS SUCTION
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCT64)

CFW-12
TAG #: CT-6
TITLE: COND STORAGE TANK OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCT6)

CFW-13
TAG #: CD-15
TITLE: FLASH EVAPORATOR DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD15)

CFW-14
TAG #: TCV-1110
TITLE: CONDENSATE TO FW HEATER FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFV1110)

CFW-15
TAG #: CD-19
TITLE: FEEDWATER HEATERS 33, 34 & 35 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD19)

CFW-16
TAG #: CD-16A
TITLE: FEEDWATER HEATER 33A INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD16A)

CFW-17
TAG #: CD-16B
TITLE: FEEDWATER HEATER 33B INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD16B)

CFW-18
TAG #: CD-16C
TITLE: FEEDWATER HEATER 33C INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD16C)

CFW-19
TAG #: CD-18A
TITLE: FEEDWATER HEATER 35A OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD18A)

CFW-20
TAG #: CD-18B
TITLE: FEEDWATER HEATER 35B OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD18B)

CFW-21
TAG #: CD-18C
TITLE: FEEDWATER HEATER 35C OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVD18C)

CFW-22
TAG #: BFD-8
TITLE: HIGH PRESSURE FEEDWATER HEATER BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVBFD8)

CFW-23
TAG #: BFD-3A
TITLE: HIGH PRESSURE FW HEATER 36A INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD3A)

CFW-24
TAG #: BFD-3B
TITLE: HIGH PRESSURE FW HEATER 36B INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD3B)

CFW-25
TAG #: BFD-3C
TITLE: HIGH PRESSURE FW HEATER 36C INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD3C)

CFW-26
TAG #: BFD-4A
TITLE: HIGH PRESSURE FW HEATER 36A OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD4A)

CFW-27
TAG #: BFD-4B
TITLE: HIGH PRESSURE FW HEATER 36B OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD4B)

CFW-28
TAG #: BFD-4C
TITLE: HIGH PRESSURE FW HEATER 36C OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD4C)

CFW-29
TAG #: BFD-7A
TITLE: S/G 31 FEEDWATER LINE ISO VALVE BFD-7A
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD7A)

CFW-30
TAG #: BFD-7B
TITLE: S/G 32 FEEDWATER LINE ISO VALVE BFD-7B
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD7B)

CFW-31
TAG #: BFD-7C
TITLE: S/G 33 FEEDWATER LINE ISO VALVE BFD-7C
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD7C)

CFW-32
TAG #: BFD-7D
TITLE: S/G 34 FEEDWATER LINE ISO VALVE BFD-7D
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVFD7D)

CFW-33
TAG #: CS-1A
TITLE: CONDENSER 31 HOTWELL ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS1A)

CFW-34
TAG #: CS-1B
TITLE: CONDENSER 31 HOTWELL ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS1B)

CFW-35
TAG #: CS-1C
TITLE: CONDENSER 32 HOTWELL ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS1C)

CFW-36
TAG #: CS-1D
TITLE: CONDENSER 32 HOTWELL ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS1D)

CFW-37
TAG #: CS-1E
TITLE: CONDENSER 33 HOTWELL ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS1E)

CFW-38
TAG #: CS-1F
TITLE: CONDENSER 33 HOTWELL ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS1F)

CFW-39
TAG #: CS-3A
TITLE: CONDENSER 31 HOTWELL DUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3A)

CFW-40
TAG #: CS-3B
TITLE: CONDENSER 31 HOTWELL DUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3B)

CFW-41
TAG #: CS-3C
TITLE: CONDENSER 32 HOTWELL DUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3C)

CFW-42
TAG #: CS-3D
TITLE: CONDENSER 32 HOTWELL DUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3D)

CFW-43
TAG #: CS-3E
TITLE: CONDENSER 33 HOTWELL DUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3E)

CFW-44
TAG #: CS-3F
TITLE: CONDENSER 33 HOTWELL DUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3F)

CFW-45
TAG #: NONE
TITLE: LOA TO OPEN/CLOSE PCV-1133
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (KCFV1133)

CFW-46
TAG #: NONE
TITLE: LOA TO BLOCK CLOSING OF PCV-1132
RANGE: T=BLOCKED F=NOTBLOCKED
VARIABLE: (KCFV1132)

CFW-47
TAG #: CT-V2
TITLE: LOA TO SUPPLY CST FROM WATER FACTORY
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCTV2)

CFW-48
TAG #: CS-3S
TITLE: LOA TO SUPPLY CND FROM CULLIGAN SYSTEM
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCS3S)

CFW-49
TAG #: MS-13A
TITLE: HOGGING EJECTOR STM SUP ISO FOR CND 31
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVS13A)

CFW-50
TAG #: MS-13B
TITLE: HOGGING EJECTOR STM SUP ISO FOR CND 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVS13B)

CFW-51
TAG #: MS-13C
TITLE: HOGGING EJECTOR STM SUP ISO FOR CND 33
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVS13C)

CFW-52
TAG #: CA-7A
TITLE: 1ST STAGE SJAE STEAM SUP ISO FOR CND 31
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCA7A)

CFW-53
TAG #: CA-7B
TITLE: 1ST STAGE SJAE STEAM SUP ISO FOR CND 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCA7B)

CFW-54
TAG #: CA-7C
TITLE: 1ST STAGE SJAE STEAM SUP ISO FOR CND 33
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCA7C)

CFW-55
TAG #: CD-2A
TITLE: CND PMP A DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD2A)

CFW-56
TAG #: CD-2B
TITLE: CND PMP B DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD2B)

CFW-57
TAG #: CD-2C
TITLE: CND PMP C DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCD2C)

CFW-58
TAG #: CA-15A
TITLE: CONDENSER A VACUUM BREAKER
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVA15A)

CFW-59
TAG #: CA-15B
TITLE: CONDENSER B VACUUM BREAKER
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVA15B)

CFW-60
TAG #: CA-15C
TITLE: CONDENSER C VACUUM BREAKER
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVA15C)

CFW-61
TAG #: NONE
TITLE: HOTWELL DISCH LINEUP SELECTION
RANGE: 0=CLOSED 1=DISCHARGE TUNNEL 2=RECIRC TO CST
VARIABLE: (NCFVCDXP)

CFW-62
TAG #: NONE
TITLE: COND POLISHER # OF OPEN SERV VESSELS
RANGE: 0, 1, 2, 3, 4, 5, OR 6
VARIABLE: (NCFVCPSV)

CFW-63
TAG #: NONE
TITLE: COND POLISHER # OF OPEN POST FILTERS
RANGE: 0, 1, 2, 3, 4, 5, OR 6
VARIABLE: (NCFVCPPF)

CFW-64
TAG #: CT-20
TITLE: COND SUPPLY FROM UNIT 1 ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCFVCT20)

CFW-65
TAG #: CS-2
TITLE: LOA PUSHBUTTON FOR CND SYS BYP VLV 179
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KCFLW17A)

CFW-66
TAG #: NONE
TITLE: LOA TO DEENERGIZE MBFP DISCHARGE VLV 31
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JCFHD231)

CFW-67
TAG #: NONE
TITLE: LOA TO DEENERGIZE MBFP DISCHARGE VLV 32
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JCFHD232)

CFW-68
TAG #: NONE
TITLE: VALVE POSITION FOR MBFP DISCHARGE VLV 31
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (ZCFHD231)

CFW-69
TAG #: NONE
TITLE: VALVE POSITION FOR MBFP DISCHARGE VLV 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (ZCFHD232)

CFW-70
TAG #: 412M
TITLE: LOA TO OVERRIDE TC-412M RELAY
RANGE: T=BLOCKED F=NOTBLOCKED
VARIABLE: (J412MOV)

CFW-71
TAG #:
TITLE: LOA FOR COND PUMP 31 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCONCD31)

CFW-72
TAG #:
TITLE: LOA FOR COND PUMP 32 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCONCD32)

CFW-73

TAG #:

TITLE: LOA FOR COND PUMP 33 BREAKER

RANGE: T=TRIP F=NORM

VARIABLE: (LCONCD33)

CNM-1
TAG #:
TITLE: CONTAINMENT RECIRC. FAN #31 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCNRF31)

CNM-2
TAG #:
TITLE: CONTAINMENT RECIRC. FAN #32 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCNRF32)

CNM-3
TAG #:
TITLE: CONTAINMENT RECIRC. FAN #33 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCNRF33)

CNM-4
TAG #:
TITLE: CONTAINMENT RECIRC. FAN #34 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCNRF34)

CNM-5
TAG #:
TITLE: CONTAINMENT RECIRC. FAN #35 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCNRF35)

CNM-6
TAG #:
TITLE: SELECT FANS FOR CNMT PURGE/NORM VENT OPERATION
RANGE: 1=OFF 2=A&B 3=B&D 4=A&B&C&D
VARIABLE: (KPURGSEL)

CNM-7
TAG #:
TITLE: START/STOP CNMT PURGE/VENT
RANGE: T=START F=STOP
VARIABLE: (KPURGRUN)

CNM-8
TAG #:
TITLE: START/STOP CNMT PRESS RELIEF
RANGE: T=START F=STOP
VARIABLE: (KPRESREL)

CNM-9
TAG #:
TITLE: CONTAINMENT SUMP PUMP 313 SWITCH
RANGE: 0=ON 1=AUTO 2=OFF
VARIABLE: (KCNP313)

CNM-10
TAG #:
TITLE: CONTAINMENT SUMP PUMP 314 SWITCH
RANGE: 0=ON 1=AUTO 2=OFF
VARIABLE: (KCNP314)

CNM-11
TAG #:
TITLE: CUT CIRCUIT PWR CHAN.1 VI PNL 500 VLV H2 ANAL
RANGE: T=DEENERGIZES F=ENERGIZE
VARIABLE: (JLOAVIR3)

CNM-12
TAG #:
TITLE: CUT CIRCUIT PWR CHAN.2 VI PNL 500 VLV H2 ANAL
RANGE: T=DEENERGIZES F=ENERGIZE
VARIABLE: (JLOAVIRA)

CNM-13

TAG #:

TITLE: VC ENTRY/EGRESS (T AT ENTRY, F AT EGRESS)

RANGE: T=ENTRY F=EGRESS

VARIABLE: (JCNMVCE)

CNS-1
TAG #: 1841
TITLE: SPRAY ADDITIVE TANK DISCHARGE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV1841)

CNS-2
TAG #: 1839A
TITLE: EDUCTOR 31 ISO.
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV839A)

CNS-3
TAG #: 1839B
TITLE: EDUCTOR 32 ISO.
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV839B)

CNS-4
TAG #: 865A
TITLE: CNMT. SPRAY PUMP 31 SUCTION
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV865A)

CNS-5
TAG #: 865B
TITLE: CNMT. SPRAY PUMP 32 SUCTION
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV865B)

CNS-6
TAG #: 1806A
TITLE: CNMT SPRAY PUMP 31 MINIFLOW
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV806A)

CNS-7
TAG #: 18063
TITLE: CNMT SPRAY PUMP 32 MINIFLOW
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RLSV8063)

CNS-8
TAG #: 878A
TITLE: CNMT SPRAY PUMP 31 CROSSTIE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV878A)

CNS-9
TAG #: 878B
TITLE: CNMT SPRAY PUMP 32 CROSSTIE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RLSV878B)

CNS-10
TAG #: 369A
TITLE: CNMT SPRAY PUMP 31 VC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV369A)

CNS-11
TAG #: 6698
TITLE: CNMT SPRAY PUMP 32 VC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV3698)

CNS-12
TAG #: 8738
TITLE: EDUCTOR TESTLINE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RLSV8738)

CNS-13
TAG #: 1803
TITLE: RECIRC PUMPS HEADER TO RECIRC SUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCSV1803)

CNS-14
TAG #: 1877A
TITLE: RECIRC PUMPS TO RECIRC SUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCS1877A)

CNS-15
TAG #: 1877B
TITLE: RECIRC PUMPS TO RECIRC SUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCS1877B)

CNS-16
TAG #:
TITLE: LOA FOR SPRAY PUMP 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCSPCS31)

CNS-17
TAG #:
TITLE: LOA FOR SPRAY PUMP 32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCSPCS32)

CNS-18
TAG #:
TITLE: LOA FOR RECIRC PUMP 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCSPR31)

CNS-19

TAG #:

TITLE: LOA FOR RECIRC PUMP 32 BREAKER

RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER

VARIABLE: (LCSPR32)

CRF-1
TAG #: NONE
TITLE: LOA TO SET BANK OVERLAP COUNTER
RANGE: RANGE 0 TO 999
VARIABLE: (MCRFOC)

CRF-2
TAG #: NONE
TITLE: ROD DRIVE MG SET 31
RANGE: T=ON F=OFF
VARIABLE: (JCRFMGA)

CRF-3
TAG #: NONE
TITLE: ROD DRIVE MG SET 32
RANGE: T=ON F=OFF
VARIABLE: (JCRFMGB)

CRF-4
TAG #: NONE
TITLE: ROD POSITION IND BACKUP POWER
RANGE: T=BACKUP F=NORMAL
VARIABLE: (JCRFIRPI)

CRF-5
TAG #: NONE
TITLE: REACTOR TRIP BYPASS BREAKER BYA RACKED IN
RANGE: T=RACKED IN BREAKER F=UNRACKED BREAKER
VARIABLE: (X52BYAX)

CRF-6
TAG #: NONE
TITLE: REACTOR TRIP BYPASS BREAKER BYB RACKED IN
RANGE: T=RACKED IN BREAKER F=UNRACKED BREAKER
VARIABLE: (X52BYBX)

CRF-7

TAG #: NONE

TITLE: REACTOR TRIP BYPASS BREAKER CONTROL

RANGE: 0=BREAKER OPEN 1= CLOSE BYP A 2=CLOSE BYP B

VARIABLE: (XPPLBYPC)

CRF-8

TAG #: NONE

TITLE: SIMULATED RX TRIP SIGNAL

RANGE: 1=TRIP TRN A 2=TRIP TRN B

VARIABLE: (XPPLTTRN)

CVC-1
TAG #: 206
TITLE: NON-REGEN HEAT EXCH OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV206)

CVC-2
TAG #: 228
TITLE: CHARGING LINE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV228)

CVC-3
TAG #: 227
TITLE: HCV-142 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV227)

CVC-4
TAG #: 223
TITLE: SEAL WATER RETURN FILTER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV223)

CVC-5
TAG #: 221A
TITLE: SEAL WATER RETURN FILTER BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV221A)

CVC-6
TAG #: 248
TITLE: SEAL INJECTION FILTER BYPASS
RANGE: RANGE 0.0 TO 1.0
VARIABLE: (RCVV248) &

CVC-7
TAG #: 241A
TITLE: RCP 31 SEAL INJECTION FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV241A)

CVC-8
TAG #: 241B
TITLE: RCP 32 SEAL INJECTION FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV241B)

CVC-9
TAG #: 241C
TITLE: RCP 33 SEAL INJECTION FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV241C)

CVC-10
TAG #: 241D
TITLE: RCP 34 SEAL INJECTION FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV241D)

CVC-11
TAG #: 305
TITLE: RCS FILTER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV305)

CVC-12
TAG #: 306
TITLE: RCS FILTER BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV306)

CVC-13
TAG #: PCV-1133A
TITLE: VCT H2 SUPPLY SETPOINT
RANGE: RANGE 0.0 TO 100.0 PSIG
VARIABLE: (PCVC1133A)

CVC-14
TAG #: PCV-1139
TITLE: VCT VENT SETPOINT
RANGE: RANGE 0.0 TO 100.0 PSIG
VARIABLE: (PCVC1133)

CVC-15
TAG #: PCV-114
TITLE: VCT N2 SUPPLY SETPOINT
RANGE: RANGE 0.0 TO 100.0 PSIG
VARIABLE: (PCVC114)

CVC-16
TAG #: 350
TITLE: BLENDER TO RWST ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV350)

CVC-17
TAG #: 1104
TITLE: HUT 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1104)

CVC-18
TAG #: 1119
TITLE: HUT 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1119)

CVC-19
TAG #: 1120
TITLE: HUT 33 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1120)

CVC-20
TAG #: 1270
TITLE: HUT 31 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1270)

CVC-21
TAG #: 1126
TITLE: HUT 32 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1126)

CVC-22
TAG #: 1128
TITLE: HUT 33 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1128)

CVC-23
TAG #: 297
TITLE: BLENDER TO CHARGING PUMP HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV297)

CVC-24
TAG #: 293
TITLE: B. A. FILTER TO CHARGING PUMP HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV293)

CVC-25
TAG #: 278
TITLE: CHARGING PUMP 31 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV278)

CVC-26
TAG #: 283
TITLE: CHARGING PUMP 32 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV283)

CVC-27
TAG #: 284
TITLE: CHARGING PUMP 33 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV284)

CVC-28
TAG #: 289
TITLE: CHARGING HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV289)

CVC-29
TAG #: 8108
TITLE: CHARGING PUMP 31 RECIRC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV8108)

CVC-30
TAG #: 8107
TITLE: CHARGING PUMP 32 RECIRC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV8107)

CVC-31
TAG #: 8106
TITLE: CHARGING PUMP 33 RECIRC ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV8106)

CVC-32
TAG #: 221B
TITLE: SEAL WATER HEAT EXCHANGER BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV221B)

CVC-33
TAG #: 272A
TITLE: SEAL WATER HEAT EXCHANGER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV272A)

CVC-34
TAG #: 288
TITLE: RWST TO CHARGING PUMP HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV288)

CVC-35
TAG #: 309
TITLE: LETDOWN TO DEBOR DEMIN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV309)

CVC-36
TAG #: 311B
TITLE: DEBOR DEMIN 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV311B)

CVC-37
TAG #: 340B
TITLE: DESOR DEMIN 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV340B)

CVC-38
TAG #: 313
TITLE: DESOR DEMIN OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV313)

CVC-39
TAG #: 387
TITLE: CATION BED DEMIN FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV387)

CVC-40
TAG #: 389
TITLE: CATION BED DEMIN INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV389)

CVC-41
TAG #: 346
TITLE: MIXED BED DEMIN 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV346)

CVC-42
TAG #: 352
TITLE: MIXED BED DEMIN 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV352)

CVC-43
TAG #: 1198A
TITLE: RIT TO BAT 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCV1198A)

CVC-44
TAG #: 1198B
TITLE: RIT TO BAT 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCV1198B)

CVC-45
TAG #: 367A
TITLE: BORIC ACID PUMP SUCTION HEADER CROSSTIE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV367A)

CVC-46
TAG #: 367B
TITLE: BORIC ACID PUMP SUCTION HEADER CROSSTIE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV367B)

CVC-47
TAG #: 364
TITLE: BORIC ACID PUMP 31 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV364)

CVC-48
TAG #: 366
TITLE: BORIC ACID PUMP 32 SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV366)

CVC-49
TAG #: 267A
TITLE: BORIC ACID FILTER BYPASS VALVES
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV267A)

CVC-50
TAG #: 267B
TITLE: BORIC ACID FILTER BYPASS VALVES
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV267B)

CVC-51
TAG #: 360
TITLE: BORIC ACID PUMP 31 TO B.A. FILTER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV360)

CVC-52
TAG #: 370
TITLE: BORIC ACID PUMP 32 TO B.A. FILTER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV370)

CVC-53
TAG #: 1197
TITLE: BORIC ACID PUMP TO BIT FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV1197)

CVC-54
TAG #: 2493
TITLE: SEAL INJECTION FILTER 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV2493)

CVC-55
TAG #: 249D
TITLE: SEAL INJECTION FILTER 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV249D)

CVC-56
TAG #: 358
TITLE: LOA TO MAKEUP TO BAST 31
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV358)

CVC-57
TAG #: 372
TITLE: LOA TO MAKEUP TO BAST 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RCVV372)

CVC-58
TAG #: NONE
TITLE: LOA FOR CHARGING PUMP 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCVPC31)

CVC-59
TAG #: NONE
TITLE: LOA FOR CHARGING PUMP 32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCVPC32)

CVC-60
TAG #: NONE
TITLE: LOA FOR CHARGING PUMP 33 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCVPC33)

CWS-1
TAG #:
TITLE: LOA TO SET WEIR GATE CONTROL SIGNAL
RANGE: RANGE 5.1, 5.3, 5.5, 5.7, 5.9 FT.
VARIABLE: (RCWSWESP)

CWS-2
TAG #:
TITLE: DE-ICING PUMP 31 CONTROL SWITCH
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KCWPDI31)

CWS-3
TAG #:
TITLE: DE-ICING PUMP 32 CONTROL SWITCH
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KCWPDI32)

CWS-4
TAG #:
TITLE: DE-ICING PUMP 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCWPDI31)

CWS-5
TAG #:
TITLE: DE-ICING PUMP 32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LCWPDI32)

CWS-6
TAG #:
TITLE: COND 31 WTR BOX A VENTING TO ATM
RANGE: T=SETUP FOR PRIMING F=VENT TO ATMOSPHERE
VARIABLE: (JCWSPRIM(1

CWS-7
TAG #:
TITLE: COND 31 WTR BOX A INTERNAL PRESSURE
RANGE: RANGE 14.7 TO 25 PSIA
VARIABLE: (PCWSLOA(1)

CWS-8
TAG #:
TITLE: COND 31 WTR BOX B VENTING TO ATM
RANGE: T=SETUP FOR PRIMING F=VENT TO ATMOSPHERE
VARIABLE: (JCWSPRIM(2

CWS-9
TAG #:
TITLE: COND 31 WTR BOX B INTERNAL PRESSURE
RANGE: RANGE 14.7 TO 25 PSIA
VARIABLE: (PCWSLOA(2)

CWS-10
TAG #:
TITLE: COND 32 WTR BOX A VENTING TO ATM
RANGE: T=SETUP FOR PRIMING F=VENT TO ATMOSPHERE
VARIABLE: (JCWSPRIM(3

CWS-11
TAG #:
TITLE: COND 32 WTR BOX A INTERNAL PRESSURE
RANGE: RANGE 14.7 TO 25 PSIA
VARIABLE: (PCWSLOA(3)

CWS-12
TAG #:
TITLE: COND 32 WTR BOX B VENTING TO ATM
RANGE: T=SETUP FOR PRIMING F=VENT TO ATMOSPHERE
VARIABLE: (JCWSPRIM(4

CWS-13
TAG #:
TITLE: COND 32 WTR BOX B INTERNAL PRESSURE
RANGE: RANGE 14.7 TO 25 PSIA
VARIABLE: (PCWSLOA(4)

CWS-14
TAG #:
TITLE: COND 33 WTR BOX A VENTING TO ATM
RANGE: T=SETUP FOR PRIMING F=VENT TO ATMOSPHERE
VARIABLE: (JCWSPRIM(5

CWS-15
TAG #:
TITLE: COND 33 WTR BOX A INTERNAL PRESSURE
RANGE: RANGE 14.7 TO 25 PSIA
VARIABLE: (PCWSLOA(5)

CWS-16
TAG #:
TITLE: COND 33 WTR BOX B VENTING TO ATM
RANGE: T=SETUP FOR PRIMING F=VENT TO ATMOSPHERE
VARIABLE: (JCWSPRIM(6

CWS-17
TAG #:
TITLE: COND 33 WTR BOX B INTERNAL PRESSURE
RANGE: RANGE 14.7 TO 25 PSIA
VARIABLE: (PCWSLOA(6)

CWS-18
TAG #:
TITLE: PCE BLDG OR CWP DRIVE TROUBLE ALARM RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KCWSALRS)

CWS-19
TAG #:
TITLE: LOA SWS TRIP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JCWPLOA)

CWS-20
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 31 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP31)

CWS-21
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 32 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP32)

CWS-22
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 33 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP33)

CWS-23
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 34 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP34)

CWS-24
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 35 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP35)

CWS-25
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 36 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP36)

CWS-26
TAG #:
TITLE: LOA FOR CIRC WATER PUMP 37 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LCWPCP37)

CWS-27
TAG #: NONE
TITLE: LOA FOR CITY WATER PRESSURE
RANGE: RANGE 0.0 TO 75.0 PSIG
VARIABLE: (PCWSCITY)

DSG-1
TAG #:
TITLE: D/G #31 UNIT/PARALLEL SWITCH
RANGE: T=UNIT POSITION F=PARALLEL
VARIABLE: (JDSGU:P1)

DSG-2
TAG #:
TITLE: D/G #32 UNIT/PARALLEL SWITCH
RANGE: T=UNIT POSITION F=PARALLEL
VARIABLE: (JDSGU:P2)

DSG-3
TAG #:
TITLE: D/G #33 UNIT/PARALLEL SWITCH
RANGE: T=UNIT POSITION F=PARALLEL
VARIABLE: (JDSGU:P3)

DSG-4
TAG #:
TITLE: D/G #31 SURVEILLANCE TEST START
RANGE: T=ON F=OFF
VARIABLE: (LDSGST01)

DSG-5
TAG #:
TITLE: D/G #32 SURVEILLANCE TEST START
RANGE: T=ON F=OFF
VARIABLE: (LDSGST02)

DSG-6
TAG #:
TITLE: D/G #33 SURVEILLANCE TEST START
RANGE: T=ON F=OFF
VARIABLE: (LDSGST03)

DSG-7
TAG #:
TITLE: D/G #31 PARALLEL TO UNIT OPERATION
RANGE: T=UNIT(OPEN FEED BKRS) F=PARALLEL(CLOSE FEED BKRS)
VARIABLE: (JDSGPR31)

DSG-8
TAG #:
TITLE: D/G #32 PARALLEL TO UNIT OPERATION
RANGE: T=UNIT(OPEN FEED BKRS) F=PARALLEL(CLOSE FEED BKRS)
VARIABLE: (JDSGPR32)

DSG-9
TAG #:
TITLE: D/G #33 PARALLEL TO UNIT OPERATION
RANGE: T=UNIT(OPEN FEED BKRS) F=PARALLEL(CLOSE FEED BKRS)
VARIABLE: (JDSGPR33)

DSG-10
TAG #:
TITLE: D/G #31 SURVEILLANCE TEST STOP
RANGE: T=ON F=OFF
VARIABLE: (LDSGSTF1)

DSG-11
TAG #:
TITLE: D/G #32 SURVEILLANCE TEST STOP
RANGE: T=ON F=OFF
VARIABLE: (LDSGSTF2)

DSG-12
TAG #:
TITLE: D/G #33 SURVEILLANCE TEST STOP
RANGE: T=ON F=OFF
VARIABLE: (LDSGSTF3)

DSG-13
TAG #:
TITLE: D/G #31 GOVERNOR RAISE SWITCH
RANGE: T=RAISE F=STOP
VARIABLE: (XDSGG31H)

DSG-14
TAG #:
TITLE: D/G #32 GOVERNOR RAISE SWITCH
RANGE: T=RAISE F=STOP
VARIABLE: (XDSGG32H)

DSG-15
TAG #:
TITLE: D/G #33 GOVERNOR RAISE SWITCH
RANGE: T=RAISE F=STOP
VARIABLE: (XDSGG33H)

DSG-16
TAG #:
TITLE: D/G #31 GOVERNOR LOWER SWITCH
RANGE: T=LOWER F=STOP
VARIABLE: (XDSGG31L)

DSG-17
TAG #:
TITLE: D/G #32 GOVERNOR LOWER SWITCH
RANGE: T=LOWER F=STOP
VARIABLE: (XDSGG32L)

DSG-18
TAG #:
TITLE: D/G #33 GOVERNOR LOWER SWITCH
RANGE: T=LOWER F=STOP
VARIABLE: (XDSGG33L)

DSG-19
TAG #:
TITLE: D/G #31 VOLTAGE REGUALTOR RAISE SWITCH
RANGE: T=RAISE F=STOP
VARIABLE: (XDSGV31H)

DSG-20
TAG #:
TITLE: D/G #32 VOLTAGE REGUALTOR RAISE SWITCH
RANGE: T=RAISE F=STOP
VARIABLE: (XDSGV32H)

DSG-21
TAG #:
TITLE: D/G #33 VOLTAGE REGUALTOR RAISE SWITCH
RANGE: T=RAISE F=STOP
VARIABLE: (XDSGV33H)

DSG-22
TAG #:
TITLE: D/G #31 VOLTAGE REGUALTOR LOWER SWITCH
RANGE: T=LOWER F=STOP
VARIABLE: (XDSGV31L)

DSG-23
TAG #:
TITLE: D/G #32 VOLTAGE REGUALTOR LOWER SWITCH
RANGE: T=LOWER F=STOP
VARIABLE: (XDSGV32L)

DSG-24
TAG #:
TITLE: D/G #33 VOLTAGE REGUALTOR LOWER SWITCH
RANGE: T=LOWER F=STOP
VARIABLE: (XDSGV33L)

DSG-25
TAG #:
TITLE: D/G #31 LOCAL STOP
RANGE: T=STOP F=RESET
VARIABLE: (LDSGSTP1)

DSG-26
TAG #:
TITLE: D/G #32 LOCAL STOP
RANGE: T=STOP F=RESET
VARIABLE: (LDSGSTP2)

DSG-27
TAG #:
TITLE: D/G #33 LOCAL STOP
RANGE: T=STOP F=RESET
VARIABLE: (LDSGSTP3)

DSG-28
TAG #:
TITLE: D/G 31 TRIP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JDSGRST1)

DSG-29
TAG #:
TITLE: D/G 32 TRIP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JDSGRST2)

DSG-30
TAG #:
TITLE: D/G 33 TRIP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JDSGRST3)

DSG-31
TAG #:
TITLE: D/G 31 AUTO/MANUAL MODE
RANGE: T=AUTO MODE F=MANUAL MODE
VARIABLE: (LDSGAU31)

DSG-32
TAG #:
TITLE: D/G 32 AUTO/MANUAL MODE
RANGE: T=AUTO MODE F=MANUAL MODE
VARIABLE: (LDSGAU32)

DSG-33
TAG #:
TITLE: D/G 33 AUTO/MANUAL MODE
RANGE: T=AUTO MODE F=MANUAL MODE
VARIABLE: (LDSGAU33)

DSG-34
TAG #:
TITLE: D/G ALARM RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JDSGANUN)

DSG-35
TAG #:
TITLE: LOA TO OPEN/CLOSE JBK2A
RANGE: 1=CLOSE 2=NORMAL 3=OPEN (MOMENTARY CONTACT, SET TO 2 BY SOFTWARE)
VARIABLE: (KBK2A)

DSG-36
TAG #:
TITLE: LOA TO OPEN/CLOSE JBK3A
RANGE: 1=CLOSE 2=NORMAL 3=OPEN (MOMENTARY CONTACT, SET TO 2 BY SOFTWARE)
VARIABLE: (KBK3A)

DSG-37
TAG #:
TITLE: LOA TO OPEN/CLOSE JBK5A
RANGE: 1=CLOSE 2=NORMAL 3=OPEN (MOMENTARY CONTACT, SET TO 2 BY SOFTWARE)
VARIABLE: (KBK5A)

DSG-38
TAG #:
TITLE: LOA TO OPEN/CLOSE JBK6A
RANGE: 1=CLOSE 2=NORMAL 3=OPEN (MOMENTARY CONTACT, SET TO 2 BY SOFTWARE)
VARIABLE: (KBK6A)

DSG-39
TAG #:
TITLE: LOA TO OPEN/CLOSE JBK2AT3A
RANGE: 1=CLOSE 2=NORMAL 3=OPEN (MOMENTARY CONTACT, SET TO 2 BY SOFTWARE)
VARIABLE: (KBK2AT3A)

DSG-40
TAG #:
TITLE: LOA TO CLOSE JBK2AT5A
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KBK2AT5A)

DSG-41
TAG #:
TITLE: LOA TO CLOSE JBK3AT6A
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KBK3AT6A)

EPS-1
TAG #:
TITLE: MAIN TRANSFORMER #1 DISCONNECT 1
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KDISXMT1)

EPS-2
TAG #:
TITLE: MAIN TRANSFORMER #1 DISCONNECT 2
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KDISXMT2)

EPS-3
TAG #:
TITLE: MAIN TRANSFORMER #1 DISCONNECT 3
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KDISXMT3)

EPS-4
TAG #:
TITLE: MAIN TRANSFORMER #1 DISCONNECT 4
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KDISXMT4)

EPS-5
TAG #:
TITLE: DISCONNECT KEY INTERLOCK
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LDISKEY)

EPS-6
TAG #:
TITLE: BUS 5A SUPPLY TO MCC39 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBK:39)

EPS-7
TAG #:
TITLE: BUS 5A SUPPLY TO MCC38 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K5K:38)

EPS-8
TAG #:
TITLE: BUS 2A SUPPLY TO MCC34 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K5K:34)

EPS-9
TAG #:
TITLE: BUS 2A SUPPLY TO MCC33 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K5K:33)

EPS-10
TAG #:
TITLE: BUS 2A SUPPLY TO MCC210 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K5K:210)

EPS-11
TAG #:
TITLE: BUS 2A SUPPLY TO MCC31 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K5K:31)

EPS-12
TAG #:
TITLE: BUS 3A SUPPLY TO MCC32 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K5K:32)

EPS-13
TAG #:
TITLE: BUS 3A SUPPLY TO MCC35 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3K:35)

EPS-14
TAG #:
TITLE: BUS 6A SUPPLY TO MCC37 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K6K:37)

EPS-15
TAG #:
TITLE: BUS CPOL SUPPLY TO MCCY01 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3K:Y01)

EPS-16
TAG #:
TITLE: BUS CPOL SUPPLY TO MCCY02 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3K:Y02)

EPS-17
TAG #:
TITLE: FEEDER TO 480V MCC311 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3K:311)

EPS-18
TAG #:
TITLE: BUS 312 SUPPLY TO MCC-A BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3K:A)

EPS-19
TAG #:
TITLE: BUS 31∠ SUPPLY TO MCC-E-1 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K∂K:E1)

EPS-20
TAG #:
TITLE: BUS 31∠ SUPPLY TO MCC-C BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K∂K:C)

EPS-21
TAG #:
TITLE: BUS 312 SUPPLY TO MCC-G BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K∂K:G)

EPS-22
TAG #:
TITLE: BUS 312 SUPPLY TO MCC-L BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K∂K:L)

EPS-23
TAG #:
TITLE: BUS 313 SUPPLY TO MCC-D BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K∂K:D)

EPS-24
TAG #:
TITLE: BUS 313 SUPPLY TO MCC-E-2 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K∂K:E2)

EPS-25
TAG #:
TITLE: BUS 313 SUPPLY TO MCC-H BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBK:H)

EPS-26
TAG #:
TITLE: BUS 313 SUPPLY TO MCC-B BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBK:B)

EPS-27
TAG #:
TITLE: BUS 313 SUPPLY TO MCC-K BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBK:K)

EPS-28
TAG #:
TITLE: 125VDC BUS 31 SUPPLY TO PNL 31 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKP31)

EPS-29
TAG #:
TITLE: 125VDC BUS 31 SUPPLY TO PNL 31A BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKP31A)

EPS-30
TAG #:
TITLE: 125VDC BUS 31 SUPPLY TO PNL 33 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKP33)

EPS-31
TAG #:
TITLE: 125VDC BUS 32 SUPPLY TO PNL 32 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKP32)

EPS-32
TAG #:
TITLE: 125VDC BUS 32 SUPPLY TO PNL 32A BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKP32A)

EPS-33
TAG #:
TITLE: 125VDC BUS 32 SUPPLY TO PNL 34 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKP34)

EPS-34
TAG #:
TITLE: 125VDC BUS 31 SUPPLY TO INVERTER 31 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKIN31)

EPS-35
TAG #:
TITLE: 125VDC BUS 32 SUPPLY TO INVERTER 32 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKIN32)

EPS-36
TAG #:
TITLE: 125VDC BUS 33 SUPPLY TO INVERTER 33 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKIN33)

EPS-37
TAG #:
TITLE: 125VDC BUS 34 SUPPLY TO INVERTER 34 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K6KIN34)

EPS-38
TAG #: 86/UT-1
TITLE: 6.9KV BUS 1 LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR861RST)

EPS-39
TAG #: 86/UT-2
TITLE: 6.9KV BUS 2 LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR862RST)

EPS-40
TAG #: 86/UT-3
TITLE: 6.9KV BUS 3 LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR863RST)

EPS-41
TAG #: 86/UT-4
TITLE: 6.9KV BUS 4 LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR864RST)

EPS-42
TAG #: 86/UT-5
TITLE: 6.9KV BUS 5 LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR865RST)

EPS-43
TAG #: 86/UT-6
TITLE: 6.9KV BUS 6 LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR866RST)

EPS-44
TAG #: 86/2A
TITLE: 480 V BUS 2A LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (J862ARST)

EPS-45
TAG #: 86/3A
TITLE: 480 V BUS 3A LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (J863ARST)

EPS-46
TAG #: 86/5A
TITLE: 480 V BUS 5A LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (J865ARST)

EPS-47
TAG #: 86/6A
TITLE: 480 V BUS 6A LOCKOUT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (J866ARST)

EPS-48
TAG #:
TITLE: MCC 312A SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K6K:3CA)

EPS-49
TAG #:
TITLE: DC BUS 32A SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKD32A)

EPS-50
TAG #:
TITLE: INSTRUMENT BUS 34 TRANSFER SWITCH
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKIB34X)

EPS-51
TAG #:
TITLE: INSTRUMENT BUS 31 ALTERNATE FEED SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKIB31)

EPS-52
TAG #:
TITLE: INSTRUMENT BUS 32 ALTERNATE FEED SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKIB32)

EPS-53
TAG #:
TITLE: INSTRUMENT BUS 33 ALTERNATE FEED SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKIB33)

EPS-54
TAG #:
TITLE: INSTRUMENT BUS 34 ALTERNATE FEED SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKIB34)

EPS-55
TAG #:
TITLE: INSTRUMENT BUS 31 STATIC INV BYPASS SWITCH
RANGE: T=FWD F=REV
VARIABLE: (LBKSTX31)

EPS-56
TAG #:
TITLE: INSTRUMENT BUS 32 STATIC INV BYPASS SWITCH
RANGE: T=FWD F=REV
VARIABLE: (LBKSTX32)

EPS-57
TAG #:
TITLE: INSTRUMENT BUS 33 STATIC INV BYPASS SWITCH
RANGE: T=FWD F=REV
VARIABLE: (LBKSTX33)

EPS-58
TAG #:
TITLE: INST BUS ALTERNATE SUPPLY FROM MCC36C
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBK1B:XF)

EPS-59
TAG #:
TITLE: BATTERY CHARGER 35 TO DC BUS 31
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKQ3531)

EPS-60
TAG #:
TITLE: BATTERY CHARGER 35 TO DC BUS 32
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKQ3532)

EPS-61
TAG #:
TITLE: BATTERY CHARGER 35 TO DC BUS 33
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKQ3533)

EPS-62
TAG #:
TITLE: BATTERY CHARGER 35 TO DC BUS 34
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKQ3534)

EPS-63
TAG #:
TITLE: BATTERY 31 FUSE
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKBAT31)

EPS-64
TAG #:
TITLE: BATTERY 32 FUSE
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKBAT32)

EPS-65
TAG #:
TITLE: BATTERY 33 FUSE
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKBAT33)

EPS-66
TAG #:
TITLE: BATTERY 34 FUSE
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBKBAT34)

EPS-67
TAG #:
TITLE: BATTERY CHARGER 31 SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3KQ31I)

EPS-68
TAG #:
TITLE: BATTERY CHARGER 32 SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3KQ32I)

EPS-69
TAG #:
TITLE: BATTERY CHARGER 33 SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3KQ33I)

EPS-70
TAG #:
TITLE: BATTERY CHARGER 34 SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3KQ34I)

EPS-71
TAG #:
TITLE: BATTERY CHARGER 35 SUPPLY BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (K3KQ35I)

EPS-72
TAG #:
TITLE: FLOOD LIGHTS NORMAL FEED BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (L3KFLOOD)

EPS-73
TAG #:
TITLE: OVERCURRENT RELAY RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JR51:RST)

EPS-74
TAG #:
TITLE: BATTERY CHARGER TROUBLE ALARM RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (LBKBTRS)

EPS-75
TAG #:
TITLE: MAIN XFM #1 EMERGENCY SUPPLY TRANSFER SWITCH
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (LBKMT1XF)

EPS-76
TAG #:
TITLE: MAIN XFM #2 EMERGENCY SUPPLY TRANSFER SWITCH
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (LBKMT2XF)

EPS-77
TAG #:
TITLE: UNIT AUX XFM EMERGENCY SUPPLY TRANSFER SWITCH
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (LBKUAXF)

EPS-78
TAG #:
TITLE: STAT AUX XFM EMERGENCY SUPPLY TRANSFER SWITCH
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (LBKSUXF)

EPS-79
TAG #:
TITLE: LIGHTING BUS RESET BREAKER ON 480V BUS 2A
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKLT312)

EPS-80
TAG #:
TITLE: LIGHTING BUS RESET BREAKER ON 480V BUS 6A
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKLT316)

EPS-81
TAG #:
TITLE: LIGHTING BUS RESET BREAKER ON 480V BUS 3A
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKLT333)

EPS-82
TAG #:
TITLE: LIGHTING BUS RESET BREAKER ON 480V BUS 5A
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKLT335)

EPS-83
TAG #:
TITLE: LIGHTING BUS 33 BREAKER (FRO CCR LITE RESET)
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KEPSCC5A)

EPS-84
TAG #:
TITLE: LIGHTING BUS 32 BREAKER (FOR CCR LITE RESET)
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KEPSCC3A)

EPS-85
TAG #:
TITLE: LIGHTING BUS 32-33 TIE BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KEPSCTIE)

EPS-86
TAG #:
TITLE: AUTO/MAN SW LT BUS 32-33 INTER-TIE
RANGE: T=AUTO F=MANUAL
VARIABLE: (KEPSAUTO)

EPS-87
TAG #:
TITLE: ST 2-6 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBK2:6)

EPS-88
TAG #:
TITLE: ST 5-6 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (KBK5:6)

EPS-89
TAG #:
TITLE: BUS 312 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBK312)

EPS-90
TAG #:
TITLE: BUS 313 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBK313)

EPS-91

TAG #:

TITLE: BUS 312/313 TIE^BREAKER

RANGE: T=CLOSED BREAKER F=OPEN BREAKER

VARIABLE: (LBK,123)

FPS-1
TAG #:
TITLE: FIRE PUMP FP-P-3 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LFPSFPP3)

FPS-2
TAG #:
TITLE: FDCP CONTROL BLDG. (EL. 15')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS01)

FPS-3
TAG #:
TITLE: FDCP CONTROL BLDG. (EL. 33')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS02)

FPS-4
TAG #:
TITLE: FDCP BATTERY RM. 31 (EL. 33')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS03)

FPS-5
TAG #:
TITLE: FDCP FAN HSE CARBON FILTER INL. PLENUM
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS04)

FPS-6
TAG #:
TITLE: FDCP ELEC. PEN. AREA (EL. 46')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS05)

EPS-7
TAG #:
TITLE: EDCP ELEC. PEN. AREA (EL. 34')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS06)

EPS-8
TAG #:
TITLE: EDCP DG RM #31 & BATTERY #33
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS07)

EPS-9
TAG #:
TITLE: EDCP DG RM #32
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS08)

EPS-10
TAG #:
TITLE: EDCP DG RM #33
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS09)

EPS-11
TAG #:
TITLE: EDCP TG BLDG. BFP OIL CONSOLE
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS10)

EPS-12
TAG #:
TITLE: EDCP H2 SEAL OIL UNIT
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS11)

FPS-13
TAG #:
TITLE: FDCP TG BLDG. 6.9 KV SWGR
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS12)

FPS-14
TAG #:
TITLE: FDCP UNIT AUX XFMR
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS13)

FPS-15
TAG #:
TITLE: FDCP MAIN XFMR 32
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS14)

FPS-16
TAG #:
TITLE: FDCP MAIN XFMR 31
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS15)

FPS-17
TAG #:
TITLE: FDCP STA AUX XFMR
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS16)

FPS-18
TAG #:
TITLE: FDCP FIRE PUMP HSE PNEU TK
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS17)

FPS-19
TAG #:
TITLE: FDCP FIRE PUMP HSE PNEU TK
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS19)

FPS-20
TAG #:
TITLE: FDCP FIRE PUMP HSE PNEU TK
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS19)

FPS-21
TAG #:
TITLE: FDCP FIRE PUMP HSE WTR TK
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS20)

FPS-22
TAG #:
TITLE: FDCP CITY WATER SUPPLY
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS21)

FPS-23
TAG #:
TITLE: FDCP DSL. FP
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS22)

FPS-24
TAG #:
TITLE: FDCP RCP #53
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS23)

FPS-25
TAG #:
TITLE: FDCP RCP #34
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS24)

FPS-26
TAG #:
TITLE: FDCP RCP #31
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS25)

FPS-27
TAG #:
TITLE: FDCP RCP #32
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS26)

FPS-28
TAG #:
TITLE: FDCP PAB CHARGING PUMP 31
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS27)

FPS-29
TAG #:
TITLE: FDCP PAB SPARE RHR PUMP ROOM
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS28)

FPS-30
TAG #:
TITLE: FDCP RAMS BLDG (EL. 44'6") SMOKE
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS29)

FPS-31
TAG #:
TITLE: FDCP RAMS BLDG (EL. 44'6") MAN. PULL STA.
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS30)

FPS-32
TAG #:
TITLE: FDCP ADMN BLDG (EL. 15')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS31)

FPS-33
TAG #:
TITLE: FDCP ADMN BLDG (EL. 61'E)
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS32)

FPS-34
TAG #:
TITLE: FDCP PAB BELOW MCC 36B
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS33)

FPS-35
TAG #:
TITLE: FDCP PAB BELOW MCC 36A
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS34)

FPS-36
TAG #:
TITLE: FDCP EXCITER ENCLOSURE
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS35)

EPS-37
TAG #:
TITLE: EDCP EXCITER ENCLOSURE
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS36)

EPS-38
TAG #:
TITLE: EDCP CABLE SPR RM (EL. 33')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS37)

EPS-39
TAG #:
TITLE: EDCP CABLE SPR RM (EL. 33')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS38)

EPS-40
TAG #:
TITLE: EDCP CABLE SPR RM (EL. 33')
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS39)

EPS-41
TAG #:
TITLE: EDCP BFP 31 TURB (HP END)
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS40)

EPS-42
TAG #:
TITLE: EDCP BFP 31 TURB (HP END)
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LEPS41)

FPS-43
TAG #:
TITLE: FDCP HSE SERV BLR BLDG CO2
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS42)

FPS-44
TAG #:
TITLE: FDCP DSL GEN RM #31
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS43)

FPS-45
TAG #:
TITLE: FDCP DSL GEN RM #31
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS44)

FPS-46
TAG #:
TITLE: FDCP DSL GEN RM #32
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS45)

FPS-47
TAG #:
TITLE: FDCP DSL GEN RM #32
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS46)

FPS-48
TAG #:
TITLE: FDCP DSL GEN RM #33
RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM
VARIABLE: (LFPS47)

FPS-49

TAG #:

TITLE: FDCP DSL GEN RM #33

RANGE: 0=OFF 1=TROUBLE 2=ALARM 3=TROUBLE & ALARM

VARIABLE: (LFPS48)

FWH-1

TAG #: 3EX-1
TITLE: HTR 33A EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV3EX1)

FWH-2

TAG #: 3EX-3
TITLE: HTR 33B EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV3EX3)

FWH-3

TAG #: 3EX-5
TITLE: HTR 33C EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV3EX5)

FWH-4

TAG #: 4EX-1
TITLE: HTR 34A EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV4EX1)

FWH-5

TAG #: 4EX-3
TITLE: HTR 34B EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV4EX3)

FWH-6

TAG #: 4EX-5
TITLE: HTR 34C EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV4EX5)

FWH-7

TAG #: 5FX-5A
TITLE: HTR 5A EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV5X5A)

FWH-8

TAG #: 5FX-5B
TITLE: HTR 5B EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV5X5B)

FWH-9

TAG #: 5FX-5C
TITLE: HTR 5C EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV5X5C)

FWH-10

TAG #: 6FX-5A
TITLE: HTR 6A EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV6X5A)

FWH-11

TAG #: 6FX-5B
TITLE: HTR 6B EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV6X5B)

FWH-12

TAG #: 6FX-5C
TITLE: HTR 6C EXT STM ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV6X5C)

FWH-13
TAG #: HD-10A
TITLE: HTR 35A-HDT VNT VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHVD10A)

FWH-14
TAG #: HD-10B
TITLE: HTR 35B-HDT VNT VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHVD10B)

FWH-15
TAG #: HD-10C
TITLE: HTR 35C-HDT VNT VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHVD10C)

FWH-16
TAG #: HD-18A
TITLE: HTR 35A DRN VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHVD18A)

FWH-17
TAG #: HD-18B
TITLE: HTR 35B DRN VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHVD18B)

FWH-18
TAG #: HD-18C
TITLE: HTR 35C DRN VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHVD18C)

FWH-19
TAG #: HC-1127
TITLE: HDP 31 DISCH LC-1127 AUTO/MAN SW
RANGE: T=AUTO F=MANUAL
VARIABLE: (KFHV1127)

FWH-20
TAG #: HC-1127A
TITLE: HDP 32 DISCH LC-1127A AUTO/MAN SW
RANGE: T=AUTO F=MANUAL
VARIABLE: (KFHV127A)

FWH-21
TAG #: HC-1127
TITLE: HDP 31 DISCH VLV LCV-1127 MAN POS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV1127)

FWH-22
TAG #: HC-1127A
TITLE: HDP 32 DISCH VLV LCV-1127A MAN POS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RFHV127A)

FWH-23
TAG #: RESET
TITLE: RST FOR HTR 31,32,33,34 DUMP VLV
RANGE: 0=AUTO 1=RESET 2=TRIP (MOMENTARY CONTACT, RETURN TO AUTO)
VARIABLE: (KFHVRST)

FWH-24
TAG #: NONE
TITLE: BYPASS SWITCH FOR FWH 33A,33B,33C LEVEL ALARM
RANGE: T=BYPASS F=NORMAL
VARIABLE: (JBYPFH33)

FWH-25
TAG #: NONE
TITLE: BYPASS SWITCH FOR FWH 34A,34B,34C LEVEL ALARM
RANGE: T=BYPASS F=NORMAL
VARIABLE: (JBYPFH34)

FWH-26
TAG #: NONE
TITLE: BYPASS SWTICH FOR FWH 36A,36B,36C LEVEL ALARM
RANGE: T=BYPASS F=NORMAL
VARIABLE: (JBYPFH36)

FWH-27
TAG #:
TITLE: LOA FOR HEATER DRAIN PUMP 31 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LHDPHD31)

FWH-28
TAG #:
TITLE: LOA FOR HEATER DRAIN PUMP 32 BREAKER
RANGE: T=TRIP F=NORM
VARIABLE: (LHDPHD32)

HVA-1
TAG #:
TITLE: P.A. BLDG FOR CB PURGE EXHAUS. FAN 32 BKR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LHVPA832)

HVA-2
TAG #:
TITLE: START FSB SUPPLY/EXHAUUST FANS
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KHVG004A)

HVA-3
TAG #:
TITLE: START RELAY FOR CNTRL RM ACC31A
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KHVF009A)

HVA-4
TAG #:
TITLE: START RELAY FOR CNTRL RM ACC31B
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KHVF009B)

HVA-5
TAG #:
TITLE: START RELAY FOR CNTRL RM ACC32A
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KHVF010A)

HVA-6
TAG #:
TITLE: START RELAY FOR CNTRL RM ACC32B
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KHVF010B)

HVA-7
TAG #:
TITLE: 43 SWITCH FOR CNTRL RM ACC31A
RANGE: T=ON F=OFF
VARIABLE: (KHVF009C)

HVA-8
TAG #:
TITLE: 43 SWITCH FOR CNTRL RM ACC31B
RANGE: T=ON F=OFF
VARIABLE: (KHVF009D)

HVA-9
TAG #:
TITLE: 43 SWITCH FOR CNTRL RM ACC32A
RANGE: T=ON F=OFF
VARIABLE: (KHVF010C)

HVA-10
TAG #:
TITLE: 43 SWITCH FOR CNTRL RM ACC32B
RANGE: T=ON F=OFF
VARIABLE: (KHVF010D)

HVA-11
TAG #:
TITLE: CTL RM ACF31 43 SELECTOR SWITCH
RANGE: 1=H 2=O 3=A
VARIABLE: (KHVF011A)

HVA-12
TAG #:
TITLE: CTL RM ACF32 43 SELECTOR SWITCH
RANGE: 1=H 2=O 3=A
VARIABLE: (KHVF013A)

HVA-13
TAG #:
TITLE: CTL RM VENT LOC/REM TRANSFER SWITCH
RANGE: T=LOCAL F=REMOTE
VARIABLE: (KHVF014A)

HVA-14
TAG #:
TITLE: CTL RM FILT BOOSTER FAN FBF31 SELECTOR SWITCH
RANGE: 1=H 2=O 3=A
VARIABLE: (KHVF015A)

HVA-15
TAG #:
TITLE: CTL RM FILT BOOSTER FAN FBF32 SELECTOR SWITCH
RANGE: 1=H 2=O 3=A
VARIABLE: (KHVF015B)

HVA-16
TAG #:
TITLE: CTL RM VENT MODE SEL SWITCH NOT ON AC PANEL
RANGE: 1-OFF 2-NORM 3-10 PCT. 4-100 PCT.
VARIABLE: (KHVF012A)

HVA-17
TAG #:
TITLE: BYPASS FIRESTAT RELAY RF1 FOR DMPR D1
RANGE: T=BYPASS F=NORMAL
VARIABLE: (KHVF011B)

HVA-18
TAG #:
TITLE: BYPASS FIRESTAT RELAY RF2 FOR DMPR D2
RANGE: T=BYPASS F=NORMAL
VARIABLE: (KHVF013B)

HVA-19
TAG #:
TITLE: BYPASS FIRESTAT SENSOR RELAY RF
RANGE: T=BYPASS F=NORMAL
VARIABLE: (KHVF0145)

HVA-20
TAG #:
TITLE: PA& EXH FAN 31
RANGE: T=ON F=OFF
VARIABLE: (KHVFPA31)

MGA-1
TAG #: NONE
TITLE: GENERATOR GAS SPACE VENT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMGV9)

MGA-2
TAG #: NONE
TITLE: H2 SUPPLY ISO VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMGV8)

MGA-3
TAG #: NONE
TITLE: CO2 SUPPLY ISO VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMGV5)

MGA-4
TAG #: NONE
TITLE: AIR SUPPLY ISO VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMGV7)

MGA-5
TAG #: NONE
TITLE: MAIN TRANSFORMER 31 COOLING RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JMGAXRS1)

MGA-6
TAG #: NONE
TITLE: MAIN TRANSFORMER 32 COOLING RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JMGAXRS2)

MGA-7

TAG #:

TITLE: GEN H2 TR ALARM LOCAL RESET

RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)

VARIABLE: (KMGACMRS)

MSS-1
TAG #: MS-3A
TITLE: S/G 31 PORV ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS3A)

MSS-2
TAG #: MS-3B
TITLE: S/G 32 PORV ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS3B)

MSS-3
TAG #: MS-3C
TITLE: S/G 33 PORV ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS3C)

MSS-4
TAG #: MS-3D
TITLE: S/G 34 PORV ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS3D)

MSS-5
TAG #: MS-55A
TITLE: MSI 31 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV55A)

MSS-6
TAG #: MS-55B
TITLE: MSI 32 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV55B)

MSS-7
TAG #: MS-55C
TITLE: MSI 53 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV55C)

MSS-8
TAG #: MS-55D
TITLE: MSI 54 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV55D)

MSS-9
TAG #: MS-5A
TITLE: STM DMP PCV-1120 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5A)

MSS-10
TAG #: MS-5B
TITLE: STM DMP PCV-1121 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5B)

MSS-11
TAG #: MS-5C
TITLE: STM DMP PCV-1122 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5C)

MSS-12
TAG #: MS-5D
TITLE: STM DMP PCV-1123 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5D)

MSS-13
TAG #: MS-5E
TITLE: STM DMP PCV-1124 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5E)

MSS-14
TAG #: MS-5F
TITLE: STM DMP PCV-1125 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5F)

MSS-15
TAG #: MS-5G
TITLE: STM DMP PCV-1126 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5G)

MSS-16
TAG #: MS-5H
TITLE: STM DMP PCV-1127 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5H)

MSS-17
TAG #: MS-5I
TITLE: STM DMP PCV-1128 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5I)

MSS-18
TAG #: MS-5J
TITLE: STM DMP PCV-1129 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5J)

MSS-19
TAG #: MS-5K
TITLE: STM DMP PCV-1130 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5K)

MSS-20
TAG #: MS-5L
TITLE: STM DMP PCV-1131 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS5L)

MSS-21
TAG #: MS-41
TITLE: S/G 32 TO AFWP ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS41)

MSS-22
TAG #: MS-42
TITLE: S/G 33 TO AFWP ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVMS42)

MSS-23
TAG #: 193
TITLE: GLAND SEAL BYPASS VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV193)

MSS-24
TAG #: MS-66
TITLE: GLAND SEAL STOP VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSSV66)

MSS-25
TAG #: GSFN
TITLE: GLAND SEAL EXHAUST FAN
RANGE: T=START F=STOP
VARIABLE: (JMSSGSFN)

MSS-26
TAG #: NONE
TITLE: LOW PRESS STEAM DUMP MOV-71
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV71)

MSS-27
TAG #: NONE
TITLE: LOW PRESS STEAM DUMP MOV-72
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV72)

MSS-28
TAG #: NONE
TITLE: LOW PRESS STEAM DUMP MOV-73
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV73)

MSS-29
TAG #: NONE
TITLE: LOW PRESS STEAM DUMP MOV-74
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV74)

MSS-30
TAG #: NONE
TITLE: LOW PRESS STEAM DUMP MOV-75
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV75)

MSS-31
TAG #: NONE
TITLE: LOW PRESS STEAM DUMP MOV-76
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RMSV76)

MSS-32
TAG #: NONE
TITLE: MAIN STEAM TRAP 31 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGMST1)

MSS-33
TAG #: NONE
TITLE: MAIN STEAM TRAP 32 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGMST2)

MSS-34
TAG #: NONE
TITLE: MAIN STEAM TRAP 33 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGMST3)

MSS-35
TAG #: NONE
TITLE: MAIN STEAM TRAP 34 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGMST4)

NIS-1

TAG #:

TITLE: AUDIO COUNT RATE SEL SW

RANGE: 0=N31, 1=N32, 2=OFF

VARIABLE: (NNISAUX)

NSS-1
TAG #: 955C
TITLE: ACCUM 31 SAMPLE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RNSV955C)

NSS-2
TAG #: 955D
TITLE: ACCUM 32 SAMPLE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RNSV955D)

NSS-3
TAG #: 955E
TITLE: ACCUM 33 SAMPLE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RNSV955E)

NSS-4
TAG #: 955F
TITLE: ACCUM 34 SAMPLE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RNSV955F)

NSS-5
TAG #: NONE
TITLE: LOA FOR VALVE 956A
RANGE: T=ON F=OFF
VARIABLE: (JNSV956A)

NSS-6
TAG #: NONE
TITLE: LOA FOR VALVE 956B
RANGE: T=ON F=OFF
VARIABLE: (JNSV956B)

NSS-7
TAG #: NONE
TITLE: LOA FOR VALVE 956C
RANGE: T=ON F=OFF
VARIABLE: (JNSV956C)

NSS-8
TAG #: NONE
TITLE: LOA FOR VALVE 956D
RANGE: T=ON F=OFF
VARIABLE: (JNSV956D)

NSS-9
TAG #: NONE
TITLE: LOA FOR VALVE 956E
RANGE: T=ON F=OFF
VARIABLE: (JNSV956E)

NSS-10
TAG #: NONE
TITLE: LOA FOR VALVE 956F
RANGE: T=ON F=OFF
VARIABLE: (JNSV956F)

NSS-11
TAG #: NONE
TITLE: LOA FOR VALVE 956G
RANGE: T=ON F=OFF
VARIABLE: (JNSV956G)

NSS-12
TAG #: NONE
TITLE: LOA FOR VALVE 956H
RANGE: T=ON F=OFF
VARIABLE: (JNSV956H)

NSS-13
TAG #: NONE
TITLE: LOA FOR VALVE 956A CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956A)

NSS-14
TAG #: NONE
TITLE: LOA FOR VALVE 956B CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956B)

NSS-15
TAG #: NONE
TITLE: LOA FOR VALVE 956C CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956C)

NSS-16
TAG #: NONE
TITLE: LOA FOR VALVE 956D CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956D)

NSS-17
TAG #: NONE
TITLE: LOA FOR VALVE 956E CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956E)

NSS-18
TAG #: NONE
TITLE: LOA FOR VALVE 956F CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956F)

NSS-19
TAG #: NONE
TITLE: LOA FOR VALVE 956G CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956G)

NSS-20
TAG #: NONE
TITLE: LOA FOR VALVE 956H CNMT PHASE A ISO RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KNSV956H)

NSS-21
TAG #: 956
TITLE: SAMPLE ISOLATION VLVS 956A/C/E/G
RANGE: T=ON F=OFF
VARIABLE: (JNSV9561)

NSS-22
TAG #: 956
TITLE: SAMPLE ISOLATION VLVS 956B/D/F/H
RANGE: T=ON F=OFF
VARIABLE: (JNSV9562)

NSS-23
TAG #: 970A
TITLE: PZR SAMPLES TO LOST ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (PNSV970A)

NSS-24
TAG #: 969
TITLE: PZR SAMPLES TO VCT ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RNSV969)

NSS-25

TAG #: 994

TITLE: NSS VALVE 994 FOR FRED Y. (ERB, 7/7/87)

RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED

VARIABLE: (RNSV994A)

NSS-26

TAG #: ONE

TITLE: CHEM SAMPLE VV 959(1101)

RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED

VARIABLE: (RNSV959)

NSS-27

TAG #: ONE

TITLE: CHEM SAMPLE VV 959(1101) "PB RESET"

RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)

VARIABLE: (KNSV959)

PRT-1

TAG #: PCV473

TITLE: NITROGEN SUPPLY CONTROL VALVE PRESSURE SETPOINT

RANGE: RANGE 15.2 TO 17.7 PSIA

VARIABLE: (PPRV473)

PRT-2

TAG #: NONE

TITLE: PRT TO GAS ANALYZER ISOLATION LOA SWITCH

RANGE: T=ON F=OFF

VARIABLE: (KPRTGSA)

RCP-1

TAG #:

TITLE: LOA FOR RCP 31 BREAKER

RANGE: T=TRIP F=NORM

VARIABLE: (LRCPRC31)

RCP-2

TAG #:

TITLE: LOA FOR RCP 32 BREAKER

RANGE: T=TRIP F=NORM

VARIABLE: (LRCPRC32)

RCP-3

TAG #:

TITLE: LOA FOR RCP 33 BREAKER

RANGE: T=TRIP F=NORM

VARIABLE: (LRCPRC33)

RCP-4

TAG #:

TITLE: LOA FOR RCP 34 BREAKER

RANGE: T=TRIP F=NORM

VARIABLE: (LRCPRC34)

RCS-1
TAG #: 501
TITLE: INNER REACTOR VESSEL FLANGE LEAKOFF
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRCV501)

RCS-2
TAG #: 502
TITLE: OUTER REACTOR VESSEL FLANGE LEAKOFF
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRCV502)

RCS-3
TAG #: 524
TITLE: LOOP 33 PZR SPRAY MINIFLOW
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRCV524)

RCS-4
TAG #: 525
TITLE: LOOP 34 PZR SPRAY MINIFLOW
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRCV525)

RCS-5
TAG #:
TITLE: PZR HTR BACK-UP GROUP #31 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LRCPH031)

RCS-6
TAG #:
TITLE: PZR HTR BACK-UP GROUP #32 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LRCPH032)

RCS-7
TAG #:
TITLE: PZR HTR BACK-UP GROUP #33 BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LRCPHG33)

RCS-8
TAG #:
TITLE: PZR HTR CONTROL GROUP BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LRCPHCTL)

RCS-9
TAG #:
TITLE: PZR BK-UP HTRS #31 # OF CIR BRKRS CLOSED
RANGE: RANGE 0.0 - 8.0
VARIABLE: (TPCSBHE1)

RCS-10
TAG #:
TITLE: PZR BK-UP HTRS #32 # OF CIR BRKRS CLOSED
RANGE: RANGE 0.0 - 7.0
VARIABLE: (TPCSBHE2)

RCS-11
TAG #:
TITLE: PZR BK-UP HTRS #33 # OF CIR BRKRS CLOSED
RANGE: RANGE 0.0 - 7.0
VARIABLE: (TPCSBHE3)

RHR-1
TAG #: NONE
TITLE: RHR PUMP NO. 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LRHRP31)

RHR-2
TAG #: NONE
TITLE: RHR PUMP NO. 32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LRHRP32)

RHR-3
TAG #: 732
TITLE: LOOP 2 HOT LEG TO RHR PMPS SUCTION
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRHVLP2H)

RHR-4
TAG #: NONE
TITLE: LOA TO DEENERGIZE V744
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JRHH744)

RHR-5
TAG #: NONE
TITLE: LOA TO DEENERGIZE V882
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JRHH882)

RHR-6
TAG #: NONE
TITLE: LOA TO DEENERGIZE V883
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JRHH883)

RHR-7
TAG #: NONE
TITLE: LOA TO DEENERGIZE V743
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JRHH743)

RHR-8
TAG #: NONE
TITLE: LOA TO DEENERGIZE V1870
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JRH1870)

RHR-9
TAG #: NONE
TITLE: LOA TO DEENERGIZE V730
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (KRHVD730)

RHR-10
TAG #: NONE
TITLE: LOA TO DEENERGIZE V731
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (KRHVD731)

RMS-1
TAG #: NONE
TITLE: WRGM SAMPLE ISO VLV (LR) SOV-1
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRMVSOV1)

RMS-2
TAG #: NONE
TITLE: WRGM FILTER ISO VLV (LR) SOV-2
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRMVSOV2)

RMS-3
TAG #: NONE
TITLE: WRGM FILTER ISO VLV (LR) SOV-3
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRMVSOV3)

RMS-4
TAG #: NONE
TITLE: WRGM SAMPLE ISO VLV (M/H R) SOV-4
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRMVSOV4)

RMS-5
TAG #: NONE
TITLE: WRGM FILTER ISO VLV (M/H R) SOV-5
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRMVSOV5)

RMS-6
TAG #: NONE
TITLE: WRGM FILTER ISO VLV (M/H R) SOV-6
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRMVSOV6)

RMS-7
TAG #: NONE
TITLE: WRGM SAMPLE COND SKID LOCAL/REMOTE SW
RANGE: T=LOCAL F=REMOTE
VARIABLE: (JRMSWRGM)

RMS-8
TAG #: NONE
TITLE: R-11 HIGH ALARM SETPOINT (CPM)
RANGE: RANGE 60000. TO 80000. (SETPOINT FOR HIGH ALARM)
VARIABLE: (ZRMSHI11)

RMS-9
TAG #: NONE
TITLE: R-12 HIGH ALARM SETPOINT (CPM)
RANGE: RANGE 5000. TO 5000. (SETPOINT FOR HIGH ALARM)
VARIABLE: (ZRMSHI12)

RMS-10
TAG #: NONE
TITLE: DEFEAT SRO DESK ALARM
RANGE: T=DEFEAT F=NORMAL
VARIABLE: (KRMSDFBP)

RMW-1

TAG #: PW-89
TITLE: MAKEUP TO PRI WTR STG TANK
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW89)

RMW-2

TAG #: PW-85
TITLE: FLSH EVA PROD COOLR ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW85)

RMW-3

TAG #: PW-86
TITLE: FLSH EVA PROD COOLR BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW86)

RMW-4

TAG #: PW-20
TITLE: FLSH EVA PROD COOLR TO RMW PUMP SUCT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW20)

RMW-5

TAG #: PW-22
TITLE: FLSH EVA PROD COOLR TO PWST
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW22)

RMW-6

TAG #: PW-11
TITLE: RMW PUMP 31 SUCT ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW11)

RMW-7

TAG #: PW-12
TITLE: RMW PUMP 32 SUCT ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW12)

RMW-8

TAG #: PW-2
TITLE: PWST TO RMW PUMPS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWVPW2)

RMW-9

TAG #: PW-109
TITLE: FLSH EVA PROD COOL TO RMW PUMP DISCH HDR
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWV109)

RMW-10

TAG #: PW-107
TITLE: RMW PUMP DISCH HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWV107)

RMW-11

TAG #: PWST
TITLE: LOA TO PWST WTR TEMP
RANGE: RANGE 32 DEGF TO 200 DEGF
VARIABLE: (TRMWPWST)

RMW-12

TAG #: 831A
TITLE: CCW SURGE TANKS CROSSTIE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RRWV831A)

RMW-13

TAG #: 0318

TITLE: CCW SURGE TANKS CROSSTIE ISO

RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED

VARIABLE: (RRWV831B)

RMW-14

TAG #: 723

TITLE: RMW TO SPENT FUEL COOLING ISO

RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED

VARIABLE: (RRWV723)

SFP-1
TAG #: NONE
TITLE: SPENT FUEL PIT PUMP 31 CONTROL SWITCH
RANGE: T=START F=STOP
VARIABLE: (KSFP31)

SFP-2
TAG #: NONE
TITLE: SPENT FUEL PIT PUMP 32 CONTROL SWITCH
RANGE: T=START F=STOP
VARIABLE: (KSFP32)

SFP-3
TAG #: VR
TITLE: SPENT FUEL PIT PUMP 32 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN .0=CLOSED
VARIABLE: (RSFVVR)

SFP-4
TAG #: 772
TITLE: SPENT FUEL PIT PUMP 31 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSFV772)

SFP-5
TAG #: NONE
TITLE: LOA TO SET SPENT FUEL PIT HEAT LOAD
RANGE: RANGE 0.0 TO 100.0 PERCENT
VARIABLE: (XSFHEAT)

SGB-1
TAG #: MOV-5
TITLE: SG31 BLOWDOWN FLOW CNTRL VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBVM5)

SGB-2
TAG #: MOV-6
TITLE: SG32 BLOWDOWN FLOW CNTRL VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBVM6)

SGB-3
TAG #: MOV-7
TITLE: SG33 BLOWDOWN FLOW CNTRL VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBVM7)

SGB-4
TAG #: MOV-8
TITLE: SG34 BLOWDOWN FLOW CNTRL VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBVM8)

SGB-5
TAG #: HCV-1
TITLE: SG31 HCV-1 CONTROLLER SETPT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBCSPH1)

SGB-6
TAG #: HCV-2
TITLE: SG32 HCV-2 CONTROLLER SETPT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBCSPH2)

SGB-7
TAG #: HCV-3
TITLE: SG33 HCV-3 CONTROLLER SETPT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBCSPH3)

SGB-8
TAG #: HCV-4
TITLE: SG34 HCV-4 CONTROLLER SETPT
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBCSPH4)

SGB-9
TAG #: MOV-1
TITLE: SG31 BLOWDOWN STOP VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBVM1)

SGB-10
TAG #: MOV-2
TITLE: SG32 BLOWDOWN STOP VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBVM2)

SGB-11
TAG #: MOV-3
TITLE: SG33 BLOWDOWN STOP VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBVM3)

SGB-12
TAG #: MOV-4
TITLE: SG34 BLOWDOWN STOP VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBVM4)

SGB-13
TAG #: HS-540
TITLE: S/G HCV/MOV BYPASS SWITCH
RANGE: T=BYPASS F=NORMAL
VARIABLE: (JSBSBY)

SGB-14
TAG #: BD-58
TITLE: SGB HX-1 SHELL SIDE INLET
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV58)

SGB-15
TAG #: BD-61
TITLE: SGB HX-1 SHELL SIDE OUTLET
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV61)

SGB-16
TAG #: BD-62
TITLE: SGB HX-1 BYPASS VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV62)

SGB-17
TAG #: BD-69
TITLE: SGB HX-3 SHELL SIDE INLET
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV69)

SGB-18
TAG #: BD-72
TITLE: SGB HX-3 SHELL SIDE OUTLET
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV72)

SGB-19
TAG #: BD-74
TITLE: SGB HX-3 BYPASS VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV74)

SGB-20
TAG #: BD-76
TITLE: SGB HX-4 SHELL SIDE INLET
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV76)

SGB-21
TAG #: BD-84
TITLE: SGB HX-4 SHELL SIDE OUTLET
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV84)

SGB-22
TAG #: BD-85
TITLE: SGB HX-4 BYPASS VALVE
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JSBV85)

SGB-23
TAG #: AOV-1/2
TITLE: DEMIN PACKAGE BYPASS/AUTO CONTROL
RANGE: T=BYPASS F=AUTO
VARIABLE: (JSBVA1)

SGB-24
TAG #: SGBD-2
TITLE: SG31 BLOWDOWN TO UNIT 1 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBV25)

SGB-25
TAG #: SG3D-24
TITLE: SG32 BLOWDOWN TO UNIT 1 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBV24)

SGB-26
TAG #: SG3D-26
TITLE: SG33 BLOWDOWN TO UNIT 1 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBV26)

SGB-27
TAG #: SG3D-27
TITLE: SG34 BLOWDOWN TO UNIT 1 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBV27)

SGB-28
TAG #: SG3D-25
TITLE: UNIT 3 TO UNIT 1 ISOLATION
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSBV25)

SGB-29
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1223
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSBV1225)

SGB-30
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1224
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSBV1224)

SGB-31
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1225
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSBV1225)

SGB-32
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1226
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSBV1226)

SGB-33
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1223A
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSB1223A)

SGB-34
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1224A
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSB1224A)

SGB-35
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1225A
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSB1225A)

SGB-36
TAG #:
TITLE: CLOSE/OPEN/RAD BYPASS POSITION FOR V-1226A
RANGE: 0=CLOSE 1=OPEN 2=RAD BYPASS
VARIABLE: (JSB1226A)

SGB-37
TAG #:
TITLE: CHAN 1 SGB ISO VLV HI TEMP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JSBCHAN1)

SGB-38
TAG #:
TITLE: CHAN 2 SGB ISO VLV HI TEMP RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (JSBCHAN2)

SGB-39
TAG #:
TITLE: SGBD RECOVERY SYSTEM ALARM RESET
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KSBTROUB)

SGS-1
TAG #: 1811A
TITLE: N2 TO SIS ACCUMULATORS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSS1811A)

SGS-2
TAG #: 1811B
TITLE: N2 TO SIS ACCUMULATORS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSS1811B)

SGS-3
TAG #: 1687B
TITLE: TRUCK FILL TO N2 BOTTLES
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSS1687B)

SGS-4
TAG #: 1687C
TITLE: TRUCK FILL TO N2 BOTTLES
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSS1687C)

SGS-5
TAG #:
TITLE: N2 TO CNM
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSSVCNM)

SGS-6
TAG #:
TITLE: N2 TO TOP OF PRESSURIZER
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSSVRCS)

SGS-7
TAG #:
TITLE: SGS H2 LOA
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSSVH2)

SGS-8
TAG #:
TITLE: MAIN CNTRL STEAM DMP VLV 1
RANGE: T=ON F=OFF
VARIABLE: (JSGSN2S1)

SGS-9
TAG #:
TITLE: MAIN CNTRL STEAM DMP VLV 2
RANGE: T=ON F=OFF
VARIABLE: (JSGSN2S2)

SGS-10
TAG #:
TITLE: MAIN CNTRL STEAM DMP VLV 3
RANGE: T=ON F=OFF
VARIABLE: (JSGSN2S3)

SGS-11
TAG #:
TITLE: MAIN CNTRL STEAM DMP VLV 4
RANGE: T=ON F=OFF
VARIABLE: (JSGSN2S4)

SGS-12
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V1A
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (PSGV1V1A)

SGS-13
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V1B
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V1B)

SGS-14
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V2A
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V2A)

SGS-15
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V2B
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V2B)

SGS-16
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V3A
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V3A)

SGS-17
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V3B
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V3B)

SGS-18
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V5A
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V5A)

SGS-19
TAG #: ONE
TITLE: H2 RECOMBINER VV 1V5B
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGV1V5B)

SGS-20
TAG #: ONE
TITLE: S/G 31 ATM RELIEF N2 BACKUP POS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVAT31)

SGS-21
TAG #: ONE
TITLE: S/G 32 ATM RELIEF N2 BACKUP POS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVAT32)

SGS-22
TAG #: ONE
TITLE: S/G 33 ATM RELIEF N2 BACKUP POS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVAT33)

SGS-23
TAG #: ONE
TITLE: S/G 34 ATM RELIEF N2 BACKUP POS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSGVAT34)

SIS-1
TAG #: NONE
TITLE: SI PUMP 31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSIW31)

SIS-2
TAG #: NONE
TITLE: SI PUMP 32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSIW32)

SIS-3
TAG #: NONE
TITLE: SI PUMP 33 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSIW33)

SIS-4
TAG #: 850A
TITLE: SI PUMP S1 DISCH ISO VLV (MOTOR OPERATED)
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV850A)

SIS-5
TAG #: 1837
TITLE: SI PUMPS TO ACCUMULATORS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV1837)

SIS-6
TAG #: 850C
TITLE: SI PUMP 31 DISCH ISO VLV (MOTOR OPERATED)
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV850C)

SIS-7
TAG #: 846
TITLE: RWST SUCTION ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV846)

SIS-8
TAG #: 856A
TITLE: SIS PUMP TO RCS LOOP 1 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV856A)

SIS-9
TAG #: 856D
TITLE: BIT TO RCS LOOP 2 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV856D)

SIS-10
TAG #: 856F
TITLE: BIT TO RCS ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV856F)

SIS-11
TAG #: 856K
TITLE: SIS PUMPS TO RCS LOOP 4 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV856K)

SIS-12
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 856B
RANGE: T=DEENERGIZES F=ENERGIZE
VARIABLE: (JSIV856B)

SIS-13
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 856G
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV856G)

SIS-14
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 894A
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV894A)

SIS-15
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 894B
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV894B)

SIS-16
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 894C
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV894C)

SIS-17
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 894D
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV894D)

SIS-18
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 842
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV842)

SIS-19
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 843
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSTV843)

SIS-20
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 8888A
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSTV8888A)

SIS-21
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 8888
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSTV8888)

SIS-22
TAG #: 1846
TITLE: BIT RECIRC TO CVCS HOLDUP TANK
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSTV1846)

SIS-23
TAG #: 1848
TITLE: BIT BYPASS ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSTV1848)

SIS-24
TAG #: 1844
TITLE: BIT RECIRC ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSTV1844)

SIS-25
TAG #: 1833B
TITLE: SI PUMPS BIT BYPASS ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSI1833B)

SIS-26
TAG #: 859A
TITLE: SIS TEST LINE ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV859A)

SIS-27
TAG #: 848B
TITLE: SI PUMP 33 SUCTION ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV848B)

SIS-28
TAG #: 848A
TITLE: SI PUMP 31 SUCTION ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV848A)

SIS-29
TAG #: 893
TITLE: SI PUMP 32 ALT SUCTION ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV893)

SIS-30
TAG #: 850B
TITLE: SI PUMP 33 DISCH ISO VLV
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSIV850B)

SIS-31
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 1810
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV1810)

SIS-32
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 851A
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV851A)

SIS-33
TAG #: NONE
TITLE: LOA TO DEENERGIZE VALVE 851B
RANGE: T=DEENGERGIZES F=ENERGIZE
VARIABLE: (JSIV851B)

SWD-1
TAG #: 3A
TITLE: 345KV DISCONNECT SWITCH
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LDIS3A)

SWD-2
TAG #: T-3
TITLE: 13.8KV SUPPLY FROM 138KV/13.8KV XFMR 3
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (L3KT3)

SWD-3
TAG #: F3-1
TITLE: 13.8KV BUS 3A SUPPLY TO GAS TRBN 2 AUTO XFMR
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (L3KF3:1)

SWD-4
TAG #: BK-3
TITLE: BKR TO XFMR #3 (138/13.8KV) FROM BUCH 138KV BUS
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKBK:3)

SWD-5
TAG #: GT1
TITLE: BREAKER GT1
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKGT1)

SWD-6
TAG #: GT2
TITLE: BREAKER GT2
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LBKGT2)

SWD-7

TAG #: GT

TITLE: GAS TURBINE 1 OUTPUT BREAKER

RANGE: T=CLOSED BREAKER F=OPEN BREAKER

VARIABLE: (LBKGT:1)

SWD-8

TAG #: GT-2

TITLE: GAS TURBINE 2 OUTPUT BREAKER

RANGE: T=CLOSED BREAKER F=OPEN BREAKER

VARIABLE: (LBKGT:2)

SWD-9

TAG #: D2/GBD

TITLE: APP-R DIESEL OUTPUT BREAKER

RANGE: T=CLOSED BREAKER F=OPEN BREAKER

VARIABLE: (KBKAPDG)

SWD-10

TAG #:

TITLE: MALFUNCTION EPS-1 RESET OF BUCHANNAN POWER

RANGE: T=RESET VALVE F=NO ACTION

VARIABLE: (JSWDRST)

SWS-1
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.38 CONTROL SWITCH
RANGE: 1=STOP 2=CENTER 3=START (MOMENTARY CONTACT)
VARIABLE: (KSWSWP38)

SWS-2
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.38 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP38)

SWS-3
TAG #: NONE
TITLE: INST AIR CLOSED COOLING PMP 31 SWITCH
RANGE: 0=ON 1=OFF 2=STBY
VARIABLE: (KSWIAP31)

SWS-4
TAG #: NONE
TITLE: INST AIR CLOSED COOLING PMP 31 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LSWIAP31)

SWS-5
TAG #: NONE
TITLE: INST AIR CLOSED COOLING PMP 32 SWITCH
RANGE: 0=ON 1=OFF 2=STBY
VARIABLE: (KSWIAP32)

SWS-6
TAG #: NONE
TITLE: INST AIR CLOSED COOLING PMP 32 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LSWIAP32)

SWS-7
TAG #: NONE
TITLE: TURB HALL CLOSED COOLING PMP 31 SWITCH
RANGE: 0=ON 1=OFF 2=STBY
VARIABLE: (KSWTHP31)

SWS-8
TAG #: NONE
TITLE: TURB HALL CLOSED COOLING PMP 31 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LSWTHP31)

SWS-9
TAG #: NONE
TITLE: TURB HALL CLOSED COOLING PMP 32 SWITCH
RANGE: 0=ON 1=OFF 2=STBY
VARIABLE: (KSWTHP32)

SWS-10
TAG #: NONE
TITLE: TURB HALL CLOSED COOLING PMP 32 BREAKER
RANGE: T=CLOSED BREAKER F=OPEN BREAKER
VARIABLE: (LSWTHP32)

SWS-11
TAG #: SWN-4
TITLE: SERVICE WATER TO CIRC PUMP SEALS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV04)

SWS-12
TAG #: SWN-5
TITLE: SERVICE WATER TO CIRC PUMP SEALS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV05)

SWS-13
TAG #: SWN-96
TITLE: BACK-UP SERV WTR PUMPS TO SERV WTR HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV096)

SWS-14
TAG #: SWN-97
TITLE: BACK-UP SERV WTR PUMPS TO SERV WTR HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV097)

SWS-15
TAG #: SWN-6
TITLE: SERV WTR HEADER TO CONV PLANT SERVICES ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV06)

SWS-16
TAG #: SWN-7
TITLE: SERV WTR HEADER TO CONV PLANT SERVICES ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV07)

SWS-17
TAG #: SWN-38
TITLE: SERV WTR TO CON FAN COOLERS HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV038)

SWS-18
TAG #: SWN-39
TITLE: SERV WTR TO CON FAN COOLERS HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV039)

SWS-19
TAG #: SWN-41-1
TITLE: SERV WST TO CON FAN COOLER 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV411)

SWS-20
TAG #: SWN-41-2
TITLE: SERV WTR TO CON FAN COOLER 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV412)

SWS-21
TAG #: SWN-41-3
TITLE: SERV WTR TO CON FAN COOLER 33 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV413)

SWS-22
TAG #: SWN-41-4
TITLE: SERV WTR TO CON FAN COOLER 34 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV414)

SWS-23
TAG #: SWN-41-5
TITLE: SERV WTR TO CON FAN COOLER 35 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV415)

SWS-24
TAG #: SWN-44-1
TITLE: SERV WTR TO CON FAN COOLER 31 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV441)

SWS-25
TAG #: SWN-44-2
TITLE: SERV WTR TO CON FAN COOLER 32 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV442)

SWS-26
TAG #: SWN-44-3
TITLE: SERV WTR TO CON FAN COOLER 33 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV443)

SWS-27
TAG #: SWN-44-4
TITLE: SERV WTR TO CON FAN COOLER 34 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV444)

SWS-28
TAG #: SWN-44-5
TITLE: SERV WTR TO CON FAN COOLER 35 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV445)

SWS-29
TAG #: SWN-40-1
TITLE: SERV WTR FAN COOLER HEADER TRAIN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV401)

SWS-30
TAG #: SWN-31
TITLE: SERV WTR TO CCW HX
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN31)

SWS-31
TAG #: SWN-32
TITLE: SERV WTR TO CCW HX
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN32)

SWS-32
TAG #: SWN-33
TITLE: SERV WTR TO CCW HX CROSSTIE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV033)

SWS-33
TAG #: SWN-34-1
TITLE: SERV WTR TO CCW HX 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV341)

SWS-34
TAG #: SWN-34-2
TITLE: SERV WTR TO CCW HX 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV342)

SWS-35
TAG #: SWN-35-1
TITLE: SERV WTR TO CCW HX 31 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV351)

SWS-36
TAG #: SWN-35-2
TITLE: SERV WTR TO CCW HX 32 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV352)

SWS-37
TAG #: SWT-2
TITLE: SERV WTR TO TURB OIL COOLERS - PCV-1179 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV002)

SWS-38
TAG #: SWT-3-1
TITLE: SERV WTR TO TURB OIL COOLER 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVT31)

SWS-39
TAG #: SWT-3-2
TITLE: SERV WTR TO TURB OIL COOLER 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVT32)

SWS-40
TAG #: SWT-9
TITLE: SERV WTR TO SEAL OIL COOLER AIR SIDE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV009)

SWS-41
TAG #: SWT-12
TITLE: SERV WTR TO SEAL OIL COOLER HYDROGEN SIDE ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV012)

SWS-42
TAG #: SWT-29
TITLE: SERV WTR TO ISO PHASE BUS COOLERS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV029)

SWS-43
TAG #: SWT-22
TITLE: SERV WTR TO FLASH EVAPORATOR ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV022)

SWS-44
TAG #: SWT-18-1
TITLE: SERV WTR TO CLOSED COOLING SYSTEM HX 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV181)

SWS-45
TAG #: SWT-18-2
TITLE: SERV WTR TO CLOSED COOLING SYSTEM HX 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV182)

SWS-46
TAG #: CC-5A
TITLE: CLOSED COOLING SYSTEM PUMP 31 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVCC5A)

SWS-47
TAG #: CC-5B
TITLE: CLOSED COOLING SYSTEM PUMP 32 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVCC5B)

SWS-48
TAG #: CC-9
TITLE: CLOSED COOLING SYSTEM MINIFLOW ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVCC09)

SWS-49
TAG #: 1-CC-V-1
TITLE: CLOSED COOLING SYSTEM SUPPLY TO AIR COMP 31 & 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVCCV1)

SWS-50
TAG #: 1-CC-V-6
TITLE: CLOSED COOLING SYSTEM RETURN FROM AIR COMP 31 & 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVCCV6)

SWS-51
TAG #: SWN-98
TITLE: SERV WTR HEADER FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV098)

SWS-52
TAG #: SWN-99
TITLE: SERV WTR HEADER FLOW CONTROL
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV099)

SWS-53
TAG #: SWN-46
TITLE: TCV-1103 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV046)

SWS-54
TAG #: FCV-1111
TITLE: SERV WTR HEADER TO CONV PLANT SERVICES ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1111)

SWS-55
TAG #: FCV-1112
TITLE: SERV WTR HEADER TO CONV PLANT SERVICES ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1112)

SWS-56
TAG #: SWT-6
TITLE: TCV-1102 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV006)

SWS-57
TAG #: SWT-35
TITLE: TCV-1101 BYPASS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV035)

SWS-58
TAG #: SWN-27-1
TITLE: SWS TO INST AIR CLOSED COOLING HX ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV271)

SWS-59
TAG #: SWN-27-2
TITLE: SWS TO INST AIR CLOSED COOLING HX ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV272)

SWS-60
TAG #: SWN-70-1
TITLE: SWS TO INST AIR CLOSED COOLING HX ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV701)

SWS-61
TAG #: SWN-70-2
TITLE: SWS TO INST AIR CLOSED COOLING HX ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV702)

SWS-62
TAG #: CC-40A
TITLE: INST AIR CLOSED COOLING PUMP 31 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVC40A)

SWS-63
TAG #: CC-40B
TITLE: INST AIR CLOSED COOLING PUMP 32 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVC40B)

SWS-64
TAG #: SWN-91
TITLE: BACKUP SER WTR PUMP 37 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV091)

SWS-65
TAG #: SWN-92
TITLE: BACKUP SER WTR PUMP 38 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV092)

SWS-66
TAG #: SWN-93
TITLE: BACKUP SER WTR PUMP 39 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV093)

SWS-67
TAG #: SWT-16-1
TITLE: SW TO MBFP 31 LUBE OIL COOLER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVT161)

SWS-68
TAG #: SWT-16-2
TITLE: SW TO MBFP 32 LUBE OIL COOLER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVT162)

SWS-69
TAG #: SWN-94-1
TITLE: SW TO CR AIR CONDITIONERS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN941)

SWS-70
TAG #: SWN-94-2
TITLE: SW TO CR AIR CONDITIONERS ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN942)

SWS-71
TAG #: SWN-2-1
TITLE: SERVICE WATER PUMP 31 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN21)

SWS-72
TAG #: SWN-2-2
TITLE: SERVICE WATER PUMP 32 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN22)

SWS-73
TAG #: SWN-2-3
TITLE: SERVICE WATER PUMP 33 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN23)

SWS-74
TAG #: SWN-2-4
TITLE: SERVICE WATER PUMP 34 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN24)

SWS-75
TAG #: SWN-2-5
TITLE: SERVICE WATER PUMP 35 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN25)

SWS-76
TAG #: SWN-2-6
TITLE: SERVICE WATER PUMP 36 DISCH ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN26)

SWS-77
TAG #: PCV-1205
TITLE: SERVICE WATER STRAINER 31 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1205)

SWS-78
TAG #: PCV-1206
TITLE: SERVICE WATER STRAINER 32 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1206)

SWS-79
TAG #: PCV-1207
TITLE: SERVICE WATER STRAINER 33 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1207)

SWS-80
TAG #: PCV-1208
TITLE: SERVICE WATER STRAINER 34 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1206)

SWS-81
TAG #: PCV-1209
TITLE: SERVICE WATER STRAINER 35 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1209)

SWS-82
TAG #: PCV-1210
TITLE: SERVICE WATER STRAINER 36 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1210)

SWS-83
TAG #: PCV-1292
TITLE: SERVICE WATER STRAINER 37 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1292)

SWS-84
TAG #: PCV-1293
TITLE: SERVICE WATER STRAINER 38 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1293)

SWS-85
TAG #: PCV-1294
TITLE: SERVICE WATER STRAINER 39 BLOWDOWN ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1294)

SWS-86
TAG #: SWN-29
TITLE: SERVICE WATER TO EDG'S HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN29)

SWS-87
TAG #: SWN-30
TITLE: SERVICE WATER TO EDG'S HEADER ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN30)

SWS-88
TAG #: SWN-62-1
TITLE: SERVICE WATER TO EDG 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN621)

SWS-89
TAG #: SWN-62-2
TITLE: SERVICE WATER TO EDG 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN62)

SWS-90
TAG #: SWN-62-3
TITLE: SERVICE WATER TO EDG 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN623)

SWS-91
TAG #: SWN-62-4
TITLE: SERVICE WATER TO EDG 32 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN624)

SWS-92
TAG #: SWN-62-5
TITLE: SERVICE WATER TO EDG 33 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN625)

SWS-93
TAG #: SWN-62-6
TITLE: SERVICE WATER TO EDG 33 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVN626)

SWS-94
TAG #: CC-43A
TITLE: IA CLOSED COOL TO INST AIR COMP 31
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWCC43A)

SWS-95
TAG #: CC-43B
TITLE: IA CLOSED COOL TO INST AIR COMP 32
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWCC43B)

SWS-96
TAG #: FIC-1176
TITLE: OPEN/CLOSE SWITCH FOR FCV-1176 & 1176A
RANGE: T=ON F=OFF
VARIABLE: (JSW1176A)

SWS-97
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.31 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP31)

SWS-98
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.32 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP32)

SWS-99
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.33 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP33)

SWS-100
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.34 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP34)

SWS-101
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.35 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP35)

SWS-102
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.36 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP36)

SWS-103
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.37 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP37)

SWS-104
TAG #: NONE
TITLE: SERVICE WATER PUMP NO.39 BREAKER
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LSWSWP39)

SWS-105
TAG #:
TITLE: STATION AC INLET ISO VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV1200)

SWS-106
TAG #: FIC-1176
TITLE: FCV-1176 & FCV-1176A SET POINT
RANGE: RANGE 0.0 TO 2625.0 GPM
VARIABLE: (WSWL0ASP)

SWS-107
TAG #: HCV-5
TITLE: SERVICE WATER HX-1 TUBE OUTLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVH5)

SWS-108
TAG #: HCV-7
TITLE: SERVICE WATER HX-4 TUBE OUTLET
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWVH7)

SWS-109
TAG #: SWN-137
TITLE: SGBD HX-1 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV137)

SWS-110
TAG #: SWN-138
TITLE: SGBD HX-1 ISOLATION VALVE
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV138)

SWS-111
TAG #: SWN-55
TITLE: SERVICE WATER OUTLET FROM DG COOLERS
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RSWV055)

TCA-1
TAG #:
TITLE: TURBINE AUX. OIL PUMP BKR
RANGE: 0=INACTIVE 1=OPEN BREAKER 2=CLOSE BREAKER
VARIABLE: (LTCAAUOP)

TCA-2
TAG #:
TITLE: TURBINE LATCHED
RANGE: T=ACTIVE LOA F=INACTIVE LOA
VARIABLE: (ITCLATCH)

TCA-3
TAG #:
TITLE: MANUAL TURBINE TRIP
RANGE: T=ACTIVE LOA F=INACTIVE LOA
VARIABLE: (ITCMTRIP)

TCA-4
TAG #:
TITLE: TURBINE LOW VACUUM TRIP BYPASS
RANGE: T=ACTIVE LOA F=INACTIVE LOA
VARIABLE: (ITCVACBY)

TCA-5
TAG #:
TITLE: LUBE OIL RESERVOIR HEATER
RANGE: T=ON F=OFF
VARIABLE: (ITCAHEAT)

TCA-6
TAG #:
TITLE: LUBE OIL RESERVOIR FILL
RANGE: T=NORMAL LEVEL F=INACTIVE
VARIABLE: (ITCAFILL)

TCA-7

TAG #:

TITLE: TURNING GEAR ENGAGED

RANGE: 1.0 = TURNING GEAR ENGAGED 0.0 = TURNING GEAR NOT ENGAGED

VARIABLE: (NMSSTGST)

TCA-8

TAG #:

TITLE: BEARING OIL LIFT PUMP STATUS

RANGE: T=START F=STOP

VARIABLE: (NTCALOP)

TCA-9

TAG #:

TITLE: TURNING GEAR MOTOR START/STOP

RANGE: T=START F=STOP

VARIABLE: (NTCASTRT)

WPS-1
TAG #: 1609
TITLE: RCDT/PRT DRAIN TO CNMT SUMP
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV1609)

WPS-2
TAG #: 1733
TITLE: RCDT PUMPS TO RWST ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV1733)

WPS-3
TAG #: 1731
TITLE: WASTE HOLDUP TANK 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV1731)

WPS-4
TAG #: 1100
TITLE: RCDT PUMPS TO CVC HUT'S ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV1100)

WPS-5
TAG #: 1900
TITLE: WASTE HOLDUP TANK 31 TO MONITOR PUMP ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV1900)

WPS-6
TAG #: 1255A
TITLE: MONITOR TANK 32 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWP1255A)

WPS-7
TAG #: 1255B
TITLE: MONITOR TANK 31 INLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWP1255B)

WPS-8
TAG #: 1254A
TITLE: MONITOR TANK 32 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWP1254A)

WPS-9
TAG #: 1254B
TITLE: MONITOR TANK 31 OUTLET ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWP1254B)

WPS-10
TAG #: 1249
TITLE: MONITOR TK OUTLT HD TO WASTE HOLDUP TK 31 ISO
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV1249)

WPS-11
TAG #: 508A
TITLE: RCS LOOP 31 DRAIN
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV508A)

WPS-12
TAG #: 505A
TITLE: RCS LOOP 32 DRAIN
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV505A)

WPS-13
TAG #: 511A
TITLE: RCS LOOP 33 DRAIN
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV511A)

WPS-14
TAG #: 515A
TITLE: RCS LOOP 34 DRAIN
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPV515A)

WPS-15
TAG #: NONE
TITLE: REACTOR COOLANT DRAIN TK PMP 31 SWITCH
RANGE: 0=ON 1=AUTO 2=OFF
VARIABLE: (KWPRCD31)

WPS-16
TAG #: NONE
TITLE: REACTOR COOLANT DRAIN TK PMP 32 SWITCH
RANGE: 0=ON 1=AUTO 2=OFF
VARIABLE: (KWPRCD32)

WPS-17
TAG #: NONE
TITLE: MONITOR TANK PUMP #3 CONTROL SWITCH
RANGE: T=ON F=OFF
VARIABLE: (KWPMTP3)

WPS-18
TAG #: NONE
TITLE: WASTE PROCESSING PACKAGE PUMP CONTROL SWITCH
RANGE: T=ON F=OFF
VARIABLE: (KWPWPPP)

WPS-19
TAG #: NONE
TITLE: LOA TO SET MONITOR TK 31 LEVEL
RANGE: RANGE 0.0 TO 100.0 PERCENT
VARIABLE: (BWPSMON1)

WPS-20
TAG #: NONE
TITLE: LOA TO SET MONITOR TK 32 LEVEL
RANGE: RANGE 0.0 TO 100.0 PERCENT
VARIABLE: (BWPSMON2)

WPS-21
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1702
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JWPV1702)

WPS-22
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1705
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (JWPV1705)

WPS-23
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1786
RANGE: T=ON F=OFF
VARIABLE: (JWPV1786)

WPS-24
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1787
RANGE: T=ON F=OFF
VARIABLE: (JWPV1787)

WPS-25
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1723
RANGE: T=ON F=OFF
VARIABLE: (JWPV1723)

WPS-26
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1728
RANGE: T=ON F=OFF
VARIABLE: (JWPV1728)

WPS-27
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1702
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1702)

WPS-28
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1705
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1705)

WPS-29
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1736
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1736)

WPS-30
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1737
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1737)

WPS-31
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1723
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1723)

WPS-32
TAG #: NONE
TITLE: LOA RESET FOAUTO/CLOSE VALVE 1728
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1728)

WPS-33
TAG #: NONE
TITLE: LOA FOR THE OPEN/CLOSE POS FOR RWPF018
RANGE: T=ON F=OFF
VARIABLE: (JWPV0180)

WPS-34
TAG #: NONE
TITLE: LOA FOR OPENING/CLOSING LCV-1003A
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (KWP1003A)

WPS-35
TAG #: NONE
TITLE: LOA FOR OPENING/CLOSING LCV-1003B
RANGE: T=OPEN VALVE F=CLOSE VALVE
VARIABLE: (KWP1003B)

WPS-36
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1788
RANGE: T=ON F=OFF
VARIABLE: (JWPV1788)

WPS-37
TAG #: NONE
TITLE: LOA SWITCH FOR VALVE 1789
RANGE: T=ON F=OFF
VARIABLE: (JWPV1789)

WPS-38
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1788
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1788)

WPS-39
TAG #: NONE
TITLE: LOA RESET FOR VALVE 1789
RANGE: T=RESET F=NORM (MOMENTARY TRUE-TO BE SET BACK TO FALSE BY SOFTWARE)
VARIABLE: (KWPV1789)

WPS-40
TAG #: RCV-014
TITLE: GAS WASTE DECAY TANK TO PLANT VENT RCV-014
RANGE: RANGE 0 TO 1.0 1=OPEN 0=CLOSED
VARIABLE: (RWPVR014)

3.D Additional Instructor/Training Features

Attached is the IP3 INSTRUCTOR SYSTEM USER'S GUIDE. This document describes the functions and features directly associated with operation and control of the simulator. All features of an Instructor System required by current regulations have been provided.

The IP3 simulator has several additional features available to the simulator instructor which are described below.

1) Video tape - This system uses the two plant replicated control room mounted video cameras. Camera direction, zoom, and focus controls are located in the Instructor Station. Video output is displayed on color CRT's and is available to record on VHS cassettes.

2) Audio system - The simulator room is wired with eight ceiling mounted microphones. Each microphone has individual volume control whose output is passed through a master sound mixer. Output from the mixer is sent to a ceiling mounted speaker and/or the video tape deck in the Instructor Station.

3) Communications - With the exception of the simulator room radio phones, all simulator communication devices are linked to the instructor station communication system. Additionally, the Party/Page and sound powered phone systems are available in the Instructor Station.

4) Color copies - Color copies of the four simulator instructor system CRT's can be made with pushbutton control at the instructor station.

5) Bounds of Simulation Alarm - Four key parameters are continuously monitored to ensure that the events being simulated have not progressed beyond plant design limits. The monitored parameters are: reactor coolant system pressure, vapor containment building pressure, vapor containment building temperature, and reactor core fuel cladding temperature. If any one of the four parameters exceeds the plant design limits, an audible alarm is generated in the simulator control room and a visual alarm is displayed at the instructor console. The audible alarm is presently disconnected.

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR TRAINING SIMULATOR

INSTRUCTOR SYSTEM USER'S GUIDE
13.1

Rev. 0: 04/08/88

Author: R. R. Brandenburg

INDEX

13.1 INSTRUCTOR SYSTEM USER'S GUIDE

1.0 General

This Instructor System User's Guide is designed to provide simulator operating information in as simple a format as possible. All function keys or poke boxes are indicated in the text by their engraved title, such as FRZ or FREEZE.

The primary control interface of the simulator is the instructor console, featuring two Aydin touch sensitive color monitor screens as identical control terminals, a third Aydin color monitor screen with pixel addressable vector graphics capability as a monitoring terminal, the required computer interface, special function buttons, and an alphanumeric keyboard. The system will accomplish all of the instructor's system display and control functions. The fourth color monitor screen will be a RAMTEK unit with keyboard that will be of the same design as the control room computer terminals and will provide access to QSPDS and CFM displays.

At the time of initialization, one of the two touch sensitive CRTs will provide the instructor with information denoting the switches and other components on the main control board panels that are set incorrectly. Indications will also be provided on the control boards in the form of lighted lights or other suitable indications.

The second operational mode to control the simulator is a hand held remote control unit with limited two-way communication capability.

The third and final mode to control the simulator is through two identical groups of pushbuttons located on the control boards with limited control capability.

A black and white CRT screen copier will provide a hard copy of the CRT display on any of the CRTs at the instructor's console. Additionally, the computer room line printer is used to obtain a hard copy of the TEAM Performance Review report, the printer monitoring output, and printer control logging (both in section 3.3).

This redundancy will be found throughout the User's Guide. For ease of use, the User's Guide will normally use the name found on the keyboard. If no key exists on the keyboard the location will be identified.

Step ONE:

Press IC SELECT and the key will backlight, the IC SELECTION MENU will appear on the Controlling CRT with a control prompt default IC indicated. This menu has the description of previously saved initial conditions 1 to 50. PG FORW and PG BACK keys are used to view this multi-page menu.

Type in the desired initial condition and press the ENTER key. The selected IC number will be used as the default IC on subsequent resets of the simulator. This number will be the default IC until a different IC number is typed in as above. Following initialization the "Master Index" will return to the controlling CRT.

The "Initial Condition Selection Menu" can be exited without making an IC selection by pressing the CONT/ESC key. The controlling CRT will return to the "Master Index".

Step TWO:

Press IC RESET and the key will backlight. This starts the initialization process. The previously selected IC (or backtrack) is loaded into memory in preparation for switch check. If a new initial condition was not selected, the system will default to the last previously selected IC or (backtrack) or IC 49 if there is no previously selected IC.

Step THREE:

After resetting, the switch positions in the control room are automatically checked for proper alignment as required in the new condition. No instructor action is required to initiate this step.

2.4 Simulator Shutdown

If the simulator is to remain unused for several hours or for other reasons, e.g., software or hardware maintenance, it may be desirable to conserve energy, bulb life, or chart life and paper by shutting down (Sleep). This is accomplished by pushing the SHUT DOWN key. Once the SHUT DOWN key is pushed the THINK key will light to assure that is your desire. If you have inadvertently hit SHUT DOWN, you may continue running by pushing RUN. If you do want to shutdown, push THINK and the simulator will be shutdown. The SHUT DOWN key will backlight, all other keys will be off and the control boards will go dark. To stop recorders the RECORDER POWER ON/OFF pushbutton must be pushed. The simulator is now shutdown, ready for startup.

2.5 Snapshot

The snapshot function can be used at any time, to save a particular set of simulator conditions for later use or analysis. Pushing the SNAP SHOT key at any time while running will save the current power plant status and conditions, including malfunctions, overrides and remote control unit assignments in the default initial condition buffer (49).

If desired this snapshot can be saved in one of the permanent initial condition positions (1 to 48). As some initial conditions are protected from inadvertent write over, a password may be necessary, to save to these ICs.

A Menu will direct the operator to enter a description, store in an IC, or exit. The Snapshot Destination IC Selection Menu will show the current IC information and any available IC for storage.

2.6 Backtrack

The backtrack function can be used at any time to recall events that have taken place over some period of time. The time is variable (SW SNAPFREQ=X, where x is in seconds), but normally backtrack files are recorded once a minute. As there are 60 files, a record of the previous hours operation is recorded at one minute intervals.

2.8 Malfunction Activation

After pressing the MALF selection, the instructor may either enter the malfunction mnemonic to access a particular malfunction, or touch a plant system, subsystem, and finally a specific malfunction. This will bring up a subscreen menu that will guide the instructor through the process of activating the malfunction. Cursor control may be substituted for the touch screen action.

If the malfunction is a generic one, allowing independent malfunction capability of redundant components, a sublist of the individual component malfunctions will appear. One of these sublisted malfunctions may then be selected by typing the specific letter and entering, or by touch or cursor action. Again the subscreen menu will appear.

The MALF light will light and remain lit until another IDA is selected. Once the specific malfunction has been chosen, the subscreen will come up and the "ACTVE", "CLEAR", "INCR", "DECR", "SET/SELECT" and "CONT/ESC" pushbuttons will light, blink, and remain lit until the malfunction is activated.

The malfunction subscreen has default values that can be used or changed as desired. Pressing the SET pushbutton allows modification of the default values. The menu structure contains a short description of the malfunction with pretabbed data entry fields. The fields contain the severity of the malfunction, the delay time before malfunction activation, the rate of degradation or ramp time, and method of activation.

The methods of activation are; (Direct, when the ACT pushbutton is depressed), (Remote, by assignment to the handheld unit or control board mounted pushbutton stations) or (Conditional, dependent upon a logical statement composed by the instructor becoming true).

The logic statements should be of the form;

JMXXXNN = <C1> .LOP. <C2> .LOP. <C3> .LOP. <C4>

The instructor may exit the menu any time during this process by pressing the CONT/ESC pushbutton and any changes that have been made will be maintained in place of the default values.

Once the values have been selected and malfunction initiation is desired, the method of initiation selected will determine the proper way to exit the menu. If the method was Direct, the ACTVE pushbutton would be depressed and the malfunction would be initiated then. If Remote was chosen, the CONT/ESC pushbutton would be used and initiation would wait until the proper button on the remote device was pushed. If, however, Conditional was the method, then the ACTVE pushbutton would be used and a periodic evaluation of the Boolean expression would begin. When the logical conditions of the Boolean expression are "TRUE," the malfunction is initiated.

For all of the cases above, any activation delay time starts after initiation. The malfunction becomes active when the delay time expires. If no delay time is assigned for activation of the malfunction, then activation takes place simultaneously with initiation.

Malfunction parameters can be modified at any time, including after activation, after initiation while the activation delay is taking place, and while awaiting conditional or remote initiation. Modification takes place by selecting the malfunction as described above and going through the process of changing values. If modification is used on an active malfunction, the "ACTVE" pushbutton must be pressed upon exit or the modifications will be ignored. The "INCR" and "DECR" pushbuttons may also be used in this modification.

2.9 Malfunction Clearing

An active or initiated malfunction may be terminated at any time. Additionally, a malfunction awaiting remote or conditional initiation can also be terminated. To terminate:

Enter the malfunction mnemonic or position the cursor on the appropriate display to select malfunction.

Primary Support Systems
Containment Systems
Primary Systems
Instrument and Control
Emergency Core Cooling System
Miscellaneous Systems

Selecting one of these will bring up another menu, the subsystems of that selection. Examples of these are:

Auxiliary Steam
Service Water System
Compressed Air
Circulating Water System

Selecting one of these will bring up another menu, the "OVERRIDES SYSTEM LIST". Examples of these are:

GEN1	E0092	WATTMETER
GEN2	E0093	PHASE A AMMETER
GEN3	E0097	PHASE B AMMETER
GEN4	E0098	MAIN GENERATOR BOLTMETER
GEN5	E0099	VOLTAGE REGULATOR
GEN6	E0100	EXCITER FIELD AMMETER
GEN7	E0101	VARMETER
GEN8	E0102	PHASE C AMMETER
GEN9	E0103	FREQUENCY METER

Selecting one of these will bring up a composition display for the selected component I/O signal. Pretabbed data entry fields allow the instructor to:

Enter desired state of override.

Set up final value and ramp time, if appropriate.

Set up desired delay time.

After pressing the LOA CONTRL selection, the instructor may either enter the LOA mnemonic to access a particular LOA, or touch a plant system, subsystem and finally a specific LOA. This will bring up a subscreen menu that will guide the instructor through the process of activating the LOA. Cursor control may be substituted for the touch screen action.

The LOA light will light and remain lit until another IDA is selected. Once the specific LOA has been chosen, the subscreen will come up and the "ACTVE", "CLEAR", "INCR", "DECR", "SET/SELECT" and "CONT/ESC" pushbuttons will light, blink, and remain lit until the LOA is activated.

The LOA subscreen has default values that can be used or changed as desired. Pressing the SET pushbutton allows modification of the default values. The menu structure contains a short description of the LOA with pretabbed data entry fields. The fields contain the status of the LOA, the delay time before LOA activation, the rate of status change or ramp time and method of activation. The LOA composition menu provides a range of values for the instructor's reference. Out of range values may be entered as no-limit checking occurs. If a valve position greater than 1 is selected, greater than design flow through the valve is possible. Out of range values should not be used because invalid simulator model responses may result.

The methods of LOA activation are the same as for malfunction activation (see section 2.8).

2.14 LOA Status

The status of LOAs may be determined at any time by depressing "LOA STATUS". This will bring the "LOCAL OPERATION STATUS LIST" or a subscreen message "NO LOAS ARE ACTIVE OR AWAITING ACTIVATION" as the case may be. While in LOA mode, the "STATUS" box on the CRT may be used by either cursor or touch screen action. The LOA Status Summary is a multi-page document if necessary and paging forward or backward are possible. The color of the individual LOA will determine its status, Red if active, Amber if in time delay

Boration/Dilution
Turbine System Heatup
Xenon Transients
Drawing Condenser Vacuum
Containment Hydrogen
Control Rod Speed

The instructor can select any one or any combination of these dynamics for fast time mode of operation and will be prompted to select the time compression factor for the item. Pressing the "CONT/ESC" pushbutton exits the fast time control menu to the "Master Index". The "FAST TIME" light is on whenever any fast time dynamics are active. Pressing the "CLEAR" pushbutton while in the "FAST TIME CONTROL MENU" will terminate the fast time mode and cause the light to go off.

Pressing the "SLOW TIME" pushbutton will cause a subscreen menu to appear, allowing the instructor to select a slow time expansion factor between 1 and 10, where as (10 = normal). All plant simulation calculations will be executed at a correspondingly slower frequency. To check the status of slow time, type "DIW SIMSPEED". SIMSPEED is 10 times the expansion factor selected, whereas (100 = normal).

NOTE: FAST TIME and SLOW TIME are not snapshot variables and therefore will not be active in backtrack or replay snapshots. Once a backtrack or replay snapshot has been selected and initialized, FAST TIME and SLOW TIME may be activated.

2.18 Automatic Exercise Program

Pressing the "AUTO EXERC" pushbutton will display a list of previously composed exercises from which the instructor may select one by using key entry or cursor positioning. After selection of one of the available exercises, the selected exercise file, consisting of the sequence of commands and the time of their execution, and a menu of options will be displayed on the control CRT. By keying in the appropriate menu item number or by cursor positioning, one may either activate the selected exercise file, select another file, return to

AUTO EXERCISES

To be entered on MPX-32 Terminal

User's should review the MPX-32 TOULD (TEXT EDITOR, Sections).

The simulator must be SHUTDOWN.

1. RING IN FOR SERVICE cntrl A

2. OWNERNAME: SYSTEM (return) (return)

3. TSM> EDIT (XX) (return)
   (XX = your initials)

4 EDT. CLE (return)
(if the workfile already contains different work)

5. EDT> COL

6. 1. ( )
   2. ( )> enter exercise
   3. ( )
   4. (return)

7. EDT> STORE (filename) UNN (return)
   (filename = your choice of name, maximum of 8 characters.)

8. (FILENAME , SCRATCH = N Y (return))
(if a file exists under that name already.)

9. EDT> CLE (return)
(to clear the workfile before using IP3AUTOX)

10. EDT> USE IP3AUTOX (return)

11. EDT> COL (return)

12. 7. FILENAME (return)
    (the number appearing after COLLECT depends on
    the number of entries in the file already)

13. (return)

14. EDT> STORE UNN (return) (return)

15. (FILENAME , SCRATCH = Y (return))
(if a file exists under that name already.)

16. EDT> X (return)

17. TSM> X (return)

18. RING IN FOR SERVICE

The instructor may delete parameters being monitored by pressing the "PARAM DEL" pushbutton and entering the variable name after "DELM". Parameters can be added or deleted from the monitoring list regardless of whether the monitoring mode is active or not.

The monitoring frequency can be changed by keying in "MCRT n", where n is the desired update frequency, and pressing the "ENTER" pushbutton at the control keyboard. The update frequency can be any multiple of 0.125 second.

The number of monitoring points can be adjusted by typing in "SW NMPTS=XX" (XX equals current number of monitor points). To clear the monitor of all monitored points "SW NMPTS=0" is used.

Parameter monitoring is terminated by pressing the lit "PARAM MON" pushbutton or by selecting a different display to appear on the monitor CRT.

The instructor may display a variable on the control CRT by pressing "PARAM DISP" and typing in the variable name after "DIS".

3.3 Printer Control

There are two Printer Control Modes, PRINT MON and PRINT LOG.

Pressing the "PRINT MON" pushbutton will allow the information displayed on the monitor CRT during Parameter Monitoring or TEAM Monitoring to be printed on the line printer located in the computer room. The backlight for this pushbutton will be on when this feature is activated.

Pressing the "PRINT LOG" pushbutton will allow the information displayed on the control CRT during expert control mode to be printed on the line printer. The backlight for this pushbutton will be on when this feature is activated.

The printer frequency may be changed by keying in "MPRT n", where n is the desired update frequency in seconds, and pressing the "ENTER" pushbutton at the control keyboard.

3.5 Trainee Evaluation and Monitoring, and Trainee Performance Review

Pressing the "TEAM" pushbutton will enable the TEAM control mode and the "TEAM CONTROL MENU" will appear on the control CRT. The pushbutton will backlight while TEAM is active.

This menu directs the instructor to:

Display current TEAM data (Title, Names, Date, Variables, and Setpoints).

Retrieve TEAM data from a disk file.

Store TEAM data on a disk file.

Modify Title, Instructor's name, Trainee's name, and Date.

Select variables for TEAM monitoring.

Activate TEAM.

Terminate TEAM

Exit TEAM control mode.

Clear TEAM selected points.

Tape drive control.

The instructor is then prompted to enter an option. If one of the first five options is chosen, the instructor will be prompted to enter the necessary data. When data entry for a particular option is completed, the control menu will appear again.

All retrieved and entered data for the current drill will be retained upon exit. This will allow the instructor to compose the drill and exit without activating the drill.

3.6 Graphic Displays Verification

Pressing the "P&ID DISP" pushbutton will cause a menu of available diagrams to appear on the control CRT. The menu includes a "SHOW POKE" box that when touched will highlight these poke areas. Touching the screen anywhere will return the screen to normal. Touching the poke box for a specific system will bring that system up on the monitor CRT.

The condition of the illustrated LOAs can be varied directly from the system diagram display. Touching the poke area associated with the LOA will cause its description, current value, open and close touch zones, position bar chart and LOA data to appear at the bottom of the CRT. Full open and closed positions can be obtained by touching the open and close touch zones, respectively. An intermediate position is obtained by touching the amount of desired travel on the bar charts and then poking the blue square in the lower right corner. Finer control of the LOA position can be obtained by poking this blue area and entering the desired values using the keyboard. The cursor keys are used to move from line-to-line, not the "ENTER" pushbutton. When all the desired data is entered, touching the blue square activates the LOA.

3.7 Quick Reference Display

Pressing the "QUICK DISP" pushbutton will cause the "QUICK REFERENCE DISPLAY" to appear on the monitor CRT. This display is a dynamic horizontal bar chart of 12 preselected variables. This display will continue until another monitor CRT display is selected.

3.8 Digital Trend

Pressing the "DIGIT TREND" pushbutton will place the monitor CRT in the digital trending mode. Up to eight variables, entered as in parameter monitoring, can be trended with their current values displayed in columns over their previous values. The bottom value of each column will be lost once the table is filled by each update. Digital trending is terminated by pressing the "DIGIT TREND" pushbutton or by selecting a different display to appear on the monitor CRT.

4.2 Pushbutton Setup/Remote Assignment

Pressing the "PB SETUP" pushbutton will bring up the "REMOTE DEVICE ASSIGNMENTS" Menu with "KEY IN HERE" prompt. The instructor may select either 11 or 12 for assignment to FUNC11 or FUNC12. The necessary information is then entered to allow these buttons to activate an IDA from the floor at the two pushbutton stations.

The instructor may choose from many types and varieties of IDAs. Some for example ("MAL TUR1 ACT" or "OVR GEN3 100,60,20,ACT" or "LOA AIR30 0,ACT") could be used, but there is almost an endless number of combinations for use in any training situation. After making the desired inputs to the two functions, the "CONT" pushbutton is pressed to exit this mode.

The other buttons on the pushbutton stations "FRZ/RUN, RESET and SWCK OVR" can be used to freeze and run as needed during training or maintenance and to reinitialize the simulator to the default IC from the simulator floor.

4.3 Remote Setup/Remote Assignment

Pressing the "REMOTE SETUP" pushbutton will bring up the "REMOTE DEVICE ASSIGNMENTS" Menu with "KEY IN HERE" prompt. The instructor may select any of the 1 through 10 function assignments. The necessary information is then entered to allow these buttons to activate an IDA from the Hand Held Remote Control Unit. The information is entered as in the Pushbutton Setup/Remote Assignment Section 4.2.

The Hand Held Remote Control Unit has an LCD screen with a seven page menu. When the unit is turned on it will do a self-check and then display page 0. The instructor may use the Hand Held unit in a manner similar to that of the main instructor console by paging to the screen that contains the necessary instructions. The unit sends and receives information from the computer and therefore the instructors must spend some time familiarizing themselves with its actions.

The following information was copied from the "REMOTE HAND HELD INSTRUCTOR CONTROL" handout by W.T. Marshall.

the remote hand held unit and loads the seven (7) pages shown in Figure 2 into the remote hand held units memory. When this operation is complete, page ? appears on the screen and the unit beeps. It is then ready to control the simulator.

If this initialization process does not complete, the following may help correct the problem.

"Waiting for Base" message means that the base station has not responded. Cycling the power to the base station may correct the problem.

"Waiting for Host" message means that the Gould computer has not responded to the base station. This could be caused by the task not being active

(!ACTIV HHD), the I/O channel needing initialization (INIT), or the computer needing to be bootstrapped to clear the problem.

Once the remote control advertisement is displayed, function buttons 1 through 6 bring up the corresponding screens. Control is accomplished by keying in the requested information and depressing ENTER after each field is properly filled.

Page 1 Operation - The first time F1 is selected, the simulator freeze/run status is just reported. On subsequent selection of F1 the status is changed from the current mode to the alternate mode and the new mode is displayed. For example, if the simulator is running, depressing F1 when some other page is displayed will cause Page 1 to be displayed with the announcement "The Simulator is Running". Depressing F1 at that time will cause the simulator to freeze and the announcement will be "The Simulator is Frozen".

Page 2 Operation - When F2 is depressed, page 2 will be displayed with the cursor position at the IC number field. Enter the number and press ENTER to move the cursor to the next field. This field will cause the simulator to enter the initialization sequence if (Y) is entered, otherwise the system will reinitialize the page 2 display. When the simulator

and the keyboard remains in the LOCK mode. This can be cleared only by reinitializing the remote unit by turning its power off and then back on again."

```
Page          0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C
 ?        0          W E S T I N G H O U S E
          1     N Y P A  I N D I A N  P O I N T  3
          2       T R A I N I N G  S I M U L A T O R
          3          R E M O T E  C O N T R O L

 1        0     F R E E Z E/R U N  M O D E    (F1)
          1
          2      T H E  S I M U L A T O R  I S  -
          3               R U N N I N G(2)              F R O Z E N(2)

 2        0     I C  S E L E C T  M O D E     (F2)
          1     I C  N U M B E R = XX(4)
          2     R E S E T ? (Y/N) _(5)
          3     S W I T C H  C K  O V R ? (Y/N)_(6)

 3        0     A C T I V E  M A L F  L I S T (F3)
          1     R C S 2 3 A' X X X X X X(2) X X X X X X(3)
          2     X X X X X X(4) X X X X X X(5) X X X X X X(6)
          3     X X X X X X(7) X X X X X X(8)

 4        0     E X P E R T  M O D E          (F4)
          1     ? - - - - - - - - - - - - - - - -(2)
          2
          3

 5        0     P R E A S S I G N E D  F U N C XX(5)
          1     - - - - - - - - - - - - - - - - -
          2
          3          E X E C U T E ? (Y/N)_      (4)

 6        0     E X E R C I S E = - - - - - - - - -(5)
          1     - - - - - - - - - - - - - - - - - -
          2
          3          E X E C U T E ? (Y/N)_      (4)
```

Figure 2 - Display Page Contents

ANNUN TEST - Will flash and sound simulator annunciators.

ANNUN ACK - Will acknowledge the alarming annunciator(s), silencing the audible and stop the flashing feature. All non-alarming annunciators will go to the reflash mode. All alarming annunciators will remain on.

ANNUN RESET - Will reset or extinguish all cleared annunciators.

4.8 CRT Control

Pressing the "CONTRL A" pushbutton will shift control of the simulator to the A CRT for command functions and the B CRT will be the monitor. Pressing the "CONTRL B" pushbutton will shift control of the simulator to the B CRT for command functions and the A CRT will be the monitor. The CONTRL A or CONTRL B pushbuttons will backlight when they have been depressed and have shifted control.

4.9 Repeat Function

Pressing the "RPT" function will cause the last command function to reappear on the control CRT. This is useful for example if you have activated a malfunction and want to terminate it or change its setting. You would just press the "RPT" pushbutton and that malfunction would come up in the subscreen for alteration.

4.10 CRT Screen Copy

Pressing the "COPY A", "COPY B", "COPY C" or "COPY D" pushbutton will cause the display on its associated CRT to be copied to the black and white CRT screen copier.

4.11 Sound Generator Control

Pressing the "SOUND ON/OFF" pushbutton will activate the sound generator to produce the sounds associated with the plant functions that are synthesized.

FUNC#	- Remote Function Key #	RUN#	- Runs simulation for # sec
INIT #	- Initializes an IC	SAVEM	- Save monitor file
ICON	- IC Index	SDIA	- System Dia Control Mode
LOA	- LOA Control Mode	SET	- Set variables
MAL	- Malf Control Mode	SLOW	- Slow Time Control Mode
MCRT#	- Sets CRT monitor rate	SNAP	- Snapshot Control Mode
MCRTOFF	- Turns off monitor disp	SW NMPTS=#	- Sets # of monitor points
MCRTON	- Turns on monitor disp	SW SIMSPEED=#	- Sets simulator speed
MENU	- Calls the Master Menu	TEAMOFF	- Turns TEAM feature off
MONV	- Monitors variable	TEAMON	- Turns TEAM feature on
MPRT#	- Sets print frequency	TERM	- Terminates simulation
MTIME	- Simulator run time	TREND	- Graphic Trending Cont Mode
OFFTREND	- Turns off trending	USEM	- Use monitor file
ONTREND	- Turns on trending	XM	- Clears Main Menu
OVR	- Calls OVR System Index	XMT	- Clears Transmitter OVRs
OVRI	- Calls OVR Category Index	XPRTCOM	- Stops printing Control CRT
PANL	- Calls Graphic Cont Mode	XPRTMON	- Stops printing Monitor CRT
PARTREND	- Parameter for Trend Disp	XY	- (X - Y) Plot Control Mode

6.0 Boolean Operators for Conditional Malfunction Activation

Relational Expressions - A relational expression consists of two arithmetic expressions separated by a relational operator.

Relational Operators - Relational operators test for a relationship between two arithmetic expressions. These operators are:

Relational Operator	Definition
.GT.	Greater than (>)
.GE.	Greater than or equal to (≥)
.LT.	Less than (<)
.LE.	Less than or equal to (≤)
.EQ.	Equal to (=)
.NE.	Not equal to (=/=)

Delimiting periods are a required part of each operator.

Expression	Result
F .OR. T	.TRUE.
F .OR. F	.FALSE.

4. PLANT OPERATING PROCEDURES

All administratively controlled procedures and drawings that are maintained in the IP3 plant control room are also maintained as controlled materials within the simulator. This practice ensures that plant operators are using the most up to date materials during training and examination evolutions. Additionally, use of controlled materials immediately identifies any areas in which the simulator does not support these activities. As deviations are found, they are formally identified and tracked using the Discrepancy Reporting process that is in place.

5. SIMULATOR TEST PROGRAM

CONTENTS

5.A. Procedural Guidance

Attached and listed below are the procedures which define the overall certification/test program for the IP3 simulator. These procedures are designed to conform to 10CFR Part 55.45, Regulatory Guide 1.149, and ANSI/ANS 3.5, 1985.

SCP-001	IP3 SIMULATOR CERTIFICATION PROGRAM
STP-001	TYPES AND FREQUENCY OF TESTS
STP-002	SIMULATOR TEST RESULTS ACCEPTANCE CRITERIA

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

SCP - 001 REV. 0

IP3 SIMULATOR CERTIFICATION PROGRAM

Written by: C. Lambert

Reviewed by: J. Robinson

Approved by: _____ Date: 1/29/90

Effective Date: 1/30/90

IP3 SIMULATOR CERTIFICATION PROGRAM

I. PURPOSE

To establish a methodology which will enable the New York Power Authority to achieve and maintain a Certified status for the IP3 plant referenced simulator in accordance with Title 10, Code of Federal Regulations, Part 55.45 and USNRC Regulatory Guide 1.149.

II. DISCUSSION

Reg. Guide 1.149 endorses the requirements set forth in ANSI/ANS-3.5-1985 as an acceptable means for complying with the Commission's regulations regarding certification of a simulation facility consisting solely of a plant referenced simulator. These requirements establish the standards for specifying minimum performance and configuration criteria for a simulator, for comparing a simulator to it's reference plant, and for upgrading simulator sot reflect changes to reference plant response or control room configuration. The IP3 Simulator Certification Program is designed to be a series of procedures defining specific activities to achieve compliance with the ANSI standard.

III. REFERENCES

A. Title 10, Code of Federal Regulations, Part 55.45

B. Regulatory Guide 1.149, Rev. 1-1987, "NUCLEAR POWER PLANT SIMULATION FACILITIES FOR USE IN LICENSE OPERATOR EXAMINATIONS"

C. American National Standard, ANSI/ANS-3.5-1985, "NUCLEAR POWER PLANT SIMULATORS FOR USE IN OPERATOR TRAINING"

IV. PROCEDURE

A. Required Testing

1. ANSI/ANS-3.5-1985 defines the requirements for simulator testing regarding; types of testing, frequency, test data collection, and performance criteria. Conformance with these requirements will be established by development, implementation, and

adherence to the IP3 Simulator Test Plan procedures.

B. Certification Submittals and Reports

1. The Simulator Manager shall be responsible for preparation of NRC Form 474, "SIMULATION FACILITY CERTIFICATION" and the necessary supporting documents. Upon completion of the submittal, the Simulator Manager will forward these items to the Training Superintendent for his review and signature by the appropriate NYPA representative.

2. The Simulator Manager shall be responsible for preparation of Annual Reports as defined in ANSI/ANS 3.5-1985 Appendix A.

3. The Simulator Manager shall be responsible for preparation of Quadrennial Reports as defined in 10CFR55.45. Upon completion of the submittal, the Simulator Manager will forward these items to the Training Superintendent for his review and submittal to the Commission.

4. The Simulator Manager shall be responsible for preparation of any necessary reports to the Commission regarding deviation form the Certified test plan, as defined in 10CFR55.45.

C. Simulator Configuration Management

1. ANSI/ANS-3.5-1985 outlines the scope of a simulator configuration management program which meets the intent of regulatory requirements. Conformance with these requirements will be established by development, implementation, and adherence to the IP3 Simulator Configuration Management Procedures.

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

STP - 001 REV. 0

TYPES AND FREQUENCY OF TESTS

Written by: C. Lambert

Reviewed by: W. Robinson

Approved by: [signature] Date: 1/29/90

Effective Date: 1/30/90

TYPES AND FREQUENCY OF TESTS

I. PURPOSE

To define the following aspects of the IP3 simulator test program.

A. The various categories of simulator tests to be performed.

B. The purpose for performing the tests in each category

C. The frequency of testing based on test type.

D. The specific tests to be included in each category.

II. DISCUSSION

Reg. Guide 1.149 and ANSI/ANS-3.5-1985 define the requirements for establishing a continuing simulator test program. The intent of this program is to demonstrate compliance with the documentation requirements by comparison of simulator performance with the reference plant database where applicable. This procedure defines the content and frequency of testing necessary to support the overall test plan. Other procedures establish the guidelines for comparison of test data against the referenced plant database.

III. REFERENCES

A. Title 10, Code of Federal Regulations, Part 55.45

B. Regulatory Guide 1.149, Rev. 1-1987, "NUCLEAR POWER PLANT SIMULATION FACILITIES FOR USE IN LICENSE OPERATOR EXAMINATIONS"

C. American National Standard, ANSI/ANS-3.5-1985, "NUCLEAR POWER PLANT SIMULATORS FOR USE IN OPERATOR TRAINING"

D. SCP-001, "IP3 SIMULATOR CERTIFICATION PROGRAM"

IV. PROCEDURE

A. Maintenance of Test Lists.

1. All test lists included as part of the test program will be stored as data files within the computerized

Simulator Management System. These data files shall identify the most recent date of test performance and as applicable, the next scheduled date for test performance.

2. The IP3 Simulator Staff shall be responsible for identifying the need to modify the content of test lists as applicable to their assigned job position.

3. The Simulator Manager shall be responsible for incorporating any necessary changes to the test lists as identified by the Simulator Staff.

B. Purpose, Category, and Frequency of Tests

1. Control Room Testing

a. The purpose of these tests are to ensure that the simulator physical characteristics replicate the reference plant control room.

b. These tests shall be performed on an as needed basis dictated by plant/simulator modification activity.

c. The tests to be performed are listed in Appendix A.

2. Malfunction Testing

a. The purpose of these tests are to verify and document proper simulator response and system interaction utilizing a procedure which identifies and predicts the plant response based on actual plant experience or best estimate.

b. These tests shall be performed on a schedule to completely test all malfunctions within a four (4) year cycle with approximately twenty-five percent (25%) of the tests completed within a calendar year.

c. The tests to be performed are listed in Appendix B.

3. Normal Operations Testing

a. The purpose of these tests is to verify and document the ability to operate the simulator in

accordance with simulator reference plant operating procedures.

b. These tests shall be performed annually.

c. The tests to be performed are listed in Appendix C.

4. Simulator Tests

a. The purpose of these tests is to verify the simulator capabilities of operating in "real time" and performing as a training aid.

b. With the exception of the computer real time test, these tests shall be performed on an as needed basis dictated by plant/simulator modification activity. The computer real time test shall be performed annually.

c. The tests to be performed are listed in Appendix D.

5. Steady State Tests

a. The purpose of these tests is to demonstrate the stability of the simulator by establishing a steady state condition and monitoring parameter variation with respect to time.

b. These tests shall be performed annually.

c. The tests to be performed are listed in Appendix E.

6. Systems Tests

a. The purpose of these tests is to verify correct function of components and features within the boundaries of a simulated system.

b. These tests shall be performed on an as needed basis dictated by plant/simulator modification activity.

c. The tests to be performed are listed in Appendix F.

7. Transient Tests

a. The purpose of these tests is to verify adequate capability of the simulator to reproduce transients which have occurred in the reference plant for which data is available and accidents or major occurrences for which no actual reference plant data exists.

b. These tests shall be performed annually.

c. The tests to be performed are listed in Appendix G.

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.01	AO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.02	BO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.03	CO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.04	DO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.05	EO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.06	FO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.07	PR PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.08	DM PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.09	VI PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.10	LO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.11	AC PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.12	EV PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.13	AM PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.14	DC PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.15	A1 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.16	A6 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.17	B1 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.18	B6 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.19	C1 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.20	NI PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.21	VM PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.22	RI PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.23	II PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.24	D8 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.25	O2 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.26	FP PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.27	E2 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.28	E7 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.29	F2 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.30	GP PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.31	G3 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.32	G5 PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.33	31 PANEL CONSTRUCTION CHECK PROCEDURE

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.34	SS PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.35	SRO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.36	RO PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.37	STA PANEL CONSTRUCTION CHECK PROCEDURE
PANEL EQUIPMENT AND DEMARCATION CONFIGURATION	A.1.2 (2)	14.02.02.05.38	QSPDS PANEL CONSTRUCTION CHECK PROCEDURE
SIMULATOR ENVIRONMENT - LIGHTING	A.1.2 (4)	14.02.02.17	SIMULATOR LIGHTING FUNCTIONAL TEST
SIMULATOR ENVIRONMENT - AUDIBLE SOUNDS	A.1.2 (4)	14.02.02.18	CONTROL ROOM AUDIBLE SOUNDS

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
		14.04.07.01.02	LOSS OF STATION AIR (AIR-2)
		14.04.07.01.03	INSTRUMENT AIR COMPRESSOR TRIP (AIR-3)
		14.04.07.01.04	STATION AIR COMPRESSOR TRIP (AIR-4)
		14.04.07.01.05	PRESSURIZATION SYSTEM LEAK (AIR-5)
		14.04.07.03.01	CIRCULATING WATER PUMP TRIP (CWS-1)
		14.04.07.03.03	MAIN CONDENSER TUBE LEAK (CWS-3)
		14.04.07.03.04	CWS PUMP LCI DRIVE UNIT FAULT (CWS-4)
		14.04.07.07.09	RCS BORATION (CVC-9)
		14.04.07.09.09	SYNCH CHECK RELAY FAILURE (EPS-9)
		14.04.07.12.03	VOLTAGE REGULATOR OSCILLATION (GEN-3)
		14.04.07.12.04	LOSS OF GENERATOR EXCITATION (GEN-4)
		14.04.07.12.05.01	MAIN GENERATOR OUTPUT BREAKER CONTROL FAILURE (GEN-5)
		14.04.07.12.05.02	MAIN GENERATOR OUTPUT BREAKER CONTROL FAILURE (GEN-5)
		14.04.07.12.06	MAIN GENERATOR PT FUSE FAILURE (GEN-6)
		14.04.07.13.02	FIRESTAT SENSOR FAILURE (HVA-2)
		14.04.07.14.05	MAIN STEAM ISOLATION VALVE FAILURE (MSS-5)
		14.04.07.14.06	STEAM DUMP FAILS TO SELECTED POSITION (MSS-6)
		14.04.07.14.09	MAIN STEAM HEADER BREAK (MSS-9)
		14.04.07.14.10	INADVERTENT MAIN STEAM ISOLATION (MSS-10)
		14.04.07.14.11	REHEAT STEAM SUPPLY VALVE FAILURE (MSS-11)
		14.04.07.14.12	GLAND SEAL REGULATOR FAILURE (MSS-12)
		14.04.07.16.02	PRESSURIZER SPRAY VALVE FAILURE (PRS-2)
		14.04.07.16.13.01	FAILURE OF PRESSURIZER LEVEL SENSING LINE (PRS-13)
		14.04.07.16.13.02	FAILURE OF PRESSURIZER LEVEL SENSING LINE (PRS-13)
		14.04.07.17.04	RCP SHAFT BREAK (RCS-4)
		14.04.07.17.06	HOT LEG NARROW RANGE RTD MICROPROCESSOR FAILURE (RCS-6)
		14.04.07.17.07	RCP VIBRATION (RCS-7)
		14.04.07.17.08	REACTOR VESSEL FLANGE LEAK (RCS-8)
		14.04.07.17.09	OIL LEAK FROM RCP BEARING OIL RESERVOIRS (RCS-9)
		14.04.07.17.10	RCP THERMAL BARRIER LEAK (RCS-10)
		14.04.07.17.12	RCP NUMBER 1 SEAL FAILURE (RCS-12)
		14.04.07.17.13	RCP NUMBER 2 SEAL FAILURE (RCS-13)
		14.04.07.17.14	RCP NUMBER 3 SEAL FAILURE (RCS-14)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
		14.04.07.17.16	RCP THRUST BEARING FAILURE (RCS-16)
		14.04.07.17.19	HOT LEG NARROW RANGE RTD FAILURE (RCS-19)
		14.04.07.17.20.01	COLD LEG NARROW RANGE RTD FAILURE (RCS-20)
		14.04.07.17.20.02	COLD LEG NARROW RANGE RTD FAILURE (RCS-20)
		14.04.07.18.02	RHR HEAT EXCHANGER TUBE LEAK (RHR-2)
		14.04.07.20.03	PERMISSIVE FAILURE (RPS-3)
FAILURE OF STEAM GENERATOR ATMOPHERIC RELIEF VALVES		14.04.07.21.03	STEAM GENERATOR RELIEF VALVE CONTROLLER FAILURE (SGN-3)
FAILURE OF STEAM GENERATOR SAFETY VALVES		14.04.07.21.04	STEAM GENERATOR SAFETY VALVE FAILURE (SGN-4)
		14.04.07.21.06	S/G LEVEL CONTROLLER OSCILLATION (SGN-6)
		14.04.07.21.07	FAILURE OF S/G LEVEL TRANSMITTER SENSING LINE (SGN-7)
		14.04.07.22.02	ACCUMULATOR LEAKAGE (SIS-2)
		14.04.07.22.03	ACCUMULATOR NITROGEN LEAKAGE (SIS-3)
		14.04.07.22.05.01	SIS CHECK VALVE LEAKAGE (SIS-5)
		14.04.07.22.05.02	SIS CHECK VALVE LEAKAGE (SIS-5)
		14.04.07.22.06	SAFETY INJECTION LINE LEAK (SIS-6)
		14.04.07.22.07	INADVERTENT SAFETY INJECTION ACTUATION (SIS-7)
		14.04.07.23.01	FALSE CONTAINMENT SPRAY ACTUATION (CNS-1)
		14.04.07.25.03	CONTROL VALVE OSCILLATION (TUR-3)
		14.04.07.25.04	TURBINE VIBRATION (TUR-4)
		14.04.07.25.05	CONTROL VALVE FAILURE (TUR-5)
		14.04.07.25.06	STOP VALVE FAILURE (TUR-6)
		14.04.07.25.07	LOSS OF MAIN TURBINE LUBE OIL (TUR-7)
		14.04.07.25.08	TURBINE HIGH ECCENTRICITY (TUR-8)
		14.04.07.25.09	TURBINE BLADE FAILURE (TUR-9)
		14.04.07.25.11	TURBINE RUNBACK FAILURE (TUR-11)
		14.04.07.27.01	INADVERTENT CONTAINMENT ISOLATION PHASE A (MSC-1)
		14.04.07.27.02	INADVERTENT CONTAINMENT ISOLATION PHASE B (MSC-2)
		14.04.07.27.03	INADVERTENT CONTAINMENT VENTILATION ISOLATION (MSC-3)
		14.04.07.29.01	MAIN BOILER FEED PUMP OIL LEAK (ATS-1)
		14.04.07.29.02	32 ABFP OVERSPEED TRIP (ATS-2)
		14.04.07.30.03	SGBD LINE BREAK INSIDE CONTAINMENT (SGB-3)
		14.04.07.30.04	SGBD LINE BREAK OUTSIDE CONTAINMENT (SGB-3)
STEAM GENERATOR TUBE LEAK/RUPTURE	3.1.2 (1)a	14.04.07.21.05	STEAM GENERATOR TUBE LEAK (SGN-5)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
LOSS OF COOLANT INSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.07.03	LETDOWN LINE LEAK INSIDE CONTAINMENT (CVC-3)
LOSS OF COOLANT OUTSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.07.04	LETDOWN LINE LEAK OUTSIDE CONTAINMENT (CVC-4)
LOSS OF COOLANT INSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.07.10	CHARGING LINE LEAK AT REGENERATIVE HX INLET (CVC-10)
LOSS OF COOLANT INSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.16.01	PRESSURIZER STEAM SPACE LEAK (PRS-1)
LOSS OF COOLANT INSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.17.17.01	FAILURE OF FLOW TAP PENETRATION (RCS-17)
LOSS OF COOLANT INSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.17.17.02	FAILURE OF FLOW TAP PENETRATION (RCS-17)
LOSS OF COOLANT OUTSIDE CONTAINMENT	3.1.2 (1)b	14.04.07.18.03	RHR PUMP SUCTION LINE BREAK (RHR-3)
LARGE BREAK RCS LOCA	3.1.2 (1)c	14.04.07.17.01	RCS RUPTURE - LOCA (RCS-1)
SMALL BREAK RCS LOCA	3.1.2 (1)c	14.04.07.17.05	RCS LEAK (RCS-5)
FAILURE OF PRESSURIZER RELIEF VALVES	3.1.2 (1)d	14.04.07.16.03	PRESSURIZER RELIEF VALVE FAILURE (PRS-3)
FAILURE OF PRESSURIZER SAFETY VALVES	3.1.2 (1)d	14.04.07.16.04	PRESSURIZER SAFETY VALVE FAILS OPEN (PRS-4)
LOSS OF ALL FEEDWATER (NORMAL AND EMERGENCY)	3.1.2 (10)	14.04.07.28.01	LOSS OF ALL FEEDWATER (NORMAL AND EMERGENCY) (CMT-1)
LOSS OF PROTECTIVE SYSTEM CHANNEL	3.1.2 (11)	14.04.07.09.02	LOSS OF 120 VAC INSTRUMENT BUS (EPS-2)
CONTROL ROD FAILURE - ROD DROPS	3.1.2 (12)	14.04.07.06.03	DROPPED ROD (CRF-3)
CONTROL ROD FAILURE - STUCK RODS	3.1.2 (12)	14.04.07.06.04.01	STUCK ROD (CRF-4A)
CONTROL ROD FAILURE - STUCK RODS	3.1.2 (12)	14.04.07.06.04.02	STUCK ROD (CRF-4B)
INABILITY TO DRIVE CONTROL RODS	3.1.2 (13)	14.04.07.06.01	POWER CABINET FAILURE (CRF-1)
INABILITY TO DRIVE CONTROL RODS	3.1.2 (13)	14.04.07.06.02	RODS FAIL TO MOVE (CRF-2)
FUEL CLADDING FAILURE	3.1.2 (14)	14.04.07.05.01	FAILED FUEL ELEMENT (RTC-1)
TURBINE TRIP	3.1.2 (15)	14.04.07.25.01	INADVERTANT TURBINE TRIP (TUR-1)
GENERATOR TRIP	3.1.2 (16)	14.04.07.12.02	MAIN GENERATOR TRIP (GEN-2)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.06	UNCONTROLLED ROD MOTION IN AUTO (CRF-6)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.07	UNCONTROLLED ROD MOTION IN MANUAL (CRF-7)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.08	FAILURE OF AUTOMATIC ROD SPEED SIGNAL (CRF-8)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.09	TREF ROD CONTROL FAILURE (CRF-9)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.10	FAILURE OF ROD POSITION INDICATOR (CRF-10)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.11	IMPROPER BANK OVERLAP (CRF-11)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.06.12	FAILURE OF ROD BLOCKS TO BLOCK (CRF-12)
FAILURE OF AUTOMATIC CONTROLS - REACTIVITY	3.1.2 (17)	14.04.07.07.20	BORIC ACID CONTROL DEVIATION (CVC-20)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.01	CONTAINMENT LETDOWN ISOLATION VALVE FAILURE (CVC-1)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.02	REGENERATIVE HEAT EXCHANGER TUBE LEAK (CVC-2)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.05	CHARGING PUMP TRIP (CVC-5)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.06	CHARGING PUMP SPEED CONTROL FAILURE (CVC-6)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.07	MAKEUP CONTROL FAILURE IN AUTOMATIC MODE (CVC-7)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.08.01	VCT LEVEL CONTROL FAILURE - HIGH (CVC-8)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.08.02	VCT LEVEL CONTROL FAILURE - LOW (CVC-8)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.11	NON-REGENERATIVE HX TUBE LEAK (CVC-11)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.12	SEAL WATER HEAT EXCHANGER TUBE LEAK (CVC-12)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.13	PLUGGED RCS FILTER (CVC-13)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.14	PLUGGED SEAL INJECTION FILTER (CVC-14)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.15	PLUGGED BORIC ACID FILTER (CVC-15)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.16	PLUGGED SEAL WATER RETURN FILTER (CVC-16)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.17.01	PT-135 FAILURE - FULL OPEN (CVC-16)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.17.02	PT-135 FAILURE - FULL OPEN (CVC-16)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.18	CHARGING LINE LEAK AT CHARGING PUMP DISCHARGE (CVC-18)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.07.19	CHARGING LINE LEAK DOWNSTREAM OF REGENERATIVE HX (CVC-19)
FAILURE OF RCS PRESSURE CONTROLS	3.1.2 (18)	14.04.07.16.08.01	PRESSURIZER PRESSURE CONTROLLER FAILURE - HIGH - (PRS-8)
FAILURE OF RCS PRESSURE CONTROLS	3.1.2 (18)	14.04.07.16.08.02	PRESSURIZER PRESSURE CONTROLLER FAILURE - LOW - (PRS-8)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.16.09.01	PRESSURIZER LEVEL CONTROLLER FAILURE - HIGH - (PRS-9)
FAILURE OF RCS VOLUME CONTROL SYSTEM	3.1.2 (18)	14.04.07.16.09.02	PRESSURIZER LEVEL CONTROLLER FAILURE - LOW - (PRS-9)
FAILURE OF RCS PRESSURE CONTROLS	3.1.2 (18)	14.04.07.16.12	PRESSURIZER HEATERS FAIL ON (PRS-12)
REACTOR TRIP	3.1.2 (19)	14.04.07.20.01	INADVERTANT REACTOR TRIP (RPS-1)
LOSS OF INSTRUMENT AIR	3.1.2 (2)	14.04.07.01.01	LOSS OF INSTRUMENT AIR (AIR-1)
MAIN FEED LINE BREAK - INSIDE CONTAINMENT	3.1.2 (20)	14.04.07.11.14	FEEDLINE BREAK INSIDE CONTAINMENT (CFW-14)
MAIN FEED LINE BREAK - OUTSIDE CONTAINMENT	3.1.2 (20)	14.04.07.11.15	FEEDLINE BREAK OUTSIDE CONTAINMENT (CFW-15)
MAIN STEAM LINE BREAK - INSIDE CONTAINMENT	3.1.2 (20)	14.04.07.14.01	STEAM LINE BREAK INSIDE CONTAINMENT (MSS-1)
MAIN STEAM LINE BREAK - OUTSIDE CONTAINMENT	3.1.2 (20)	14.04.07.14.02	STEAM LINE BREAK OUTSIDE CONTAINMENT (MSS-2)
NUCLEAR INSTRUMENTATION FAILURES - SOURCE RANGE	3.1.2 (21)	14.04.07.15.01	SOURCE RANGE CHANNEL FAILURE (NIS-1)
NUCLEAR INSTRUMENTATION FAILURES - SOURCE RANGE	3.1.2 (21)	14.04.07.15.02	NOISY SOURCE RANGE CHANNEL (NIS-2)
NUCLEAR INSTRUMENTATION FAILURES - SOURCE RANGE	3.1.2 (21)	14.04.07.15.03	SOURCE RANGE CHANNEL HI-VOLTS FAILURE (NIS-3)
NUCLEAR INSTRUMENTATION FAILURES - INTERMEDIATE RANGE	3.1.2 (21)	14.04.07.15.04	INTERMEDIATE RANGE CHANNEL FAILURE (NIS-4)
NUCLEAR INSTRUMENTATION FAILURES - INTERMEDIATE RANGE	3.1.2 (21)	14.04.07.15.05	INTERMEDIATE RANGE COMPENSATING VOLTAGE FAILURE (NIS-5)
NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE	3.1.2 (21)	14.04.07.15.06	POWER RANGE DETECTOR FAILURE (NIS-6)
NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE	3.1.2 (21)	14.04.07.15.07	POWER RANGE FAILURE (NIS-7)
NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE	3.1.2 (21)	14.04.07.15.08	POWER RANGE OUTPUT OSCILLATION (NIS-8)
NUCLEAR INSTRUMENTATION FAILURES - INTERMEDIATE RANGE	3.1.2 (21)	14.04.07.15.09	INTERMEDIATE RANGE BLOWN FUSE (NIS-9)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE	3.1.2 (21)	14.04.07.15.10	POWER RANGE FUSE BLOWN (NIS-10)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.03.02	CIRCULATING WATER PUMP SPEED CONTROL FAILURE (CWS-2)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.11.10	CONDENSATE POLISHER FACILITY BYPASS VALVE FAILURE (CFW-10)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.11.12	FEEDWATER FLOW TRANSMITTER FAILURE (CFW-12)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.11.13	FEEDWATER REGULATION VALVE CONTROLLER FAILURE (CFW-13)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.12.01	MAIN GENERATOR VOLTAGE REGULATOR FAILURE (GEN-1)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.14.03	STEAM HEADER PRESSURE DETECTOR PT-404 FAILURE (MSS-3)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.14.04	STEAM LINE FLOW TRANSMITTER FAILURE (MSS-4)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.14.07	STEAM DUMP CONTROL FAILURE (MSS-7)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.14.08	TURBINE TRIP ARMING FAILURE (MSS-8)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.05.01	PRESSURIZER PRESSURE TRANSMITTER FAILURE - CONTROL -(PRS-5)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.05.02	PRESSURIZER PRESSURE TRANSMITTER FAILURE - BISTABLE -(PRS-5)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.06.01	PRESSURIZER LEVEL TRANSMITTER FAILURE (PRS-6)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.06.02	PRESSURIZER LEVEL TRANSMITTER FAILURE (PRS-6)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.07	PRESSURIZER HEATERS FAIL OFF (PRS-7)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.10	PRESSURIZER TEMPERATURE TRANSMITTER FAILURE (PRS-10)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.16.11	OPS SYSTEM SETPOINT CALCULATOR FAILURE (PRS-11)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.17.11	RCS FLOW TRANSMITTER FAILURE (RCS-11)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.17.15	RCS WIDE RANGE RTD FAILURE (RCS-15)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.17.18	FAILURE OF RCP START PERMISSIVE (RCS-18)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.19.01.01	AREA RADIATION MONITOR FAILURE (RMS-1)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.19.01.02	AREA RADIATION MONITOR FAILURE (RMS-1)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.19.02	PROCESS RADIATION MONITOR FAILURE (RMS-2)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.21.01.01	STEAM GENERATOR LEVEL TRANSMITTER FAILURE - HIGH (SGN-1)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.21.01.02	STEAM GENERATOR LEVEL TRANSMITTER FAILURE - LOW (SGN-1)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.21.02	STEAM GENERATOR PRESSURE TRANSMITTER FAILURE (SGN-2)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.25.10	TURBINE FIRST STAGE PRESSURE TRANSMITTER FAILURE (TUR-10)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.29.03	MBFP TURBINE SPEED OSCILLATION (ATS-3)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.29.05	LOSS OF MBFP FEEDWATER SIGNAL (ATS-5)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.29.06.01	MBFP SPEED SENSOR FAILURE (ATS-6)
PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES	3.1.2 (22)	14.04.07.29.06.02	MBFP SPEED SENSOR FAILURE (ATS-6)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.02.01	COMPONENT COOLING WATER PUMP TRIP (CCW-1)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.08.01	DIESEL GENERATOR FAILURE (DSG-1)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
PASSIVE MALFUNCTIONS - EMERGENCY FEEDWATER SYSTEM	3.1.2 (23)	14.04.07.11.01	AUXILIARY FEEDWATER PUMP TRIP (CFW-1)
PASSIVE MALFUNCTIONS - EMERGENCY FEEDWATER SYSTEM	3.1.2 (23)	14.04.07.11.03	AUXILIARY FEEDWATER FLOW CONTROL VALVE FAILURE (CFW-3)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.13.01	FAN COOLER UNIT TRIP (HVA-1)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.22.01	SAFETY INJECTION FAILURE (SIS-1)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.22.04	SAFETY INJECTION PUMP TRIP (SIS-4)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.23.02	CONTAINMENT SPRAY PUMP FAILURE (CNS-2)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.24.01	SERVICE WATER PUMP TRIP (SWS-1)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.25.02	TURBINE PROTECTION TRIP FAILURE (TUR-2)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.30.01.01	FAILURE OF A SGBD ISOLATION VALVE TO CLOSE - MECH - (SGB-1)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.30.01.02	FAILURE OF A SGBD ISOLATION VALVE TO CLOSE - AUTO - (SGB-1)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.30.02.01	FAILURE OF A SGBD SAMPLE VALVE TO CLOSE - MECH - (SGB-2A)
PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS	3.1.2 (23)	14.04.07.30.02.02	FAILURE OF A SGBD SAMPLE VALVE TO CLOSE - AUTO - (SGB-2B)
FAILURE OF THE AUTOMATIC REACTOR TRIP SYSTEM	3.1.2 (24)	14.04.07.20.02.01	REACTOR TRIP BREAKERS FAIL TO OPEN - AUTO (RPS-2)
FAILURE OF THE AUTOMATIC REACTOR TRIP SYSTEM	3.1.2 (24)	14.04.07.20.02.02	REACTOR TRIP BREAKERS FAIL TO OPEN - MANUAL (RPS-2)
LOSS OF ELECTRICAL POWER - EMERGENCY	3.1.2 (3)	14.04.07.08.02	DIESEL GENERATOR BREAKER INADVERTANT TRIP (DSG-2)
LOSS OF ELECTRICAL POWER - OFFSITE	3.1.2 (3)	14.04.07.09.01	STATION BLACKOUT (EPS-1)
LOSS OF ELECTRICAL POWER - ONSITE	3.1.2 (3)	14.04.07.09.03	LOSS OF 125 VDC BUSS (EPS-3)
LOSS OF ELECTRICAL POWER - ONSITE	3.1.2 (3)	14.04.07.09.04	LOSS OF 6900 VOLT BUS (EPS-4)
LOSS OF ELECTRICAL POWER - ONSITE	3.1.2 (3)	14.04.07.09.05	LOSS OF 480 VOLT BUS (EPS-5)
LOSS OF ELECTRICAL POWER - OFFSITE	3.1.2 (3)	14.04.07.09.06	LOSS OF STATION AUXILIARY TRANSFORMER (EPS-6)
LOSS OF ELECTRICAL POWER - ONSITE	3.1.2 (3)	14.04.07.09.07	LOSS OF UNIT AUXILIARY TRANSFORMER (EPS-7)
LOSS OF ELECTRICAL POWER - ONSITE	3.1.2 (3)	14.04.07.09.08	LOSS OF MOTOR CONTROL CENTER (EPS-8)
LOSS OF FORCED CORE COOLANT FLOW	3.1.2 (4)	14.04.07.17.02.01	REACTOR COOLANT PUMP TRIP - ABOVE P8 (RCS-2)
LOSS OF FORCED CORE COOLANT FLOW	3.1.2 (4)	14.04.07.17.02.02	REACTOR COOLANT PUMP TRIP - BELOW P8 (RCS-2)
LOSS OF CONDENSER LEVEL CONTROL	3.1.2 (5)	14.04.07.04.01	HOTWELL LEVEL TRANSMITTER FAILURE (CND-1)
LOSS OF CONDENSER VACUUM	3.1.2 (5)	14.04.07.04.02	LOSS OF CONDENSER VACUUM (CND-2)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.02	SERVICE WATER LEAKAGE TO CONTAINMENT (SWS-2)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.03	FAILURE OF TCV-1102 (SWS-3)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.04	FAILURE OF PCV-1179 (SWS-4)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.05	LOSS OF COOLING TO HYDROGEN COOLERS (SWS-5)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.06.01	SERVICE WATER PUMP STRAINERS BLOCKED (SWS-6)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.06.02	SERVICE WATER PUMP STRAINERS BLOCKED (SWS-6)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.07	SERVICE WATER PUMP CHECK VALVE FAILS TO SEAT (SWS-7)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.08	SERVICE WATER PUMP SHAFT BREAK (SWS-8)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.09	LOSS OF SERVICE WATER TO CCW HEAT EXCHANGERS (SWS-9)
LOSS OF SERVICE WATER	3.1.2 (6)	14.04.07.24.10	LOSS OF SERVICE WATER TO FEED PUMP OIL COOLERS (SWS-10)
LOSS OF SHUTDOWN COOLING	3.1.2 (7)	14.04.07.18.01	RHR PUMP TRIP (RHR-1)
LOSS OF SHUTDOWN COOLING	3.1.2 (7)	14.04.07.23.03	RECIRCULATION PUMP TRIP (CNS-3)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.02	LOSS OF CCW TO RHR HEAT EXCHANGER (CCW-2)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.03	COMPONENT COOLING WATER PUMP SUCTION LINE LEAK (CCW-3)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.04	COMPONENT COOLING WATER PUMP DISCHARGE LINE LEAK (CCW-4)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.05	CCW LEAK DOWNSTREAM OF THE CCW HEAT EXCHANGER (CCW-5)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.06	CCW LEAK UPSTREAM OF RHR HEAT EXCHANGER (CCW-6)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.07	LOSS OF CCW TO REACTOR COOLANT PUMPS (CCW-7)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.08	LOSS OF CCW TO NON-REGENERATIVE HEAT EXCHANGER (CCW-8)
LOSS OF COMPONENT COOLING WATER	3.1.2 (8)	14.04.07.02.09	LOSS OF CCW TO THE SEAL WATER HEAT EXCHANGER (CCW-9)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.02	AUXILIARY FEEDWATER LINE RUPTURE (CFW-2)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.04	LOW FLOW FEEDWATER REG VALVE FAILURE (CFW-4)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.05	CONDENSATE PUMP TRIP (CFW-5)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.06	CONDENSATE BOOSTER PUMP TRIP (CFW-6)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.07	HEATER DRAIN PUMP TRIP (CFW-7)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.08	HP FEEDWATER HEATER TUBE LEAK (CFW-8)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.09	LP FEEDWATER HEATER TUBE LEAK (CFW-9)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.11	CONDENSATE POLISHER FACILITY LINE BREAK (CFW-11)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.16	MBFP CHECK VALVE FAILURE (CFW-16)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.17	CLOGGED SERVICE VESSEL (CFW-17)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.18	POST FILTER FAILURE (CFW-18)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.11.19	CBP DISCHARGE MOV FAILURE (CFW-19)
LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE	3.1.2 (9)	14.04.07.29.04	MAIN FEEDWATER PUMP TRIP (ATS-4)
RUPTURE OF A CONTROL ROD DRIVE HOUSING - RCCA EJECTION	A.3.3 (2)	14.04.07.06.05	CONTROL ROD EJECTION (CRF-5)
LOSS OF EXTERNAL ELECTRICAL LOAD	A.3.3 (2)	14.04.07.09.10.01	345 KV MOTOR OPERATED DISCONNECT FAILURE (EPS-10D)
LOSS OF EXTERNAL ELECTRICAL LOAD	A.3.3 (2)	14.04.07.09.10.02	345 KV MOTOR OPERATED DISCONNECT FAILURE (EPS-10E)
LOSS OF REACTOR COOLANT FLOW - LOCKED ROTOR ACCIDENT	A.3.3 (2)	14.04.07.17.03	RCP LOCKED ROTOR (RCS-3)
ACCIDENTAL RELEASE - WASTE GAS	A.3.3 (2)	14.04.07.26.01	WASTE GAS DECAY TANK RUPTURE (WPS-1)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
PLANT STARTUP - COLD TO HOT STANDBY	3.1.1 (1)	14.04.02.03	PLANT HEATUP FROM COLD SHUTDOWN CONDITION
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.01	PT-M74 FULL LENGTH RODS' MOVEMENT EXERCISE
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.02	PT-CS01 MAIN STEAM VALVES (PCV-1310 A and PCV-1310 B)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.03	PT-CS02 MAIN STEAM CHECK VALVES (MS-1'S AND MS-2'S)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.04	PT-CS03 AUXILIARY COOLANT SYSTEM VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.05	PT-CS05 MAIN STEAM CHECK VALVES (MS-1s and MS-2s) - S/U
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.06	PT-CS06 CONTAINMENT SPRAY SYSTEM VALVES' FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.07	PT-CS08 SAFETY INJECTION SYSTEM RWST VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.08	PT-CS09 SAFETY INJECTION SYSTEM TO HOT LEG - 856 B & 856 G
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.10	PT-CS13 RHR MINIFLOW VALVES FUNCTIONAL (VLVS 743 and 1870)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.11	PT-CS14 RESIDUAL HEAT REMOVAL SYSTEM VALVES' FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.12	PT-CS15 AUX BOILER FEED PUMP (31/33) and CHECK VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.14	PT-CS19 AUX BOILER FEED PUMP (32) FUNCTIONAL - (< 350 F)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.15	PT-CS20 CONTAINMENT ISOLATION VALVES - RCP SEAL WATER
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.16	PT-CS21 CONTAINMENT ISOLATION VALVES - CHARGING SYSTEM
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.18	PT-CS24 HIGH HEAD SAFETY INJECTION VALVES FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.19	PT-CS26 EMERGENCY BORATION FLOW PATH VALVE FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.20	PT-CS29 REACTOR HEAD VENT VALVES TEST
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.21	PT-M15 MAIN TURBINE STOP AND CONTROL VALVE TEST
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.35	PT-Q19 COMPONENT COOLING VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.36	PT-Q20 A.B.F. VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.37	PT-Q21 STEAM GENERATOR BLOWDOWN VALVES' FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.38	PT-Q22 RESIDUAL HEAT REMOVAL SYSTEM VALVES' FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.39	PT-Q23 HI HEAD SI VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.40	PT-Q24 CONTAINMENT SPRAY DISCH. VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.41	PT-Q26 NITROGEN VALVES 891A,B,C,D; 863; 550
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.44	PT-Q29 AIR EJECTOR ISO. VLVS. PC-1229, 1230
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.45	PT-Q31 LIQUID WASTE DISPOSAL CONTAINMENT ISOLATION VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.46	PT-Q32 RCS VLVS 519,552,548,549
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.47	PT-Q35 DEMINERALIZED WATER CONTAINMENT ISOLATION VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.48	PT-Q36 RHR COMPONENT COOLING VLVS-882 A + B
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.50	PT-Q40 BIT RECIRC VLVS 1851 A + B
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.51	PT-Q52 CNMT HYDROGEN MONITORING SYSTEM VALVES' FUNCTIONAL

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.59	PT-R007 AUX BOILER FEED PUMPS' FULL FLOW TEST
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.63	PT-R034 RESIDUAL HEAT REMOVAL SYSTEM VALVES 730 and 731
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.65	PT-R061 INSTRUMENT AIR CONTAINMENT ISO VALVE (PCV-1228)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.66	PT-R063 RESIDUAL HEAT REMOVAL SYSTEM VALVES' TIMING (889s)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.67	PT-R064 SAFETY INJECTION HI-HEAD VALVES TEST (857s)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.68	PT-R071 RECIRCULATION VALVES' FUNCTIONAL (1802s)
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.69	PT-R076 BORON INJECTION TANK VALVES' FUNCTIONAL
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.71	PT-V01 SOURCE RANGE
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.72	PT-V02 INTERMEDIATE RANGE
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.76	PT-V12 PR PERMISSIVES AND TRIP
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.81	PT-V26 FEEDWATER REG VLVS FCV-417,27,37,47
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.82	PT-V29 FULLFLOW THROUGH BIT CHECK VALVES
OPERATOR CONDUCTED SURVEILLANCE TESTS	3.1.1 (10)	14.04.09.85	PT-W03 PLANT ASSEMBLY ALARMS
NUCLEAR STARTUP - HOT STANDBY TO RATED POWER	3.1.1 (2)	14.04.02.04	REACTOR STARTUP TEST
NUCLEAR STARTUP - HOT STANDBY TO RATED POWER	3.1.1 (2)	14.04.02.05	PLANT STARTUP FROM 0 PERCENT POWER TO FULL POWER CONDITION
REACTOR TRIP FOLLOWED BY RECOVERY TO RATED POWER	3.1.1 (4)	14.04.02.06	RECOVERY TO RATED POWER AFTER REACTOR TRIP
PLANT SHUTDOWN FROM RATED POWER TO HOT STANDBY	3.1.1 (8)	14.04.02.01	PLANT SHUTDOWN FROM 100 PERCENT POWER TO 0 PERCENT POWER
PLANT COOLDOWN FROM HOT STANDBY TO COLD SHUTDOWN	3.1.1 (8)	14.04.02.02	HOT SHUTDOWN TO COLD SHUTDOWN
CORE PERFORMANCE TESTING	3.1.1 (9)	14.04.06.01	INITIAL CRITICALITY AND LOW POWER PHYSICS

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
COMPUTER REAL TIME TEST	A3.1	14.04.06.04	SPARE MEMORY CHECKS
COMPUTER REAL TIME TEST	A3.1	14.04.06.05	DUTY CYCLE MEASUREMENT

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
MASS AND ENERGY BALANCE	4.1 (2)a	14.04.04.01	100 PERCENT POWER STEADY STATE HEAT BALANCE
MASS AND ENERGY BALANCE	4.1 (2)a	14.04.04.02	75 PERCENT POWER STEADY STATE HEAT BALANCE
MASS AND ENERGY BALANCE	4.1 (2)a	14.04.04.03	45 PERCENT POWER STEADY STATE HEAT BALANCE
MASS AND ENERGY BALANCE - RCS TEMPERATURE TO S/G PRESSURE	4.1 (2)b	14.04.05.03	RCS TEMPERATURE VS STEAM GENERATOR PRESSURE
MASS AND ENERGY BALANCE	4.1 (2)b	14.04.05.04	MAIN CONDENSER ENERGY BALANCE TEST
MASS AND ENERGY BALANCE	4.1 (2)b	14.04.05.05	SECONDARY MASS BALANCE
MASS AND ENERGY BALANCE - MASS BALANCE OF PRESSURIZER	4.1 (2)d	14.04.05.01	PRIMARY MASS BALANCE TEST
MASS AND ENERGY BALANCE - MASS BALANCE OF PRESSURIZER	4.1 (2)d	14.04.05.02	MASS BALANCE TEST ON SMALL BREAK LOCA
100% POWER STEADY STATE STABILITY TEST	B.2.1	14.04.03.01.01	STEADY STATE ACCURACY AND DRIFT TEST (100% BOL)
100% POWER STEADY STATE STABILITY TEST	B.2.1	14.04.03.01.02	STEADY STATE ACCURACY AND DRIFT TEST (100% MOL)
100% POWER STEADY STATE STABILITY TEST	B.2.1	14.04.03.01.03	STEADY STATE ACCURACY AND DRIFT TEST (100% EOL)
STEADY STATE STABILITY TEST	B.2.1	14.04.03.01.04	STEADY STATE ACCURACY AND DRIFT TEST (45% BOL)
STEADY STATE STABILITY TEST	B.2.1	14.04.03.01.05	STEADY STATE ACCURACY AND DRIFT TEST (45% EOL)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.01	ELECTRICAL DISTRIBUTION SYSTEM TEST (EPS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.01.01	ELECTRICAL DISTRIBUTION SYSTEM TEST - 6900 VOLT
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.01.02	ELECTRICAL DISTRIBUTION SYSTEM TEST - 480 VOLT
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.02	CONTAINMENT & CONTAINMENT HVAC SYSTEM TEST (CNM)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.03	SERVICE WATER SYSTEM TEST (SWS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.04	COMPONENT COOLING WATER SYSTEM TEST (CCW)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.06	COMPRESSED AIR SYSTEM TEST (CAS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.07	WASTE DISPOSAL SYSTEM TEST (WDS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.08	CONDENSATE AND FEEDWATER SYSTEM TEST (CFW)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.09	MAIN STEAM SYSTEM TEST (MSS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.10	STEAM GENERATOR & MAIN STEAM HEADER SYSTEM TEST (SGN)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.11	CIRCULATING WATER SYSTEM TEST (CWS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.12	NUCLEAR INSTRUMENTATION SYSTEM TEST (NIS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.13	RESIDUAL HEAT REMOVAL SYSTEM TEST (RHR)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.14	SPENT FUEL POOL COOLING SYSTEM TEST (SFP)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.15	CHEMICAL & VOLUME CONTROL SYSTEM TEST (CVC)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.16	REACTOR COOLANT SYSTEM TEST (RCS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.17	CONTAINMENT SPRAY SYSTEM TEST (CNS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.18	SAFETY INJECTION SYSTEM TEST (SIS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.19	INCORE SYSTEM TEST
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.20	REACTOR PROTECTION SYSTEM TEST
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.21	AUXILIARY FEEDWATER SYSTEM TEST (AFW)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.22	CONTROL ROD DRIVE & RPI SYSTEM TEST
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.23	RADIATION MONITORING SYSTEM TEST (RMS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.24	HEATER DRAINS & VENTS SYSTEM TEST
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.25	PRESSURIZER RELIEF TANK SYSTEM TEST (PRT)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.26	STEAM GENERATOR BLOWDOWN AND RECOVERY SYSTEM TEST (SGB)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.27	REACTOR MAKEUP WATER SYSTEM TEST (RMW)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.28	NUCLEAR SAMPLE SYSTEM TEST (NSS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.29	HEATING, VENTILATION, AND AIR CONDITIONING SYSTEM TEST (HVA)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.30	AUXILIARY STEAM SYSTEM TEST (ASB)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.31	MAIN GENERATOR AUXILIARIES SYSTEM TEST (MGA)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.32	MAIN GENERATOR SYSTEM TEST (GEN)

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.33	DIESEL GENERATOR SYSTEM TEST (DSG)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.34	DIESEL LOAD SEQUENCER SYSTEM TEST (DSQ)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.35	PLANT CONTROL SYSTEM TEST (PCS)
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.36	QUALIFIED SAFETY PARAMETER DISPLAY SYSTEM TEST
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.37	CRITICAL FUNCTION MONITORING SYSTEM TEST
SYSTEMS CONTROLLED FROM THE CONTROL ROOM	3.3.1	14.03.03.38	PLANT PROCESS COMPUTER SYSTEM TEST

ANSI 3.5 DESCRIPTION	ANSI 3.5 SECTION	IP3 TEST NUMBER	IP3 TEST TITLE
PLANT TRANSIENT TESTS	A.3.3 (1)	14.04.08.11	PLANT TRANSIENT (DIRECT TRIP FROM BUCHANAN 06/29/90)
MANUAL REACTOR TRIP	B.2.2 (1)	14.04.08.01	MANUAL REACTOR TRIP
SLOW RCS DEPRESSURIZATION TO SATURATED CONDITION	B.2.2 (10)	14.04.08.10	SLOW PRIMARY DEPRESSURIZATION TO SATURATED CONDITIONS
SIMULTANEOUS TRIP OF ALL FEEDWATER PUMPS	B.2.2 (2)	14.04.08.02	SIMULTANEOUS TRIP OF ALL FEEDWATER PUMPS
SIMULTANEOUS CLOSURE OF ALL MAIN STEAM ISOLATION VALVES	B.2.2 (3)	14.04.08.03	SIMULTANEOUS CLOSURE OF ALL MSIV'S
SIMULTANEOUS TRIP OF ALL REACTOR COOLANT PUMPS	B.2.2 (4)	14.04.08.04	SIMULTANEOUS TRIP OF ALL RCP'S
TRIP OF ANY SINGLE REACTOR COOLANT PUMP	B.2.2 (5)	14.04.08.05	TRIP OF A SINGLE RCP
MAIN TURBINE TRIP FROM 10% POWER	B.2.2 (6)	14.04.08.06	TURBINE TRIP < P-7
MAXIMUM RATE POWER RAMP - 100% TO 75% BACK TO 100%	B.2.2 (7)	14.04.08.07	MAXIMUM RATE POWER RAMP (100% - 75% - 100%)
MAXIMUM LARGE BREAK LOCA WITH LOSS OF OFFSITE POWER	B.2.2 (8)	14.04.08.08	100% RCS RUPTURE WITH LOSS OF ALL OFFSITE POWER
MAXIMUM SIZE UNISOLABLE MAIN STEAM LINE RUPTURE	B.2.2 (9)	14.04.08.09	UNISOLABLE 100% MAIN STEAM LINE RUPTURE

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

STP - 002 REV. 0

SIMULATOR TEST RESULTS ACCEPTANCE CRITERIA

Written by: C. Lambert

Reviewed by: J. C. Robinson

Approved by: _____ Date: 1/29/90

Effective Date: 1/30/90

SIMULATOR TEST RESULTS ACCEPTANCE CRITERIA

I. PURPOSE

To define the acceptance criteria to be used when evaluating test results of the IP3 Simulator Test Program.

II. DISCUSSION

Reg. Guide 1.149 and ANSI/ANS-3.5-1985 define the acceptance criteria for each type of required simulator testing. The IP3 Simulator Test Program has adopted these criteria and uses them as applicable for evaluation purposes.

III. REFERENCES

A. Title 10, Code of Federal Regulations, Part 55.45

B. Regulatory Guide 1.149, Rev. 1-1987, "NUCLEAR POWER PLANT SIMULATION FACILITIES FOR USE IN LICENSE OPERATOR EXAMINATIONS"

C. American National Standard, ANSI/ANS-3.5-1985, "NUCLEAR POWER PLANT SIMULATORS FOR USE IN OPERATOR TRAINING"

D. SCP-001, "IP3 SIMULATOR CERTIFICATION PROGRAM"

E. STP-001, "TYPES AND FREQUENCY OF TESTS"

IV. DEFINITIONS

Best estimate - Reference palnt response data based upon engineering evaluation or operational assessment.

Computed values - Physical paramters calculated by the simulator mathematical models and stored in computer memory.

Critical parameters -
(1) Those parameters that require direct and; continuous observation to operate the power plant under manual control.
(2) Input parameters to plant safety systems.

Real time - Simulation of dynamic performance in the same time base relationships, sequences, durations, rates and acceleration as the dynamic performance of the reference plant.

Reference plant - The specific nuclear power plant from which the simulator control room configuration, system control arrangement and simulator design data is derived.

V. PROCEDURE

A. Test Results Acceptance Criteria

1. Control Room Testing

a. All panels, devices, consoles, and controls available to the control room operators are replicated in the simulator.

b. All audible sounds heard by the control room operators are replicated in the simulator.

c. All plant systems manipulated by the control room operators are simulated either locally or remotely.

2. Malfunction Testing

a. Where applicable, the acceptance criteria shall be the same as plant startup test procedure criteria.

b. Observable changes in simulator parameters shall correspond in direction to those expected from a best estimate for the simulated transient and do not violate the physical laws of nature.

c. The simulator shall not fail to cause an alarm or automatic action if the reference plant would have caused an alarm or automatic action.

d. The simulator shall not cause an alarm or automatic action if the reference plant would not have caused an alarm or automatic action.

3. Normal Operations Testing

a. Where applicable, the acceptance criteria shall be the same as plant startup/surveillance test procedure criteria.

b. The simulated values of critical parameters shall be monitored with a 0.5 second resolution and shall not deviate more than +/-2% from the values of the reference plant parameters and

shall not detract from training.

c. The simulated values of noncritical parameters shall be monitored with a 0.5 second resolution and shall not deviate more than +/-10% from the values of the reference plant parameters and shall not detract from training.

4. Simulator Tests

a. For the computer real time test the acceptance criteria shall be that the combined CPU/IPU utilization shall not exceed 90%.

b. Other tests of this category shall demonstrate that the simulator is capable of performing as a training device according to the scope of function defined in the Instructor System documentation.

5. Steady State Tests

a. Where applicable, the acceptance criteria shall be the same as plant startup/surveillance test procedure criteria.

b. The simulated values of critical parameters shall be monitored with a 0.5 second resolution and shall not deviate more that +/-2% from the values of the reference plant parameters and shall not detract from training.

c. The simulated values of noncritical parameters shall be monitored with a 0.5 second resolution and shall not deviate more than +/-10% from the values of the reference plant parameters and shall not detract from training.

6. System Tests

a. Where applicable, the acceptance criteria shall be the same as plant startup test procedure criteria.

b. Observable changes in simulator parameters shall correspond in direction to those expected from a best estimate for the simulated transient and shall not violate the physical laws of nature.

c. The simulator shall not cause an alarm or automatic action if the refernece plant would not have caused an alarm or automatic action.

d. The simulator shall not fail to cause an alarm or automatic action if the refernce plant would have caused an alarm or automatic action.

7. Transient Tests

a. Simulated values of required parameters will be monitored at a resolution of 0.5 seconds. These values will be compared to actual plant response, analytical or design data, or results from other similar plants. Where this data is not reasonably available, a best estimate evaluation approach will be utilized.

b. Observable changes in simulator parameters shall correspond in direction to those expected from a best estimate for the simulated transient and do not violate the physical laws of nature.

c. The simulator shall not fail to cause an alarm or automatic action if the reference plant would have caused an alarm or automatic action.

d. The simulator shall not cause an alarm or automatic action if the reference plant would not have caused an alarm or automatic action.

5.B.1 Control Room Tests

Each of the tests in this series is designed to ensure that the equipment and environment of the simulator control room replicates the conditions found in the reference plant. This is accomplished by taking detailed photographs of all panels, equipment, and devices in the plant control room and then comparing them, item by item, to the simulator. Documentation of the checks performed is established through the use of device specific and generic checklists where applicable. When a difference is noted between a simulator item and the plant photograph, a Discrepancy Report is generated which serves as a tracking tool for successful completion of the test. This process has resulted in a very high degree of physical and functional fidelity. A computerized tracking system is utilized to maintain the status and scheduling of these tests.

A sample checklist is attached together with a report (as of February 3, 1991 on testing status and future scheduled performance dates.

Indian Point 3 Simulator
Certification Data sheet
for Test Number : 14.02.02.05.01

Printed : 01/10/91

Panel/Item number : AD/241 Component description : RCP 33 BEARING LIFT OIL PUMP CONT SW

Panel Section : SAF-SBF2 (Sections for RCS AND SAFEGUARDS CONTROLBOARD)

WESTINGHOUSE W2 MODULE
TWO LAMPS: RED- -GREEN
EZC MINILIGHTS LENSES 449D187G10(R),G20(G)
TYPE W-2 SWITCH:3 POSITION,SPRING RETURNED TO
CENTER WITH FLAG AND 'PULL-OUT'
ROUND HANDLE (P/N: 310C624H01)
PULL OUT,STOP,(NEUT),START
SWITCH P/N: 508A244G01 (PISTOL GRIP HANDLE)
SWITCH PURCHASE ORDER: MN-47836

	Results Agree	Results Disagree	D.R. Number
Device type correct	✓		
Number of switch positions correct	✓		
TRIP flags correct	✓		
Legend plate correct	✓		
Escutcon plate correct	N/A		
Handle type correct	✓		
Indicating arrow correct	✓		
Number of lamps correct	✓		
Lens colors correct	✓		
Number of meters correct	N/A		
Meter range correct			
Meter scale correct			
Meter text correct			
Meter pointer correct			
Meter backlit			
Number of Potentiometers correct			
Potentiometer scale correct			
Number of pens correct			
Correct pen assignments	✓		
Number of engravings correct	✓		
Color of engravings correct	✓		
Engraving text correct	✓		
Engraving letter size correct	✓		
Demarkation correct	✓		

Test Title...: AO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/19/90
Status.....: FAILED Last Performed..: 12/17/90
IC Number....: XX Next Scheduled..: 07/13/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: BO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/21/90
Status.....: FAILED Last Performed..: 12/13/90
IC Number....: XX Next Scheduled..: 07/20/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: CO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/24/90
Status.....: FAILED Last Performed..: 12/07/90
IC Number....: XX Next Scheduled..: 07/27/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: DO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/26/90
Status.....: FAILED Last Performed..: 12/03/90
IC Number....: XX Next Scheduled..: 08/03/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: EO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.05 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/28/90
Status.....: FAILED Last Performed..: 12/21/90
IC Number....: XX Next Scheduled..: 08/10/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: FO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.06 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/30/90
Status.....: FAILED Last Performed..: 01/03/91
IC Number....: XX Next Scheduled..: 08/17/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: PR PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.07 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/28/90
Status.....: FAILED Last Performed..: 01/06/91
IC Number....: XX Next Scheduled..: 08/17/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: DM PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.08 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 11/30/90
Status.....: PASSED Last Performed..: 01/06/91
IC Number....: XX Next Scheduled..: 08/17/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: VI PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.09 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/01/90
Status.....: PASSED Last Performed..: 01/06/91
IC Number....: XX Next Scheduled..: 08/31/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: LO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.10 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/01/90
Status.....: FAILED Last Performed..: 01/07/91
IC Number....: XX Next Scheduled..: 08/31/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: AC PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.11 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/01/90
Status.....: PASSED Last Performed..: 01/06/91
IC Number....: XX Next Scheduled..: 08/31/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: EV PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.12 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/01/90
Status.....: PASSED Last Performed..: 01/07/91
IC Number....: XX Next Scheduled..: 09/07/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: AM PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.13 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/01/90
Status.....: PASSED Last Performed..: 01/07/91
IC Number....: XX Next Scheduled..: 09/07/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: DC PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.14 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/03/90
Status.....: PASSED Last Performed..: 01/07/91
IC Number....: XX Next Scheduled..: 09/07/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: A1 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.15 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/03/90
Status.....: PASSED Last Performed..: 01/08/91
IC Number....: XX Next Scheduled..: 09/14/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: A6 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.16 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/03/90
Status.....: PASSED Last Performed..: 01/08/91
IC Number....: XX Next Scheduled..: 09/14/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: B1 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.17 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/03/90
Status.....: PASSED Last Performed..: 01/08/91
IC Number....: XX Next Scheduled..: 09/14/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: B6 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.18 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/03/90
Status.....: PASSED Last Performed..: 01/08/91
IC Number....: XX Next Scheduled..: 09/14/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: C1 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.19 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/04/90
Status.....: PASSED Last Performed..: 01/08/91
IC Number....: XX Next Scheduled..: 09/21/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: N1 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.20 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/04/90
Status.....: FAILED Last Performed..: 01/09/91
IC Number....: XX Next Scheduled..: 09/21/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: VM PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.21 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/04/90
Status.....: PASSED Last Performed..: 01/09/91
IC Number....: XX Next Scheduled..: 09/21/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: R1 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.22 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/04/90
Status.....: FAILED Last Performed..: 01/09/91
IC Number....: XX Next Scheduled..: 09/28/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: I1 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.23 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/04/90
Status.....: FAILED Last Performed..: 01/10/91
IC Number....: XX Next Scheduled..: 09/28/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: D8 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.24 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/04/90
Status.....: FAILED Last Performed..: 01/10/91
IC Number....: XX Next Scheduled..: 09/28/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: O2 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.25 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/01/90
Status.....: PASSED Last Performed..: 01/10/91
IC Number....: XX Next Scheduled..: 10/05/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: FP PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.26 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/05/90
Status.....: FAILED Last Performed..: 01/13/91
IC Number....: XX Next Scheduled..: 10/05/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: E2 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.27 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/05/90
Status.....: PASSED Last Performed..: 01/14/91
IC Number....: XX Next Scheduled..: 10/19/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: E7 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.28 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/05/90
Status.....: FAILED Last Performed..: 01/15/91
IC Number....: XX Next Scheduled..: 10/19/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: F2 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.29 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/05/90
Status.....: PASSED Last Performed..: 01/15/91
IC Number....: XX Next Scheduled..: 10/19/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: GP PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.30 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/05/90
Status.....: PASSED Last Performed..: 01/15/91
IC Number....: XX Next Scheduled..: 10/19/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: G3 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.31 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/05/90
Status.....: FAILED Last Performed..: 01/20/91
IC Number....: XX Next Scheduled..: 10/26/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: G5 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.32 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: FAILED Last Performed..: 01/23/91
IC Number....: XX Next Scheduled..: 10/26/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: 31 PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.33 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: PASSED Last Performed..: 01/24/91
IC Number....: XX Next Scheduled..: 11/02/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: SS PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.34 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: PASSED Last Performed..: 01/24/91
IC Number....: XX Next Scheduled..: 11/02/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: SRO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.35 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: FAILED Last Performed..: 01/25/91
IC Number....: XX Next Scheduled..: 11/02/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: RO PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.36 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: PASSED Last Performed..: 01/25/91
IC Number....: XX Next Scheduled..: 11/09/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: STA PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.37 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: PASSED Last Performed..: 01/25/91
IC Number....: XX Next Scheduled..: 11/09/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: QSPDS PANEL CONSTRUCTION CHECK PROCEDURE
Test No.....: 14.02.02.05.38 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 12/06/90
Status.....: PASSED Last Performed..: 01/26/91
IC Number....: XX Next Scheduled..: 11/09/91
ANSI Section.: A.1.2 (2)
ANSI Desc. ..: PANEL EQUIPMENT AND DEMARCATION CONFIGURATION

Test Title...: SIMULATOR LIGHTING FUNCTIONAL TEST
Test No.....: 14.02.02.17 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 12/06/90
Status.....: PASSED Last Performed..: 11/27/90
IC Number....: Next Scheduled..: 12/06/91
ANSI Section.: A.1.2 (4)
ANSI Desc. ..: SIMULATOR ENVIRONMENT - LIGHTING

Test Title...: CONTROL ROOM AUDIBLE SOUNDS
Test No.....: 14.02.02.18 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/31/91
Status.....: FAILED Last Performed..: 01/31/91
IC Number....: 12 Next Scheduled..: 11/16/91
ANSI Section.: A.1.2 (4)
ANSI Desc. ..: SIMULATOR ENVIRONMENT - AUDIBLE SOUNDS

5.B.2 Malfunction Tests

The tests in this series are designed to ensure that simulated plant malfunctions used for training or evaluation purposes produce realistic and predictable responses in comparison to the reference plant. Each of the malfunction tests have been written, reviewed, performed, and results analyzed by members of the plant operations staff, licensed operator training staff, and simulator support staff. Using this broad spectrum of personnel, with years of plant specific knowledge and experience has produced a test program yielding plant specific simulator responses based on sound principles of engineering.

A computerized tracking system is used to maintain the status and scheduling of these tests. Testing status as of February 3, 1991 and future scheduled performance dates are indicated in the attached report.

Test Title...: LOSS OF INSTRUMENT AIR (AIR-1)
Test No.....: 14.04.07.01.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/31/88
Status.....: PASSED Last Performed..: 03/31/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (2)
ANSI Desc. ..: LOSS OF INSTRUMENT AIR

Test Title...: LOSS OF STATION AIR (AIR-2)
Test No.....: 14.04.07.01.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/14/88
Status.....: PASSED Last Performed..: 03/14/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: INSTRUMENT AIR COMPRESSOR TRIP (AIR-3)
Test No.....: 14.04.07.01.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/06/88
Status.....: PASSED Last Performed..: 03/06/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: STATION AIR COMPRESSOR TRIP (AIR-4)
Test No.....: 14.04.07.01.04 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/06/88
Status.....: PASSED Last Performed..: 03/06/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: PRESSURIZATION SYSTEM LEAK (AIR-5)
Test No.....: 14.04.07.01.05 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/04/88
Status.....: PASSED Last Performed..: 04/04/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: COMPONENT COOLING WATER PUMP TRIP (CCW-1)
Test No.....: 14.04.07.02.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/22/88
Status.....: PASSED Last Performed..: 02/22/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: LOSS OF CCW TO RHR HEAT EXCHANGER (CCW-2)
Test No.....: 14.04.07.02.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: COMPONENT COOLING WATER PUMP SUCTION LINE LEAK (CCW-3)
Test No.....: 14.04.07.02.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/22/88
Status.....: PASSED Last Performed..: 02/22/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: COMPONENT COOLING WATER PUMP DISCHARGE LINE LEAK (CCW-4)
Test No.....: 14.04.07.02.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: CCW LEAK DOWNSTREAM OF THE CCW HEAT EXCHANGER (CCW-5)
Test No.....: 14.04.07.02.05 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: CCW LEAK UPSTREAM OF RHR HEAT EXCHANGER (CCW-6)
Test No.....: 14.04.07.02.06 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/19/88
Status.....: PASSED Last Performed..: 03/19/88
IC Number....: 2 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: LOSS OF CCW TO REACTOR COOLANT PUMPS (CCW-7)
Test No.....: 14.04.07.02.07 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: LOSS OF CCW TO NON-REGENERATIVE HEAT EXCHANGER (CCW-8)
Test No.....: 14.04.07.02.08 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 05/30/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: LOSS OF CCW TO THE SEAL WATER HEAT EXCHANGER (CCW-9)
Test No.....: 14.04.07.02.09 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (8)
ANSI Desc. ..: LOSS OF COMPONENT COOLING WATER

Test Title...: CIRCULATING WATER PUMP TRIP (CWS-1)
Test No.....: 14.04.07.03.01 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: CIRCULATING WATER PUMP SPEED CONTROL FAILURE (CWS-2)
Test No.....: 14.04.07.03.02 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MAIN CONDENSER TUBE LEAK (CWS-3)
Test No.....: 14.04.07.03.03 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/24/88
Status.....: PASSED Last Performed..: 02/24/88
IC Number....: 9 Next Scheduled..: 03/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: CWS PUMP LCI DRIVE UNIT FAULT (CWS-4)
Test No.....: 14.04.07.03.04 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: HOTWELL LEVEL TRANSMITTER FAILURE (CND-1)
Test No.....: 14.04.07.04.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (5)
ANSI Desc. ..: LOSS OF CONDENSER LEVEL CONTROL

Test Title...: LOSS OF CONDENSER VACUUM (CND-2)
Test No.....: 14.04.07.04.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (5)
ANSI Desc. ..: LOSS OF CONDENSER VACUUM

Test Title...: FAILED FUEL ELEMENT (RTC-1)
Test No.....: 14.04.07.05.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 09/21/88
Status.....: PASSED Last Performed..: 09/21/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (14)
ANSI Desc. ..: FUEL CLADDING FAILURE

Test Title...: POWER CABINET FAILURE (CRF-1)
Test No.....: 14.04.07.06.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/30/88
Status.....: PASSED Last Performed..: 03/30/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (13)
ANSI Desc. ..: INABILITY TO DRIVE CONTROL RODS

Test Title...: RODS FAIL TO MOVE (CRF-2)
Test No.....: 14.04.07.06.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/05/88
Status.....: PASSED Last Performed..: 03/05/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (13)
ANSI Desc. ..: INABILITY TO DRIVE CONTROL RODS

Test Title...: DROPPED ROD (CRF-3)
Test No.....: 14.04.07.06.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/24/88
Status.....: PASSED Last Performed..: 03/24/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (12)
ANSI Desc. ..: CONTROL ROD FAILURE - ROD DROPS

Test Title...: STUCK ROD (CRF-4A)
Test No.....: 14.04.07.06.04.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/19/88
Status.....: PASSED Last Performed..: 03/19/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (12)
ANSI Desc. ..: CONTROL ROD FAILURE - STUCK RODS

Test Title...: STUCK ROD (CRF-4B)
Test No.....: 14.04.07.06.04.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/05/88
Status.....: PASSED Last Performed..: 03/05/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (12)
ANSI Desc. ..: CONTROL ROD FAILURE - STUCK RODS

Test Title...: CONTROL ROD EJECTION (CRF-5)
Test No.....: 14.04.07.06.05 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/07/88
Status.....: PASSED Last Performed..: 04/07/88
IC Number....: 8 Next Scheduled..: 03/31/92
ANSI Section.: A.3.3 (2)
ANSI Desc. ..: RUPTURE OF A CONTROL ROD DRIVE HOUSING - RCCA EJECTION

Test Title...: UNCONTROLLED ROD MOTION IN AUTO (CRF-6)
Test No.....: 14.04.07.06.06 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/05/88
Status.....: PASSED Last Performed..: 03/05/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: UNCONTROLLED ROD MOTION IN MANUAL (CRF-7)
Test No.....: 14.04.07.06.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/05/88
Status.....: PASSED Last Performed..: 03/05/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: FAILURE OF AUTOMATIC ROD SPEED SIGNAL (CRF-8)
Test No.....: 14.04.07.06.08 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/05/88
Status.....: PASSED Last Performed..: 03/05/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: TREF ROD CONTROL FAILURE (CRF-9)
Test No.....: 14.04.07.06.09 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/17/88
Status.....: PASSED Last Performed..: 03/17/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: FAILURE OF ROD POSITION INDICATOR (CRF-10)
Test No.....: 14.04.07.06.10 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/25/88
Status.....: PASSED Last Performed..: 03/25/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: IMPROPER BANK OVERLAP (CRF-11)
Test No.....: 14.04.07.06.11 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/05/88
Status.....: PASSED Last Performed..: 03/05/88
IC Number....: 7 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: FAILURE OF ROD BLOCKS TO BLOCK (CRF-12)
Test No.....: 14.04.07.06.12 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: CONTAINMENT LETDOWN ISOLATION VALVE FAILURE (CVC-1)
Test No.....: 14.04.07.07.01 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: REGENERATIVE HEAT EXCHANGER TUBE LEAK (CVC-2)
Test No.....: 14.04.07.07.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/24/88
Status.....: PASSED Last Performed..: 03/24/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: LETDOWN LINE LEAK INSIDE CONTAINMENT (CVC-3)
Test No.....: 14.04.07.07.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT INSIDE CONTAINMENT

Test Title...: LETDOWN LINE LEAK OUTSIDE CONTAINMENT (CVC-4)
Test No.....: 14.04.07.07.04 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/06/88
Status.....: PASSED Last Performed..: 03/06/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT OUTSIDE CONTAINMENT

Test Title...: CHARGING PUMP TRIP (CVC-5)
Test No.....: 14.04.07.07.05 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: CHARGING PUMP SPEED CONTROL FAILURE (CVC-6)
Test No.....: 14.04.07.07.06 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/24/88
Status.....: PASSED Last Performed..: 02/24/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: MAKEUP CONTROL FAILURE IN AUTOMATIC MODE (CVC-7)
Test No.....: 14.04.07.07.07 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 02/02/90
Status.....: PASSED Last Performed..: 02/02/90
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: VCT LEVEL CONTROL FAILURE - HIGH (CVC-8)
Test No.....: 14.04.07.07.08.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/24/88
Status.....: PASSED Last Performed..: 02/24/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: VCT LEVEL CONTROL FAILURE - LOW (CVC-8)
Test No.....: 14.04.07.07.08.02 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/02/90
Status.....: PASSED Last Performed..: 02/02/90
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: RCS BORATION (CVC-9)
Test No.....: 14.04.07.07.09 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: CHARGING LINE LEAK AT REGENERATIVE HX INLET (CVC-10)
Test No.....: 14.04.07.07.10 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/19/88
Status.....: PASSED Last Performed..: 03/19/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT INSIDE CONTAINMENT

Test Title...: NON-REGENERATIVE HX TUBE LEAK (CVC-11)
Test No.....: 14.04.07.07.11 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: SEAL WATER HEAT EXCHANGER TUBE LEAK (CVC-12)
Test No.....: 14.04.07.07.12 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PLUGGED RCS FILTER (CVC-13)
Test No.....: 14.04.07.07.13 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/24/88
Status.....: PASSED Last Performed..: 02/24/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PLUGGED SEAL INJECTION FILTER (CVC-14)
Test No.....: 14.04.07.07.14 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PLUGGED BORIC ACID FILTER (CVC-15)
Test No.....: 14.04.07.07.15 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/24/88
Status.....: PASSED Last Performed..: 02/24/88
IC Number....: 12 Next Scheduled..: 03/31/94
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PLUGGED SEAL WATER RETURN FILTER (CVC-16)
Test No.....: 14.04.07.07.16 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/24/88
Status.....: PASSED Last Performed..: 02/24/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PT-135 FAILURE - FULL OPEN (CVC-17)
Test No.....: 14.04.07.07.17.01 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/25/88
Status.....: PASSED Last Performed..: 02/25/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PT-135 FAILURE - FULL OPEN (CVC-17)
Test No.....: 14.04.07.07.17.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/25/88
Status.....: PASSED Last Performed..: 02/25/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: CHARGING LINE LEAK AT CHARGING PUMP DISCHARGE (CVC-18)
Test No.....: 14.04.07.07.18 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/06/88
Status.....: PASSED Last Performed..: 03/06/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: CHARGING LINE LEAK DOWNSTREAM OF REGENERATIVE HX (CVC-19)
Test No.....: 14.04.07.07.19 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/30/88
Status.....: PASSED Last Performed..: 03/30/88
IC Number....: 12 Next Scheduled..: 03/31/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: BORIC ACID CONTROL DEVIATION (CVC-20)
Test No.....: 14.04.07.07.20 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/23/88
Status.....: PASSED Last Performed..: 03/23/88
IC Number....: 12 Next Scheduled..: 03/31/93
ANSI Section.: 3.1.2 (17)
ANSI Desc. ..: FAILURE OF AUTOMATIC CONTROLS - REACTIVITY

Test Title...: DIESEL GENERATOR FAILURE (DSG-1)
Test No.....: 14.04.07.08.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: DIESEL GENERATOR BREAKER INADVERTANT TRIP (DSG-2)
Test No.....: 14.04.07.08.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/08/88
Status.....: PASSED Last Performed..: 03/08/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - EMERGENCY

Test Title...: STATION BLACKOUT (EPS-1)
Test No.....: 14.04.07.09.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - OFFSITE

Test Title...: LOSS OF 120 VAC INSTRUMENT BUS (EPS-2)
Test No.....: 14.04.07.09.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/22/88
Status.....: PASSED Last Performed..: 03/22/88
IC Number....: 12 Next Scheduled..: 05/30/91
ANSI Section.: 3.1.2 (11)
ANSI Desc. ..: LOSS OF PROTECTIVE SYSTEM CHANNEL

Test Title...: LOSS OF 125 VDC BUSS (EPS-3)
Test No.....: 14.04.07.09.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/11/88
Status.....: PASSED Last Performed..: 03/11/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - ONSITE

Test Title...: LOSS OF 6900 VOLT BUS (EPS-4)
Test No.....: 14.04.07.09.04 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - ONSITE

Test Title...: LOSS OF 480 VOLT BUS (EPS-5)
Test No.....: 14.04.07.09.05 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - ONSITE

Test Title...: LOSS OF STATION AUXILIARY TRANSFORMER (EPS-6)
Test No.....: 14.04.07.09.06 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - OFFSITE

Test Title...: LOSS OF UNIT AUXILIARY TRANSFORMER (EPS-7)
Test No.....: 14.04.07.09.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - ONSITE

Test Title...: LOSS OF MOTOR CONTROL CENTER (EPS-8)
Test No.....: 14.04.07.09.08 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (3)
ANSI Desc. ..: LOSS OF ELECTRICAL POWER - ONSITE

Test Title...: SYNCH CHECK RELAY FAILURE (EPS-9)
Test No.....: 14.04.07.09.09 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: 345 KV MOTOR OPERATED DISCONNECT FAILURE (EPS-10D)
Test No.....: 14.04.07.09.10.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/13/88
Status.....: PASSED Last Performed..: 04/13/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: A.3.3 (2)
ANSI Desc. ..: LOSS OF EXTERNAL ELECTRICAL LOAD

Test Title...: 345 KV MOTOR OPERATED DISCONNECT FAILURE (EPS-10E)
Test No.....: 14.04.07.09.10.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/13/88
Status.....: PASSED Last Performed..: 04/13/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: A.3.3 (2)
ANSI Desc. ..: LOSS OF EXTERNAL ELECTRICAL LOAD

Test Title...: AUXILIARY FEEDWATER PUMP TRIP (CFW-1)
Test No.....: 14.04.07.11.01 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/27/88
Status.....: PASSED Last Performed..: 02/27/88
IC Number....: 8 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY FEEDWATER SYSTEM

Test Title...: AUXILIARY FEEDWATER LINE RUPTURE (CFW-2)
Test No.....: 14.04.07.11.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/27/88
Status.....: PASSED Last Performed..: 02/27/88
IC Number....: 8 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: AUXILIARY FEEDWATER FLOW CONTROL VALVE FAILURE (CFW-3)
Test No.....: 14.04.07.11.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/27/88
Status.....: PASSED Last Performed..: 02/27/88
IC Number....: 8 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY FEEDWATER SYSTEM

Test Title...: LOW FLOW FEEDWATER REG VALVE FAILURE (CFW-4)
Test No.....: 14.04.07.11.04 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/11/88
Status.....: PASSED Last Performed..: 03/11/88
IC Number....: 8 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: CONDENSATE PUMP TRIP (CFW-5)
Test No.....: 14.04.07.11.05 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: CONDENSATE BOOSTER PUMP TRIP (CFW-6)
Test No.....: 14.04.07.11.06 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/27/88
Status.....: PASSED Last Performed..: 02/27/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: HEATER DRAIN PUMP TRIP (CFW-7)
Test No.....: 14.04.07.11.07 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: HP FEEDWATER HEATER TUBE LEAK (CFW-8)
Test No.....: 14.04.07.11.08 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: LP FEEDWATER HEATER TUBE LEAK (CFW-9)
Test No.....: 14.04.07.11.09 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: CONDENSATE POLISHER FACILITY BYPASS VALVE FAILURE (CFW-10)
Test No.....: 14.04.07.11.10 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: CONDENSATE POLISHER FACILITY LINE BREAK (CFW-11)
Test No.....: 14.04.07.11.11 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: FEEDWATER FLOW TRANSMITTER FAILURE (CFW-12)
Test No.....: 14.04.07.11.12 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: FEEDWATER REGULATION VALVE CONTROLLER FAILURE (CFW-13)
Test No.....: 14.04.07.11.13 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 9 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: FEEDLINE BREAK INSIDE CONTAINMENT (CFW-14)
Test No.....: 14.04.07.11.14 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (20)
ANSI Desc. ..: MAIN FEED LINE BREAK - INSIDE CONTAINMENT

Test Title...: FEEDLINE BREAK OUTSIDE CONTAINMENT (CFW-15)
Test No.....: 14.04.07.11.15 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (20)
ANSI Desc. ..: MAIN FEED LINE BREAK - OUTSIDE CONTAINMENT

Test Title...: MBFP CHECK VALVE FAILURE (CFW-16)
Test No.....: 14.04.07.11.16 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 9 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: CLOGGED SERVICE VESSEL (CFW-17)
Test No.....: 14.04.07.11.17 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: POST FILTER FAILURE (CFW-18)
Test No.....: 14.04.07.11.18 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: CBP DISCHARGE MOV FAILURE (CFW-19)
Test No.....: 14.04.07.11.19 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/29/88
Status.....: PASSED Last Performed..: 02/29/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: MAIN GENERATOR VOLTAGE REGULATOR FAILURE (GEN-1)
Test No.....: 14.04.07.12.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MAIN GENERATOR TRIP (GEN-2)
Test No.....: 14.04.07.12.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (16)
ANSI Desc. ..: GENERATOR TRIP

Test Title...: VOLTAGE REGULATOR OSCILLATION (GEN-3)
Test No.....: 14.04.07.12.03 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: LOSS OF GENERATOR EXCITATION (GEN-4)
Test No.....: 14.04.07.12.04 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: MAIN GENERATOR OUTPUT BREAKER CONTROL FAILURE (GEN-5)
Test No.....: 14.04.07.12.05.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: MAIN GENERATOR OUTPUT BREAKER CONTROL FAILURE (GEN-5)
Test No.....: 14.04.07.12.05.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: MAIN GENERATOR PT FUSE FAILURE (GEN-6)
Test No.....: 14.04.07.12.06 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/04/88
Status.....: PASSED Last Performed..: 04/04/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: FAN COOLER UNIT TRIP (HVA-1)
Test No.....: 14.04.07.13.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: FIRESTAT SENSOR FAILURE (HVA-2)
Test No.....: 14.04.07.13.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/09/88
Status.....: PASSED Last Performed..: 03/09/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: STEAM LINE BREAK INSIDE CONTAINMENT (MSS-1)
Test No.....: 14.04.07.14.01 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (20)
ANSI Desc. ..: MAIN STEAM LINE BREAK - INSIDE CONTAINMENT

Test Title...: STEAM LINE BREAK OUTSIDE CONTAINMENT (MSS-2)
Test No.....: 14.04.07.14.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (20)
ANSI Desc. ..: MAIN STEAM LINE BREAK - OUTSIDE CONTAINMENT

Test Title...: STEAM HEADER PRESSURE DETECTOR PT-404 FAILURE (MSS-3)
Test No.....: 14.04.07.14.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/17/88
Status.....: PASSED Last Performed..: 03/17/88
IC Number....: 8 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: STEAM LINE FLOW TRANSMITTER FAILURE (MSS-4)
Test No.....: 14.04.07.14.04 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/14/88
Status.....: PASSED Last Performed..: 03/14/88
IC Number....: 9 Next Scheduled..: 07/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MAIN STEAM ISOLATION VALVE FAILURE (MSS-5)
Test No.....: 14.04.07.14.05 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 07/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: STEAM DUMP FAILS TO SELECTED POSITION (MSS-6)
Test No.....: 14.04.07.14.06 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/09/88
Status.....: PASSED Last Performed..: 03/09/88
IC Number....: 8 Next Scheduled..: 06/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: STEAM DUMP CONTROL FAILURE (MSS-7)
Test No.....: 14.04.07.14.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 9 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: TURBINE TRIP ARMING FAILURE (MSS-8)
Test No.....: 14.04.07.14.08 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MAIN STEAM HEADER BREAK (MSS-9)
Test No.....: 14.04.07.14.09 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/17/88
Status.....: PASSED Last Performed..: 03/17/88
IC Number....: 12 Next Scheduled..: 06/30/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: INADVERTENT MAIN STEAM ISOLATION (MSS-10)
Test No.....: 14.04.07.14.10 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: REHEAT STEAM SUPPLY VALVE FAILURE (MSS-11)
Test No.....: 14.04.07.14.11 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 12 Next Scheduled..: 06/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: GLAND SEAL REGULATOR FAILURE (MSS-12)
Test No.....: 14.04.07.14.12 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 8 Next Scheduled..: 06/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: SOURCE RANGE CHANNEL FAILURE (NIS-1)
Test No.....: 14.04.07.15.01 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 6 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - SOURCE RANGE

Test Title...: NOISY SOURCE RANGE CHANNEL (NIS-2)
Test No.....: 14.04.07.15.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/17/88
Status.....: PASSED Last Performed..: 03/17/88
IC Number....: 6 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - SOURCE RANGE

Test Title...: SOURCE RANGE CHANNEL HI-VOLTS FAILURE (NIS-3)
Test No.....: 14.04.07.15.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 6 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - SOURCE RANGE

Test Title...: INTERMEDIATE RANGE CHANNEL FAILURE (NIS-4)
Test No.....: 14.04.07.15.04 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 7 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - INTERMEDIATE RANGE

Test Title...: INTERMEDIATE RANGE COMPENSATING VOLTAGE FAILURE (NIS-5)
Test No.....: 14.04.07.15.05 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/25/88
Status.....: PASSED Last Performed..: 03/25/88
IC Number....: 7 Next Scheduled..: 06/30/93
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - INTERMEDIATE RANGE

Test Title...: POWER RANGE DETECTOR FAILURE (NIS-6)
Test No.....: 14.04.07.15.06 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE

Test Title...: POWER RANGE FAILURE (NIS-7)
Test No.....: 14.04.07.15.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/11/88
Status.....: PASSED Last Performed..: 04/11/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE

Test Title...: POWER RANGE OUTPUT OSCILLATION (NIS-8)
Test No.....: 14.04.07.15.08 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 9 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE

Test Title...: INTERMEDIATE RANGE BLOWN FUSE (NIS-9)
Test No.....: 14.04.07.15.09 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/22/88
Status.....: PASSED Last Performed..: 03/22/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - INTERMEDIATE RANGE

Test Title...: POWER RANGE FUSE BLOWN (NIS-10)
Test No.....: 14.04.07.15.10 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 9 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (21)
ANSI Desc. ..: NUCLEAR INSTRUMENTATION FAILURES - POWER RANGE

Test Title...: PRESSURIZER STEAM SPACE LEAK (PRS-1)
Test No.....: 14.04.07.16.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT INSIDE CONTAINMENT

Test Title...: PRESSURIZER SPRAY VALVE FAILURE (PRS-2)
Test No.....: 14.04.07.16.02 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 01/23/90
Status.....: PASSED Last Performed..: 01/23/90
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: PRESSURIZER RELIEF VALVE FAILURE (PRS-3)
Test No.....: 14.04.07.16.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/30/88
Status.....: PASSED Last Performed..: 03/30/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (1)d
ANSI Desc. ..: FAILURE OF PRESSURIZER RELIEF VALVES

Test Title...: PRESSURIZER SAFETY VALVE FAILS OPEN (PRS-4)
Test No.....: 14.04.07.16.04 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (1)d
ANSI Desc. ..: FAILURE OF PRESSURIZER SAFETY VALVES

Test Title...: PRESSURIZER PRESSURE TRANSMITTER FAILURE - CONTROL -(PRS-5)
Test No.....: 14.04.07.16.05.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PRESSURIZER PRESSURE TRANSMITTER FAILURE - BISTABLE -(PRS-5)
Test No.....: 14.04.07.16.05.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PRESSURIZER LEVEL TRANSMITTER FAILURE (PRS-6)
Test No.....: 14.04.07.16.06.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PRESSURIZER LEVEL TRANSMITTER FAILURE (PRS-6)
Test No.....: 14.04.07.16.06.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/06/88
Status.....: PASSED Last Performed..: 03/06/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PRESSURIZER HEATERS FAIL OFF (PRS-7)
Test No.....: 14.04.07.16.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/25/88
Status.....: PASSED Last Performed..: 02/25/88
IC Number....: 12 Next Scheduled..: 06/30/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PRESSURIZER PRESSURE CONTROLLER FAILURE - HIGH - (PRS-8)
Test No.....: 14.04.07.16.08.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS PRESSURE CONTROLS

Test Title...: PRESSURIZER PRESSURE CONTROLLER FAILURE - LOW - (PRS-8)
Test No.....: 14.04.07.16.08.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS PRESSURE CONTROLS

Test Title...: PRESSURIZER LEVEL CONTROLLER FAILURE - HIGH - (PRS-9)
Test No.....: 14.04.07.16.09.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/26/88
Status.....: PASSED Last Performed..: 02/26/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PRESSURIZER LEVEL CONTROLLER FAILURE - LOW - (PRS-9)
Test No.....: 14.04.07.16.09.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/27/88
Status.....: PASSED Last Performed..: 02/27/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS VOLUME CONTROL SYSTEM

Test Title...: PRESSURIZER TEMPERATURE TRANSMITTER FAILURE (PRS-10)
Test No.....: 14.04.07.16.10 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/08/88
Status.....: PASSED Last Performed..: 03/08/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: OPS SYSTEM SETPOINT CALCULATOR FAILURE (PRS-11)
Test No.....: 14.04.07.16.11 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 2 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PRESSURIZER HEATERS FAIL ON (PRS-12)
Test No.....: 14.04.07.16.12 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/01/88
Status.....: PASSED Last Performed..: 03/01/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (18)
ANSI Desc. ..: FAILURE OF RCS PRESSURE CONTROLS

Test Title...: FAILURE OF PRESSURIZER LEVEL SENSING LINE (PRS-13)
Test No.....: 14.04.07.16.13.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/17/88
Status.....: PASSED Last Performed..: 03/17/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: FAILURE OF PRESSURIZER LEVEL SENSING LINE (PRS-13)
Test No.....: 14.04.07.16.13.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCS RUPTURE - LOCA (RCS-1)
Test No.....: 14.04.07.17.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (1)c
ANSI Desc. ..: LARGE BREAK RCS LOCA

Test Title...: REACTOR COOLANT PUMP TRIP - ABOVE P8 (RCS-2)
Test No.....: 14.04.07.17.02.01 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (4)
ANSI Desc. ..: LOSS OF FORCED CORE COOLANT FLOW

Test Title...: REACTOR COOLANT PUMP TRIP - BELOW P8 (RCS-2)
Test No.....: 14.04.07.17.02.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 9 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (4)
ANSI Desc. ..: LOSS OF FORCED CORE COOLANT FLOW

Test Title...: RCP LOCKED ROTOR (RCS-3)
Test No.....: 14.04.07.17.03 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 9 Next Scheduled..: 09/30/92
ANSI Section.: A.3.3 (2)
ANSI Desc. ..: LOSS OF REACTOR COOLANT FLOW - LOCKED ROTOR ACCIDENT

Test Title...: RCP SHAFT BREAK (RCS-4)
Test No.....: 14.04.07.17.04 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCS LEAK (RCS-5)
Test No.....: 14.04.07.17.05 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (1)c
ANSI Desc. ..: SMALL BREAK RCS LOCA

Test Title...: HOT LEG NARROW RANGE RTD MICROPROCESSOR FAILURE (RCS-6)
Test No.....: 14.04.07.17.06 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/17/90
Status.....: In REVIEW Last Performed..: 10/17/90
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCP VIBRATION (RCS-7)
Test No.....: 14.04.07.17.07 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 03/09/88
Status.....: PASSED Last Performed..: 03/09/88
IC Number....: 9 Next Scheduled..: 09/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: REACTOR VESSEL FLANGE LEAK (RCS-8)
Test No.....: 14.04.07.17.08 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: OIL LEAK FROM RCP BEARING OIL RESERVOIRS (RCS-9)
Test No.....: 14.04.07.17.09 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCP THERMAL BARRIER LEAK (RCS-10)
Test No.....: 14.04.07.17.10 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/08/88
Status.....: PASSED Last Performed..: 03/08/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCS FLOW TRANSMITTER FAILURE (RCS-11)
Test No.....: 14.04.07.17.11 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: RCP NUMBER 1 SEAL FAILURE (RCS-12)
Test No.....: 14.04.07.17.12 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCP NUMBER 2 SEAL FAILURE (RCS-13)
Test No.....: 14.04.07.17.13 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCP NUMBER 3 SEAL FAILURE (RCS-14)
Test No.....: 14.04.07.17.14 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: RCS WIDE RANGE RTD FAILURE (RCS-15)
Test No.....: 14.04.07.17.15 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/09/88
Status.....: PASSED Last Performed..: 03/09/88
IC Number....: 5 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: RCP THRUST BEARING FAILURE (RCS-16)
Test No.....: 14.04.07.17.16 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: FAILURE OF FLOW TAP PENETRATION (RCS-17)
Test No.....: 14.04.07.17.17.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/21/88
Status.....: PASSED Last Performed..: 03/21/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT INSIDE CONTAINMENT

Test Title...: FAILURE OF FLOW TAP PENETRATION (RCS-17)
Test No.....: 14.04.07.17.17.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/08/88
Status.....: PASSED Last Performed..: 04/08/88
IC Number....: 9 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT INSIDE CONTAINMENT

Test Title...: FAILURE OF RCP START PERMISSIVE (RCS-18)
Test No.....: 14.04.07.17.18 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: HOT LEG NARROW RANGE RTD FAILURE (RCS-19)
Test No.....: 14.04.07.17.19 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/17/90
Status.....: In REVIEW Last Performed..: 10/18/90
IC Number....: 12 Next Scheduled..: 10/17/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: COLD LEG NARROW RANGE RTD FAILURE (RCS-20)
Test No.....: 14.04.07.17.20.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/17/90
Status.....: In REVIEW Last Performed..: 10/17/90
IC Number....: 12 Next Scheduled..: 10/17/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: COLD LEG NARROW RANGE RTD FAILURE (RCS-20)
Test No.....: 14.04.07.17.20.02 Cert Test(Y/N)..: Y
Revision.....: Last Scheduled..: 10/17/90
Status.....: In REVIEW Last Performed..: 10/17/90
IC Number....: 12 Next Scheduled..: 10/17/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: RHR PUMP TRIP (RHR-1)
Test No.....: 14.04.07.18.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/22/88
Status.....: PASSED Last Performed..: 03/22/88
IC Number....: 1 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (7)
ANSI Desc. ..: LOSS OF SHUTDOWN COOLING

Test Title...: RHR HEAT EXCHANGER TUBE LEAK (RHR-2)
Test No.....: 14.04.07.18.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/12/88
Status.....: PASSED Last Performed..: 04/12/88
IC Number....: 1 Next Scheduled..: 10/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: RHR PUMP SUCTION LINE BREAK (RHR-3)
Test No.....: 14.04.07.18.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/31/88
Status.....: PASSED Last Performed..: 03/31/88
IC Number....: 1 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (1)b
ANSI Desc. ..: LOSS OF COOLANT OUTSIDE CONTAINMENT

Test Title...: AREA RADIATION MONITOR FAILURE (RMS-1)
Test No.....: 14.04.07.19.01.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: AREA RADIATION MONITOR FAILURE (RMS-1)
Test No.....: 14.04.07.19.01.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/30/88
Status.....: PASSED Last Performed..: 03/30/88
IC Number....: 12 Next Scheduled..: 09/30/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: PROCESS RADIATION MONITOR FAILURE (RMS-2)
Test No.....: 14.04.07.19.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: INADVERTANT REACTOR TRIP (RPS-1)
Test No.....: 14.04.07.20.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/21/88
Status.....: PASSED Last Performed..: 03/21/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (19)
ANSI Desc. ..: REACTOR TRIP

Test Title...: REACTOR TRIP BREAKERS FAIL TO OPEN - AUTO (RPS-2)
Test No.....: 14.04.07.20.02.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/08/88
Status.....: PASSED Last Performed..: 04/08/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (24)
ANSI Desc. ..: FAILURE OF THE AUTOMATIC REACTOR TRIP SYSTEM

Test Title...: REACTOR TRIP BREAKERS FAIL TO OPEN - MANUAL (RPS-2)
Test No.....: 14.04.07.20.02.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/20/88
Status.....: PASSED Last Performed..: 03/20/88
IC Number....: 12 Next Scheduled..: 10/31/91
ANSI Section.: 3.1.2 (24)
ANSI Desc. ..: FAILURE OF THE AUTOMATIC REACTOR TRIP SYSTEM

Test Title...: PERMISSIVE FAILURE (RPS-3)
Test No.....: 14.04.07.20.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 9 Next Scheduled..: 09/30/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: STEAM GENERATOR LEVEL TRANSMITTER FAILURE - HIGH (SGN-1)
Test No.....: 14.04.07.21.01.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: STEAM GENERATOR LEVEL TRANSMITTER FAILURE - LOW (SGN-1)
Test No.....: 14.04.07.21.01.02 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: STEAM GENERATOR PRESSURE TRANSMITTER FAILURE (SGN-2)
Test No.....: 14.04.07.21.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 9 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: STEAM GENERATOR RELIEF VALVE CONTROLLER FAILURE (SGN-3)
Test No.....: 14.04.07.21.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.:
ANSI Desc. ..: FAILURE OF STEAM GENERATOR ATMOPHERIC RELIEF VALVES

Test Title...: STEAM GENERATOR SAFETY VALVE FAILURE (SGN-4)
Test No.....: 14.04.07.21.04 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 12 Next Scheduled..: 09/30/92
ANSI Section.:
ANSI Desc. ..: FAILURE OF STEAM GENERATOR SAFETY VALVES

Test Title...: STEAM GENERATOR TUBE LEAK (SGN-5)
Test No.....: 14.04.07.21.05 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/06/90
Status.....: PASSED Last Performed..: 02/06/90
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (1)a
ANSI Desc. ..: STEAM GENERATOR TUBE LEAK/RUPTURE

Test Title...: S/G LEVEL CONTROLLER OSCILLATION (SGN-6)
Test No.....: 14.04.07.21.06 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: FAILURE OF S/G LEVEL TRANSMITTER SENSING LINE (SGN-7)
Test No.....: 14.04.07.21.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: SAFETY INJECTION FAILURE (SIS-1)
Test No.....: 14.04.07.22.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/18/88
Status.....: PASSED Last Performed..: 04/18/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: ACCUMULATOR LEAKAGE (SIS-2)
Test No.....: 14.04.07.22.02 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/07/90
Status.....: PASSED Last Performed..: 07/07/90
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: ACCUMULATOR NITROGEN LEAKAGE (SIS-3)
Test No.....: 14.04.07.22.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 01/25/90
Status.....: PASSED Last Performed..: 01/25/90
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: SAFETY INJECTION PUMP TRIP (SIS-4)
Test No.....: 14.04.07.22.04 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: SIS CHECK VALVE LEAKAGE (SIS-5)
Test No.....: 14.04.07.22.05.01 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 09/30/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: SIS CHECK VALVE LEAKAGE (SIS-5)
Test No.....: 14.04.07.22.05.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: SAFETY INJECTION LINE LEAK (SIS-6)
Test No.....: 14.04.07.22.06 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: INADVERTENT SAFETY INJECTION ACTUATION (SIS-7)
Test No.....: 14.04.07.22.07 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/04/88
Status.....: PASSED Last Performed..: 03/04/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: FALSE CONTAINMENT SPRAY ACTUATION (CNS-1)
Test No.....: 14.04.07.23.01 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: CONTAINMENT SPRAY PUMP FAILURE (CNS-2)
Test No.....: 14.04.07.23.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/05/90
Status.....: PASSED Last Performed..: 02/05/90
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: RECIRCULATION PUMP TRIP (CNS-3)
Test No.....: 14.04.07.23.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/21/88
Status.....: PASSED Last Performed..: 03/21/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.: 3.1.2 (7)
ANSI Desc. ..: LOSS OF SHUTDOWN COOLING

Test Title...: SERVICE WATER PUMP TRIP (SWS-1)
Test No.....: 14.04.07.24.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 9 Next Scheduled..: 09/30/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: SERVICE WATER LEAKAGE TO CONTAINMENT (SWS-2)
Test No.....: 14.04.07.24.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: FAILURE OF TCV-1102 (SWS-3)
Test No.....: 14.04.07.24.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: FAILURE OF PCV-1179 (SWS-4)
Test No.....: 14.04.07.24.04 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: LOSS OF COOLING TO HYDROGEN COOLERS (SWS-5)
Test No.....: 14.04.07.24.05 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: SERVICE WATER PUMP STRAINERS BLOCKED (SWS-6)
Test No.....: 14.04.07.24.06.01 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: SERVICE WATER PUMP STRAINERS BLOCKED (SWS-6)
Test No.....: 14.04.07.24.06.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: SERVICE WATER PUMP CHECK VALVE FAILS TO SEAT (SWS-7)
Test No.....: 14.04.07.24.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/03/88
Status.....: PASSED Last Performed..: 03/03/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: SERVICE WATER PUMP SHAFT BREAK (SWS-8)
Test No.....: 14.04.07.24.08 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: LOSS OF SERVICE WATER TO CCW HEAT EXCHANGERS (SWS-9)
Test No.....: 14.04.07.24.09 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 9 Next Scheduled..: 12/31/94
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: LOSS OF SERVICE WATER TO FEED PUMP OIL COOLERS (SWS-10)
Test No.....: 14.04.07.24.10 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/30/90
Status.....: FAILED Last Performed..: 04/30/90
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (6)
ANSI Desc. ..: LOSS OF SERVICE WATER

Test Title...: INADVERTANT TURBINE TRIP (TUR-1)
Test No.....: 14.04.07.25.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/25/88
Status.....: PASSED Last Performed..: 03/25/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.: 3.1.2 (15)
ANSI Desc. ..: TURBINE TRIP

Test Title...: TURBINE PROTECTION TRIP FAILURE (TUR-2)
Test No.....: 14.04.07.25.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: CONTROL VALVE OSCILLATION (TUR-3)
Test No.....: 14.04.07.25.03 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/22/88
Status.....: PASSED Last Performed..: 03/22/88
IC Number....: 9 Next Scheduled..: 12/31/94
ANSI Section.:
ANSI Desc. ..:

Test Title...: TURBINE VIBRATION (TUR-4)
Test No.....: 14.04.07.25.04 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: CONTROL VALVE FAILURE (TUR-5)
Test No.....: 14.04.07.25.05 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: STOP VALVE FAILURE (TUR-6)
Test No.....: 14.04.07.25.06 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/08/88
Status.....: PASSED Last Performed..: 03/08/88
IC Number....: 9 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: LOSS OF MAIN TURBINE LUBE OIL (TUR-7)
Test No.....: 14.04.07.25.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/25/88
Status.....: PASSED Last Performed..: 03/25/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: TURBINE HIGH ECCENTRICITY (TUR-8)
Test No.....: 14.04.07.25.08 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/17/88
Status.....: PASSED Last Performed..: 03/17/88
IC Number....: 31 Next Scheduled..: 12/31/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: TURBINE BLADE FAILURE (TUR-9)
Test No.....: 14.04.07.25.09 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: TURBINE FIRST STAGE PRESSURE TRANSMITTER FAILURE (TUR-10)
Test No.....: 14.04.07.25.10 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/11/88
Status.....: PASSED Last Performed..: 03/11/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: TURBINE RUNBACK FAILURE (TUR-11)
Test No.....: 14.04.07.25.11 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/08/88
Status.....: PASSED Last Performed..: 03/08/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: WASTE GAS DECAY TANK RUPTURE (WPS-1)
Test No.....: 14.04.07.26.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/18/88
Status.....: PASSED Last Performed..: 04/18/88
IC Number....: 12 Next Scheduled..: 12/31/94
ANSI Section.: A.3.3 (2)
ANSI Desc. ..: ACCIDENTAL RELEASE - WASTE GAS

Test Title...: INADVERTENT CONTAINMENT ISOLATION PHASE A (MSC-1)
Test No.....: 14.04.07.27.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/13/88
Status.....: PASSED Last Performed..: 04/13/88
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.:
ANSI Desc. ..:

Test Title...: INADVERTENT CONTAINMENT ISOLATION PHASE B (MSC-2)
Test No.....: 14.04.07.27.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: INADVERTENT CONTAINMENT VENTILATION ISOLATION (MSC-3)
Test No.....: 14.04.07.27.03 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/09/88
Status.....: PASSED Last Performed..: 03/09/88
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: LOSS OF ALL FEEDWATER (NORMAL AND EMERGENCY) (CMT-1)
Test No.....: 14.04.07.28.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/23/91
Status.....: In REVIEW Last Performed..: 01/23/91
IC Number....: 10 Next Scheduled..: 01/23/95
ANSI Section.: 3.1.2 (10)
ANSI Desc. ..: LOSS OF ALL FEEDWATER (NORMAL AND EMERGENCY)

Test Title...: MAIN BOILER FEED PUMP OIL LEAK (ATS-1)
Test No.....: 14.04.07.29.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/18/88
Status.....: PASSED Last Performed..: 03/18/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: 32 ABFP OVERSPEED TRIP (ATS-2)
Test No.....: 14.04.07.29.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.:
ANSI Desc. ..:

Test Title...: MBFP TURBINE SPEED OSCILLATION (ATS-3)
Test No.....: 14.04.07.29.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 04/11/90
Status.....: PASSED Last Performed..: 04/11/90
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MAIN FEEDWATER PUMP TRIP (ATS-4)
Test No.....: 14.04.07.29.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/12/90
Status.....: PASSED Last Performed..: 04/12/90
IC Number....: 12 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (9)
ANSI Desc. ..: LOSS OF NORMAL FEEDWATER OR FEEDWATER SYSTEM FAILURE

Test Title...: LOSS OF MBFP FEEDWATER SIGNAL (ATS-5)
Test No.....: 14.04.07.29.05 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/12/90
Status.....: PASSED Last Performed..: 04/12/90
IC Number....: 11 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MBFP SPEED SENSOR FAILURE (ATS-6)
Test No.....: 14.04.07.29.06.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/08/90
Status.....: PASSED Last Performed..: 04/08/90
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: MBFP SPEED SENSOR FAILURE (ATS-6)
Test No.....: 14.04.07.29.06.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/18/90
Status.....: PASSED Last Performed..: 04/18/90
IC Number....: 12 Next Scheduled..: 12/31/93
ANSI Section.: 3.1.2 (22)
ANSI Desc. ..: PROCESS INSTRUMENTATION, ALARM, CONTROL FAILURES

Test Title...: FAILURE OF A SGBD ISOLATION VALVE TO CLOSE - MECH - (SGB-1)
Test No.....: 14.04.07.30.01.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/01/90
Status.....: PASSED Last Performed..: 02/01/90
IC Number....: 12 Next Scheduled..: 12/31/91
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: FAILURE OF A SGBD ISOLATION VALVE TO CLOSE - AUTO - (SGB-1)
Test No.....: 14.04.07.30.01.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/05/90
Status.....: PASSED Last Performed..: 02/05/90
IC Number....: 11 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: FAILURE OF A SGBD SAMPLE VALVE TO CLOSE - MECH - (SGB-2A)
Test No.....: 14.04.07.30.02.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/01/90
Status.....: PASSED Last Performed..: 02/01/90
IC Number....: 11 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: FAILURE OF A SGBD SAMPLE VALVE TO CLOSE - AUTO - (SGB-2B)
Test No.....: 14.04.07.30.02.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/09/90
Status.....: PASSED Last Performed..: 02/09/90
IC Number....: 11 Next Scheduled..: 12/31/92
ANSI Section.: 3.1.2 (23)
ANSI Desc. ..: PASSIVE MALFUNCTIONS - EMERGENCY SAFETY FEATURES SYSTEMS

Test Title...: SGBD LINE BREAK INSIDE CONTAINMENT (SGB-3)
Test No.....: 14.04.07.30.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/02/90
Status.....: PASSED Last Performed..: 02/02/90
IC Number....: 11 Next Scheduled..: 12/31/93
ANSI Section.:
ANSI Desc. ..:

Test Title...: SGBD LINE BREAK OUTSIDE CONTAINMENT (SGB-3)
Test No.....: 14.04.07.30.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/02/90
Status.....: PASSED Last Performed..: 02/02/90
IC Number....: 11 Next Scheduled..: 12/31/94
ANSI Section.:
ANSI Desc. ..:

5.B.3 Normal Operations Tests

The tests in this series demonstrate adequate simulator performance in the following areas.

1) The ability to operate the simulator using controlled copies of plant procedures from a cold shutdown to full power and return to cold shutdown.

2) The ability to perform operator conducted surveillance tests in the simulator control room using latest revisions of the plant tests.

Successful completion of these tests is based on a comparison of available plant data to the simulator results using the established acceptance criteria.

A computerized tracking system is used to maintain the status and scheduling of these tests. Testing status as of February 3, 1991 and future scheduled performance dates are indicated in the attached report.

Test Title...: PLANT SHUTDOWN FROM 100 PERCENT POWER TO 0 PERCENT POWER
Test No.....: 14.04.02.01 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/04/88
Status.....: PASSED Last Performed..: 04/04/88
IC Number....: 12 Next Scheduled..: 04/04/91
ANSI Section.: 3.1.1 (8)
ANSI Desc. ..: PLANT SHUTDOWN FROM RATED POWER TO HOT STANDBY

Test Title...: HOT SHUTDOWN TO COLD SHUTDOWN
Test No.....: 14.04.02.02 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/16/88
Status.....: PASSED Last Performed..: 02/16/88
IC Number....: 04 Next Scheduled..: 02/16/91
ANSI Section.: 3.1.1 (8)
ANSI Desc. ..: PLANT COOLDOWN FROM HOT STANDBY TO COLD SHUTDOWN

Test Title...: PLANT HEATUP FROM COLD SHUTDOWN CONDITION
Test No.....: 14.04.02.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/06/88
Status.....: PASSED Last Performed..: 02/06/88
IC Number....: 01 Next Scheduled..: 02/06/91
ANSI Section.: 3.1.1 (1)
ANSI Desc. ..: PLANT STARTUP - COLD TO HOT STANDBY

Test Title...: REACTOR STARTUP TEST
Test No.....: 14.04.02.04 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/06/88
Status.....: PASSED Last Performed..: 02/06/88
IC Number....: 05 Next Scheduled..: 02/06/91
ANSI Section.: 3.1.1 (2)
ANSI Desc. ..: NUCLEAR STARTUP - HOT STANDBY TO RATED POWER

Test Title...: PLANT STARTUP FROM 0 PERCENT POWER TO FULL POWER CONDITION
Test No.....: 14.04.02.05 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/22/88
Status.....: PASSED Last Performed..: 02/22/88
IC Number....: 05 Next Scheduled..: 02/22/91
ANSI Section.: 3.1.1 (2)
ANSI Desc. ..: NUCLEAR STARTUP - HOT STANDBY TO RATED POWER

Test Title...: RECOVERY TO RATED POWER AFTER REACTOR TRIP
Test No.....: 14.04.02.06 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/06/88
Status.....: PASSED Last Performed..: 02/06/88
IC Number....: 12 Next Scheduled..: 02/06/91
ANSI Section.: 3.1.1 (4)
ANSI Desc. ..: REACTOR TRIP FOLLOWED BY RECOVERY TO RATED POWER

Test Title...: INITIAL CRITICALITY AND LOW POWER PHYSICS
Test No.....: 14.04.06.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 04 Next Scheduled..: 03/16/91
ANSI Section.: 3.1.1 (9)
ANSI Desc. ..: CORE PERFORMANCE TESTING

Test Title...: PT-M74 FULL LENGTH RODS' MOVEMENT EXERCISE
Test No.....: 14.04.09.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/05/90
IC Number....: 7 Next Scheduled..: 10/18/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS01 MAIN STEAM VALVES (PCV-1310 A and PCV-1310 B)
Test No.....: 14.04.09.02 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/18/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 04/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS02 MAIN STEAM CHECK VALVES (MS-1'S AND MS-2'S)
Test No.....: 14.04.09.03 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 07/19/90
Status.....: PASSED Last Performed..: 07/19/90
IC Number....: 04 Next Scheduled..: 04/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS03 AUXILIARY COOLANT SYSTEM VALVES
Test No.....: 14.04.09.04 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/12/90
IC Number....: 3 Next Scheduled..: 06/04/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS05 MAIN STEAM CHECK VALVES (MS-1s and MS-2s) - S/U
Test No.....: 14.04.09.05 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/22/90
IC Number....: 05 Next Scheduled..: 04/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS06 CONTAINMENT SPRAY SYSTEM VALVES' FUNCTIONAL
Test No.....: 14.04.09.06 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/13/90
IC Number....: 03 Next Scheduled..: 04/23/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS08 SAFETY INJECTION SYSTEM RWST VALVES
Test No.....: 14.04.09.07 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/14/90
IC Number....: 03 Next Scheduled..: 04/17/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS09 SAFETY INJECTION SYSTEM TO HOT LEG - 856 B & 856 G
Test No.....: 14.04.09.08 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/08/90
IC Number....: 03 Next Scheduled..: 04/17/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS13 RHR MINIFLOW VALVES FUNCTIONAL (VLVS 743 and 1870)
Test No.....: 14.04.09.10 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 04/26/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS14 RESIDUAL HEAT REMOVAL SYSTEM VALVES' FUNCTIONAL
Test No.....: 14.04.09.11 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/01/90
IC Number....: 03 Next Scheduled..: 04/26/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS15 AUX BOILER FEED PUMP (31/33) and CHECK VALVES
Test No.....: 14.04.09.12 Cert Test(Y/N)..: Y
Revision.....: 6 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/11/90
IC Number....: 05 Next Scheduled..: 04/30/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS19 AUX BOILER FEED PUMP (32) FUNCTIONAL - (< 350 F)
Test No.....: 14.04.09.14 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/22/90
IC Number....: 05 Next Scheduled..: 04/30/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS20 CONTAINMENT ISOLATION VALVES - RCP SEAL WATER
Test No.....: 14.04.09.15 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 08/07/90
IC Number....: 01 Next Scheduled..: 05/03/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS21 CONTAINMENT ISOLATION VALVES - CHARGING SYSTEM
Test No.....: 14.04.09.16 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 05/03/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS24 HIGH HEAD SAFETY INJECTION VALVES FUNCTIONAL
Test No.....: 14.04.09.18 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 05/21/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS26 EMERGENCY BORATION FLOW PATH VALVE FUNCTIONAL
Test No.....: 14.04.09.19 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 01 Next Scheduled..: 05/03/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-CS29 REACTOR HEAD VENT VALVES TEST
Test No.....: 14.04.09.20 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 1 Next Scheduled..: 05/22/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-M15 MAIN TURBINE STOP AND CONTROL VALVE TEST
Test No.....: 14.04.09.21 Cert Test(Y/N)..: Y
Revision.....: 9 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/21/90
IC Number....: 12 Next Scheduled..: 05/24/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q19 COMPONENT COOLING VALVES
Test No.....: 14.04.09.35 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/08/90
IC Number....: 12 Next Scheduled..: 06/04/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q20 A.B.F. VALVES
Test No.....: 14.04.09.36 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/25/90
IC Number....: 12 Next Scheduled..: 06/06/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q21 STEAM GENERATOR BLOWDOWN VALVES' FUNCTIONAL
Test No.....: 14.04.09.37 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/25/90
IC Number....: 12 Next Scheduled..: 08/07/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q22 RESIDUAL HEAT REMOVAL SYSTEM VALVES' FUNCTIONAL
Test No.....: 14.04.09.38 Cert Test(Y/N)..: Y
Revision.....: 6 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/11/90
IC Number....: 12 Next Scheduled..: 04/26/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q23 HI HEAD SI VALVES
Test No.....: 14.04.09.39 Cert Test(Y/N)..: Y
Revision.....: 6 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/10/90
IC Number....: 12 Next Scheduled..: 04/17/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q24 CONTAINMENT SPRAY DISCH. VALVES
Test No.....: 14.04.09.40 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/10/90
IC Number....: 12 Next Scheduled..: 04/23/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q26 NITROGEN VALVES 891A,B,C,D; 863; 550
Test No.....: 14.04.09.41 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/21/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 12 Next Scheduled..: 06/14/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q29 AIR EJECTOR ISO. VLVS. PC-1229, 1230
Test No.....: 14.04.09.44 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/10/90
IC Number....: 12 Next Scheduled..: 06/14/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q31 LIQUID WASTE DISPOSAL CONTAINMENT ISOLATION VALVES
Test No.....: 14.04.09.45 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/21/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 12 Next Scheduled..: 06/14/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q32 RCS VLVS 519,552,548,549
Test No.....: 14.04.09.46 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 08/25/90
IC Number....: 12 Next Scheduled..: 06/14/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q35 DEMINERALIZED WATER CONTAINMENT ISOLATION VALVES
Test No.....: 14.04.09.47 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 12 Next Scheduled..: 06/14/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q36 RHR COMPONENT COOLING VLVS-882 A + B
Test No.....: 14.04.09.48 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/16/90
IC Number....: 12 Next Scheduled..: 06/28/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q40 BIT RECIRC VLVS 1851 A + B
Test No.....: 14.04.09.50 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 07/21/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 12 Next Scheduled..: 06/28/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-Q52 CNMT HYDROGEN MONITORING SYSTEM VALVES' FUNCTIONAL
Test No.....: 14.04.09.51 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 07/21/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 12 Next Scheduled..: 06/28/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R007 AUX BOILER FEED PUMPS' FULL FLOW TEST
Test No.....: 14.04.09.59 Cert Test(Y/N)..: Y
Revision.....: 9 Last Scheduled..: 01/23/91
Status.....: FAILED Last Performed..: 01/23/91
IC Number....: 5 Next Scheduled..: 08/07/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R034 RESIDUAL HEAT REMOVAL SYSTEM VALVES 730 and 731
Test No.....: 14.04.09.63 Cert Test(Y/N)..: Y
Revision.....: 8 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/24/90
IC Number....: 03 Next Scheduled..: 04/26/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R061 INSTRUMENT AIR CONTAINMENT ISO VALVE (PCV-1228)
Test No.....: 14.04.09.65 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 08/09/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R063 RESIDUAL HEAT REMOVAL SYSTEM VALVES' TIMING (889s)
Test No.....: 14.04.09.66 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 04/26/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R064 SAFETY INJECTION HI-HEAD VALVES TEST (857s)
Test No.....: 14.04.09.67 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 08/25/90
Status.....: FAILED Last Performed..: 08/25/90
IC Number....: 01 Next Scheduled..: 04/17/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R071 RECIRCULATION VALVES' FUNCTIONAL (1802s)
Test No.....: 14.04.09.68 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 07/08/90
Status.....: FAILED Last Performed..: 07/18/90
IC Number....: 2 Next Scheduled..: 08/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-R076 BORON INJECTION TANK VALVES' FUNCTIONAL
Test No.....: 14.04.09.69 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 07/08/90
Status.....: PASSED Last Performed..: 07/18/90
IC Number....: 03 Next Scheduled..: 08/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-V01 SOURCE RANGE
Test No.....: 14.04.09.71 Cert Test(Y/N)..: Y
Revision.....: 8 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/21/90
IC Number....: 3 Next Scheduled..: 10/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-V02 INTERMEDIATE RANGE
Test No.....: 14.04.09.72 Cert Test(Y/N)..: Y
Revision.....: 6 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/22/90
IC Number....: 12 Next Scheduled..: 10/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-V12 PR PERMISSIVES AND TRIP
Test No.....: 14.04.09.76 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 01/28/91
Status.....: PASSED Last Performed..: 01/28/91
IC Number....: 12 Next Scheduled..: 10/17/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-V26 FEEDWATER REG VLVS FCV-417,27,37,47
Test No.....: 14.04.09.81 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 07/22/90
Status.....: PASSED Last Performed..: 07/22/90
IC Number....: 04 Next Scheduled..: 10/15/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-V29 FULLFLOW THROUGH BIT CHECK VALVES
Test No.....: 14.04.09.82 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 08/26/90
Status.....: FAILED Last Performed..: 08/26/90
IC Number....: 1 Next Scheduled..: 10/15/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

Test Title...: PT-W03 PLANT ASSEMBLY ALARMS
Test No.....: 14.04.09.85 Cert Test(Y/N)..: Y
Revision.....: 7 Last Scheduled..: 08/25/90
Status.....: PASSED Last Performed..: 08/25/90
IC Number....: 12 Next Scheduled..: 11/16/91
ANSI Section.: 3.1.1 (10)
ANSI Desc. ..: OPERATOR CONDUCTED SURVEILLANCE TESTS

5.B.4 Simulator Tests

These tests are designed to demonstrate that the simulator will operate in a "real time" manner during the most intensive training or evaluation scenarios including simultaneous operator manipulations of controls and devices. Two separate scenarios were analyzed. The first scenario is a coincidental station blackout and large break LOCA. The second is a coincidental steam generator tube rupture, stuck control rod, and steam line rupture inside containment.

Successful test completion is based on a comparison of established industry standards with calculated simulator computer system performance during the two scenarios.

A computerized tracking system is used to maintain the status and scheduling of these tests. Testing status as of February 3, 1991 and future scheduled performance dates are indicated in the attached report.

Test Title...: SPARE MEMORY CHECKS
Test No.....: 14.04.06.04 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 12/03/90
Status.....: PASSED Last Performed..: 01/22/91
IC Number....: Next Scheduled..: 09/12/92
ANSI Section.: A3.1
ANSI Desc. ..: COMPUTER REAL TIME TEST

Test Title...: DUTY CYCLE MEASUREMENT
Test No.....: 14.04.06.05 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 12/04/90
Status.....: PASSED Last Performed..: 01/20/91
IC Number....: 12 Next Scheduled..: 09/05/92
ANSI Section.: A3.1
ANSI Desc. ..: COMPUTER REAL TIME TEST

5.B.5 Steady State Tests

These tests demonstrate the ability of the simulator to maintain established conditions (IC's) that match available plant data and provide an integrated plant response with conservation of mass and energy throughout the total plant heat cycle. These tests are performed using plant heat balance procedures and control room calculation equipment and software. Test results are compared to available plant data and successful completion based on the established acceptance criteria.

A computerized tracking system is used to maintain the status and scheduling of these tests. Testing status as of February 3, 1991 and future scheduled performance dates are indicated in the attached report.

Test Title...: STEADY STATE ACCURACY AND DRIFT TEST (100% BOL)
Test No.....: 14.04.03.01.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/13/90
Status.....: PASSED Last Performed..: 01/14/90
IC Number....: 10 Next Scheduled..: 10/13/91
ANSI Section.: B.2.1
ANSI Desc. ..: 100% POWER STEADY STATE STABILITY TEST

Test Title...: STEADY STATE ACCURACY AND DRIFT TEST (100% MOL)
Test No.....: 14.04.03.01.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/13/90
Status.....: PASSED Last Performed..: 10/14/90
IC Number....: 11 Next Scheduled..: 10/13/91
ANSI Section.: B.2.1
ANSI Desc. ..: 100% POWER STEADY STATE STABILITY TEST

Test Title...: STEADY STATE ACCURACY AND DRIFT TEST (100% EOL)
Test No.....: 14.04.03.01.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/13/90
Status.....: PASSED Last Performed..: 10/14/90
IC Number....: 12 Next Scheduled..: 10/13/91
ANSI Section.: B.2.1
ANSI Desc. ..: 100% POWER STEADY STATE STABILITY TEST

Test Title...: STEADY STATE ACCURACY AND DRIFT TEST (45% BOL)
Test No.....: 14.04.03.01.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/13/90
Status.....: PASSED Last Performed..: 10/14/90
IC Number....: 8 Next Scheduled..: 10/13/91
ANSI Section.: B.2.1
ANSI Desc. ..: STEADY STATE STABILITY TEST

Test Title...: STEADY STATE ACCURACY AND DRIFT TEST (45% EOL)
Test No.....: 14.04.03.01.05 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 10/13/90
Status.....: PASSED Last Performed..: 10/14/90
IC Number....: 9 Next Scheduled..: 10/13/91
ANSI Section.: B.2.1
ANSI Desc. ..: STEADY STATE STABILITY TEST

Test Title...: 100 PERCENT POWER STEADY STATE HEAT BALANCE
Test No.....: 14.04.04.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/12/88
Status.....: PASSED Last Performed..: 04/12/88
IC Number....: 12 Next Scheduled..: 04/12/91
ANSI Section.: 4.1 (2)a
ANSI Desc. ..: MASS AND ENERGY BALANCE

Test Title...: 75 PERCENT POWER STEADY STATE HEAT BALANCE
Test No.....: 14.04.04.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/22/88
Status.....: PASSED Last Performed..: 04/22/88
IC Number....: 12 Next Scheduled..: 04/22/91
ANSI Section.: 4.1 (2)a
ANSI Desc. ..: MASS AND ENERGY BALANCE

Test Title...: 45 PERCENT POWER STEADY STATE HEAT BALANCE
Test No.....: 14.04.04.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 02/02/91
Status.....: PASSED Last Performed..: 02/02/91
IC Number....: 08 Next Scheduled..: 02/02/92
ANSI Section.: 4.1 (2)a
ANSI Desc. ..: MASS AND ENERGY BALANCE

Test Title...: PRIMARY MASS BALANCE TEST
Test No.....: 14.04.05.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 04/21/91
ANSI Section.: 4.1 (2)d
ANSI Desc. ..: MASS AND ENERGY BALANCE - MASS BALANCE OF PRESSURIZER

Test Title...: MASS BALANCE TEST ON SMALL BREAK LOCA
Test No.....: 14.04.05.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: 04/21/91
ANSI Section.: 4.1 (2)d
ANSI Desc. ..: MASS AND ENERGY BALANCE - MASS BALANCE OF PRESSURIZER

Test Title...: RCS TEMPERATURE VS STEAM GENERATOR PRESSURE
Test No.....: 14.04.05.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 03/30/88
Status.....: PASSED Last Performed..: 03/30/88
IC Number....: 12 Next Scheduled..: 03/30/91
ANSI Section.: 4.1 (2)b
ANSI Desc. ..: MASS AND ENERGY BALANCE - RCS TEMPERATURE TO S/G PRESSURE

Test Title...: MAIN CONDENSER ENERGY BALANCE TEST
Test No.....: 14.04.05.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/07/88
Status.....: PASSED Last Performed..: 04/07/88
IC Number....: 12 Next Scheduled..: 04/07/91
ANSI Section.: 4.1 (2)b
ANSI Desc. ..: MASS AND ENERGY BALANCE

Test Title...: SECONDARY MASS BALANCE
Test No.....: 14.04.05.05
Revision.....: 0
Status.....: PASSED
IC Number....: 12
ANSI Section.: 4.1 (2)b
ANSI Desc. ..: MASS AND ENERGY BALANCE

Cert Test(Y/N)..: Y
Last Scheduled..: 04/20/88
Last Performed..: 04/20/88
Next Scheduled..: 04/20/91

5.B.6 System Tests

These tests demonstrate the completeness of the simulation models by comparing system performance against plant data such as logic diagrams, tank and pump curves, log sheets, surveillance tests, etc. as applicable. Additional testing is performed in this area to ensure that LOA's and overrides function as required.

A computerized tracking system is used to maintain the status and scheduling of these tests. Testing status as of February 3, 1991 and future scheduled performance dates are indicated in the attached report.

Test Title...: ELECTRICAL DISTRIBUTION SYSTEM TEST (EPS)
Test No.....: 14.03.03.01 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 04/15/88
Status.....: PASSED Last Performed..: 04/15/88
IC Number....: 09 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: ELECTRICAL DISTRIBUTION SYSTEM TEST - 6900 VOLT
Test No.....: 14.03.03.01.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/02/91
Status.....: PASSED Last Performed..: 01/02/91
IC Number....: 9 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: ELECTRICAL DISTRIBUTION SYSTEM TEST - 480 VOLT
Test No.....: 14.03.03.01.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/20/91
Status.....: In REVIEW Last Performed..: 01/20/91
IC Number....: 9 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CONTAINMENT & CONTAINMENT HVAC SYSTEM TEST (CNM)
Test No.....: 14.03.03.02 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/31/88
Status.....: PASSED Last Performed..: 03/31/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: SERVICE WATER SYSTEM TEST (SWS)
Test No.....: 14.03.03.03 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/09/90
Status.....: PASSED Last Performed..: 02/09/90
IC Number....: 11 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: COMPONENT COOLING WATER SYSTEM TEST (CCW)
Test No.....: 14.03.03.04 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 02/06/88
Status.....: PASSED Last Performed..: 02/06/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: COMPRESSED AIR SYSTEM TEST (CAS)
Test No.....: 14.03.03.06 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/15/88
Status.....: PASSED Last Performed..: 04/15/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: WASTE DISPOSAL SYSTEM TEST (WDS)
Test No.....: 14.03.03.07 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/23/88
Status.....: PASSED Last Performed..: 02/23/88
IC Number....: 06 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CONDENSATE AND FEEDWATER SYSTEM TEST (CFW)
Test No.....: 14.03.03.08 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/20/88
Status.....: PASSED Last Performed..: 03/20/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: MAIN STEAM SYSTEM TEST (MSS)
Test No.....: 14.03.03.09 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/15/88
Status.....: PASSED Last Performed..: 03/15/88
IC Number....: 07 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: STEAM GENERATOR & MAIN STEAM HEADER SYSTEM TEST (SGN)
Test No.....: 14.03.03.10 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 03/14/88
Status.....: PASSED Last Performed..: 03/14/88
IC Number....: 08 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CIRCULATING WATER SYSTEM TEST (CWS)
Test No.....: 14.03.03.11 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 04 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: NUCLEAR INSTRUMENTATION SYSTEM TEST (NIS)
Test No.....: 14.03.03.12 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 05/01/88
Status.....: PASSED Last Performed..: 05/01/88
IC Number....: 6 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: RESIDUAL HEAT REMOVAL SYSTEM TEST (RHR)
Test No.....: 14.03.03.13 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 02 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: SPENT FUEL POOL COOLING SYSTEM TEST (SFP)
Test No.....: 14.03.03.14 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/06/88
Status.....: PASSED Last Performed..: 02/06/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CHEMICAL & VOLUME CONTROL SYSTEM TEST (CVC)
Test No.....: 14.03.03.15 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 03/16/88
Status.....: PASSED Last Performed..: 03/16/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: REACTOR COOLANT SYSTEM TEST (RCS)
Test No.....: 14.03.03.16 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/22/88
Status.....: PASSED Last Performed..: 02/22/88
IC Number....: 6 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CONTAINMENT SPRAY SYSTEM TEST (CNS)
Test No.....: 14.03.03.17 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 02/17/88
Status.....: PASSED Last Performed..: 02/17/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: SAFETY INJECTION SYSTEM TEST (SIS)
Test No.....: 14.03.03.18 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/10/88
Status.....: PASSED Last Performed..: 03/10/88
IC Number....: 6 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: INCORE SYSTEM TEST
Test No.....: 14.03.03.19 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/09/91
Status.....: In REVIEW Last Performed..: 01/09/91
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: REACTOR PROTECTION SYSTEM TEST
Test No.....: 14.03.03.20 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/20/88
Status.....: PASSED Last Performed..: 03/20/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: AUXILIARY FEEDWATER SYSTEM TEST (AFW)
Test No.....: 14.03.03.21 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/22/88
Status.....: PASSED Last Performed..: 02/22/88
IC Number....: 7 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CONTROL ROD DRIVE & RPI SYSTEM TEST
Test No.....: 14.03.03.22 Cert Test(Y/N)..: Y
Revision.....: 4 Last Scheduled..: 03/23/88
Status.....: PASSED Last Performed..: 03/23/88
IC Number....: 6 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: RADIATION MONITORING SYSTEM TEST (RMS)
Test No.....: 14.03.03.23 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 04/09/88
Status.....: PASSED Last Performed..: 04/09/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: HEATER DRAINS & VENTS SYSTEM TEST
Test No.....: 14.03.03.24 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/05/88
Status.....: PASSED Last Performed..: 02/05/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: PRESSURIZER RELIEF TANK SYSTEM TEST (PRT)
Test No.....: 14.03.03.25 Cert Test(Y/N)..: Y
Revision.....: 3 Last Scheduled..: 02/05/88
Status.....: PASSED Last Performed..: 02/05/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: STEAM GENERATOR BLOWDOWN AND RECOVERY SYSTEM TEST (SGB)
Test No.....: 14.03.03.26 Cert Test(Y/N)..: Y
Revision.....: 5 Last Scheduled..: 02/09/90
Status.....: PASSED Last Performed..: 02/09/90
IC Number....: 5 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: REACTOR MAKEUP WATER SYSTEM TEST (RMW)
Test No.....: 14.03.03.27 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/06/88
Status.....: PASSED Last Performed..: 02/06/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: NUCLEAR SAMPLE SYSTEM TEST (NSS)
Test No.....: 14.03.03.28 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 02/05/88
Status.....: PASSED Last Performed..: 02/05/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: HEATING, VENTILATION, AND AIR CONDITIONING SYSTEM TEST (HVA)
Test No.....: 14.03.03.29 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 04/21/88
Status.....: PASSED Last Performed..: 04/21/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: AUXILIARY STEAM SYSTEM TEST (ASB)
Test No.....: 14.03.03.30 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 02/05/88
Status.....: PASSED Last Performed..: 02/05/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: MAIN GENERATOR AUXILIARIES SYSTEM TEST (MGA)
Test No.....: 14.03.03.31 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/14/88
Status.....: PASSED Last Performed..: 03/14/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: MAIN GENERATOR SYSTEM TEST (GEN)
Test No.....: 14.03.03.32 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/02/88
Status.....: PASSED Last Performed..: 03/02/88
IC Number....: 8 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: DIESEL GENERATOR SYSTEM TEST (DSG)
Test No.....: 14.03.03.33 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: DIESEL LOAD SEQUENCER SYSTEM TEST (DSQ)
Test No.....: 14.03.03.34 Cert Test(Y/N)..: Y
Revision.....: 2 Last Scheduled..: 03/07/88
Status.....: PASSED Last Performed..: 03/07/88
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: PLANT CONTROL SYSTEM TEST (PCS)
Test No.....: 14.03.03.35 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 03/29/88
Status.....: PASSED Last Performed..: 03/29/88
IC Number....: 7 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: QUALIFIED SAFETY PARAMETER DISPLAY SYSTEM TEST
Test No.....: 14.03.03.36 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 12/01/90
Status.....: In REVIEW Last Performed..: 12/01/90
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: CRITICAL FUNCTION MONITORING SYSTEM TEST
Test No.....: 14.03.03.37 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 11/18/90
Status.....: In REVIEW Last Performed..: 11/18/90
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

Test Title...: PLANT PROCESS COMPUTER SYSTEM TEST
Test No.....: 14.03.03.38 Cert Test(Y/N)..: Y
Revision.....: 1 Last Scheduled..: 11/25/90
Status.....: In REVIEW Last Performed..: 11/25/90
IC Number....: 12 Next Scheduled..: / /
ANSI Section.: 3.3.1
ANSI Desc. ..: SYSTEMS CONTROLLED FROM THE CONTROL ROOM

5.B.7 Transient Tests

These tests are designed to demonstrate compliance with ANSI/ANS 3.5 Appendix B and the ability to reproduce transients that have occurred on the reference plant that are not tested elsewhere in the test program. Since these tests are significantly different from those in other portions of the test program, an individual testing methodology abstract for each of the eleven (11) tests, as well as a computer report on the status and scheduling of these tests, is attached.

Present testing status and future scheduled performance dates are indicated in the attached report.

Manual Reactor Trip

Test number 14.04.08.01

1. Date Conducted: 06/23/90

2. A manual reactor trip test was conducted utilizing an automated initiation file which simulates an operator depressing the reactor trip push button on the reference plant's control room panel FCF. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The manual reactor trip was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable hot shutdown condition with the respective parameters at values consistent with those of the reference plant at a hot shutdown condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: A slight anomaly was observed in the response of the pressurizer liquid temperature during review of the test data collected. This anomaly was not readily observable on the respective control room meter and did not affect the expected behavior of the simulation in any manner which would cause an operator to take any action(s) not normally performed in response

to this transient. At present, reference plant data is being collected and analyzed and the simulated pressurizer liquid temperature response will be made to replicate the reference plant response.

Also noted was an inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Simultaneous Trip Of All Feedwater Pumps

Test number 14.04.08.02

1. Date Conducted: 06/23/90

2. A simultaneous trip of all main feedwater pumps test was conducted utilizing an automated initiation file which activates simulator malfunctions to simultaneously trip both main feed water pumps. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The simultaneous trip of all main feedwater pumps was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, six plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable hot shutdown condition with the respective parameters at values consistent with those of the reference plant at a hot shutdown condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient.The data and test procedure verified the expected results.

7. Deficiencies: A slight anomaly was observed in the response of the pressurizer liquid temperature during review of the test data collected. This anomaly was not readily observable on the respective control room meter and did not affect the expected behavior of the simulation in any manner which would cause an operator to take any action(s) not normally performed in response to this transient. At present, reference plant data is being collected and analyzed and the simulated

pressurizer liquid temperature response will be made to replicate the reference plant response.

Also noted was an inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Simultaneous Closure Of All Main Steam Isolation Valves

Test number 14.04.08.03

1. Date Conducted: 06/23/90

2. A simultaneous closure of all main steam isolation valves test was conducted utilizing an automated initiation file which activates simulator malfunctions to simultaneously close all main steam . No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The simultaneous closure of all main steam isolation valves was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable hot shutdown condition with the respective parameters at values consistent with those of the reference plant at a hot shutdown condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: A slight anomaly was observed in the response of the pressurizer liquid temperature during review of the test data collected. This anomaly was not readily observable on the respective control room meter and did not affect the expected behavior of the simulation in any manner which would cause an operator

to take any action(s) not normally performed in response to this transient. At present, reference plant data is being collected and analyzed and the simulated pressurizer liquid temperature response will be made to replicate the reference plant response.

Also noted was an inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Simultaneous Trip Of All Reactor Coolant Pumps

Test number 14.04.08.04

1. Date Conducted: 06/23/90

2. A simultaneous trip of all reactor coolant pumps test was conducted utilizing an automated initiation file which activates simulator malfunctions to simultaneous trip all four reactor coolant pumps. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The simultaneous trip of all reactor coolant pumps was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable hot shutdown condition with the respective parameters at values consistent with those of the reference plant at a hot shutdown condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient.The data and test procedure verified the expected results.

7. Deficiencies: A slight anomaly was observed in the response of the pressurizer liquid temperature during review of the test data collected. This anomaly was not readily observable on the respective control room meter and did not affect the expected behavior of the simulation in any manner which would cause an operator to take any action(s) not normally performed in response to this transient. At present, reference plant data is

being collected and analyzed and the simulated pressurizer liquid temperature response will be made to replicate the reference plant response.

Also noted was an inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Trip Of Any Single Reactor Coolant Pump

Test number 14.04.08.05

1. Date Conducted: 01/18/91

2. A trip of Reactor Coolant Pump No. 34 test was conducted utilizing an automated initiation file which activates the simulator malfunction to trip the reactor coolant pump in response to an overcurrent condition. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The trip of Reactor Coolant Pump No. 34 was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty four critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable hot shutdown condition with the respective parameters at values consistent with those of the reference plant at a hot shutdown condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: An inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry

conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Main Turbine Trip From Less Than 10% Power

Test number 14.04.08.06

1. Date Conducted: 06/24/90

2. A main turbine trip at a power of approximately eight percent (9 % is the maximum power level at which an immediate reactor trip will occur) test was conducted utilizing an automated initiation file which ramps power from twenty five percent to eight percent, allows a period of stabilization, and then simulates an operator depressing the turbine trip push button on the control room panel FAF. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The turbine trip at a power less than that which would cause an immediate reactor trip was initiated from a 25% power, plant shutdown in progress condition (IC-07).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, six plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable condition, reactor not tripped, with reactor power decreasing toward 1 E-8 amps and temperature being maintained at programmed no load temperature by the steam dump system. Steam generator levels were being maintained by the main feed water system. The respective parameters were at values consistent with those of the reference plant at a hot standby condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: None

Maximum Rate Power Ramp (100%-75%-100%)

Test number 14.04.08.07

1. Date Conducted: 06/24/90

2. A maximum rate power ramp from 100% power to 75% power and back to 100% power test was conducted utilizing an automated initiation file which simulates an operator manipulating the turbine's governor valve's control switch on the reference plant's control room panel FAF to first reduce turbine power to seventy five percent and then to increase the turbine power back to one hundred percent. All controls were in automatic and no follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The maximum rate power ramp test was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a stable 100% condition with the respective parameters at values consistent with those of the reference plant at a 100% condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: A slight anomaly was observed in the response of the pressurizer liquid temperature during review of the test data collected. This anomaly was not

readily observable on the respective control room meter and did not affect the expected behavior of the simulation in any manner which would cause an operator to take any action(s) not normally performed in response to this transient. At present, reference plant data is being collected and analyzed and the simulated pressurizer liquid temperature response will be made to replicate the reference plant response.

Maximum Size Reactor Coolant System Rupture With A Coincident Loss Of All Offsite Power

Test number 14.04.08.08

1. Date Conducted: 06/24/90

2. A large break loss of coolant accident coincident with the loss of all offsite power test was conducted utilizing an automated initiation file which activates simulator malfunctions to simultaneously rupture Reactor Coolant Loop 31's cold leg and interrupt the supply of offsite power to the plant. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The LOCA coincident with a loss of offsite power was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which five critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a shutdown condition with the engineered safeguards systems activated in the injection mode.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: An inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency

will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Maximum Size Unisolable Main Steam Line Rupture

Test number 14.04.08.09

1. Date Conducted: 01/18/91

2. A maximum size unisolable main steam line rupture inside containment on Main Steam Line 31 test was conducted utilizing an automated initiation file which activates the simulator malfunction to rupture the main steam line. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The unisolable main steam line rupture was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which five critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a shutdown condition with engineered safeguards activated in the injection mode.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient.The data and test procedure verified the expected results.

7. Deficiencies: An inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still

being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Slow Primary System Depressurization to Saturated Conditions Using A Pressurizer Relief Valve Stuck Open (High Head Safety Injection Inhibited)

Test number 14.04.08.10

1. Date Conducted: 01/20/91

2. A slow depressurization to saturated conditions using pressurizer relief valve PCV-455C with high head safety injection pumps inhibited test was conducted utilizing an automated initiation file which simulates an operator opening the pressurizer power operated relief valve (PCV-455C) via the control switch on the reference plant's control room panel FCF and defeating the high head safety injection pumps by placing their respective controllers in the TRIP PULLOUT position on panel SBF-2. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The slow depressurization to saturated conditions was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of twelve hundred (1200) seconds during which twelve critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient. At the end of the twelve hundred seconds, the plant was in a shutdown condition with the reactor coolant system pressure and temperature at saturated conditions. Engineered safeguards had activated, but high head injection flow is not available due to the pumps being in a trip pullout condition, and the low head injection flow was inhibited since the reactor coolant system pressure remained above the shut off head of the pumps throughout the test. The pressurizer relief tank rupture disk had ruptured and containment parameters were increasing.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and

training groups. All alarms received were expected for the transient. The data and test procedure verified the expected results.

7. Deficiencies: An inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Reference Plant Transient - Direct Trip From Buchanan

Test number 14.04.08.11

1. Date Conducted: 01/22/91

2. On June 29, 1990 the reference plant experienced a unit trip from a 100% power condition due to a mechanical failure of protection relay MCT1 (Reference LER Number 90-004-00). The failure of this relay activated relay TR-1 at the Buchannan substation which resulted in a direct trip signal being sent to the plant's generator output breakers, resulting in a unit trip. A test was conducted to verify that the simulator response replicates the plant response. The test was conducted utilizing an automated initiation file which activates the simulator malfunction that simulates the direct trip signal from Buchanan. No follow up operator actions were performed.

3. Options : None

4. Initial Conditions: The direct trip from Buchanan was initiated from a 100% power, steady state, end of life condition (IC-12).

5. Final Conditions/Duration: The test was conducted for a period of eighteen hundred (1800) seconds during which twenty one critical parameters, as defined by the ANSI/ANS 3.5 standard, were monitored and recorded versus time with a resolution of one half second. Additionally, four plant variables were recorded continuously throughout the transient and eight simulator recorder charts were collected to compare with the respective recorder charts of the reference plant. At the end of the eighteen hundred seconds, the plant was in a stable hot shutdown condition with the respective parameters at values consistent with those of the reference plant at a hot shutdown condition.

6. Data from the test was reviewed by senior reactor operator qualified personnel from both the simulator and training groups. All alarms received were expected for the transient.The data and test procedure verified the expected results.

7. Deficiencies: A slight anomaly was observed in the response of the pressurizer liquid temperature during review of the test data collected. This anomaly was not readily observable on the respective control room meter and did not affect the expected behavior of the simulation in any manner which would cause an operator to take any action(s) not normally performed in response to this transient. At present, reference plant data is being collected and analyzed and the simulated pressurizer liquid temperature response will be made to replicate the reference plant response.

Also noted was an inconsistency of the simulator plant process computer to display the correct status for the heat sink critical safety function. Critical safety function status is determined by the Shift Technical Advisor using the Function Restoration Procedure Status Trees whenever the Emergency Operating Procedure entry conditions are met and therefore this inconsistency will not cause the operator to take any unnecessary actions. The simulator's plant process computer is still being tested at this time and discrepancies are being resolved. Upon completion to the test program for the plant process computer, this inconsistency will have been resolved.

Test Title...: MANUAL REACTOR TRIP
Test No.....: 14.04.08.01 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/23/90
Status.....: PASSED Last Performed..: 06/23/90
IC Number....: 12 Next Scheduled..: 05/25/91
ANSI Section.: B.2.2 (1)
ANSI Desc. ..: MANUAL REACTOR TRIP

Test Title...: SIMULTANEOUS TRIP OF ALL FEEDWATER PUMPS
Test No.....: 14.04.08.02 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/23/90
Status.....: PASSED Last Performed..: 06/23/90
IC Number....: 12 Next Scheduled..: 05/25/91
ANSI Section.: B.2.2 (2)
ANSI Desc. ..: SIMULTANEOUS TRIP OF ALL FEEDWATER PUMPS

Test Title...: SIMULTANEOUS CLOSURE OF ALL MSIV'S
Test No.....: 14.04.08.03 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/23/90
Status.....: PASSED Last Performed..: 06/23/90
IC Number....: 12 Next Scheduled..: 04/27/91
ANSI Section.: B.2.2 (3)
ANSI Desc. ..: SIMULTANEOUS CLOSURE OF ALL MAIN STEAM ISOLATION VALVES

Test Title...: SIMULTANEOUS TRIP OF ALL RCP'S
Test No.....: 14.04.08.04 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/23/90
Status.....: PASSED Last Performed..: 06/23/90
IC Number....: 12 Next Scheduled..: 04/27/91
ANSI Section.: B.2.2 (4)
ANSI Desc. ..: SIMULTANEOUS TRIP OF ALL REACTOR COOLANT PUMPS

Test Title...: TRIP OF A SINGLE RCP
Test No.....: 14.04.08.05 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/18/91
Status.....: PASSED Last Performed..: 01/18/91
IC Number....: 12 Next Scheduled..: 01/25/92
ANSI Section.: B.2.2 (5)
ANSI Desc. ..: TRIP OF ANY SINGLE REACTOR COOLANT PUMP

Test Title...: TURBINE TRIP < P-7
Test No.....: 14.04.08.06 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/24/90
Status.....: PASSED Last Performed..: 06/24/90
IC Number....: 7 Next Scheduled..: 06/29/91
ANSI Section.: B.2.2 (6)
ANSI Desc. ..: MAIN TURBINE TRIP FROM 10% POWER

Test Title...: MAXIMUM RATE POWER RAMP (100% - 75% - 100%)
Test No.....: 14.04.08.07 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/24/90
Status.....: PASSED Last Performed..: 06/24/90
IC Number....: 12 Next Scheduled..: 07/27/91
ANSI Section.: B.2.2 (7)
ANSI Desc. ..: MAXIMUM RATE POWER RAMP - 100% TO 75% BACK TO 100%

Test Title...: 100% RCS RUPTURE WITH LOSS OF ALL OFFSITE POWER
Test No.....: 14.04.08.08 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 06/24/90
Status.....: PASSED Last Performed..: 06/24/90
IC Number....: 12 Next Scheduled..: 08/31/91
ANSI Section.: B.2.2 (8)
ANSI Desc. ..: MAXIMUM LARGE BREAK LOCA WITH LOSS OF OFFSITE POWER

Test Title...: UNISOLABLE 100% MAIN STEAM LINE RUPTURE
Test No.....: 14.04.08.09 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/18/91
Status.....: PASSED Last Performed..: 01/18/91
IC Number....: 12 Next Scheduled..: 02/23/92
ANSI Section.: B.2.2 (9)
ANSI Desc. ..: MAXIMUM SIZE UNISOLABLE MAIN STEAM LINE RUPTURE

Test Title...: SLOW PRIMARY DEPRESSURIZATION TO SATURATED CONDITIONS
Test No.....: 14.04.08.10 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/20/91
Status.....: PASSED Last Performed..: 01/20/91
IC Number....: 12 Next Scheduled..: 03/28/92
ANSI Section.: B.2.2 (10)
ANSI Desc. ..: SLOW RCS DEPRESSURIZATION TO SATURATED CONDITION

Test Title...: PLANT TRANSIENT (DIRECT TRIP FROM BUCHANAN 06/29/90)
Test No.....: 14.04.08.11 Cert Test(Y/N)..: Y
Revision.....: 0 Last Scheduled..: 01/22/91
Status.....: PASSED Last Performed..: 01/22/91
IC Number....: 12 Next Scheduled..: 04/25/92
ANSI Section.: A.3.3 (1)
ANSI Desc. ..: PLANT TRANSIENT TESTS

5.C. Test Program Deficiency Reports

During the conduct of simulator testing, deficiencies noted are formally documented and entered into the Discrepancy Reporting (DR) System. This DR system is linked to the test program via the individual test identification numbers. Therefore, at any given time, it is easily determined if there are outstanding DR's against any test. The integrity of the test program is monitored on a regular basis using this capability. A listing of the DR's written against the test program as of February 4, 1991 is attached.

DATE : 02/04/91

****
*
* REPORT ON DR's VS CERTIFICATION TESTS
*
****

ACTIVE	74
RETEST	3
FAILED	0
TOTAL DR'S	77

02/04/91 DR's WRITTEN AGAINST CERTIFICATION TESTS PAGE : 1

STATUS CODE: (A)CTIVE, (F)AILED RETEST, (R)EADY FOR RETEST

DR #	SYS	PRI	STATUS	TITLE	WRITTEN	STATUS CHNG. ON	DAYS SINCE STATUS CHNG.	TEST #
4323	HDWR	3	A	RCP SEAL INJECTION FLOW INDICATORS SCALES	10/02/90	01/26/91	9	14.02.02.05.01
4452	HDWR	2	A	AO/056, PI-186, METER SCALE INCORRECT	12/18/90	01/04/91	31	14.02.02.05.01
4454	HDWR	2	A	AO/068, TI-471, METER SCALE INCORRECT	12/18/90	01/04/91	31	14.02.02.05.01
4457	HDWR	2	A	AO/023,024 FI-945A,B TAGS MISSING	12/18/90	01/04/91	31	14.02.02.05.01
4463	HDWR	2	A	AO/089 ANNUNCIATOR WINDOWS SHOULD BE BLANK/SPARE	12/18/90	01/04/91	31	14.02.02.05.01
4465	HDWR	2	A	UNIT OF MEASURE MISSING FROM METER SCALES	12/18/90	01/04/91	31	14.02.02.05.01
4468	HDWR	2	A	AO/012,013,014,016 TAG MISSING	12/18/90	01/04/91	31	14.02.02.05.01
4469	HDWR	3	A	AO/066, FI-924A, SCALE INCORRECT	12/18/90	01/04/91	31	14.02.02.05.01
4471	HDWR	3	A	AO/087, TCV-1103, DIFFERENT CONTROLLER MODEL IN SIMULATOR	12/18/90	01/04/91	31	14.02.02.05.01
4473	HDWR	3	A	BO/099 ANNUNCIATOR WINDOWS ENGRAVED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.02
4475	HDWR	3	A	BO/077, THRU 080 RECORDER MODELS DO NOT AGREE WITH PLANT	12/18/90	01/07/91	28	14.02.02.05.02
4476	HDWR	2	A	BO/093,094 (LR-417,437) INCORRECT METER SCALES & MISSING TAGS	12/18/90	01/07/91	28	14.02.02.05.02
4479	HDWR	3	A	BO/098 ANNUNCIATOR WINDOWS ENGRAVED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.02
4482	HDWR	3	A	BO/097 ANNUNCIATOR WINDOW ENGRAVED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.02
4483	HDWR	2	A	BO/190 SWITCH MODULE LEGEND PLATE INCORRECT	12/18/90	01/07/91	28	14.02.02.05.02
4592	HDWR	3	A	BO/348 TAG MISSING	01/25/91	01/31/91	4	14.02.02.05.02
4593	HDWR	3	A	BO/366 THRU 371 AND BO/376 THRU 383 COLOR CODING - ENHANCEMENT	01/25/91	01/31/91	4	14.02.02.05.02
4324	HDWR	3	A	RHR FLOW INDICATOR SCALES INCORRECT	10/02/90	01/26/91	9	14.02.02.05.03
4486	HDWR	2	A	CO/074 ANNUNCIATOR WINDOW SHOULD BE BLANK R3/C1	12/18/90	01/07/91	28	14.02.02.05.03
4493	HDWR	2	A	METER SCALE DIVISIONS INCORRECT	12/18/90	01/07/91	28	14.02.02.05.03
4497	HDWR	2	A	CO/172,182 ENHANCEMENT BAR IS NOT DASHED	12/18/90	01/07/91	28	14.02.02.05.03
4498	HDWR	2	A	CO/435 STATUS LITE (LOWER) ENGRAVED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.03
4499	HDWR	2	A	CO/076 ANNUNCIATOR ENGRAVED INCORRECTLY R4/C2	12/18/90	01/07/91	28	14.02.02.05.03
4500	HDWR	2	A	CO/001,002,003,004 TAGS MISSING	12/18/90	01/07/91	28	14.02.02.05.03
4502	HDWR	2	A	CO/064 RECORDER METER SCALE DIVISIONS INCORRECT	12/18/90	01/07/91	28	14.02.02.05.03
4503	HDWR	2	A	CO/022 ANNUNCIATOR WINDOW R3/C7 SHOULD BE BLANK	12/18/90	01/07/91	28	14.02.02.05.03
4508	HDWR	2	A	CO/428, PR-402, RECORDER METER SCALE INCORRECT	12/18/90	01/07/91	28	14.02.02.05.03
4439	HDWR	2	A	ANNUNCIATOR WINDOWS ARE REVERSED DO/351	12/03/90	12/06/90	60	14.02.02.05.04
4440	HDWR	2	A	ANNUNCIATOR WINDOW ENGRAVED INCORRECTLY DO/351	12/03/90	12/06/90	60	14.02.02.05.04

STATUS CODE: (A)CTIVE, (F)AILED RETEST, (R)EADY FOR RETEST

DR #	SYS	PRI	STATUS	TITLE	WRITTEN	STATUS CHNG. ON	DAYS SINCE STATUS CHNG.	TEST #
4441	HDWR	2	A	STATUS LIGHT ENGRAVING DOES NOT AGREE WITH PHOTOS DO/024	12/03/90	12/06/90	60	14.02.02.05.04
4514	HDWR	2	A	DO/011, LI-1139, SCALE DESCRIPTION INCORRECT	12/18/90	01/07/91	28	14.02.02.05.04
4515	HDWR	3	A	DO/012, AR-1102, RECORDER MODELS ARE DIFFERENT	12/18/90	01/07/91	28	14.02.02.05.04
4516	HDWR	2	A	DO/017, PR-1195, RECORDER CHANNEL DESCRIPTIONS DO NOT MATCH PLANT	12/18/90	01/07/91	28	14.02.02.05.04
4520	HDWR	2	A	DO/023 ANNUNCIATOR ENGRAVED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.04
4576	HDWR	2	A	DO/022 ANNUNCIATOR WINDOW ENGRAVED IMPROPERLY	01/08/91	01/14/91	21	14.02.02.05.04
4609	HDWR	3	A	ANNUNCIATOR WINDOW ENGRAVED INCORRECTLY	01/29/91	01/31/91	4	14.02.02.05.04
4128	HDWR	3	A	FEED FLOW & STEAM FLOW INDICATORS SCALE TEXT ERRORS	04/11/90	04/12/90	298	14.02.02.05.05
4524	HDWR	3	A	EO/103 METER SCALE DIVISION COLORED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.05
4525	HDWR	2	A	EO/116 THRU 121 METER SCALES MISSING TRIANGLES	12/18/90	01/07/91	28	14.02.02.05.05
4526	HDWR	3	A	EO/207 ANNUNCIATOR WINDOW ENGRAVED INCORRECTLY	12/18/90	01/07/91	28	14.02.02.05.05
4527	HDWR	2	A	EO/118,119,120 SCALE MULTIPLIER INCORRECT	12/18/90	01/07/91	28	14.02.02.05.05
4529	HDWR	3	A	EZ/088 ANNUNCIATOR WINDOW INCORRECT	12/18/90	01/07/91	28	14.02.02.05.05
4530	HDWR	3	A	STATUS LIGHT NOT INSTALLED IN SIMULATOR	12/18/90	01/07/91	28	14.02.02.05.05
4532	HDWR	2	A	EO/084,087 SCALE DESCRIPTION INCORRECT	12/18/90	01/07/91	28	14.02.02.05.05
4545	HDWR	2	A	FO/511 RECORDER MODEL DIFFERENT THAN PLANT MODEL	12/19/90	01/07/91	28	14.02.02.05.06
4571	HDWR	2	A	PR/013,014 DESCRIPTION TAGS REVERSED	01/02/91	01/07/91	28	14.02.02.05.07
4535	HDWR	2	R	RAD MON LOCKOUT PANEL TAG PROBLEMS	12/20/90	01/16/91	19	14.02.02.05.10
4570	HDWR	2	A	STATUS LIGHT LENS ENGRAVED INCORRECTLY (NP/N50)	01/02/91	01/07/91	28	14.02.02.05.20
4550	HDWR	3	A	RI/108 NO DEVICE IN PLANT, BLANK INSTALLED	12/19/90	01/07/91	28	14.02.02.05.22
4552	HDWR	2	A	RI/201 THRU 204 SCALES ARE INCORRECT	12/20/90	01/07/91	28	14.02.02.05.22
4554	HDWR	2	A	RI/206,211 STATUS LIGHTS TAGGED INCORRECTLY	12/20/90	01/07/91	28	14.02.02.05.22
4581	HDWR	2	A	STATUS LIGHT LENS COLOR INCORRECT PNL. D1,D3	01/11/91	01/14/91	21	14.02.02.05.22
4594	HDWR	3	A	RI/101 THRU 104 TAGS MISSING, RECORDER SCALES INCORRECT	01/25/91	01/31/91	4	14.02.02.05.22
4574	HDWR	2	A	II/105,305,306 RECORDER METER SCALES INCORRECT	01/03/91	01/14/91	21	14.02.02.05.23

STATUS CODE: (A)CTIVE, (F)AILED RETEST, (R)EADY FOR RETEST

DR #	SYS	PRI	STATUS	TITLE	WRITTEN	STATUS CHNG. ON	DAYS SINCE STATUS CHNG.	TEST #
4582	HDWR	2	A	STATUS LIGHT LENS COLOR INCORRECT PNL. D11	01/11/91	01/14/91	21	14.02.02.05.24
4540	HDWR	2	R	FIRE PANEL TAGGING PROBLEMS	12/19/90	01/16/91	19	14.02.02.05.26
4598	HDWR	3	A	DMIMS NOT INSTALLED	01/26/91	01/31/91	4	14.02.02.05.28
4364	HDWR	3	A	"G" RACK LABEL DISCREPANCIES	10/27/90	01/26/91	9	14.02.02.05.31
4596	HDWR	3	A	G3/794 THRU 798 AND G3/737 ,738 TAGS ARE INCORRECT	01/25/91	01/31/91	4	14.02.02.05.31
4597	HDWR	3	A	G5/737 ,738 TAGS ARE INCORRECT	01/25/91	01/31/91	4	14.02.02.05.32
4536	HDWR	2	A	SRO CONSOLE INDICATING LIGHTS MISSING	12/19/90	01/07/91	28	14.02.02.05.35
4611	HDWR	3	A	FIRE PROTECTION PANEL ALARM NOT CORRECT	01/31/91	01/31/91	4	14.02.02.18
4399	FPS	3	A	CO2 POWER FAIL ALARMS POWER SUPPLY	11/05/90	11/15/90	81	14.03.03.01
4587	EPS	3	R	EPS (BUS 312 & MCC 312A)	01/21/91	02/02/91	2	14.03.03.01.02
4415	HDWR	2	A	INCORE INSTRUMENTATION DETECTOR "C" DOES NOT WORK	11/10/90	11/15/90	81	14.03.03.19
4417	IPC	2	A	INCORE INSTRUMENTATION IPC POINTS NOT MODELLED	11/10/90	01/14/91	21	14.03.03.19
4424	IPC	3	A	HDSR DISK PROTECTION MESSAGE	11/18/90	11/20/90	76	14.03.03.37
4425	IPC	3	A	IPC - CORE DELTA T VARIABLE RESPONSE	11/18/90	11/20/90	76	14.03.03.37
4430	IPC	3	A	QUESTIONABLE DATA REPORT	11/25/90	12/14/90	52	14.03.03.38
4431	IPC	3	A	REDUNDANT MEASUREMENTS STATUS REPORT	11/25/90	12/14/90	52	14.03.03.38
4432	IPC	3	A	COMPUTED VALUES FOR FUEL ASSEMBLY POWER AND QUADRANT SYMMETRY	11/25/90	12/06/90	60	14.03.03.38
4433	IPC	3	A	COMPUTER RAD TILT ALARM	11/25/90	12/14/90	52	14.03.03.38
4157	SWS	3	A	MAL SWS10 PROBLEMS	04/30/90	12/18/90	48	14.04.07.24.10

STATUS CODE: (A)CTIVE, (F)AILED RETEST, (R)EADY FOR RETEST

DR #	SYS	PRI	STATUS	TITLE	WRITTEN	STATUS CHNG. ON	DAYS SINCE STATUS CHNG.	TEST #
4608	PCS	3	A	AUXILIARY FEEDWATER	01/29/91	02/02/91	2	14.04.09.59
4601	SIS	3	A	HIGH HEAD INJECTION FLOWS PT-R64	01/28/91	01/31/91	4	14.04.09.67
4602	VLV	2	A	RECIRC PUMP DISCH VLVS (1802'S) STROKE TIMES	01/28/91	02/02/91	2	14.04.09.68
4603	SIS	3	A	HIGH HEAD SAFETY INJECTION FLOWS (PT-V29)	01/28/91	02/02/91	2	14.04.09.82

5.D. Test Program 4 Year Schedules

Attached are the testing schedules for the years 1991, 1992, 1993, and 1994. Malfunction testing has been projected for the next four years commencing with this submittal. All testing required to be performed on an annual basis is projected for one year from the date of this submittal. Future annual testing will be scheduled based on the overall simulator usage schedule for the upcoming year while recognizing the requirement to meet the test program objectives.

IP3 SIMULATOR

1991 PERFORMANCE TEST SCHEDULE

02/04/91 IP3 PERFORMANCE TESTING SCHEDULE PAGE : 1

-- ALL TEST TYPES --

FOR THE PERIOD 01/01/91 to 12/31/91

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Wednesday, 02/06/91	14.04.02.03	PLANT HEATUP FROM COLD SHUTDOWN CONDITION
Wednesday, 02/06/91	14.04.02.04	REACTOR STARTUP TEST
Wednesday, 02/06/91	14.04.02.06	RECOVERY TO RATED POWER AFTER REACTOR TRIP
Saturday, 02/16/91	14.04.02.02	HOT SHUTDOWN TO COLD SHUTDOWN
Friday, 02/22/91	14.04.02.05	PLANT STARTUP FROM 0 PERCENT POWER TO FULL POWER CONDITION
Saturday, 03/16/91	14.04.06.01	INITIAL CRITICALITY AND LOW POWER PHYSICS
Saturday, 03/30/91	14.04.05.03	RCS TEMPERATURE VS STEAM GENERATOR PRESSURE
Thursday, 04/04/91	14.04.02.01	PLANT SHUTDOWN FROM 100 PERCENT POWER TO 0 PERCENT POWER
Sunday, 04/07/91	14.04.05.04	MAIN CONDENSER ENERGY BALANCE TEST
Friday, 04/12/91	14.04.04.01	100 PERCENT POWER STEADY STATE HEAT BALANCE
Tuesday, 04/16/91	14.04.09.02	PT-CS01 MAIN STEAM VALVES (PCV-1310 A and PCV-1310 B)
Tuesday, 04/16/91	14.04.09.03	PT-CS02 MAIN STEAM CHECK VALVES (MS-1'S AND MS-2'S)
Tuesday, 04/16/91	14.04.09.05	PT-CS05 MAIN STEAM CHECK VALVES (MS-1s and MS-2s) - S/U
Wednesday, 04/17/91	14.04.09.07	PT-CS08 SAFETY INJECTION SYSTEM RWST VALVES
Wednesday, 04/17/91	14.04.09.08	PT-CS09 SAFETY INJECTION SYSTEM TO HOT LEG - 856 B & 856 G
Wednesday, 04/17/91	14.04.09.39	PT-Q23 HI HEAD SI VALVES
Wednesday, 04/17/91	14.04.09.67	PT-R064 SAFETY INJECTION HI-HEAD VALVES TEST (857s)
Saturday, 04/20/91	14.04.05.05	SECONDARY MASS BALANCE
Sunday, 04/21/91	14.04.05.01	PRIMARY MASS BALANCE TEST
Sunday, 04/21/91	14.04.05.02	MASS BALANCE TEST ON SMALL BREAK LOCA
Monday, 04/22/91	14.04.04.02	75 PERCENT POWER STEADY STATE HEAT BALANCE
Tuesday, 04/23/91	14.04.09.06	PT-CS06 CONTAINMENT SPRAY SYSTEM VALVES' FUNCTIONAL

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Tuesday, 04/23/91	14.04.09.40	PT-Q24 CONTAINMENT SPRAY DISCH. VALVES
Friday, 04/26/91	14.04.09.10	PT-CS13 RHR MINIFLOW VALVES FUNCTIONAL (VLVS 743 and 1870)
Friday, 04/26/91	14.04.09.11	PT-CS14 RESIDUAL HEAT REMOVAL SYSTEM VALVES' FUNCTIONAL
Friday, 04/26/91	14.04.09.38	PT-Q22 RESIDUAL HEAT REMOVAL SYSTEM VALVES' FUNCTIONAL
Friday, 04/26/91	14.04.09.63	PT-R034 RESIDUAL HEAT REMOVAL SYSTEM VALVES 730 and 731
Friday, 04/26/91	14.04.09.66	PT-R063 RESIDUAL HEAT REMOVAL SYSTEM VALVES' TIMING (889s)
Saturday, 04/27/91	14.04.08.03	SIMULTANEOUS CLOSURE OF ALL MSIV'S
Saturday, 04/27/91	14.04.08.04	SIMULTANEOUS TRIP OF ALL RCP'S
Tuesday, 04/30/91	14.04.09.12	PT-CS15 AUX BOILER FEED PUMP (31/33) and CHECK VALVES
Tuesday, 04/30/91	14.04.09.14	PT-CS19 AUX BOILER FEED PUMP (32) FUNCTIONAL - (< 350 F)
Friday, 05/03/91	14.04.09.15	PT-CS20 CONTAINMENT ISOLATION VALVES - RCP SEAL WATER
Friday, 05/03/91	14.04.09.16	PT-CS21 CONTAINMENT ISOLATION VALVES - CHARGING SYSTEM
Friday, 05/03/91	14.04.09.19	PT-CS26 EMERGENCY BORATION FLOW PATH VALVE FUNCTIONAL
Tuesday, 05/21/91	14.04.09.18	PT-CS24 HIGH HEAD SAFETY INJECTION VALVES FUNCTIONAL
Wednesday, 05/22/91	14.04.09.20	PT-CS29 REACTOR HEAD VENT VALVES TEST
Friday, 05/24/91	14.04.09.21	PT-M15 MAIN TURBINE STOP AND CONTROL VALVE TEST
Saturday, 05/25/91	14.04.08.01	MANUAL REACTOR TRIP
Saturday, 05/25/91	14.04.08.02	SIMULTANEOUS TRIP OF ALL FEEDWATER PUMPS
Thursday, 05/30/91	14.04.07.01.01	LOSS OF INSTRUMENT AIR (AIR-1)
Thursday, 05/30/91	14.04.07.01.02	LOSS OF STATION AIR (AIR-2)
Thursday, 05/30/91	14.04.07.02.07	LOSS OF CCW TO REACTOR COOLANT PUMPS (CCW-7)
Thursday, 05/30/91	14.04.07.03.01	CIRCULATING WATER PUMP TRIP (CWS-1)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Thursday, 05/30/91	14.04.07.06.01	POWER CABINET FAILURE (CRF-1)
Thursday, 05/30/91	14.04.07.06.02	RODS FAIL TO MOVE (CRF-2)
Thursday, 05/30/91	14.04.07.06.03	DROPPED ROD (CRF-3)
Thursday, 05/30/91	14.04.07.06.12	FAILURE OF ROD BLOCKS TO BLOCK (CRF-12)
Thursday, 05/30/91	14.04.07.07.07	MAKEUP CONTROL FAILURE IN AUTOMATIC MODE (CVC-7)
Thursday, 05/30/91	14.04.07.07.08.01	VCT LEVEL CONTROL FAILURE - HIGH (CVC-8)
Thursday, 05/30/91	14.04.07.07.08.02	VCT LEVEL CONTROL FAILURE - LOW (CVC-8)
Thursday, 05/30/91	14.04.07.07.17.01	PT-135 FAILURE - FULL OPEN (CVC-17)
Thursday, 05/30/91	14.04.07.07.17.02	PT-135 FAILURE - FULL OPEN (CVC-17)
Thursday, 05/30/91	14.04.07.09.02	LOSS OF 120 VAC INSTRUMENT BUS (EPS-2)
Tuesday, 06/04/91	14.04.09.04	PT-CS03 AUXILIARY COOLANT SYSTEM VALVES
Tuesday, 06/04/91	14.04.09.35	PT-Q19 COMPONENT COOLING VALVES
Thursday, 06/06/91	14.04.09.36	PT-Q20 A.B.F. VALVES
Friday, 06/14/91	14.04.09.41	PT-Q26 NITROGEN VALVES 891A,B,C,D; 863; 550
Friday, 06/14/91	14.04.09.44	PT-Q29 AIR EJECTOR ISO. VLVS. PC-1229, 1230
Friday, 06/14/91	14.04.09.45	PT-Q31 LIQUID WASTE DISPOSAL CONTAINMENT ISOLATION VALVES
Friday, 06/14/91	14.04.09.46	PT-Q32 RCS VLVS 519,552,548,549
Friday, 06/14/91	14.04.09.47	PT-Q35 DEMINERALIZED WATER CONTAINMENT ISOLATION VALVES
Friday, 06/28/91	14.04.09.48	PT-Q36 RHR COMPONENT COOLING VLVS-882 A + B
Friday, 06/28/91	14.04.09.50	PT-Q40 BIT RECIRC VLVS 1851 A + B
Friday, 06/28/91	14.04.09.51	PT-Q52 CNMT HYDROGEN MONITORING SYSTEM VALVES' FUNCTIONAL
Saturday, 06/29/91	14.04.08.06	TURBINE TRIP < P-7

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Saturday, 07/13/91	14.02.02.05.01	AO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 07/20/91	14.02.02.05.02	BO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 07/27/91	14.02.02.05.03	CO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 07/27/91	14.04.08.07	MAXIMUM RATE POWER RAMP (100% - 75% - 100%)
Wednesday, 07/31/91	14.04.07.09.03	LOSS OF 125 VDC BUSS (EPS-3)
Wednesday, 07/31/91	14.04.07.09.04	LOSS OF 6900 VOLT BUS (EPS-4)
Wednesday, 07/31/91	14.04.07.09.10.01	345 KV MOTOR OPERATED DISCONNECT FAILURE (EPS-10D)
Wednesday, 07/31/91	14.04.07.09.10.02	345 KV MOTOR OPERATED DISCONNECT FAILURE (EPS-10E)
Wednesday, 07/31/91	14.04.07.11.14	FEEDLINE BREAK INSIDE CONTAINMENT (CFW-14)
Wednesday, 07/31/91	14.04.07.11.15	FEEDLINE BREAK OUTSIDE CONTAINMENT (CFW-15)
Wednesday, 07/31/91	14.04.07.12.02	MAIN GENERATOR TRIP (GEN-2)
Wednesday, 07/31/91	14.04.07.12.04	LOSS OF GENERATOR EXCITATION (GEN-4)
Wednesday, 07/31/91	14.04.07.14.01	STEAM LINE BREAK INSIDE CONTAINMENT (MSS-1)
Wednesday, 07/31/91	14.04.07.14.02	STEAM LINE BREAK OUTSIDE CONTAINMENT (MSS-2)
Wednesday, 07/31/91	14.04.07.14.04	STEAM LINE FLOW TRANSMITTER FAILURE (MSS-4)
Wednesday, 07/31/91	14.04.07.14.05	MAIN STEAM ISOLATION VALVE FAILURE (MSS-5)
Saturday, 08/03/91	14.02.02.05.04	DO PANEL CONSTRUCTION CHECK PROCEDURE
Wednesday, 08/07/91	14.04.09.37	PT-Q21 STEAM GENERATOR BLOWDOWN VALVES' FUNCTIONAL
Wednesday, 08/07/91	14.04.09.59	PT-R007 AUX BOILER FEED PUMPS' FULL FLOW TEST
Friday, 08/09/91	14.04.09.65	PT-R061 INSTRUMENT AIR CONTAINMENT ISO VALVE (PCV-1228)
Saturday, 08/10/91	14.02.02.05.05	EO PANEL CONSTRUCTION CHECK PROCEDURE
Friday, 08/16/91	14.04.09.68	PT-R071 RECIRCULATION VALVES' FUNCTIONAL (1802s)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Friday, 08/16/91	14.04.09.69	PT-R076 BORON INJECTION TANK VALVES' FUNCTIONAL
Saturday, 08/17/91	14.02.02.05.06	FO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 08/17/91	14.02.02.05.07	PR PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 08/17/91	14.02.02.05.08	DM PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 08/31/91	14.02.02.05.09	VI PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 08/31/91	14.02.02.05.10	LO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 08/31/91	14.02.02.05.11	AC PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 08/31/91	14.04.08.08	100% RCS RUPTURE WITH LOSS OF ALL OFFSITE POWER
Saturday, 09/07/91	14.02.02.05.12	EV PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/07/91	14.02.02.05.13	AM PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/07/91	14.02.02.05.14	DC PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/14/91	14.02.02.05.15	A1 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/14/91	14.02.02.05.16	A6 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/14/91	14.02.02.05.17	B1 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/14/91	14.02.02.05.18	B6 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/21/91	14.02.02.05.19	C1 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/21/91	14.02.02.05.20	NI PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/21/91	14.02.02.05.21	VM PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/28/91	14.02.02.05.22	RI PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/28/91	14.02.02.05.23	II PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 09/28/91	14.02.02.05.24	D8 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 10/05/91	14.02.02.05.25	O2 PANEL CONSTRUCTION CHECK PROCEDURE

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Saturday, 10/05/91	14.02.02.05.26	FP PANEL CONSTRUCTION CHECK PROCEDURE
Sunday, 10/13/91	14.04.03.01.01	STEADY STATE ACCURACY AND DRIFT TEST (100% BOL)
Sunday, 10/13/91	14.04.03.01.02	STEADY STATE ACCURACY AND DRIFT TEST (100% MOL)
Sunday, 10/13/91	14.04.03.01.03	STEADY STATE ACCURACY AND DRIFT TEST (100% EOL)
Sunday, 10/13/91	14.04.03.01.04	STEADY STATE ACCURACY AND DRIFT TEST (45% BOL)
Sunday, 10/13/91	14.04.03.01.05	STEADY STATE ACCURACY AND DRIFT TEST (45% EOL)
Tuesday, 10/15/91	14.04.09.81	PT-V26 FEEDWATER REG VLVS FCV-417,27,37,47
Tuesday, 10/15/91	14.04.09.82	PT-V29 FULLFLOW THROUGH BIT CHECK VALVES
Wednesday, 10/16/91	14.04.09.71	PT-V01 SOURCE RANGE
Wednesday, 10/16/91	14.04.09.72	PT-V02 INTERMEDIATE RANGE
Thursday, 10/17/91	14.04.07.17.19	HOT LEG NARROW RANGE RTD FAILURE (RCS-19)
Thursday, 10/17/91	14.04.07.17.20.01	COLD LEG NARROW RANGE RTD FAILURE (RCS-20)
Thursday, 10/17/91	14.04.07.17.20.02	COLD LEG NARROW RANGE RTD FAILURE (RCS-20)
Thursday, 10/17/91	14.04.09.76	PT-V12 PR PERMISSIVES AND TRIP
Friday, 10/18/91	14.04.09.01	PT-M74 FULL LENGTH RODS' MOVEMENT EXERCISE
Saturday, 10/19/91	14.02.02.05.27	E2 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 10/19/91	14.02.02.05.28	E7 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 10/19/91	14.02.02.05.29	F2 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 10/19/91	14.02.02.05.30	GP PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 10/26/91	14.02.02.05.31	G3 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 10/26/91	14.02.02.05.32	G5 PANEL CONSTRUCTION CHECK PROCEDURE
Thursday, 10/31/91	14.04.07.14.10	INADVERTENT MAIN STEAM ISOLATION (MSS-10)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Thursday, 10/31/91	14.04.07.16.01	PRESSURIZER STEAM SPACE LEAK (PRS-1)
Thursday, 10/31/91	14.04.07.16.06.01	PRESSURIZER LEVEL TRANSMITTER FAILURE (PRS-6)
Thursday, 10/31/91	14.04.07.16.06.02	PRESSURIZER LEVEL TRANSMITTER FAILURE (PRS-6)
Thursday, 10/31/91	14.04.07.16.09.01	PRESSURIZER LEVEL CONTROLLER FAILURE - HIGH - (PRS-9)
Thursday, 10/31/91	14.04.07.16.09.02	PRESSURIZER LEVEL CONTROLLER FAILURE - LOW - (PRS-9)
Thursday, 10/31/91	14.04.07.16.11	OPS SYSTEM SETPOINT CALCULATOR FAILURE (PRS-11)
Thursday, 10/31/91	14.04.07.17.05	RCS LEAK (RCS-5)
Thursday, 10/31/91	14.04.07.17.08	REACTOR VESSEL FLANGE LEAK (RCS-8)
Thursday, 10/31/91	14.04.07.17.09	OIL LEAK FROM RCP BEARING OIL RESERVOIRS (RCS-9)
Thursday, 10/31/91	14.04.07.18.01	RHR PUMP TRIP (RHR-1)
Thursday, 10/31/91	14.04.07.18.02	RHR HEAT EXCHANGER TUBE LEAK (RHR-2)
Thursday, 10/31/91	14.04.07.20.02.01	REACTOR TRIP BREAKERS FAIL TO OPEN - AUTO (RPS-2)
Thursday, 10/31/91	14.04.07.20.02.02	REACTOR TRIP BREAKERS FAIL TO OPEN - MANUAL (RPS-2)
Saturday, 11/02/91	14.02.02.05.33	31 PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 11/02/91	14.02.02.05.34	SS PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 11/02/91	14.02.02.05.35	SRO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 11/09/91	14.02.02.05.36	RO PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 11/09/91	14.02.02.05.37	STA PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 11/09/91	14.02.02.05.38	QSPDS PANEL CONSTRUCTION CHECK PROCEDURE
Saturday, 11/16/91	14.02.02.18	CONTROL ROOM AUDIBLE SOUNDS
Saturday, 11/16/91	14.04.09.85	PT-W03 PLANT ASSEMBLY ALARMS
Friday, 12/06/91	14.02.02.17	SIMULATOR LIGHTING FUNCTIONAL TEST

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Tuesday, 12/31/91	14.04.07.02.08	LOSS OF CCW TO NON-REGENERATIVE HEAT EXCHANGER (CCW-8)
Tuesday, 12/31/91	14.04.07.14.03	STEAM HEADER PRESSURE DETECTOR PT-404 FAILURE (MSS-3)
Tuesday, 12/31/91	14.04.07.21.01.01	STEAM GENERATOR LEVEL TRANSMITTER FAILURE - HIGH (SGN-1)
Tuesday, 12/31/91	14.04.07.21.01.02	STEAM GENERATOR LEVEL TRANSMITTER FAILURE - LOW (SGN-1)
Tuesday, 12/31/91	14.04.07.21.02	STEAM GENERATOR PRESSURE TRANSMITTER FAILURE (SGN-2)
Tuesday, 12/31/91	14.04.07.21.06	S/G LEVEL CONTROLLER OSCILLATION (SGN-6)
Tuesday, 12/31/91	14.04.07.21.07	FAILURE OF S/G LEVEL TRANSMITTER SENSING LINE (SGN-7)
Tuesday, 12/31/91	14.04.07.24.02	SERVICE WATER LEAKAGE TO CONTAINMENT (SWS-2)
Tuesday, 12/31/91	14.04.07.25.04	TURBINE VIBRATION (TUR-4)
Tuesday, 12/31/91	14.04.07.25.05	CONTROL VALVE FAILURE (TUR-5)
Tuesday, 12/31/91	14.04.07.25.06	STOP VALVE FAILURE (TUR-6)
Tuesday, 12/31/91	14.04.07.25.11	TURBINE RUNBACK FAILURE (TUR-11)
Tuesday, 12/31/91	14.04.07.29.01	MAIN BOILER FEED PUMP OIL LEAK (ATS-1)
Tuesday, 12/31/91	14.04.07.29.02	32 ABFP OVERSPEED TRIP (ATS-2)
Tuesday, 12/31/91	14.04.07.30.01.01	FAILURE OF A SGBD ISOLATION VALVE TO CLOSE - MECH - (SGB-1)

IP3 SIMULATOR

1992 PERFORMANCE TEST SCHEDULE

02/04/91 IP3 PERFORMANCE TESTING SCHEDULE PAGE : 1

-- ALL TEST TYPES --

FOR THE PERIOD 01/01/92 to 12/31/92

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Saturday, 01/25/92	14.04.08.05	TRIP OF A SINGLE RCP
Sunday, 02/02/92	14.04.04.03	45 PERCENT POWER STEADY STATE HEAT BALANCE
Sunday, 02/23/92	14.04.08.09	UNISOLABLE 100% MAIN STEAM LINE RUPTURE
Saturday, 03/28/92	14.04.08.10	SLOW PRIMARY DEPRESSURIZATION TO SATURATED CONDITIONS
Tuesday, 03/31/92	14.04.07.01.03	INSTRUMENT AIR COMPRESSOR TRIP (AIR-3)
Tuesday, 03/31/92	14.04.07.02.01	COMPONENT COOLING WATER PUMP TRIP (CCW-1)
Tuesday, 03/31/92	14.04.07.02.02	LOSS OF CCW TO RHR HEAT EXCHANGER (CCW-2)
Tuesday, 03/31/92	14.04.07.02.09	LOSS OF CCW TO THE SEAL WATER HEAT EXCHANGER (CCW-9)
Tuesday, 03/31/92	14.04.07.03.02	CIRCULATING WATER PUMP SPEED CONTROL FAILURE (CWS-2)
Tuesday, 03/31/92	14.04.07.06.04.01	STUCK ROD (CRF-4A)
Tuesday, 03/31/92	14.04.07.06.04.02	STUCK ROD (CRF-4B)
Tuesday, 03/31/92	14.04.07.06.05	CONTROL ROD EJECTION (CRF-5)
Tuesday, 03/31/92	14.04.07.07.01	CONTAINMENT LETDOWN ISOLATION VALVE FAILURE (CVC-1)
Tuesday, 03/31/92	14.04.07.07.02	REGENERATIVE HEAT EXCHANGER TUBE LEAK (CVC-2)
Tuesday, 03/31/92	14.04.07.07.09	RCS BORATION (CVC-9)
Tuesday, 03/31/92	14.04.07.07.10	CHARGING LINE LEAK AT REGENERATIVE HX INLET (CVC-10)
Tuesday, 03/31/92	14.04.07.07.11	NON-REGENERATIVE HX TUBE LEAK (CVC-11)
Tuesday, 03/31/92	14.04.07.07.18	CHARGING LINE LEAK AT CHARGING PUMP DISCHARGE (CVC-18)
Tuesday, 03/31/92	14.04.07.07.19	CHARGING LINE LEAK DOWNSTREAM OF REGENERATIVE HX (CVC-19)
Saturday, 04/25/92	14.04.08.11	PLANT TRANSIENT (DIRECT TRIP FROM BUCHANAN 06/29/90)
Tuesday, 06/30/92	14.04.07.09.05	LOSS OF 480 VOLT BUS (EPS-5)
Tuesday, 06/30/92	14.04.07.09.06	LOSS OF STATION AUXILIARY TRANSFORMER (EPS-6)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Tuesday, 06/30/92	14.04.07.11.01	AUXILIARY FEEDWATER PUMP TRIP (CFW-1)
Tuesday, 06/30/92	14.04.07.11.02	AUXILIARY FEEDWATER LINE RUPTURE (CFW-2)
Tuesday, 06/30/92	14.04.07.11.03	AUXILIARY FEEDWATER FLOW CONTROL VALVE FAILURE (CFW-3)
Tuesday, 06/30/92	14.04.07.11.04	LOW FLOW FEEDWATER REG VALVE FAILURE (CFW-4)
Tuesday, 06/30/92	14.04.07.11.16	MBFP CHECK VALVE FAILURE (CFW-16)
Tuesday, 06/30/92	14.04.07.12.05.01	MAIN GENERATOR OUTPUT BREAKER CONTROL FAILURE (GEN-5)
Tuesday, 06/30/92	14.04.07.12.05.02	MAIN GENERATOR OUTPUT BREAKER CONTROL FAILURE (GEN-5)
Tuesday, 06/30/92	14.04.07.12.06	MAIN GENERATOR PT FUSE FAILURE (GEN-6)
Tuesday, 06/30/92	14.04.07.14.06	STEAM DUMP FAILS TO SELECTED POSITION (MSS-6)
Tuesday, 06/30/92	14.04.07.14.07	STEAM DUMP CONTROL FAILURE (MSS-7)
Tuesday, 06/30/92	14.04.07.14.08	TURBINE TRIP ARMING FAILURE (MSS-8)
Tuesday, 06/30/92	14.04.07.15.01	SOURCE RANGE CHANNEL FAILURE (NIS-1)
Tuesday, 06/30/92	14.04.07.15.02	NOISY SOURCE RANGE CHANNEL (NIS-2)
Tuesday, 06/30/92	14.04.07.15.03	SOURCE RANGE CHANNEL HI-VOLTS FAILURE (NIS-3)
Tuesday, 06/30/92	14.04.07.16.07	PRESSURIZER HEATERS FAIL OFF (PRS-7)
Saturday, 09/05/92	14.04.06.05	DUTY CYCLE MEASUREMENT
Saturday, 09/12/92	14.04.06.04	SPARE MEMORY CHECKS
Wednesday, 09/30/92	14.04.07.16.08.01	PRESSURIZER PRESSURE CONTROLLER FAILURE - HIGH - (PRS-8)
Wednesday, 09/30/92	14.04.07.16.08.02	PRESSURIZER PRESSURE CONTROLLER FAILURE - LOW - (PRS-8)
Wednesday, 09/30/92	14.04.07.17.02.01	REACTOR COOLANT PUMP TRIP - ABOVE P8 (RCS-2)
Wednesday, 09/30/92	14.04.07.17.02.02	REACTOR COOLANT PUMP TRIP - BELOW P8 (RCS-2)
Wednesday, 09/30/92	14.04.07.17.03	RCP LOCKED ROTOR (RCS-3)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Wednesday, 09/30/92	14.04.07.17.04	RCP SHAFT BREAK (RCS-4)
Wednesday, 09/30/92	14.04.07.17.07	RCP VIBRATION (RCS-7)
Wednesday, 09/30/92	14.04.07.17.16	RCP THRUST BEARING FAILURE (RCS-16)
Wednesday, 09/30/92	14.04.07.17.18	FAILURE OF RCP START PERMISSIVE (RCS-18)
Wednesday, 09/30/92	14.04.07.18.03	RHR PUMP SUCTION LINE BREAK (RHR-3)
Wednesday, 09/30/92	14.04.07.20.01	INADVERTANT REACTOR TRIP (RPS-1)
Wednesday, 09/30/92	14.04.07.20.03	PERMISSIVE FAILURE (RPS-3)
Wednesday, 09/30/92	14.04.07.21.03	STEAM GENERATOR RELIEF VALVE CONTROLLER FAILURE (SGN-3)
Wednesday, 09/30/92	14.04.07.21.04	STEAM GENERATOR SAFETY VALVE FAILURE (SGN-4)
Wednesday, 09/30/92	14.04.07.24.01	SERVICE WATER PUMP TRIP (SWS-1)
Thursday, 12/31/92	14.04.07.24.06.01	SERVICE WATER PUMP STRAINERS BLOCKED (SWS-6)
Thursday, 12/31/92	14.04.07.24.06.02	SERVICE WATER PUMP STRAINERS BLOCKED (SWS-6)
Thursday, 12/31/92	14.04.07.24.07	SERVICE WATER PUMP CHECK VALVE FAILS TO SEAT (SWS-7)
Thursday, 12/31/92	14.04.07.24.08	SERVICE WATER PUMP SHAFT BREAK (SWS-8)
Thursday, 12/31/92	14.04.07.24.10	LOSS OF SERVICE WATER TO FEED PUMP OIL COOLERS (SWS-10)
Thursday, 12/31/92	14.04.07.25.07	LOSS OF MAIN TURBINE LUBE OIL (TUR-7)
Thursday, 12/31/92	14.04.07.25.08	TURBINE HIGH ECCENTRICITY (TUR-8)
Thursday, 12/31/92	14.04.07.25.09	TURBINE BLADE FAILURE (TUR-9)
Thursday, 12/31/92	14.04.07.25.10	TURBINE FIRST STAGE PRESSURE TRANSMITTER FAILURE (TUR-10)
Thursday, 12/31/92	14.04.07.27.01	INADVERTENT CONTAINMENT ISOLATION PHASE A (MSC-1)
Thursday, 12/31/92	14.04.07.29.03	MBFP TURBINE SPEED OSCILLATION (ATS-3)
Thursday, 12/31/92	14.04.07.29.04	MAIN FEEDWATER PUMP TRIP (ATS-4)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Thursday, 12/31/92	14.04.07.30.01.02	FAILURE OF A SGBD ISOLATION VALVE TO CLOSE - AUTO - (SGB-1)
Thursday, 12/31/92	14.04.07.30.02.01	FAILURE OF A SGBD SAMPLE VALVE TO CLOSE - MECH - (SGB-2A)
Thursday, 12/31/92	14.04.07.30.02.02	FAILURE OF A SGBD SAMPLE VALVE TO CLOSE - AUTO - (SGB-2B)

IP3 SIMULATOR

1993 PERFORMANCE TEST SCHEDULE

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Wednesday, 03/31/93	14.04.07.01.04	STATION AIR COMPRESSOR TRIP (AIR-4)
Wednesday, 03/31/93	14.04.07.02.03	COMPONENT COOLING WATER PUMP SUCTION LINE LEAK (CCW-3)
Wednesday, 03/31/93	14.04.07.02.04	COMPONENT COOLING WATER PUMP DISCHARGE LINE LEAK (CCW-4)
Wednesday, 03/31/93	14.04.07.03.03	MAIN CONDENSER TUBE LEAK (CWS-3)
Wednesday, 03/31/93	14.04.07.04.01	HOTWELL LEVEL TRANSMITTER FAILURE (CND-1)
Wednesday, 03/31/93	14.04.07.04.02	LOSS OF CONDENSER VACUUM (CND-2)
Wednesday, 03/31/93	14.04.07.06.06	UNCONTROLLED ROD MOTION IN AUTO (CRF-6)
Wednesday, 03/31/93	14.04.07.06.07	UNCONTROLLED ROD MOTION IN MANUAL (CRF-7)
Wednesday, 03/31/93	14.04.07.06.08	FAILURE OF AUTOMATIC ROD SPEED SIGNAL (CRF-8)
Wednesday, 03/31/93	14.04.07.07.03	LETDOWN LINE LEAK INSIDE CONTAINMENT (CVC-3)
Wednesday, 03/31/93	14.04.07.07.04	LETDOWN LINE LEAK OUTSIDE CONTAINMENT (CVC-4)
Wednesday, 03/31/93	14.04.07.07.12	SEAL WATER HEAT EXCHANGER TUBE LEAK (CVC-12)
Wednesday, 03/31/93	14.04.07.07.13	PLUGGED RCS FILTER (CVC-13)
Wednesday, 03/31/93	14.04.07.07.20	BORIC ACID CONTROL DEVIATION (CVC-20)
Wednesday, 06/30/93	14.04.07.08.01	DIESEL GENERATOR FAILURE (DSG-1)
Wednesday, 06/30/93	14.04.07.08.02	DIESEL GENERATOR BREAKER INADVERTANT TRIP (DSG-2)
Wednesday, 06/30/93	14.04.07.09.07	LOSS OF UNIT AUXILIARY TRANSFORMER (EPS-7)
Wednesday, 06/30/93	14.04.07.11.05	CONDENSATE PUMP TRIP (CFW-5)
Wednesday, 06/30/93	14.04.07.11.06	CONDENSATE BOOSTER PUMP TRIP (CFW-6)
Wednesday, 06/30/93	14.04.07.11.07	HEATER DRAIN PUMP TRIP (CFW-7)
Wednesday, 06/30/93	14.04.07.11.10	CONDENSATE POLISHER FACILITY BYPASS VALVE FAILURE (CFW-10)
Wednesday, 06/30/93	14.04.07.11.11	CONDENSATE POLISHER FACILITY LINE BREAK (CFW-11)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Wednesday, 06/30/93	14.04.07.11.17	CLOGGED SERVICE VESSEL (CFW-17)
Wednesday, 06/30/93	14.04.07.11.18	POST FILTER FAILURE (CFW-18)
Wednesday, 06/30/93	14.04.07.11.19	CBP DISCHARGE MOV FAILURE (CFW-19)
Wednesday, 06/30/93	14.04.07.14.09	MAIN STEAM HEADER BREAK (MSS-9)
Wednesday, 06/30/93	14.04.07.15.04	INTERMEDIATE RANGE CHANNEL FAILURE (NIS-4)
Wednesday, 06/30/93	14.04.07.15.05	INTERMEDIATE RANGE COMPENSATING VOLTAGE FAILURE (NIS-5)
Thursday, 09/30/93	14.04.07.15.09	INTERMEDIATE RANGE BLOWN FUSE (NIS-9)
Thursday, 09/30/93	14.04.07.16.02	PRESSURIZER SPRAY VALVE FAILURE (PRS-2)
Thursday, 09/30/93	14.04.07.16.03	PRESSURIZER RELIEF VALVE FAILURE (PRS-3)
Thursday, 09/30/93	14.04.07.16.04	PRESSURIZER SAFETY VALVE FAILS OPEN (PRS-4)
Thursday, 09/30/93	14.04.07.16.10	PRESSURIZER TEMPERATURE TRANSMITTER FAILURE (PRS-10)
Thursday, 09/30/93	14.04.07.16.12	PRESSURIZER HEATERS FAIL ON (PRS-12)
Thursday, 09/30/93	14.04.07.17.11	RCS FLOW TRANSMITTER FAILURE (RCS-11)
Thursday, 09/30/93	14.04.07.17.12	RCP NUMBER 1 SEAL FAILURE (RCS-12)
Thursday, 09/30/93	14.04.07.17.13	RCP NUMBER 2 SEAL FAILURE (RCS-13)
Thursday, 09/30/93	14.04.07.17.14	RCP NUMBER 3 SEAL FAILURE (RCS-14)
Thursday, 09/30/93	14.04.07.17.17.01	FAILURE OF FLOW TAP PENETRATION (RCS-17)
Thursday, 09/30/93	14.04.07.17.17.02	FAILURE OF FLOW TAP PENETRATION (RCS-17)
Thursday, 09/30/93	14.04.07.19.01.01	AREA RADIATION MONITOR FAILURE (RMS-1)
Thursday, 09/30/93	14.04.07.19.01.02	AREA RADIATION MONITOR FAILURE (RMS-1)
Friday, 12/31/93	14.04.07.21.05	STEAM GENERATOR TUBE LEAK (SGN-5)
Friday, 12/31/93	14.04.07.22.01	SAFETY INJECTION FAILURE (SIS-1)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Friday, 12/31/93	14.04.07.22.02	ACCUMULATOR LEAKAGE (SIS-2)
Friday, 12/31/93	14.04.07.22.03	ACCUMULATOR NITROGEN LEAKAGE (SIS-3)
Friday, 12/31/93	14.04.07.22.04	SAFETY INJECTION PUMP TRIP (SIS-4)
Friday, 12/31/93	14.04.07.24.03	FAILURE OF TCV-1102 (SWS-3)
Friday, 12/31/93	14.04.07.24.04	FAILURE OF PCV-1179 (SWS-4)
Friday, 12/31/93	14.04.07.24.05	LOSS OF COOLING TO HYDROGEN COOLERS (SWS-5)
Friday, 12/31/93	14.04.07.27.02	INADVERTENT CONTAINMENT ISOLATION PHASE B (MSC-2)
Friday, 12/31/93	14.04.07.27.03	INADVERTENT CONTAINMENT VENTILATION ISOLATION (MSC-3)
Friday, 12/31/93	14.04.07.29.05	LOSS OF MBFP FEEDWATER SIGNAL (ATS-5)
Friday, 12/31/93	14.04.07.29.06.01	MBFP SPEED SENSOR FAILURE (ATS-6)
Friday, 12/31/93	14.04.07.29.06.02	MBFP SPEED SENSOR FAILURE (ATS-6)
Friday, 12/31/93	14.04.07.30.03	SGBD LINE BREAK INSIDE CONTAINMENT (SGB-3)

IP3 SIMULATOR

1994 PERFORMANCE TEST SCHEDULE

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Thursday, 03/31/94	14.04.07.01.05	PRESSURIZATION SYSTEM LEAK (AIR-5)
Thursday, 03/31/94	14.04.07.02.05	CCW LEAK DOWNSTREAM OF THE CCW HEAT EXCHANGER (CCW-5)
Thursday, 03/31/94	14.04.07.02.06	CCW LEAK UPSTREAM OF RHR HEAT EXCHANGER (CCW-6)
Thursday, 03/31/94	14.04.07.03.04	CWS PUMP LCI DRIVE UNIT FAULT (CWS-4)
Thursday, 03/31/94	14.04.07.05.01	FAILED FUEL ELEMENT (RTC-1)
Thursday, 03/31/94	14.04.07.06.09	TREF ROD CONTROL FAILURE (CRF-9)
Thursday, 03/31/94	14.04.07.06.10	FAILURE OF ROD POSITION INDICATOR (CRF-10)
Thursday, 03/31/94	14.04.07.06.11	IMPROPER BANK OVERLAP (CRF-11)
Thursday, 03/31/94	14.04.07.07.05	CHARGING PUMP TRIP (CVC-5)
Thursday, 03/31/94	14.04.07.07.06	CHARGING PUMP SPEED CONTROL FAILURE (CVC-6)
Thursday, 03/31/94	14.04.07.07.14	PLUGGED SEAL INJECTION FILTER (CVC-14)
Thursday, 03/31/94	14.04.07.07.15	PLUGGED BORIC ACID FILTER (CVC-15)
Thursday, 06/30/94	14.04.07.07.16	PLUGGED SEAL WATER RETURN FILTER (CVC-16)
Thursday, 06/30/94	14.04.07.09.01	STATION BLACKOUT (EPS-1)
Thursday, 06/30/94	14.04.07.09.08	LOSS OF MOTOR CONTROL CENTER (EPS-8)
Thursday, 06/30/94	14.04.07.09.09	SYNCH CHECK RELAY FAILURE (EPS-9)
Thursday, 06/30/94	14.04.07.11.08	HP FEEDWATER HEATER TUBE LEAK (CFW-8)
Thursday, 06/30/94	14.04.07.11.09	LP FEEDWATER HEATER TUBE LEAK (CFW-9)
Thursday, 06/30/94	14.04.07.11.12	FEEDWATER FLOW TRANSMITTER FAILURE (CFW-12)
Thursday, 06/30/94	14.04.07.11.13	FEEDWATER REGULATION VALVE CONTROLLER FAILURE (CFW-13)
Thursday, 06/30/94	14.04.07.12.01	MAIN GENERATOR VOLTAGE REGULATOR FAILURE (GEN-1)
Thursday, 06/30/94	14.04.07.12.03	VOLTAGE REGULATOR OSCILLATION (GEN-3)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Thursday, 06/30/94	14.04.07.13.01	FAN COOLER UNIT TRIP (HVA-1)
Thursday, 06/30/94	14.04.07.13.02	FIRESTAT SENSOR FAILURE (HVA-2)
Thursday, 06/30/94	14.04.07.14.11	REHEAT STEAM SUPPLY VALVE FAILURE (MSS-11)
Thursday, 06/30/94	14.04.07.14.12	GLAND SEAL REGULATOR FAILURE (MSS-12)
Friday, 09/30/94	14.04.07.15.06	POWER RANGE DETECTOR FAILURE (NIS-6)
Friday, 09/30/94	14.04.07.15.07	POWER RANGE FAILURE (NIS-7)
Friday, 09/30/94	14.04.07.15.08	POWER RANGE OUTPUT OSCILLATION (NIS-8)
Friday, 09/30/94	14.04.07.15.10	POWER RANGE FUSE BLOWN (NIS-10)
Friday, 09/30/94	14.04.07.16.05.01	PRESSURIZER PRESSURE TRANSMITTER FAILURE - CONTROL -(PRS-5)
Friday, 09/30/94	14.04.07.16.05.02	PRESSURIZER PRESSURE TRANSMITTER FAILURE - BISTABLE -(PRS-5)
Friday, 09/30/94	14.04.07.16.13.01	FAILURE OF PRESSURIZER LEVEL SENSING LINE (PRS-13)
Friday, 09/30/94	14.04.07.16.13.02	FAILURE OF PRESSURIZER LEVEL SENSING LINE (PRS-13)
Friday, 09/30/94	14.04.07.17.01	RCS RUPTURE - LOCA (RCS-1)
Friday, 09/30/94	14.04.07.17.06	HOT LEG NARROW RANGE RTD MICROPROCESSOR FAILURE (RCS-6)
Friday, 09/30/94	14.04.07.17.10	RCP THERMAL BARRIER LEAK (RCS-10)
Friday, 09/30/94	14.04.07.17.15	RCS WIDE RANGE RTD FAILURE (RCS-15)
Friday, 09/30/94	14.04.07.19.02	PROCESS RADIATION MONITOR FAILURE (RMS-2)
Friday, 09/30/94	14.04.07.22.05.01	SIS CHECK VALVE LEAKAGE (SIS-5)
Saturday, 12/31/94	14.04.07.22.05.02	SIS CHECK VALVE LEAKAGE (SIS-5)
Saturday, 12/31/94	14.04.07.22.06	SAFETY INJECTION LINE LEAK (SIS-6)
Saturday, 12/31/94	14.04.07.22.07	INADVERTENT SAFETY INJECTION ACTUATION (SIS-7)
Saturday, 12/31/94	14.04.07.23.01	FALSE CONTAINMENT SPRAY ACTUATION (CNS-1)

PERFORMANCE DATE	TEST NUMBER	TEST TITLE
Saturday, 12/31/94	14.04.07.23.02	CONTAINMENT SPRAY PUMP FAILURE (CNS-2)
Saturday, 12/31/94	14.04.07.23.03	RECIRCULATION PUMP TRIP (CNS-3)
Saturday, 12/31/94	14.04.07.24.09	LOSS OF SERVICE WATER TO CCW HEAT EXCHANGERS (SWS-9)
Saturday, 12/31/94	14.04.07.25.01	INADVERTANT TURBINE TRIP (TUR-1)
Saturday, 12/31/94	14.04.07.25.02	TURBINE PROTECTION TRIP FAILURE (TUR-2)
Saturday, 12/31/94	14.04.07.25.03	CONTROL VALVE OSCILLATION (TUR-3)
Saturday, 12/31/94	14.04.07.26.01	WASTE GAS DECAY TANK RUPTURE (WPS-1)
Saturday, 12/31/94	14.04.07.30.04	SGBD LINE BREAK OUTSIDE CONTAINMENT (SGB-3)

6. SIMULATOR DISCREPANCY RESOLUTION

Attached and listed below are the procedures which describe the methods for initiating and processing IP3 Simulator Discrepancy Reports. The process described within these procedures is an integral part of the simulator testing program. Deficiencies noted during testing are documented as Discrepancy Reports (DR's) and tracked using the individual test number. This process ensures that test status is directly linked to problems previously noted.

SIMAP-101	INITIATING DISCREPANCY REPORTS
SIMAP-102	PROCESSING DISCREPANCY REPORTS

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

SIMAP-101 REV. 1

INITIATING DISCREPANCY REPORTS

Written by: C. Lambert

Reviewed by: J. Robinson

Approved by: [signature] Date: 1/25/90

Effective Date: 1/25/90

SIMAP-101

INITIATING DISCREPANCY REPORTS

I. PURPOSE

The purpose of this procedure is to describe the process used to identify and document the discrepancies between the Indian Point 3 Plant and the Indian Point 3 Simulator.

II. DISCUSSION

A discrepancy report is used to notify the Simulator Support Staff of any difference between the Indian Point 3 Plant and the Simulator Design Data Base in either appearance or response. A discrepancy report may also be used to identify any Simulator Hardware degradation or problems associated with the instructor system-simulator interface. Required simulator changes resulting from plant modifications or requests for simulator enhancements beyond the design scope may be effected via a Simulator Discrepancy Report.

III. DEFINITIONS

A. DR - Acronym for "Discrepancy Report".

B. MODELER - For the purpose of this procedure, the "Modeler" is the individual or group to whom a Discrepancy Report is assigned for resolution or attention. The "Modeler" may be anyone on the Simulator Support staff or the immediate supervisor of the DR originator.

C. PRIORITY - One of four (4) discrete levels used to rank an Active DR based on the degree of negative impact on the simulation and the expected time for resolution.

1. Priority 1 - The simulator cannot be used for its intended function. Immediate and continuous attention is required until resolved. All Priority 1 DRs will constitute a "down time" condition.

2. Priority 2 - The simulator can be used but there are obvious negative training results. Priority 2 DRs are expected to be resolved within fifteen (15) consecutive days.

3. Priority 3 - The simulator can be used and there are no obvious negative training results. Priority 3 DRs are expected to be resolved within thirty (30) consecutive days.

4. Priority 4 - The simulator can be used for its intended purpose. A Priority 4 DR references a change in plant configuration/procedures or requests an enhancement to the simulator system. Priority 4 DRs are expected to be resolved within one (1) year.

D. Training Impact - One of four (4) discrete levels of impact on simulator training activities that are planned or in progress.

1. Level A - Problem greatly hinders training

2. Level B - Problem adversely affects the ability to conduct a reliable scenario on a given procedure event or system

3. Level C - Problem has a minor but definite impact

4. Level D - Problem has little or no adverse effect on training.

1

IV. Procedure

A. Discrepancy Report Filing

Discrepancy Reports shall be maintained in three (3) locations dependent upon the status of the DR. The three locations are as follows:

1. Daily DR Book - This 3-ring binder is to be kept in the Instructor Station except for the purpose of updating the computerized DR tracking system. The Daily DR book is comprised of the following sections.

a. Index - The Index section is used to obtain and log the sequential DR numbers.

b. Active - The Active section is used to hold newly generated DRs until entered in the Simulator Management System.

c. Retest - The Retest section is used to hold DRs that have been worked on, and are ready for testing.

d. Cleared - The Cleared section is used to hold DRs that have been worked on, and the applicable changes found acceptable.

e. Failed - The Failed section is used to hold DR's that have been tested and the applicable changes are determined to be unacceptable.

f. Reassigned - The reassigned section is used to hold DRs that require the attention of an individual or group other than the MODELER presently responsible for the DRs. Only the Simulator Manager or his designee may reassign a DR.

g. Terminated - The Terminated section is used to hold DRs that have been Cleared and the associated simulator documentation revised and approved.

h. Blank Forms - The Blank Form section is used to hold blank Discrepancy Report Forms making them conveniently available.

2. Active DR Book - This 3-ring binder is to be kept in the Instructor Station except for the purpose of updating the computerized DR tracking system. The Active Book is comprised of the following sections:

a. Active - This section is used to hold DRs that have been entered into the Simulator Management System and are being worked on by the assigned Modeler.

b. Failed - This section is used to hold DRs that have been entered into the Simulator Management System as having Failed retesting and are being worked on by the assigned Modeler.

c. Retest - This section is used to hold DRs that have been entered into the Simulator Management System as being ready for retest.

d. Cleared - This section is used to hold DRs that have been tested, the changes found acceptable, but the simulator documentation is still being revised.

3. Cleared DR Book(s) - These volumes of ring binders are to be kept in the Simulator Documents Storage Room. They are used to hold Discrepancy Reports that have been worked on, retested, cleared, and entered as such in the Simulator Management System. These DR's will be maintained by the Authority for the life of the IP3 Simulator.

4. Terminated DR Book(s) - These volumes of ring binders are to be kept in the Simulator Documents Storage Room. They are used to hold Discrepancy Reports that have been cleared have had the associated documentation revised, and have been entered as such in the Simulator Management System. These DRs will be maintained by the Authority for the life of the IP3 Simulator.

B. Initiating Discrepancy Reports

1. Discrepancy Reports may only be initiated by the following individuals:

   a. Any member of the Simulator Support Staff

   b. Qualified Simulator Instructors

Simulator discrepancies may be identified by anyone including; students, observers, auditors, etc. The individual who identified the discrepancy will have the Simulator Instructor or Simulator Staff member initiate the DR. The initiator will use the last name of the person identifying the discrepancy as the Originator of the DR.

2. The initiator of a Discrepancy Report shall log, write, and file the DR in the following manner:

   a. Obtain a blank DR form from the Daily DR book in the Instructor Station.

   b. From the DR Index, determine the next sequential number to be used.

   c. On the front page of the DR form enter the next sequential DR number on the line labelled "DR No."

   d. On the front page of the DR form, enter a descriptive title for the identified discrepancy on the line labelled "TITLE"

e. On the front of the DR form enter the date the Discrepancy Report is being initiated.

f. Enter the first initial and last name of the person who identified the discrepancy, on the line labelled "ORIGINATOR:". This name will usually be yours unless a student, examiner, or auditor has brought the discrepancy to your attention.

g. In the Simulator Computer Room, determine which disk pack load is in service. This is done by reading the label on the acrylic disk pack cover resting a top disk drive "DISK SYS A 0800". On the DR form enter the load name on the line labelled "LOAD ID:".

h. Enter the initial condition set number that was in use when the discrepancy was identified, on the line labelled "IC No.:" If the discrepancy conditions were saved as a snapshot then enter the snapshot ID.

i. Enter the simulator test number and test steps in progress when the discrepancy was noted, on the line labelled "TEST IN PROGRESS:". If a training session was in progress then enter the applicable lesson plan number. If either of these situations do not apply then enter "N/A".

j. The lines labelled "DESCRIPTION OF PROBLEM" are to be filled out by the initiator. This section shall include as a minimum the following; 1) A detailed description of the observed discrepancy, 2) A detailed description of the simulation that was expected, 3) If applicable, a list of activities preceding the observed discrepancy (i.e. active malfunctions, overrides, LOAs, etc.), 4) A list of references to substantiate the simulation that was expected.

k. In the DR Index, enter the following; 1) The DR number, 2) the descriptive title of the DR as it appears on the DR form, 3) the entry date as it appears on the DR form, 4) your first and last initials in the entry initials box.

l. Place the filled out DR form in the Active section of the Daily DR book. When placing the DR in the book, the ascending numerical order shall be maintained.

IP3 SIMULATOR DISCREPANCY REPORT

DR No. _____

TITLE: _____

DATE: ___/___/___

PRIORITY: _____

ORIGINATOR: _____

TRNG. IMPACT: _____

LOAD ID: _____

SYSTEM: _____

IC No. _____

MODELER: _____

TEST IN PROGRESS: _____

DESCRIPTION OF PROBLEM: _____

REFERENCES: _____

****

DR No. _____ SYSTEM: _____ MDLR: _____

DETAILED CAUSE OF PROBLEM: _____

SPECIFIC CHANGES TO SOFTWARE/HARDWARE: _____

****

DR No. _____

RETEST COMMENTS: _____

NEW REFERENCES USED: _____

SIMULATOR DOCUMENTATION REVISED: _____

	DATE	INITIALS	
CHANGES MADE	_____	_____	MODELER
CHANGES ACCEPTED	_____	_____	SUPV.
CLEARED BY: _____		DATE: _____	
DOCUMENTATION UPDATED	_____	_____	MODELER
DOCUMENTATION CHECKED	_____	_____	SUPV.
TERMINATED BY: _____		DATE: _____	

DR No. _____

BUDGET LOG

NH = NYPA HARDWARE
CH = CONTRACT HARDWARE
NS = NYPA SOFTWARE
CS = CONTRACT SOFTWARE
NO = NYPA OPS
CO = CONTRACTOR OPS
NA = NYPA ADMINISTRATION

	NH	CH	NS	CS	NO	CO	NA
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							
21.							
22.							
23.							
24.							
25.							
TOT							

(C:\WP50\BUDGET.LOG)

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

SIMAP-102 REV. 0

PROCESSING DISCREPANCY REPORTS

Written by: C. Lambert

Reviewed by: Wayne Robinson

Approved by: [signature] Date: 8/21/89

Effective Date: 8/21/89

SIMAP-102
PROCESSING DISCREPENCY REPORTS

I. PURPOSE

The purpose of this procedure is to define the methods by which discrepancy reports are processed by the Simulator Support Staff from the time a DR is Initiated until it is Terminated.

II. DISCUSSION

Each Discrepancy Report is handled by several members of the Simulator Staff while it is being resolved. To ensure that each DR is efficiently resolved in a timely manner requires that each staff member consistently follow the same guidelines while working on these problems. This procedure is applicable to the Indian Point 3 Simulator Support Staff and shall be adhered to by each member of that group.

III. PROCEDURE

A. Classification and Assignment

1. Priority classification will be determined by the Simulator Manager according to the guidelines in procedure SIMAP-101. The priority for resolution will be written by the Simulator Manager on page 1 of the DR form in the space provided. Based on new information or impact on scheduled activities, the priority of a DR may be changed by the Simulator Manager at any time.

2. The Training Impact of a DR will be determined by the Operations Training Supervisor or his designee, according to the guidelines in procedure SIMAP-101. The Training Impact designation will be written on page 1 of the DR form in the space provided.

3. The simulator system wherein the discrepancy is found or may be found, shall originally be determined by the Simulator Manager. The System designation shall be a three (3) or four (4) character acronym from the DR-SYS.DBF file in the Simulator Management System. The System designation will be written by the Simulator Manager on pages 1 through 4 of the DR form in the space provided. This designation may be changed at any time by the Simulator Manager

based on the determined cause of the discrepancy.

4. For the sake of convenience, the term "Modeler" is used to identify to whom the DR is assigned and is not limited to software personnel. The Modeler assignment will be determined by the Simulator Manager based on the apparent cause of the discrepancy, input from the Simulator staff, or the need to reassign the DR. The Modeler designation shall be a two (2) character designation from the DR-NAMES.DBF file in the Simulator Management System. The Modeler assignment designation shall be written by the Simulator Manager on pages 1 and 2 of the DR form in the spaces provided. This assignment may be changed at any time by the Simulator Manager.

5. Typically on a daily basis but no less than once per week, the Simulator Manager will audit the Daily Book for new or reassigned DRs. The Simulator Manager will classify and/or assign these DRs as per this procedure. New DRs will be reviewed for completeness and clarity. If a DR is determined to require additional input from the initiator, the Simulator Manager will annotate the "Description of Problem" section of the DR and assign the DR to the initiator or the initiator's supervisor. The annotation will outline the information needed and include the date and signature of the Simulator Manager.

6. When the Simulator Manager has completed the initial or revised classification and assignment of a DR, he will enter or revise that information in the DR tracking software of the Simulator Management System. The Simulator Manager will then prepare and distribute individual reports to the Modelers informing them as to their DR responsibilities.

7. When the Simulator Manager has completed entering the DR classification and assignment information into the Simulator Management System he will remove those DRs from the Daily Book and place them into the appropriate sections of the Active Book as described in procedure SIMAP-101.

B. <u>Correcting Simulator Deficiencies</u>

1. This section of the procedure shall define the process to be used by any and all Modelers while correcting deficiencies in the simulator system.

2. Modelers may only remove DRs from any of the storage locations for the purpose of making working copies. This policy will be adhered to by ALL personnel who review, work on, or otherwise handle Discrepancy Reports.

3. A Modeler receives notification that a DR has been assigned to him or has failed retesting via a report from the Simulator Manager. DRs referenced in the report will be located in the appropriate section(s) of the Active Book. If necessary, a Modeler may make a photocopy of the DR(s) for reference while working on the discrepancy. However, ALL annotations on any DR must be made on the original DR form. This includes the mandatory entries on the Budget LOG by the Simulator Staff.

4. When the Modeler has determined the cause(s) of the discrepancy, he will enter in narrative form, a DETAILED description of the problem in the space provided on page 2 of the DR form. The description is expected to be concise and not simplistic. As an example; "Setpoint is wrong" or "Wire is broke", will not be accepted. The information given shall be sufficient for complete understanding of the problem when reviewed by another member of the technical staff.

5. Upon correction of the problem, the Modeler will provide, in narrative form, a COMPLETE description of the change(s) made and/or actions taken to correct the deficiency. This information will be written in the appropriate section on page 2 of the DR form. If any new data or references are used to correct the deficiency, the Modeler will fully identify those data sources in the "New References Used" section on page 3 of the DR form. At this point, the Modeler will initial and date the "Changes Made" section on page 3 of the DR form and submit this information to his supervisor for review.

6. It is the responsibility of the Modeler's supervisor to review the work performed on the DR. This review shall include identification of the discrepancy cause(s), changes made, data used, and completion of applicable sections of the DR form. If any portion of the Modeler's work is found to be deficient, the supervisor shall notify the Modeler of the problem(s) and instruct him to correct those items. If the

supervisor approves the work performed, he will initial and date the "Changes accepted" section on page 3 of the DR form and place the DR in the Retest section of the Daily Book.

7. Typically on a daily basis but no less than once per week, the Simulator Manager will audit the Daily Book for DRs that have been placed in the Retest section. The Simulator Manager shall revise the status of these DRs in the Simulator Management System and place the DRs in the Retest section of the Active Book. It is the responsibility of the Simulator Manager to prepare and distribute a report to the Modeler and the Simulator Operations Supervisor when a DR has been submitted for retest.

C. Retesting Simulator Deficiencies

1. DRs submitted for retesting shall be retested by a member of the Simulator Support Staff other than the assigned Modeler. Usually this person will be the Simulator Operations Supervisor. The Simulator Operations Supervisor will review all DRs ready for retest to determine if additional software, hardware, or training personnel are required to fully retest the DR.

2. If the DR was written against a simulator test procedure, then that test procedure will be used, either in whole or in part, to retest the DR.

3. If the DR should fail retest, the individual performing the test shall fully identify the reasons for failure in the "Retest Comments" section on page 3 of the DR form. These comments shall include the date and signature of the person performing the test. This person will then put the DR in the Failed section of the Daily Book.

4. Typically on a daily basis but no less than once per week, the Simulator Manager will audit the Daily Book for DRs that have been placed in the Failed section. The Simulator Manager shall revise the status of these DRs in the Simulator Management System and place the DRs in the Failed section of the Active Book. It is the responsibility of the Simulator Manager to prepare and distribute a report to the assigned Modeler when a DR has failed retest.

5. If the DR should pass retest, the individual performing the test may write any pertinent remarks in the "Retest Comments" section on page 3 of the DR form. This individual will sign and date the "Cleared By" section on page 3 of the DR form and place the DR in the Cleared section of the Daily Book.

6. Typically on a daily basis but no less than once per week, the Simulator Manager will audit the Daily Book for DRs that have been placed in the Cleared section. The Simulator Manager shall revise the status of these DRs in the Simulator Management System and place the DRs in the Cleared section of the Active Book. It is the responsibility of the Simulator Manager to prepare and distribute a report to the assigned Modeler when a DR has cleared retest.

D. Simulator Documentation Updating

1. It is the responsibility of the Modeler assigned a DR: 1) to identify any and all portions of simulator documentation affected by the changes he/she makes; 2) to prepare and/or revise the affected documentation in a manner which precisely identifies any changes made; and; 3) prepare all necessary Errata sheets for inclusion to the simulator documentation.

2. When the Modeler has completed all required revisions and or additions to the simulator documentation, he/she will identify all affected sections of the documentation in the "Simulator Documentation Revised" section on page 3 of the DR form. The Modeler will then initial and date the "Documentation Updated" section on page 3 of the DR form and forward the information to his supervisor for review.

3. The Modeler's supervisor shall be responsible for ensuring that: 1) the Modeler has identified ALL affected simulator documentation; 2) changes made to the simulator system by the Modeler are precisely documented; 3) that all necessary Errata sheets have been prepared by the Modeler and; 4) any new data sources or references used by the Modeler are reflected in the documentation.

4. If the Modeler's supervisor should find deficiencies in the documentation updates, he/she shall notify the Modeler of the problems and instruct the Modeler to correct those items.

5. If the supervisor should find the documentation updates to be sufficient he/she shall initial and date the "Documentation Checked" section on page 3 of the DR form and place the DR in the Terminated section of the Daily Book.

6. Typically on a daily basis but no less than once per week, the Simulator Manager will audit the Daily Book for DRs that have been placed in the Terminated section. The Simulator Manager shall review these DRs to ensure that all applicable sections of the DR form are correctly filled out and that no obvious errors or omissions exist. If the Simulator Manager should find deficiencies in any section of the DR form, he shall notify the appropriate personnel and instruct them to correct those items. If the Simulator Manager should approve the DR resolution, he shall sign and date the "Terminated By" section on page 3 of the DR form, revise the status of the DR in the Simulator Management System, and place the DR in the Terminated Book(s) located in the Simulator Documents Storage Room.

E. Reports

1. The Simulator Manager is responsible for preparing and distributing reports on the status of DR to upper management, Training Department Staff, Simulator Support Staff, Modelers, DR Initiators, and others as may be required.

2. Typically daily but no less than once per week, a report will be distributed to all Modelers who have assigned DRs that are not Terminated. This report will include the status of the DR(s) and other information necessary for the maintenance of the simulator system.

3. Typically daily but no less than once per week, a report on all DRs ready for retest will be prepared and sent to the Simulator Operations Supervisor.

4. Once per week a report will be prepared on the status of all DRs that are not Terminated. This report will be distributed to the Training Superintendent, Assistant Training Superintendent, Operations Training Supervisor, and the Training Support Supervisor. A copy of this report will also be posted in the Simulator Instructor Station.

5. At the end of each month a report will be prepared on the man-hour expenditures per terminated DR. This report will be distributed to the Training Superintendent and the Simulator Support Staff.

6. Prior to a new simulation load being placed in service a report will be prepared to indicate each Cleared DR to be included in the new load. This report will be distributed to the Training Superintendent, Assistant Training Superintendent, Operations Training Supervisor, Training Support Supervisor, and Simulator Support Staff no less than one (1) week prior to the new load being put into service.

7. On a quarterly basis a report will be prepared and distributed to individual initiators of DRs. The DR selection criteria for this report shall be; 1) any DR written by that individual but not yet Cleared, 2) any DR written by that initiator and Cleared within the preceding three months.

F. DR Budget Log

1. The DR Budget Log shall be used to provide documentation of man-hour expenditures for O&M budgeting, staffing analysis and justification, and personnel efficiency assessment.

2. Any individual of the Simulator Support Staff who processes or assists in the processing of a DR toward final resolution is required to make their appropriate entries onto that DR Budget Log. This shall be done each time they perform any work related to that DR.

3. Space is provided on the Budget Log for up to twenty-two (22) individual elapsed time entries. All entries shall be made in a hours and minutes format (HH:MM). As an example, a hardware contractor is the next person to work on a DR and has been preceded by three other individuals. He works on this DR for four hours and forty-five minutes but does not complete his task. On line "4)" and in the "CH" column he would enter "04:45" and cross out the "4)". The next time he works on the DR he would make his entry on the next available line which may or may not be line "5)" depending upon whether someone else worked on the DR since his last efforts.

4. When a DR is Terminated the Simulator Manager shall total the entered times for each column on the Budget Log and enter those totals in the spaces provided. These totals shall also be entered into the Simulator Management System for each DR.

7. SIMULATOR UPGRADE PROGRAM

Attached and listed below are the procedures which define the methods for identifying plant changes and incorporating them into the IP3 simulator. It should be noted that this process is presently being refined as a result of practical experience over the past two years. During this period over 80 plant changes have been completed or are in progress on the simulator. Future revisions to the Configuration Management System will include improved cost control reporting, job status tracking, and records management.

CMS-A-01	CONFIGURATION MANAGEMENT SYSTEM (CMS) CONTROL
CMS-I-01	SIMULATOR CONFIGURATION CHANGE IDENTIFICATION
CMS-I-02	SIMULATOR CONFIGURATION CHANGE ANALYSIS
CMS-I-03	CONFIGURATION CHANGE IMPLEMENTATION

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

CMS-A-01 REV. 0

CONFIGURATION MANAGEMENT SYSTEM (CMS) CONTROL

Written by: C. Lambert

Reviewed by: Wayne Rehm

Approved by: [signature] Date: 9/6/89

Effective Date: 10/2/89

CMS-A-01

CONFIGURATION MANAGEMENT SYSTEM (CMS) CONTROL

I. PURPOSE

The purpose of this procedure is to administratively describe how the CMS is utilized to develop, track and implement corrective action plans for differences and changes to:

- o Simulator software configuration
- o Simulator hardware configuration
- o Simulator testing procedures
- o Simulator documentation

In achieving these ends, the procedure addresses the maintenance and control of simulator spare parts inventory, preventive maintenance program and discrepancy reports as well as the use of the Utility System.

The intent of this procedure is to provide an administrative overview of the inter-relationship of the simulator to the various controls, procedures, documentation, regulatory requirements, etc., which dictate the facilities operations. As such this procedure will identify the relationship and functional areas of the remaining procedures concerning use of the CMS in the management of the simulator facility.

II. DISCUSSION

This procedure is applicable to the access and use of the Simulator Configuration Management System and to CMS Administrative Procedures, CMS-I01 through CMS-I-07. This Procedure Section, or Sections CMS-I-01 through CMS-I-07 inclusive, do not apply to the actual physical changes to Simulator Hardware, Software, or Design Specifications. For information concerning these areas, refer to appropriate sections of the simulator documentation supplied by Westinghouse Electric Co. The requirements of this procedure shall apply only to members of the IP3 Training Department Simulator Division.

III. RESPONSIBILITY

A. TRAINING SUPERINTENDENT

The training Superintendent has overall responsibility for the development and implementation of training programs consistent with Federal and Code Requirements and INPO Guidelines. In that capacity the Training Superintendent is responsible for ensuring correct implementation and use of the Simulator Configuration Management System to maintain compliance with configuration requirements. Because the CMS is not a stand alone entity but a management tool, the Training Superintendent is responsible for organizing and Controlling the various inputs and outputs of the CMS between the individuals under his direction. Examples of this are in orchestrating the supply of information to the Simulator Manager necessary for review against current simulator configuration.

B. SIMULATOR MANAGER

The Simulator Manager is responsible for the correct implementation and use of the CMS by the Simulator Division Staff.

C. CMS COORDINATOR

The Simulator Manager or his designee, shall serve as the CMS Coordinator and is responsible for those items as described in Attachment 1. This responsibility includes on line control and management of the CMS and serving as the single point of contact for inputs and outputs of the CMS as directed by the Training Superintendent.

IV. DEFINITIONS OF ABBREVIATIONS

- CMS - Configuration Management System
- CCS - Configuration Control System
- SMS - Simulator Management System

V. PROCEDURE

A. Configuration Management System Overview

1. The operation of a simulator facility is dictated by many different and varied factors such as regulatory requirements from several documents, INPO guidelines, the simulator vendor's operating procedures, and the CMS Administrative Procedures to name a few.

2. The CMS should be considered as a management tool to collect, store and document many of administrative functions dictated by the factors previously mentioned. It should not be considered a stand alone entity which performs all the functions required in the simulator operation.

3. The IP3 Simulator Configuration Management System (CMS) is functionally divided into four sections which are to be presented in menu form. Refer to Attachment 2 which depicts the Main Menu of CMS.

4. The Configuration Control System (CCS) section is the portion of the system which is structured to perform the functions of comparing the simulator configuration to that of the reference plant. Refer to Attachment 3 which depicts the CCS main menu. Selections 1 through 4 are functional manipulations of numerous files contained in Selection 5.

5. Attachment 4 depicts the files contained within the CCS as Selection 5 of the CCS menu.

6. CMS Administrative Procedures Sections CMS-I-01; 02; 03; 04; and 05 deal primarily with those functions controlled by the CCS and shall be referred to when conducting such functions.

7. The Simulator Management System (SMS) is the portion of the system which is structured to perform the functions of the day to day operations and maintenance of the simulator. Refer to Attachment 5 which depicts the SMS main menu. The functional manipulation commands are contained within the individual files.

8. CMS Administrative Procedures Sections CMS-I-06; 07 and (in some respects) 05 deal primarily with those functions controlled by the SMS and shall be referred to when conducting such functions.

9. The Utilities section is the portion of the system which is structured to perform the functions of administering the CMS itself. Refer to Attachment 6 which depicts the Utilities main menu. Selections 1, 2, and 3 are all functional manipulations and files associated with CMS including the control and security of system access.

11. CMS Implementing Procedure Section CMS-I-05 and the CMS Users Guide deal with operation of the system utilities and shall be referred to when conducting such operations.

B. CMS Administrative Procedure Application

1. All operations of the CMS shall be in accordance with Procedures CMS-A-01 and CMS-I-01 through CMS-I-07 to ensure consistent and efficient use of the system.

2. A functional description of Procedures CMS-I-01 through CMS-I-07 follows.

3. Section CMS-I-01 (Simulator Configuration Change Identification) lists the types of documents which have the capacity of creating the need for a change to the simulator. Examples of these documents range from such items as License Event Reports (LER), which come from external sources, to Simulator Change Notice Deferrals which are generated internally. In the case of both of these examples, CMS-I-01 outlines the special considerations which must be applied to these items.

4. Section CMS-I-01 (Simulator Configuration Change Analysis) details the evaluation process for the document's impact on simulator hardware, software, testing and documentation materials. Following evaluation, this policy also details the Review and Approval process for any anticipated change to the simulator.

5. Section CMS-I-03 (Simulator Configuration Change Implementation) details the mechanisms and process for conduct of simulator changes, which were approved for implementation.

6. Section CMS-I-04 (Simulator Testing and Evaluation) describes the considerations and mechanisms involved in the two categories of simulator testing. Testing which is required periodically by regulatory requirements and testing which is required to verify the correct implementation of a simulator change.

7. Section CMS-I-05 (Simulator Configuration Management Security and Data Control) details the mechanisms for maintaining the security of the various files of the CMS and the use of the Utilities portion of the system to regulate access. In addition to maintaining the data integrity, this procedure details the importance of protecting proprietary data restrictions. Accordingly, the appropriate data license agreements associated with simulator data are attached to CMS-I-05 as integral portions of the procedure.

8. Section CMS-I-06 (Simulator Spare Parts and Materials Control) contains the description of maintaining an adequate spare parts inventory for the simulator including how changes in simulator configuration impact spare parts control.

9. Section CMS-I-07 (Simulator Preventive Maintenance Program) details the structure of the preventive maintenance program including consideration of differences in equipment cycle rates and revisions to the program contingent to simulator configuration changes.

VI. RECORDS

The records contained within the CMS and the reports which can be generated by the CMS document compliance with several requirements. It is imperative that an adequate backup copy be maintained to protect against power loss or equipment failure. The Simulator Manager shall implement the appropriate administrative controls to ensure the adequacy of the back up.

VII. REFERENCES

- ANS/ANSI 3.5, 1985
- Reg Guide 1.149
- 10CFR55
- NUREG 1258
- NUREG 1262
- INPO 86-026
- INPO 87-016
- General Physics CMS Users Guide

VIII. ATTACHMENTS

1. CMS Coordinator Position Description
2. CMS Main Menu
3. Configuration Control System Menu
4. Configuration Control System Files
5. Simulator Management System Menu
6. Utilities Main Menu

CMS-A-01

CONFIGURATION MANAGEMENT SYSTEM (CMS) CONTROL

1. The CMS Coordinator should have the following direct responsibilities:

   a) Collection of all relevant materials which may impact the simulator's fidelity or performance such as those described in the CMS Administrative procedures.

   b) CMS Document Control including all aspects of Configuration Management File Management.

   c) Entry of CMS related materials including initial determination of the level of review necessary.

   d) Coordination of detailed review process in the four specific areas other than documentation review; Hardware, Software, Acceptance Testing and Training Materials.

   e) Perform review of the documentation changes necessitated by the entered material.

   f) Review the results of all areas of evaluation for accuracy and consistency ensuring conformance to CMS administrative procedures. Following such review, the CMS Coordinator is responsible for the timely resolution of an discrepancies noted.

   g) Presentation of the evaluation results on a periodic basis to NYPA Management. These presentations shall include:

      1) Detailed synopsis of each entry for the reporting period including man hour and cost estimates for those simulator changes dictated.

      2) A brief review of those entries during the period, which in the CMS Coordinator's opinion, did not require further evaluation, including the reasons for that opinion.

      3) A. brief review of upcoming items, such as future plant modifications, which may change or affect the resolution of the items under 1 above. For example, a future modification to the plant which is either planned or in progress may be grounds for a deferment of a simulator change to incorporate the provisions of previously completed modification.

h) The CMS Coordinator shall be responsible to NYPA Management for answering any and all questions regarding the configuration of the simulator. This includes any and all regulatory requirements or guidelines. This individual would also be expected to explain to auditors, in any detail necessary, the procedures and mechanisms by which the simulator configuration is maintained.

i) Preparation of the results of each periodic presentation to include:

1) Preparation of Simulator Change Work Orders for approval in the Hardware, Software, ATP, and Documentation areas for each simulator change approved which will be performed in house or deferred.

2) Prepare the Technical Specification for approval in all appropriate areas for each approved simulator change for which competitive bids will be sought.

3) Prepare justification documentation for approval for each simulator change which was disapproved.

4) Prepare the Deferral Document for approval for each approved simulator change which is deferred for incorporation as a later date.

j) Coordinate with the various responsible departments within NYPA to schedule approved simulator change work orders to avoid conflicts of intended simulator use.

k) Coordinate with the various responsible departments within NYPA to obtain competitive bids for simulator changes to be conducted by outside organizations. Provide technical assistance in evaluating bids and, following contract award, assist in maintaining accountability of the project.

l) Whether the work is performed in house or by vendor organizations, the CMS Coordinator is responsible for day-to-day and historical accountability of each simulator change in progress or completed. This accountability is required in all five areas of the CMS including man hour and cost. Additionally, the CMS Coordinator is <u>directly</u> responsible for the accuracy of Simulator Database maintained within the CMS.

m) Direct responsibility for initial preparation of NRC form 474 for certification of the Simulation Facility as dictated by Regulatory Guide 1262 and direct

responsibility for maintenance of certification and configuration data.

2. The CMS Coordinator should possess the following <u>qualifications:</u>

a) Conversant in all regulatory requirements and guidelines relevant to simulator configuration and certification. As a minimum, this individual should be knowledgeable in 10CRF55, ANSI/ANS-3.5, 1985, INPO 86-026, Regulatory Guides 1.149, 1258 and 1262. Such knowledge is necessary to permit preparation of NRC Form 474.

b) Knowledgeable in the design and operation of the reference plant. A Reactor Operator license or certification is required. A Senior Reactor Operator license or certification is desirable. This working knowledge should include familiarity with all procedural and administrative aspects of plant operation.

c) Experience in license training of power plant operators with emphasis on simulator training.

d) Familiarity with all of the following areas:

1) Simulator hardware architecture and layout with emphasis on software interface.

2) Simulator software architecture to include a working knowledge of software modularization. Heavy emphasis on pertinent software assumptions and simplifications is mandatory.

3) Conversant in Simulator Acceptance Test production, conduct and revision. Actual participation in a simulator acceptance test is highly desirable.

4) Intimate knowledge of all forms of simulator documentation. This individual must be fluent in the use of all data associated with the reference plant, simulator, and simulation computer complex.

e) Knowledgeable in all sections and files of the CMS System with emphasis on data retrieval and cross referencing.

Attachment 2
CMS-A-01

```
================================================================
||                                                            ||
||              SIMULATOR MANAGEMENT CONTROL SYSTEM MENU      ||
================================================================
||                                                            ||
||                                                            ||
||                0.    EXIT                                  ||
||                                                            ||
||                1.    CONFIGURATION CONTROL SYSTEM          ||
||                                                            ||
||                2.    SIMULATOR MANAGEMENT SYSTEM           ||
||                                                            ||
||                3.    SIMULATOR DATABASE MANAGEMENT SYSTEM  ||
||                                                            ||
||                4.    UTILITIES                             ||
||                                                            ||
||                                                            ||
||                                                            ||
||                                                            ||
========================= SELECT  :    :  ====================
```

G E N E R A L P H Y S I C S C O R P O R A T I O N
Pottstown, Pennsylvania

Attachment 3
CMS-A-01

```
================================================================================
||  C O N F I G U R A T I O N   C O N T R O L   S Y S T E M   M E N U  ||
================================================================================
||                                                                            ||
||                                                                            ||
||                    0.   EXIT                                               ||
||                                                                            ||
||                    1.   ENTER NEW DATA                                     ||
||                                                                            ||
||                    2.   UPDATE THE WORK REQUEST FILE                       ||
||                                                                            ||
||                    3.   UPDATE THE SIMULATOR CHANGE FILE                   ||
||                                                                            ||
||                    4.   WORK REQUEST STATUS REPORT                         ||
||                                                                            ||
||                    5.   CONFIGURATION CONTROL SYSTEM FILES MENU            ||
||                                                                            ||
||                                                                            ||
============================ SELECT    :    : ================================
```

Attachment 4
CMS-A-01

```
================================================================================
||   C O N F I G U R A T I O N   C O N T R O L   S Y S T E M   F I L E S   |
================================================================================
||                                                                            |
||   A.   SIMULATOR DATABASE FILE                                             |
||                                                                            |
||   B.   REFERENCE DATABASE FILE              H.   DATABASE CHANGE FILE      |
||                                                                            |
||   C.   SIMULATOR WORK REQUEST FILE          I.   RETEST FILE               |
||                                                                            |
||   D.   SIMULATOR CHANGE FILE                J.   SIMULATOR MODULE FILE     |
||                                                                            |
||   E.   SIMULATOR HARDWARE CHANGE FILE                                      |
||                                                                            |
||   F.   SIMULATOR SOFTWARE CHANGE FILE       K.   SIMULATOR REFERENCE LOG   |
||                                                                            |
||   G.   ATP CHANGE FILE                      X.   EXIT                      |
||                                                                            |
||                                                                            |
||                                                                            |
========================== SELECT  :  : ======================================
```

Attachment 5
CMS-A-01

```
SIMULATOR MANAGEMENT SYSTEM MENU

   0.  EXIT                              1.  SIMULATOR TESTING MENU
   2.  PM SYSTEM                         3.  SPARE PARTS
   4.  CONSUMABLES                       5.  VENDORS
   6.  DISCREPANCY REPORTS               7.  MODIFICATION COSTS
   8.  PM REFERENCE DOCUMENTATION        9.  PM GENERAL LEDGER
  10.  PM MAN/HOURS                     11.  PM ORIGINATORS
  12.  PM STATUS                        13.  PM ACTION TAKEN
  14.  PM REQUISITIONED PARTS           15.  PM TEST EQUIPMENT
  16.  PURCHASE REQUISITIONS            17.  WAREHOUSE PURCHASES

                    SELECT  :  :
```

Attachment 6
CMS-A-01

```
================================================================================
||                              U T I L I T I E S                               |
================================================================================
||                                                                              |
||    1.   ARCHIVE MANAGEMENT SYSTEM          4.   WORD PROCESSOR               |
||                                                                              |
||    2.   FILE MANAGEMENT SYSTEM             5.   EXIT TO DOS                  |
||                                                                              |
||    3.   BASIC                              6.   SECURITY FILE                |
||                                                                              |
||                                                                              |
||                                    0.  EXIT                                  |
||                                                                              |
||                                                                              |
========================== SELECT  :  : ======================================
```

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

CMS-I-01 REV. 0

SIMULATOR CONFIGURATION CHANGE IDENTIFICATION

Written by: C. Lambert

Reviewed by: Shayne Robinson

Approved by: _____ Date: 10/2/89

Effective Date: 10/2/89

CMS-I-01

SIMULATOR CONFIGURATION CHANGE IDENTIFICATION

I. PURPOSE

To establish the requirements for the data to be reviewed to identify Simulator Configuration changes. The requirements are to audit the review of all documentation that may have an impact on the simulator and to identify the differences between the simulator design basis.

II. DISCUSSION

This procedure is applicable to all data that may necessitate changes in the simulator configuration. This procedure applies to the members of the IP3 Training Department Simulator Division only. If not already reviewed, refer to CMS Administrative Procedure CMS-A01 before performing this procedure. Sections CMS-A-01 through CMS-I-07 inclusive, do not apply to the actual physical changes to Simulator Hardware, Software, or Design Specifications.

III. RESPONSIBILITY

A. TRAINING SUPERINTENDENT

The Training Superintendent had overall responsibility for the review, identification and documentation of the data sources to determine if a change to the Simulator is required.

B. SIMULATOR MANAGER

The Simulator Manager is responsible for implementing the requirements of this procedure and serving as the CMS Coordinator.

C. CMS COORDINATOR

The CMS Coordinator is responsible for the on line control and management of the CMS and serving as the single point of contact for inputs and outputs of the CMS as directed by the Training Superintendent.

IV. DEFINITIONS OF ABBREVIATIONS

- CMS - Configuration Management System
- CCS - Configuration Control System

o SMS - Simulator Management System

V. PROCEDURE

A. Data Base Review

1. As a minimum the following documents should be reviewed to identify Simulator Configuration changes.

a) Training Request

b) Plant Modifications

c) Plant Procedures

d) License or Operating Event Reports (LER's)

e) INPO/Regulatory Requirements

f) Simulator Discrepancy Reports

g) Other (i.e. deferrals)

Input data into the system is provided by sources that are not covered by the Configuration Management System. Input data to this policy that falls in this category are:

- Training Requests

- Plant Modifications

- License Event Reports (LER's)

- INPO/Regulatory Requirements

Obtaining this input data will be performed through the existing New York Power Authority policies on data acquisitions.

License Event Reports (LER's) and Deferrals require special considerations in terms of evaluating their impact on the simulator. Deferrals are Simulator Work Requests which have already been through the evaluation review and approval process detailed in Procedure Section CMS-I-02. However, instead of being scheduled for implementation the decision was made to "table" or defer the action with conditions for reevaluation at a

later date. The purpose of Deferrals identification then is to establish a review of the Simulator Work Request Evaluation from which had been previously performed to ensure its continued validity. In this case when accessing the Data Log File do not enter the original input document. Enter the Simulator Work Request being reevaluated.

Example: SWRN 8700001 was deferred.

Enter "8700001 Defer" to create SWRN 8700002 or whatever SWRN is next in sequence.

This provides an audit trail of both the original evaluation of the original document (8700001) and the reevaluation of the deferred work request (8700062).

License Event Reports (LER's) are somewhat more complicated. The intent of reviewing an LER is to determine whether the simulator can support recreation of the License Event for training purposes. This is especially important in light of the fact that the NRC considers recreation of selected LER's essential in the conduct of license examinations. Any simulator modification is based on what portion of the LER the simulator was incapable of recreating. This is not something which is self evident from the LER.

LER's must first be converted into a License Event Replay Scenario (Attachment 2). This scenario details the conditions and sequence of events necessary to replicate the event on the simulator and will be prepared by a simulator instructor. Once prepared, an attempt is made to recreate the event on the simulator noting the results. This determines the inadequacies, if any, of the simulator (although not necessarily the underlying cause) and provides the input document to be utilized for the rest of the evaluation process instead of the LER itself. The secondary benefit of this process is the creation of a scenario which can produce the LER in a timely manner if requested by the NRC during a license examination, or an auditable explanation of why the LER cannot be reproduced for the examination.

2. Specific documents within each category of A1 are compared with the CCS data log file for duplication. The comparison is done in accordance with Section CMS-I-05.

3. If the document being reviewed has previously been logged indicating this is a duplicate, then no further action is required. This prevents creation of two or more separate evaluation requests for the same document.

4. If the document being reviewed is not currently in the data base indicating a new entry, then data entry occurs in accordance with Section CMS-I-05.

5. A Simulator Work Request Evaluation Form (Attachment 1) should be generated and routed in the following order:

A. Hardware Evaluation	Section CMS-I-02
B. Software Evaluation	Section CMS-I-02
C. Testing Evaluation	Section CMS-I-02
D. Documentation Evaluation	Section CMS-I-02

VI. RECORDS

The records contained within the CMS and the reports which can be generated by the CMS document compliance with several requirements. It is imperative that an adequate backup copy be maintained to protect against power loss or equipment failure. The backup shall be updated periodically to ensure completeness.

VII. REFERENCES

None

VIII. ATTACHMENTS

1. Sample Simulator Work Request Evaluation Form
2. Licensee/Operating Event Report Replay Scenario Form

SIMULATOR EVALUATION REQUEST NUMBER:

INITIATING DOCUMENT: _____

TITLE: _____

SIMULATOR CONFIGURATION CHANGE RECOMMENDATION

SIMULATOR CHANGE REQUIRED: _____

SIMULATOR CHANGE NOT REQUIRED: _____

COMMENTS: _____

_____

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APPROVED BY: _____ DATE: _____

SIMULATOR EVALUATION REQUEST FORM

SIMULATOR EVAL REQUEST #: 8800001
DATE INITIATED: 06/27/88
DUE DATE: 07/27/88

THIS SIMULATOR EVAL REQUEST IS BASED ON THE FOLLOWING REFERENCE PLANT CHANGE/ADDITION.

SIMULATOR HARDWARE CHANGE EVALUATION RESPONSIBILITY: MIKE EACHO

SIMULATOR HARDWARE CHANGE REQ'D Yes No (circle one)

EST MAN HRS: _____ EST COST: _____ PARTS LEAD TIME _____

SIMULATOR OUTAGE TIME: _____

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

SIMULATOR SOFTWARE CHANGE EVALUATION RESPONSIBILITY: ERNIE LEVINSON

SIMULATOR SOFTWARE CHANGE REQ'D Yes No (circle one)

EST MAN HRS: _____ EST COST: _____ SIMULATOR OUTAGE TIME ____

DAILY READINESS TEST PROGRAM CHANGE REQ'D Yes No (circle one)

SYSTEM AFFECTED: _____

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

SIMULATOR EVALUATION REQUEST FORM (con't)

SIMULATOR EVAL REQUEST #: 8800001
DATE INITIATED: 06/27/88
DUE DATE: 07/27/88

SIMULATOR TESTING CHANGE EVALUATION RESPONSIBILITY: VINCENT

TEST CHANGE REQ'D Yes No (circle one) EST MAN HRS: _____

EST COST: _____ ATP REWRITE REQ'D Yes No (circle one)

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

SIMULATOR DATABASE CHANGE EVALUATION RESPONSIBILITY: ERNIE LEVINSON

DATABASE CHANGE REQ'D Yes No (circle one)

EST MAN HRS: _____ EST COST: _____

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

AUTHORIZED BY: _____ DATE: _____

NEW YORK POWER AUTHORITY

INDIAN POINT 3

LICENSEE/OPERATING EVENT REPORT

REPLAY SCENARIO FORM

EVENT REPORT NUMBER: _____
EVENT DESCRIPTION: _____
DATE: _____

I. PURPOSE OF EVENT REPLAY SCENARIOS

The purpose of creating an Event Replay Scenario is to define the simulator conditions necessary to replicate the event as it occurred in the reference plant. Once defined, an attempt to reproduce the event on the simulator is made and the results noted. These results are then evaluated separately to determine the impact in the simulator configuration.

II. INITIAL CONDITIONS

Fill in the conditions below necessary to replicate the initial conditions of the event report. If a valid simulator IC does not exist, note the adjustments to an existing IC which will satisfy the requirements and provide any necessary clarifications in the remarks section.

If due to an identifiable limitation of the simulator, the conditions or manipulation cannot be established, then so note in the remarks section and submit this form for CMS evaluation.

INITIAL CONDITION NUMBER: _____

INITIAL CONDITION NAME: _____

REACTOR POWER: _____

TEMPERATURE: _____

PRESSURE: _____

REACTIVITY: _____

XENON: _____

CORE LIFE: _____

REMARKS: _____

III. SEQUENCE OF EVENTS

Fill in the sequence of events below necessary to replicate the Event Report. If the Event Report specifies time between steps ensure those times are specified below.

If due to an identifiable limitation of the simulator, the conditions or manipulations cannot be established, then so note in the remarks section and submit this form for CMS evaluation.

Time	Step	Number	Title
00:00:00			
	1.		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		
	8.		
	9.		
	10.		

REMARKS: _____

IV. RESULTS

A) If the results of the Event Report Replay Scenario on the simulator match those of the Event Report, then so note in the remarks section and submit this form for CMS evaluation.

B) If the results of the Event Report Replay Scenario on the simulator do not match those of the Event Report, detail the SPECIFIC differences noted in the remarks section. It is not necessary to analyze where the problem lies at this time, however, the instructor is free to outline his opinion of the possible cause if he so desires. Attach a copy of the Event Report in question to this form and submit for CMS evaluation.

REMARKS: _____

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

CMS-I-02 REV. 0

SIMULATOR CONFIGURATION CHANGE ANALYSIS

Written by: C. Lambert

Reviewed by: [signature]

Approved by: [signature] Date: 9/14/89

Effective Date: 10/2/89

CMS-I-02

SIMULATOR CONFIGURATION CHANGE ANALYSIS

I. PURPOSE

This procedure defines the review strategy and technical approach for determining if a simulation modification is required based upon differences between the simulator and actual plant; training input of plant and simulation changes; and improvements needed in simulator design.

II. DISCUSSION

This procedure is applicable to the analysis of changes which may be made to the simulator configuration. This procedure applies to the members of the IP3 Training Department Simulator Division only. If not already reviewed, refer to Section CMS-A01 before performing this procedure. Sections CMS-A-01 and CMS-I-01 through CMS-I-07 inclusive, do not apply to the actual physical changes to Simulator Hardware, Software of Design Specifications.

III. RESPONSIBILITY

A) Training Superintendent

The Training Superintendent has overall responsibility for the configuration change analysis of the simulator.

B) Simulator Manager

The Simulator Manager is responsible to the Training Superintendent for the implementation of this procedure and serving as the CMS Coordinator.

C) CMS Coordinator

The CMS Coordinator is responsible for the on line control and management of the CMS and serving as the single point of contact for inputs and outputs of the CMS as directed by the Training Superintendent.

IV. DEFINITIONS OF ABBREVIATIONS

CMS - Configuration Management System

CCS - Configuration Control System

SMS - Simulator Management System

V. PROCEDURE

1. Evaluation Review Process of Hardware Changes

A) The Simulator Work Request Evaluation Form should be reviewed to determine if a hardware change is required. If no hardware change then proceed to step 5E of this procedure.

B) The hardware change should be reviewed to determine if new equipment is required, using the Simulator Change Evaluation Worksheet - Hardware. If new equipment is not required, proceed to step 5F.

C) It should be determined if the new equipment is procurable or substitution may be required. Considering visual and training impact, qualified vendors, realistic lead times and cost estimate are assigned to the hardware package.

D) Spare parts inventory should be evaluated in accordance with Section CMS-I-05 as well as new preventive maintenance requirements as a result of procurement.

E) Cost and man hour estimates should be prepared which includes the design, installation and hardware test, and documentation including PM's.

F) Upon completion of the hardware section, the Simulator Work Request Evaluation Form is forwarded for software review.

2) Evaluation Review Process of Software Changes

A) The Simulator Work Request Evaluation Form should be reviewed to determine if a software change is required. If no software change is required then proceed to step 5D of this procedure.

B) The scope of the change shall be evaluated, using the Simulator Change Evaluation Worksheet - Software. The following items should be considered when evaluating the magnitude of the change

a) New Design Basis Document required?

b) New or replacement simulation model (timing, memory)

c) New system required

d) New LOA function

e) New malfunction

C) New hardware should be considered to support the software changes. New hardware may require a special interface, DORT or WORT and I/O mapping.

D) A cost and man hour estimate should be prepared as a result of the review.

E) Upon completion of the software section, the Simulator Work Request Evaluation Form is forwarded for testing reviewed.

3) Evaluation Review Process of Testing Changes

A) The Simulator Work Request Evaluation Form should be reviewed to determine if any testing is required.

B) An evaluation should be done to determine if identified testing will result in a change in test procedures by either modifying an existing procedure or writing a new one. The Simulator Change Worksheet - Testing should be used to make this evaluation. A new test procedure should consider the impact on systems, malfunctions and remote functions.

C) A total cost and man hour estimate should be prepared as a result of the review. The estimate should include time to write a new or modify an existing test procedure, time to conduct simulator test and reshooting IC's if necessary.

D) Upon completion of the testing section, the Simulator Work Request Evaluation Form is forwarded for documentation review.

4) Evaluation Review Process of Documentation

A) The Simulator Work Request Evaluation Form, after Hardware, Software and Testing, review should be analyzed to determine if any other data base is affected. If this is not done, the documentation review process will not be accurate.

B) The Simulator Work Request Evaluation Form should be reviewed to determine if any documentation should be changed, using the Simulator Change Evaluation Worksheet.

C) The Simulator Work Request Evaluation Form should also be compared against the simulator data base to determine if the data base should be updated. An update list is prepared reflecting the data base deficiencies with man hour and cost estimates.

E) Upon completion of the documentation section, the Simulator Work Request Evaluation Form is forwarded for change review.

5) Change Approval Process

A) Upon completion of the Simulator Work Request Evaluation Form, if it is identified that a change is not required, then the Simulator Work Request Evaluation Form status is updated using Section CMS-I-05.

B) If a change is identified on the form, then the Simulator Work Request Evaluation Form is forwarded for approval. Approval of the simulator change should be done taking into consideration:

- Will the proposed change be superseded by another change?
- What is the benefit of the change in training?
- Does the benefit of the change outweigh the cost?
- Other reasons?

Identifying the individual or individuals responsible for the change approval should be done by NYPA, however, the process described in INPO Guideline 86-026 should be followed as closely as possible.

C) Approval of a change then requires the scheduling of the change implementation.

D) A change that is disapproved, requires a justification as to why the change was disapproved, especially in light of the fact that the evaluation forms recommended a change. The Simulator Work Request Evaluation Form status is updated using Section CMS-I-05.

E) A decision must be made as to whether the simulator change will be conducted "in-house" or done by an outside vendor. If an outside vendor is used, a simulator change specification must be prepared. Once this is done, proceed to step 5H.

F) If the simulator change is to be done "in-house" it is then scheduled for accomplishment.

G) If an approved change cannot be scheduled, then it is deferred and an explanation of the deferral and a proposed rescheduling must be prepared. The deferral then reenters Section CMS-I-01 so that its validity may be reevaluated. The Simulator Work Request Evaluation Form status is updated using Section CMS-I-05.

H) If a change is scheduled, then the Simulator Work Request Evaluation Form is evaluated for changes identified:

- Hardware
- Software
- Testing
- Documentation

For the identified change, a Change Notice Form is generated. For example, a software change will generate a Software Change Notice Form.

I) Whether a Change Notice Form is generated or not, the Simulator Work Request Evaluation Form status is updated using Section CMS-I-05.

VI. RECORDS

The records contained within the CMS and the reports which can be generated by the CMS document compliance with several requirements. It is imperative that an adequate backup copy be maintained to protect against power loss or equipment failure. The backup shall be updated periodically to ensure completeness.

VII. REFERENCES

None

VIII. ATTACHMENTS

1) Simulator Work Request Evaluation Form
2) Simulator Change Evaluation Worksheet - Hardware
3) Simulator Change Evaluation Worksheet - Software
4) Simulator Change Evaluation Worksheet - Testing
5) Simulator Change Evaluation Worksheet - Documentation
6) Hardware Change Notice Form
7) Software Change Notice Form
8) Testing Change Notice Form
9) Documentation Change Notice Form

SIMULATOR EVALUATION REQUEST NUMBER:

INITIATING DOCUMENT: _____

TITLE: _____

SIMULATOR CONFIGURATION CHANGE RECOMMENDATION

SIMULATOR CHANGE REQUIRED: _____

SIMULATOR CHANGE NOT REQUIRED: _____

COMMENTS: _____

_____

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_____

APPROVED BY: _____ DATE: _____

SIMULATOR EVALUATION REQUEST FORM

SIMULATOR EVAL REQUEST #:
DATE INITIATED:
DUE DATE:

THIS SIMULATOR EVAL REQUEST IS BASED ON THE FOLLOWING REFERENCE PLANT CHANGE/ADDITION.

SIMULATOR HARDWARE CHANGE EVALUATION RESPONSIBILITY: MIKE EACHO

SIMULATOR HARDWARE CHANGE REQ'D Yes No (circle one)

EST MAN HRS: _____ EST COST: _____ PARTS LEAD TIME _____

SIMULATOR OUTAGE TIME: _____

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

SIMULATOR SOFTWARE CHANGE EVALUATION RESPONSIBILITY:

SIMULATOR SOFTWARE CHANGE REQ'D Yes No (circle one)

EST MAN HRS: _____ EST COST: _____ SIMULATOR OUTAGE TIME ___

DAILY READINESS TEST PROGRAM CHANGE REQ'D Yes No (circle one)

SYSTEM AFFECTED: _____

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

SIMULATOR EVALUATION REQUEST FORM (con't)

SIMULATOR EVAL REQUEST #:
DATE INITIATED:
DUE DATE:

SIMULATOR TESTING CHANGE EVALUATION RESPONSIBILITY:

TEST CHANGE REQ'D Yes No (circle one) EST MAN HRS: _

EST COST: _____ ATP REWRITE REQ'D Yes No (circle one)

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

SIMULATOR DATABASE CHANGE EVALUATION RESPONSIBILITY:

DATABASE CHANGE REQ'D Yes No (circle one)

EST MAN HRS: _____ EST COST: _____

DESCRIPTION: _____

_____

_____

REVIEWED BY: _____ DATE: _____

AUTHORIZED BY: _____ DATE: _____

SIMULATOR CHANGE EVALUATION WORKSHEET

HARDWARE

Evaluator: _____ Simulator Change Request Number: _____

Source Document: _____

Criteria:

Power Available: Y, N Sufficient I/O: Y, N

Relocation Required: Y, N Special Handlers: Y, N

Evaluation Details:

Attachments: Y, N

10 CFR55 Impact: Y, N Regulatory Guide 1.149 Impact: Y, N

ANSI 3.5 Impact: Y, N NUREG 1258 Impact: Y, N

Vendor Interface: Y, N

Manhour Analysis:

Cost Analysis: Manpower Cost Estimate:

Parts Cost Estimate: _____

Total Estimate:

Simulator Down Time:

Simulator Change Recommendation: Y, N

Signature:_____ Date _____

SIMULATOR CHANGE EVALUATION WORKSHEET

SOFTWARE

Evaluator: _____ Simulator Change Request Number: _____

Source Document: _____

Criteria:

Remote Functions Required: Y, N

Malfunction Required: Y, N

Trip Overrides Required: Y, N

I/O Overrides Required: Y, N

Timing Impact: Y, N

Simulation Limit Parameter: Y, N

Simulation Diagram Changes: Y, N

Component Listings Changes: Y, N

Interface Diagram Changes: Y, N

Module Listing Change: Y, N

Memory Impact: Y, N

Special Handler Required: Y, N

Evaluation Details:

Attachments: Y, N

10 CFR55 Impact: Y, N

ANSI 3.5 Impact: Y, N

Regulatory Guide 1.149 Impact: Y, N

NUREG 1258 Impact: Y, N

Vendor Interface: Y, N

Manhour Analysis:

Cost Analysis:

Simulator Down Time:

Simulator Change Recommendation: Y, N

Signature: _____ Date _____

SIMULATOR CHANGE EVALUATION WORKSHEET

TESTING

Evaluator: _____ Simulator Change Request Number: _____

Source Document: _____

Criteria:

Remote Functions: Y, N

Malfunctions: Y, N

New Test: Y, N

Revise Existing Test: Y, N

Startup/Shutdown Required: Y, N

Trip Overrides: Y, N

I/O Overrides: Y, N

Resnap IC's: Y, N

IC01 Change: Y, N

Evaluation Details:

Attachments: Y, N

10 CFR55 Impact: Y, N

ANSI 3.5 Impact: Y, N

Regulatory Guide 1.149 Impact: Y, N

NUREG 1258 Impact: Y, N

Vendor Interface: Y, N

Manhour Analysis:

Cost Analysis:

Simulator Down Time:

Simulator Change Recommendation: Y, N

Signature: _____ Date _____

SIMULATOR CHANGE EVALUATION WORKSHEET

DOCUMENTATION

Evaluator: _____ Simulator Change Request Number: _____

Source Document: _____

Criteria:

A. Are the design documents associated with this SWRN in the Reference Plant Database?

PRINTS AFFECTED:	If NO, should it be:	If YES, correct Rev?
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N

B. Are the design documents associated with this SWRN in the Simulator Database?

PRINTS AFFECTED:	If NO, should it be:	If YES, correct Rev?
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N
_____	Y / N	Y / N

SIMULATOR CHANGE EVALUATION WORKSHEET

DOCUMENTATION (Con't)

C. Do changes required by other areas, Hardware, Software, ATP, impact other databases?

MARK THOSE AFFECTED WITH AN "X":

1.	SIM. DBASE	: :	7.	ATP CHANGE	: :
2.	REF. DBASE	: :	8.	DATABASE CHANGE	: :
3.	WORK REQUEST	: :	9.	RETEST ASST.	: :
4.	SIM. CHANGE	: :	10.	SIM. MOD ASST.	: :
5.	H/W CHANGE	: :	11.	TRG. MAT. ASST.	: :
6.	S/W CHANGE	: :	12.	SIMULATOR REF LOG	: :

SIMULATOR MANAGEMENT SYSTEM

1.	PMS DBASE	: :	7.	MALF. TESTS	: :
2.	SPARE PARTS	: :	8.	INITIAL CONDS.	: :
3.	VENDORS	: :	9.	ATP	: :
4.	DISC. REPORTS	: :	10.	ANSI 3.5	: :
5.	SYS. TESTS	: :	11.	PLANT PROC.	: :
6.	REMOTES	: :	12.	SEC. FILE	: :

SIMULATOR CHANGE EVALUATION WORKSHEET

DOCUMENTATION (Con't)

D. **PREPARE THE UPDATE LIST:**

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

FILENAME: _____
COMMENTS: _____

SIMULATOR CHANGE EVALUATION WORKSHEET

DOCUMENTATION (Con't)

FILENAME: _____
COMMENTS: _____
_____
_____

FILENAME: _____
COMMENTS: _____
_____
_____

Extra Page? Y / N

Manhours Analysis:

Cost Analysis:

Signature: _____ Date: _____

S I M U L A T O R H A R D W A R E C H A N G E N O T I C E

SIMULATOR CHANGE REQUEST #:
DATE ISSUED:
DATE DUE:

This SIMULATOR HARDWARE CHANGE NOTICE is based on the following REFERENCE PLANT change/addition:

DOCUMENT ID: MOD 893-B REVISION: REVDATE: / /

DOCUMENT TITLE: ADD RX PRESS INDICATION FOR ACCIDENT MONITORING. (PL-0014)

CHANGE RESPONSIBILITY: PHIL HOEPER

AUTHORIZATION: _____ DATE: _____

==========

ESTIMATED MAN/HOURS: SIMULATOR OUTAGE TIME:

ACTUAL MAN/HOURS: PARTS LEAD TIME:

COST: 0

DESCRIPTION:

STATUS: 0

STATUS: ORDERED: RECEIVED: INSTALLED: TESTED:

DATE CLOSED: _____

DOCUMENTATION UPDATED ON _____ BY _____ (initials)

COMMENTS/MEMO: _____

_____

_____

COMPLETED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____

S I M U L A T O R S O F T W A R E C H A N G E N O T I C E

SIMULATOR CHANGE REQUEST #:
DATE ISSUED:
DATE DUE:

This SIMULATOR SOFTWARE CHANGE NOTICE is based on the following REFERENCE PLANT change/addition:

DOCUMENT ID: MOD 893-B REVISION: REVDATE: / /

DOCUMENT TITLE: ADD RX PRESS INDICATION FOR ACCIDENT MONITORING. (PL-0014)

CHANGE RESPONSIBILITY: BOB EICHLBERG

AUTHORIZATION: _____ DATE: _____

==========

ESTIMATED MAN/HOURS: ACTUAL MAN/HOURS:

SIMULATOR OUTAGE TIME:

COST: 0

DESCRIPTION:

STATUS: 0

DAILY READINESS TEST PROGRAM CHANGE STATUS:

STATE: ANALYSIS: CODING: TEST: DORT:

DATE CLOSED: _____

COMMENTS/MEMO: _____

_____

_____

COMPLETED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____

S I M U L A T O R T E S T I N G C H A N G E N O T I C E

SIMULATOR CHANGE REQUEST #:
DATE ISSUED:
DATE DUE:

This SIMULATOR TESTING CHANGE NOTICE is based on the following REFERENCE PLANT change/addition:

DOCUMENT ID: MOD 893-B REVISION: REVDATE: / /

DOCUMENT TITLE: ADD RX PRESS INDICATION FOR ACCIDENT MONITORING. (PL-0014)

CHANGE RESPONSIBILITY: DALE HOFFMAN

AUTHORIZATION: _____ DATE: _____

==========

ESTIMATED MAN/HOURS: ACTUAL MAN/HOURS:

COST: 0

DESCRIPTION: TESTING WILL BE INCLUDED UNDER ALTERNATE SHUTDOWN SYSTEM TEST UNDER 8700042.

OVERALL STATUS: 0

ATP REWRITE: INITIALS: _____

ATP TESTING COMPLETED:

DATE CLOSED: _____

COMMENTS/MEMO: _____

_____

_____

COMPLETED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____
APPROVED BY: _____ DATE: _____

SIMULATOR DATABASE DOCUMENTATION CHANGE NOTICE

SIMULATOR CHANGE REQUEST #:
DATE ISSUED:
DATE DUE:

This SIMULATOR DATABASE DOCUMENTATION CHANGE NOTICE is based on the following REFERENCE PLANT change/addition:

DOCUMENT ID: MOD 893-B REVISION: REVDATE: / /

DOCUMENT TITLE: ADD RX PRESS INDICATION FOR ACCIDENT MONITORING. (PL-0014)

CHANGE RESPONSIBILITY: KEITH HAWKINS

AUTHORIZATION: _____ DATE: _____

==========

ESTIMATED MAN/HOURS: ACTUAL MAN/HOURS:

COST: 0

DESCRIPTION: ADD PRINTS WITH HIGHER REV LVL TO SIMBAS WHEN WORK COMPLETE. (SEE WORKSHEET)

STATUS: C

STATE: HARD: N SOFT: N TEST: N TM: C DOC: C

DATE CLOSED: _____

COMMENTS/MEMO: _____

_____

_____

COMPLETED BY: _____ DATE: _____

REVIEWED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____

NEW YORK POWER AUTHORITY

INDIAN POINT 3

TRAINING SIMULATOR

CMS-I-03 REV. 0

CONFIGURATION CHANGE IMPLEMENTATION

Written by: C. Lambert

Reviewed by: Wayne Robinson

Approved by: _____ Date: 9/1/89

Effective Date: 10/2/89

CMS-I-03

CONFIGURATION CHANGE IMPLEMENTATION

I. PURPOSE

This procedure provides instructions and guidelines for the implementation of an approved and authorized simulator change.

II. DISCUSSION

This procedure provides the details of the flow of work assignment with respect to simulator changes, as well as the associated documents used to track, control, and describe the work. The requirements of this procedure shall apply only to members of the IP3 Training Department Simulator Division. If not already reviewed, refer to CMS-A-01 before performing this procedure. Sections CMS-A-01 and CMS-I-01 through CMS-I-07 inclusive, do not apply to the actual physical changes to Simulator Hardware, Software, or Design Specifications.

III. RESPONSIBILITY

A. SIMULATOR MANAGER

The Simulator Manager is responsible for the proper implementation of this procedure and shall serve as the CMS Coordinator.

C. CMS COORDINATOR

The CMS Coordinator is responsible for the on line control and management of the CMS and serving as the single point of contact for inputs and outputs of the CMS as directed by the Training Superintendent.

IV. DEFINITIONS OF ABBREVIATIONS

CMS - Configuration Management System

CCS - Configuration Control System

SMS - Simulator Management System

V. PROCEDURE

The Simulator Change Notice and the Simulator Change Work Order are both described in detail in the following steps.

I. GENERAL

1) Authorized simulator changes will cue the updating of the simulator change request files in the Configuration Management System and the generation of simulator change notice hard copies.

2) A change notice package will be assembled. This package will include:

   a) An updated Simulator Change Evaluation Form

   b) The Simulator Change Evaluation Worksheets

   c) The Data Package

   d) The Simulator Change Notices

   e) The Simulator Change Work Orders

   There will be four change notices contained in this package; hardware, software, testing, and documentation.

3) The package will be distributed to the respective responsible person in each of the four areas; hardware, software, testing, and documentation.

4) Each person in their area of concern will detail the work to be done on the Simulator Change Work Order. The work order should reflect the approved and authorized change developed from the evaluation process.

   The work to be done should be described clearly. References should be listed as required to assist or guide the work.

5) When the work order is complete the Simulator Change Notice will be updated to reflect the work necessary to complete the change.

6) Simulator Change Notices with their respective work orders will be distributed by the Simulator Manager for execution. His signature on both forms will authorize the start of work.

II. Simulator Change Notice Forms

a) These forms are used within the CCS and provides for work coordination, real man hour and cost expenditures, simulator changes tracking and work summaries.

b) Use Of The Forms

The following steps describe the line by line use of the simulator change notice forms. Though not all items are found on all change notice forms, they are provided here for clarity.

c) Responsibility

The person or designee is charged with the execution of the change notice.

d) Authorization

This person is the individual who authorizes the described work to be performed.

e) Estimated Man Hours

This block should be filled in with the value derived from the evaluation.

f) Simulator Outage Time

This number is provided as a tool for scheduling the work to be performed into the simulator usage schedule.

g) Parts Lead Time

This value is provided to ensure parts are available when Hardware work is scheduled to be performed.

h) Cost

This block is filled in with the actual cost for performance of the respective change.

i) Description

This block provides for a brief description of the tasks to be performed. The associated change assistance file allows for detailing specifics of these tasks.

j) Status

This block reflects the overall status of the respective change notice.

k) States

These blocks identify the status of the specific portions of the change notice necessary to close out the work.

l) ATP Rewrite

This block identifies the need for a rewrite of an acceptance test procedure.

This block reflects when performance of the identified acceptance test procedure has been completed.

m) Date Closed

This block is filled in when the change is complete.

n) Documentation Updated On

This block identifies when the associated hardware documentation has been updated and by whom. Specifically these items may include wiring diagrams, I/O listings, etc.

o) Comments/Memo

This field is open for any comments relating to the performance of the simulator change.

p) Completed By

This block is signed and dated by the person who actually completed the change.

q) Reviewed By

This block is signed and dated by the person assigned to the responsibility block. This signature indicates that the job is complete in all respects.

r) Approved By

This block is signed and dated by the work coordinator approving all of the work which was performed.

III. Simulator Change Work Orders

a) These forms provided for the control, coordinating and detailing of an approved and authorized simulator change request.

b) Use Of The Forms

The following steps described in the line by line use of the simulator change work order forms.

1. Change Responsibility

This is the person charged with the layout and detailing of a simulator change with respect to their area of concern.

2. Simulator Change Request Number

This is the individual change request number (SCRN) assigned to the request and individual change notice forms.

3. Work Coordinator

This is the signature of the person coordinating the work. His signature indicates that work may start on the change request as described in the area for work description.

4. Special Instructions

This is an open field block available to the work coordinator.

5. Work Completed/Started

These blocks are for the person performing in charge. The blocks for date, time and initials should be filled in at the beginning and the end of the work. Total man hours should be filled in . A job may be performed over any extended period of time. In these cases a running total of man hours should be maintained on the side until completion.

6. Vendor Interface

This field is provided to describe any interaction required with a vendor with respect to a simulator change.

7. Work Description

This field provides the details necessary to perform the work.

8. Additional Pages

This is a cue, indicating that more information is attached.

VI. RECORDS

The records contained within the CMS and the reports which can be generated by the CMS document compliance with several requirements. It is imperative that an adequate backup copy be maintained to protect against power loss or equipment failure. The backup shall be updated periodically to ensure completeness.

VII. REFERENCES

None

VIII. ATTACHMENTS

1) Simulator Change Work Order - Hardware

2) Simulator Change Work Order - Software

3) Simulator Change Work Order - Testing

4) Simulator Change Work Order - Documentation

SIMULATOR CHANGE WORK ORDER
HARDWARE

Change Responsibility: _____ Simulator Change Request Number: _____

Start Work Authorization:

Work Coordinator: _____ Date: _____ Time: _____

Special Instructions:

Work Completed: Date:_____ Time:_____ Initials:_____

Work Started: Date: _____ Time: _____ Initials: _____

Total Manhours: _____

Vendor Interface: Y, N

Work Description:

Additional Pages: Y, N

SIMULATOR CHANGE WORK ORDER
SOFTWARE

Change Responsibility: _____ Simulator Change Request Number: _____

Start Work Authorization:

Work Coordinator: _____ Date: _____ Time: _____

Special Instructions:

Work Completed: Date:_____ Time:_____ Initials:_____

Work Started: Date: _____ Time: _____ Initials: _____

Total Manhours: _____

Vendor Interface: Y, N

Work Description:

Additional Pages: Y, N

SIMULATOR CHANGE WORK ORDER
TESTING

Change Responsibility: _____ Simulator Change Request Number: _____

Start Work Authorization:

Work Coordinator: _____ Date: _____ Time: _____

Special Instructions:

Work Completed: Date:_____ Time:_____ Initials:_____

Work Started: Date: _____ Time: _____ Initials: _____

Total Manhours: _____

Vendor Interface: Y, N

Work Description:

Additional Pages: Y, N

SIMULATOR CHANGE WORK ORDER DOCUMENTATION

Change Responsibility: _____ Simulator Change Request Number: _____

Start Work Authorization:

Work Coordinator: _____ Date: _____ Time: _____

Special Instructions:

Work Completed: Date:_____ Time:_____ Initials:_____

Work Started: Date: _____ Time: _____ Initials: _____

Total Manhours: _____

Vendor Interface: Y, N

Work Description:

Additional Pages: Y, N

8. EXCEPTIONS TAKEN TO ANSI/ANS 3.5

Listed and justified below are the exceptions taken to the ANSI/ANS 3.5, 1985 standard as it applies to the IP3 simulator. The exceptions taken are a reflection of operating conditions and practices at IP3 and do not detract from the overall intent of the standard.

Section 3.1.1 (7)	Startup, shutdown and power operations with less than full reactor coolant flow.
Exception -	Power operation with less than full reactor coolant flow.
Justification -	IP3 Technical Specifications and administrative controls preclude plant operations in this mode. As such, simulating these conditions for training or evaluation purposes serves no purpose.
Section 3.1.1 (9)	Core performance testing such as plant heat balance, determination of shutdown margin, and measurement of reactivity coefficients and control rod worth using permanently installed instrumentation.
Exceptions -	1) Determination of shutdown margin. 2) Measurement of reactivity coefficients and control rod worth using permanently installed instrumentation.
Justification -	The two exceptions taken are not tasks performed by plant operations personnel. However, as part of the simulator validation process reactivity coefficients and rod worth are measured and compared to available plant data.

Section 3.1.2 (12) Control rod failure including stuck rods, uncoupled rods, drifting rods, rod drops, and misaligned rods.

Exceptions -

1) Uncoupled rods.
2) Drifting rods.
3) Misaligned rods.

Justification -

1) Uncoupled rods are determined to have the same effects as a dropped rod or stuck rod. This exception does not limit or have an otherwise negative impact on the ability to conduct training or evaluations on the simulator.

2) The mechanical design of the rod control system prevents the occurrence of this phenomena.

3) Misaligned rods are determined to have the same effect as stuck rods. This exception does not limit or have an otherwise negative impact on the ability to conduct training or evaluations on the simulator.