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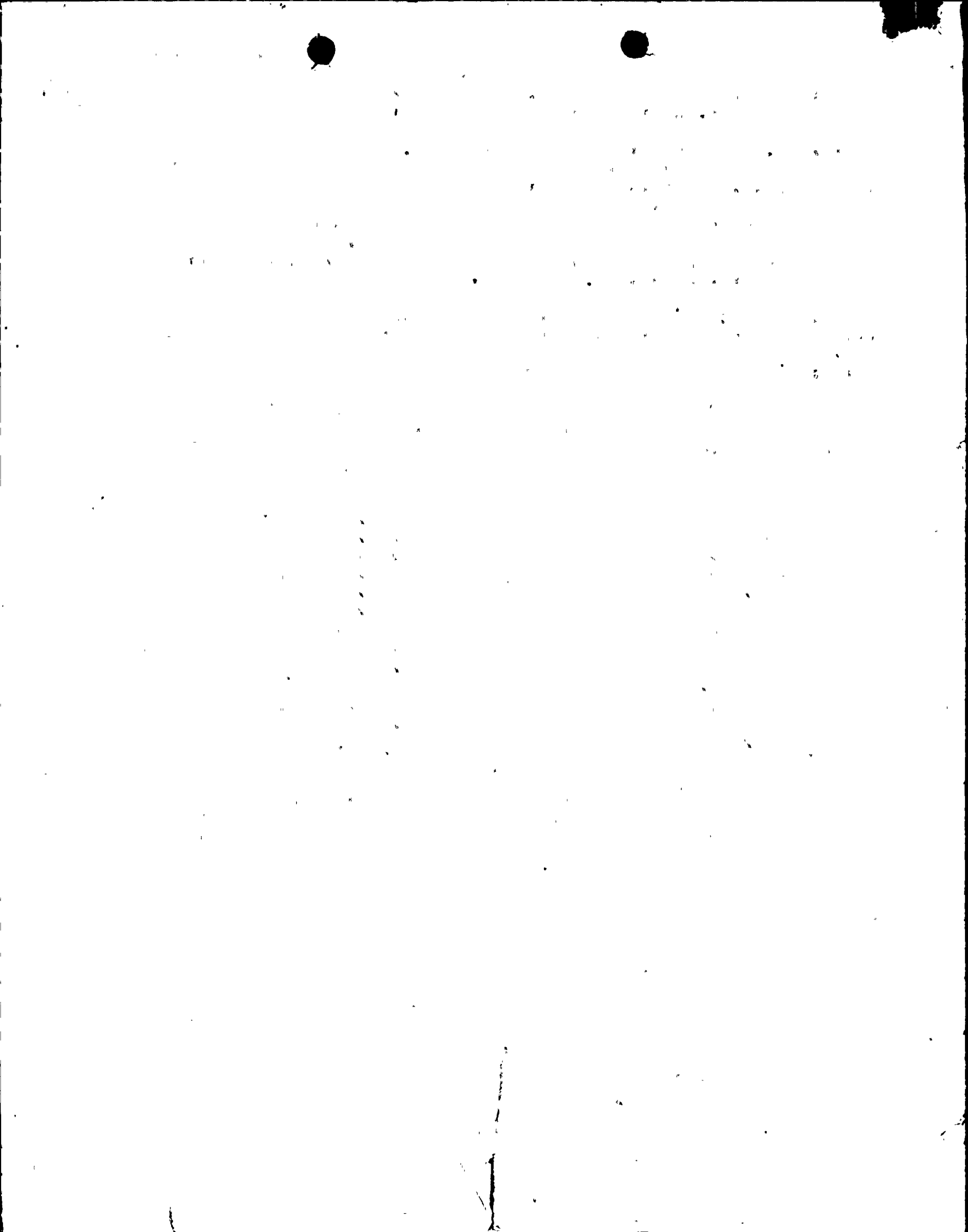
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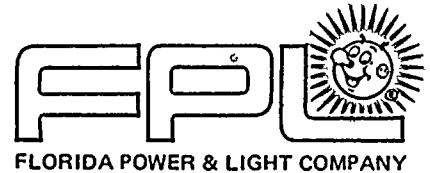
SUBJECT: Forwards emergency operating procedures re LOCA, ATWS loss of feedwater or steam generator level, steam generator tube rupture, reactor/turbine trip & inadequate core cooling. Review requested.
see RFI

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NOTES:

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	LIC BR #3 LA		1	0	NERSES, V.	01	1	1
INTERNAL:	ELD		1	0	IEI	06	3	3
	IE/DEP/EPOB	35	1	1	IEV/DEP/EPLB	36	3	3
	MPA		1	0	NRR/DE/CEB	11	1	1
	NRR/DE/EOB	13	3	3	NRR/DE/GB	28	2	2
	NRR/DE/HGEB	30	2	2	NRR/DE/MEB	18	1	1
	NRR/DE/MTEB	17	1	1	NRR/DE/QAB	21	1	1
	NRR/DE/SAB	24	1	1	NRR/DE/SEB	25	1	1
	NRR/DHFS/HFEB	40	1	1	NRR/DHFS/LQBI	32	1	1
	NRR/DHFS/OLBI	34	1	1	NRR/DHFS/PTRB	20	1	1
	NRR/DSI/AEB	26	1	1	NRR/DSI/ASB	27	1	1
	NRR/DSI/CPB	10	1	1	NRR/DSI/CSB	09	1	1
	NRR/DSI/EISB	12	1	1	NRR/DSI/ICSB	16	1	1
	NRR/DSI/PSB	19	1	1	NRR/DSI/RAB	22	1	1
	NRR/DSI/RSB	23	1	1	NRR/DST/LGB	33	1	1
	REG: FILEI	04	1	1				
EXTERNAL:	ACRS	41	16	16	BNLICAMDTS (ONLY)		1	1
	FEMA-REPI DIVI	39	1	1	LPDR	03	1	1
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	NTIS		1	1				





January 8, 1982
L-82-9

Office of Nuclear Reactor Regulation
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: St. Lucie Unit 2
Docket No. 50-389
Emergency Operating Procedures



Attached for your review are the Emergency Operating Procedures for St. Lucie Unit 2. They include Loss of Coolant Accident, Anticipated Transient Without Scram, Loss of Feedwater or Steam Generator Level, Steam Generator Tube Rupture, Reactor Trip/Turbine Trip, and Inadequate Core Cooling. We would be pleased to discuss any comments you may have at your convenience.

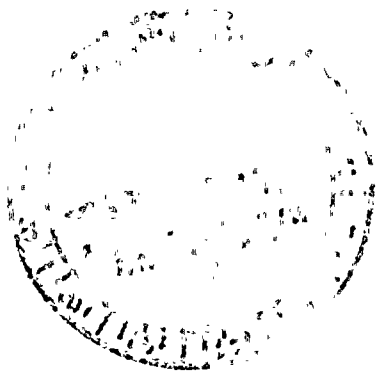
Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems & Technology
Attachments
REU/DME/ah

cc: J. P. O'Reilly, Regional Administrator, Region II (w/o attachments)
Harold F. Reis, Esquire (w/o attachments)

8201130415 820108
PDR ADOCK 05000389
F PDR

*Boo
S/11*



OFF-NORMAL PROCEDURE
2-0030130 REV 1
RT/TT

Control # 8201130415

2

FLORIDA POWER AND LIGHT COMPANY
ST. LUCIE PLANT UNIT 2
OFF-NORMAL OPERATING PROCEDURE
NUMBER 2-0030130
REVISION 1

REACTOR TRIP/TURBINE TRIP
OCTOBER 25, 1982

TOTAL NO. OF PAGES 12

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FLORIDA POWER AND LIGHT COMPANY
ST. LUCIE PLANT UNIT 2
OFF-NORMAL PROCEDURE NUMBER 2-0030130
REVISION 1

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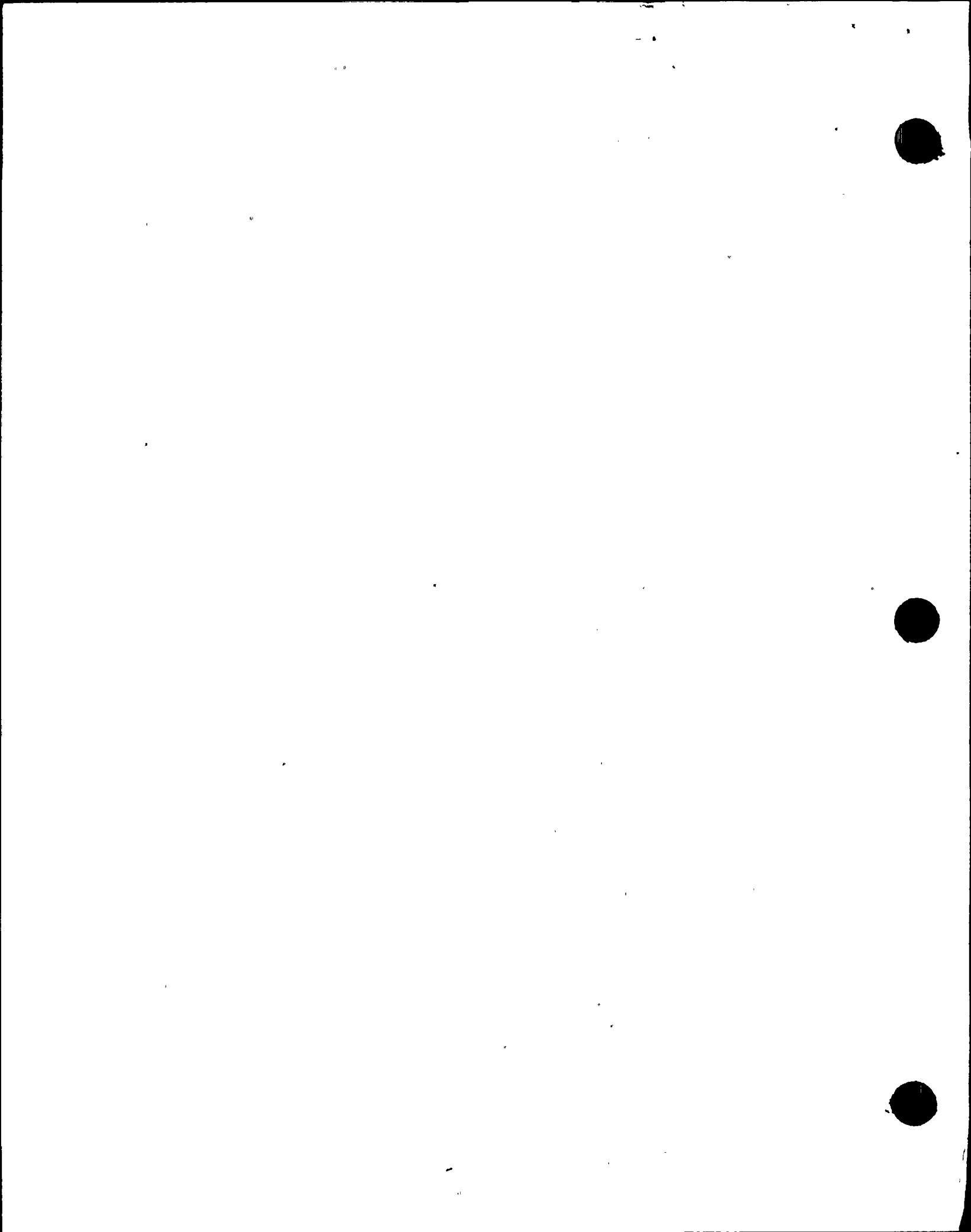
1.0 SCOPE

This procedure provides guidelines for an operator following a reactor trip. The circumstances which contributed to the trip may require the use of another procedure concurrent with or following this procedure.

2.0 SYMPTOMS

2.1 Indications and annunciator alarms associated with any of the following trips:

<u>SYMPTOM</u>	<u>INDICATION/ALARM</u>
2.1.1 Hi power	2.1.1 <u>Indication</u> J1002A/004A, B, C, D, JR009/010 RPS - Ch. 1 TR1111/1121 <u>Alarms</u> L-9, L-17
2.1.2 Hi rate of change/power.	2.1.2 <u>Indication</u> JK1-001A, B, C, D, RPS - Ch. 2
2.1.3 Lo RC Flow	2.1.3 <u>Indications</u> PDI-1101A, B, C, D, RPS - Ch. 6 <u>Alarms</u> L-10, L-18
2.1.4 Lo S/G level	2.1.4 <u>Indications</u> LIC-9013 A, B, C, D, LIC-9023 A, B, C, D, LR-9011/9021 RPS - Ch. 7 <u>Alarms</u> L-3, L-11



2

2.0 SYMPTOMS (Cont.)

2.1 (Cont.)

2.1.5 Lo S/G Pressure

2.1.5 IndicationsPI-08-1A, 1B,
PR-08-1, 2,
RPS - Ch. 8
PI-8013A, B, C, D, (RTGB 206)
PI-8023A, B, C, D, (RTGB 206)Alarms

L-19, L-27

2.1.6 Local Power Density

2.1.6 IndicationsJR-012, JO-012-1
JI-005A, B, C, D.
JI-006A, B, C, D.
RPS - Ch. 3Alarms

L-22, L-30

2.1.7 Thermal margin/low pressure

2.1.7 IndicationsPIA-1102A, B, C, D,
RPS - Ch. 4Alarms

L-36, L-41

2.1.8 Hi Pressurizer Pressure

2.1.8 IndicationsPI-1102A, B, C, D,
PR-1100
PIC-1100X/Y
RPS - Ch. 5Alarms

L-20, L-28

2.1.9 Hi Containment Pressure

2.1.9 IndicationsPIS-07-2A, 2B, 2C, 2D.
PI-07-4A/5A
PR-07-4B/5BAlarms

L-5, L-13

2

2.0 SYMPTOMS (Cont.)

2.1 (Cont.)

2.1.10 Turbine trip

2.1.10 Indications

WM-881
DMW-881
W-REC-881
RPS - Ch. 10
DEH - SYSTEM

Alarms

L-21, D-8

2.1.11 Low CCW Flow to RCP's
($< 636 \text{ GPM} \geq 10 \text{ min.}$)

2.1.11 Indications

FIA-1158, 1168, 1178, 1188
RPS - Ch. 11
FIS-14-1A, 1B

Alarms

L-6, L-14

2.1.12 Turbine Overspeed

2.1.12 Indications

RPS - Ch. 10
DEH - SYSTEM
MW-881

Alarms

D-5, L-21

2.1.13 Condenser low vacuum

2.1.13 Indications

RPS - Ch. 10
PI-10-7A, 7B

Alarms

D-3, L-21,
D-13

2.1.14 Thrust bearing failure

2.1.14 Indications

RPS - Ch. 10
TR-22-1

Alarms

D-6, D-16



2.0 SYMPTOMS (Cont.)

2.1 (Cont.)

2.1.15 Generator Lockout

2.1.15 Indications
RPS - Ch. 10
AM 881
AM 872
VM 872

Alarms
D-7

2.1.16 Exhaust Hood High Temp

2.1.16 Indications
RPS - Ch. 10
TR-22-6

Alarms
D-4, D-14

2.1.17 Turbine Bearing Oil Pressure

2.1.17 Indications
RPS- Ch. 10
PI-22-25

Alarms
D-2, D-12

2.1.18 Auto-Stop Oil Pressure

2.1.18 Indications
RPS - Ch. 10
PI-22-25, 26

Alarms
D-7, D-17

2.1.19 High S/G Level

2.1.19 Indications
LIC-9013 A, B, C, D
LIC-9023 A, B, C, D
LR-9011/9021
RPS - Ch. 12 (FUTURE)

Alarms
L-?, L-?, (FUTURE)
G-1, G-9

2.1.20 DEH DC Bus Failure

2.1.20 Alarms
D-19

2

2

2.0 SYMPTOMS (Cont.)

2.1 (Cont.)

2.1.21 Manual Trip

2.1.21 Indications

All CEA's fully inserted
ADS, DEH- SYSTEM
W-REC-871
DMW-871
Core Mimic
Digital Position Readout

Alarms

L-1, D-10

NOTE: In every case where a reactor trip occurs, the following alarms should also energize, K-1, -2, -3, -4, -5, -9, -10, -12, -13, (RTB's) If they do not, this could be an indication of ATWS

2.2 Reactor Trip Breakers OPEN

2.2 Indications

RPS

Alarms

K-1, -2, -3, -4, -5, -9, -10, -12, -13

2.3 CEA's Insert

2.3 Indications

ADS, Core Mimic, Digital Position Readout, and Backup

2.4 Generator MW Output Reduces to Zero

2.4 Indications

DEH, W-REC-871
DMW-871, RPS - Ch. 10

Alarms.

D-21, D-8

2.5 After trip, the following Parameters:

Reactor Power	- Decrease
Pressurizer Pressure	- Decrease
Pressurizer Level	- Decrease
RCS Temperature	- Decrease
Steam Generator Pressure	- Increase
Steam Generator Level	- Decrease



2

3.0 AUTOMATIC ACTIONS

3.1 The turbine generator will trip with
EITHER

A Turbine Trip Signal

OR

A Reactor Trip Signal

3.2 The reactor will trip with
EITHER

A Reactor Trip Signal

OR

A Turbine Trip Signal and
Power is $> 15\%$

3.3 Plant electrical auxiliaries
transfer from auxiliary to
SU transformer.

3.4 S/G level $< 39\%$ narrow range
(2 out of 4 channels) automatic
initiation of auxiliary
feedwater sys.

3.5 Atmospheric Dumps and/or
SBCS actuate following a
trip.

3.6 Turbine trip on Hi S/G level
will also CLOSE 100% feedwater
bypass valves.

4.0 IMMEDIATE OPERATOR ACTIONS

- 4.1 Manually depress both Reactor Trip P.B.'s on RTGB 201 or 204 and ensure Reactor Trip Bkrs. are open.

NOTE: If the conditions for a Reactor Trip are present, and the Reactor has not tripped, refer immediately to OP 2-0030132 (ATWAS)

- 4.2 Manually depress Turbine Trip P.B. on RTGB 201, ensure all G.V.'s and T.V.'s close.
- 4.3 Ensure all CEA's are fully inserted. If more than one CEA is not fully inserted, initiate Emergency Boration per Op #2-0250030.
- 4.4 Close reheater block valves (MV-08-4, 6, 8 and 10).
- 4.5 Ensure Gen. OCB's and Gen Field Bkr are open.
- 4.6 Ensure that auxiliary power has transferred to the Startup Transformers.

OR

D/G 2A and/or D/G 2B are running with their output Bkrs closed carrying only the emergency buses.

Note: In the event of a complete loss of offsite pwr, refer immediately to op #2-0030140, "Blackout Operation".

- 4.7 Ensure main feedwater flow to S/G's through 15% valves,

OR

Ensure aux feedwater initiated.

- 4.8 Ensure that Tave is being maintained at 532°F by SBCS or Atmos Dumps.

2

5.0 SUBSEQUENT ACTIONS

CHECK

2

- 5.1 Consult break diagnostic chart (Fig. 1) and determine if another emergency procedure is required. If so, immediately refer to that procedure; if not, proceed to Step 5.2
- 5.2 Reverify (using check list) all immediate actions have occurred.
- 5.3 If trip was caused by High Pressurizer Pressure, verify the PORV's are CLOSED or isolate manually when pressure <2300 psia.

CAUTION

Do not overfeed the S/G's. This could cause T_{avg} to go below 532°F and thermal shock the S/G's.

- 5.4 Place the feedwater bypass valves in the "auto" position to maintain no load levels.
- 5.5 If the emergency diesels are running, START both motor driven auxiliary fw pumps and maintain S/G level
- 5.6 If both the S/G feed pumps and motor driven auxiliary FW pumps are inoperable, then START steam driven auxiliary fw pump.

CAUTION

Feed should be diverted from any S/G showing abnormally low steam pressure or high feed flow.

- 5.7 Ensure pressurizer level is being returned to setpoint by auto control of charging pumps and letdown control valves. If not, take manual control.
- 5.8 Ensure pressurizer pressure is being controlled automatically by the heaters and spray valves. If not, take manual control.



5.0 SUBSEQUENT ACTIONS (Cont.)

- 5.9 If steam pressure cannot be maintained above 800 psig, CLOSE MSIV's or atmospheric dump valves, as appropriate, to avoid excessive cooldown and depressurization of the RCS.
- 5.10 Verify shutdown margin. If it is below Tech Specs, emergency borate
- 5.11 As the turbine slows down, ensure the bearing oil pumps START as follows or manually START; if required:
- 5.11.1 AC bearing oil pump and seal-oil backup pumps START together @ 11-12 psig
 - 5.11.2 Emergency D.C. oil pump @ 10-11 psig
 - 5.11.3 Bearing oil lift pump starts when turbine reaches 600 RPM
- 5.12 Ensure at 0 RPM the turning gear engages.
- 5.13 Place turbine drain selector to OPEN

CHECK

2

CAUTION

Do not isolate steam to gland seals as long as condenser vacuum is maintained.

- 5.14 Reduce bearing oil temperature to 90°F - 100°F.
- 5.15 In the event the condenser is not available, evaluate condensate storage tank inventory.
- 5.16 If it is unsafe to maintain the plant in hot standby condition; bring the unit to cold shutdown per OP #2-0030127
- 5.17 If immediate recovery and return to power is planned, commence CEA block circuit check, if required (see OP #2-0030122 Para. 8.6, Reactor Startup).

CHECK

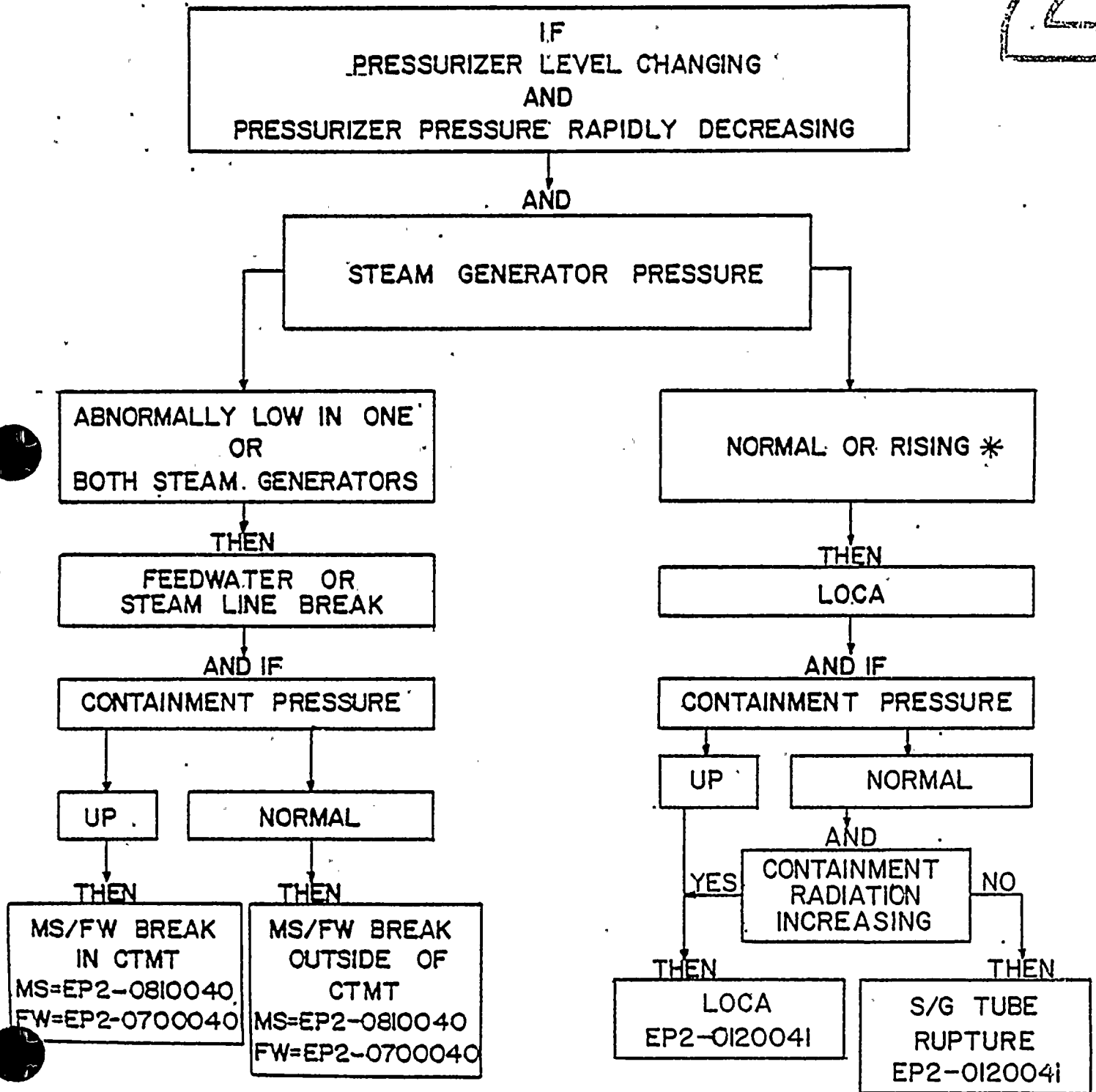
NOTE

If RCP's have tripped, they may be restarted if it has been confirmed that a LOCA has not occurred, pump services CAN be restored and RCS pressure-temperature conditions permit restart.



FIGURE 1 BREAK DIAGNOSTIC CHART

2



* MAY DECREASE SLIGHTLY AFTER REACTOR TRIP

6.0 PURPOSE/DISCUSSION

This procedure provides the entry to a sequence of events that will lead to the safe termination of any of the emergency events considered for our plant. The first few immediate actions verify that all has performed as it should. The operator verifies CEA's in, or if not, is referred to the ATWAS procedure. He then verifies off-site power and if it is not available, he is referred to the Blackout Procedure. He then scans a Diagnostic Chart and, if necessary, is directed to the appropriate emergency procedures. Each of these emergency procedures will provide specific instructions for the particular circumstances and verify adequate core cooling, or if not, refer to the operator to the inadequate core cooling procedure.

If no emergency conditions exist, the operator continues to the subsequent actions, which guide him to a safe shutdown and preparation for return to power, if conditions warrant.

7.0 REFERENCES

- 7.1 St. Lucie Unit #1 Off-Normal Procedures
- 7.2 St. Lucie Unit #2 FSAR, Sect. 7
- 7.3 CEN 128, C.E. NSSS transients & accidents

8.0 RECORDS REQUIRED

- 8.1 Normal log entries and trip details
- 8.2 Startup/Shutdown log entry
- 8.3 Reactor trip log entry
- 8.4 Applicable log chart recorders

9.0 APPROVAL

Reviewed by the Facility Review Group October 12, 1982
Approved by C. M. Wethy Plant Manager October 14, 1982

Rev. 1 reviewed by Facility Review Group 10-26 1982
Approved by J. H. Baum Plant Manager 10-26 1982

"L A S T P A G E"

EP 2-0030130
REV. 1
TOTAL NO. OF PAGES 12

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FLORIDA POWER & LIGHT COMPANY
 ST. LUCIE UNIT NUMBER 2
 OFF-NORMAL PROCEDURE NUMBER 2-0030131
 REVISION 1

2

1.0 Title:

Plant Annunciator Summary - Unit 2

2.0 Review And Approval:

Review by Facility Review Group _____ February 22, 1982 & March 17, 1983

Approved by C. M. Wethy _____ Plant Manager _____ March 17, 1983

Revision 1 Reviewed by F R G _____ April 14 1983

Approved by J. H. Bauer _____ Plant Manager is April 5/12 1983

3.0 Purpose And Discussion:

This procedure provides an informative guide to operations personnel for resolving alarm conditions that are received on an annunciator panel in the St. Lucie Unit No. 1 Control Center and local annunciator panels throughout the plant.

The actions listed are intended to be a guide in response to single annunciators, and are not intended to be a substitute for good judgment based on thorough understanding of plant conditions and equipment.

In cases where many annunciators are lighted simultaneously, operators are expected to respond to the root cause of the condition and maintain the unit in a safe condition in accordance with applicable off-normal and emergency procedures. Such action will not necessarily correspond to that on this list.

4.0 Symptoms:

Annunciator windows received.

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

2

5.0 Instructions:

5.1 Annunciators are categorized on the following sheets by vertical rows from left to right.

5.2 Control Room Annunciator Panels are listed as follows:

(From right to left on control board)

<u>PANEL LETTER</u>	<u>NAME</u>	<u>NO. OF SHEETS</u>
1. A-	Station Auxiliaries B	10 Sheets
2. B-	Station Auxiliaries A	10 Sheets
3. C-	Generator & Transformers	10 Sheets
4. D-	Turbine & Generator Cooling	10 Sheets
5. E-	Circulating & Intatke Cooling Water	8 Sheets
6. F-	Heater Drain & Station Miscellaneous	8 Sheets
7. G-	Condensate & Feedwater	8 Sheets
8. H-	Reactor Coolant System	8 Sheets
9. J-	Reactor Coolant Pumps	8 Sheets
10. K-	C.E.A.	8 Sheets
11. L-	Reactor Protection	8 Sheets
12. M-	Chemical & Volume Control	8 Sheets
13. N-	Waste Management	8 Sheets
14. P-	Engineered Safeguards	10 Sheets
15. Q-	Engineered Safeguards	10 Sheets
16. R-	Engineered Safeguards	10 Sheets
17. S-	Engineered Safeguards	10 Sheets
18. T-	Containment HVAC	6 Sheets
19. U-	Containment HVAC	6 Sheets
20. V-	Shield Bldg/CNL Room HVAC	6 Sheets
21. W-	Control Room/RAB HVAC	6 Sheets
22. X-	Miscellaneous HVAC	6 Sheets
23. LA	Miscellaneous HVAC	6 Sheets
24. LB	Miscellaneous HVAC	6 Sheets
25. LC	Miscellaneous Aux Board	6 Sheets
26. LR	Line Repeat Panel	6 Sheets

ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

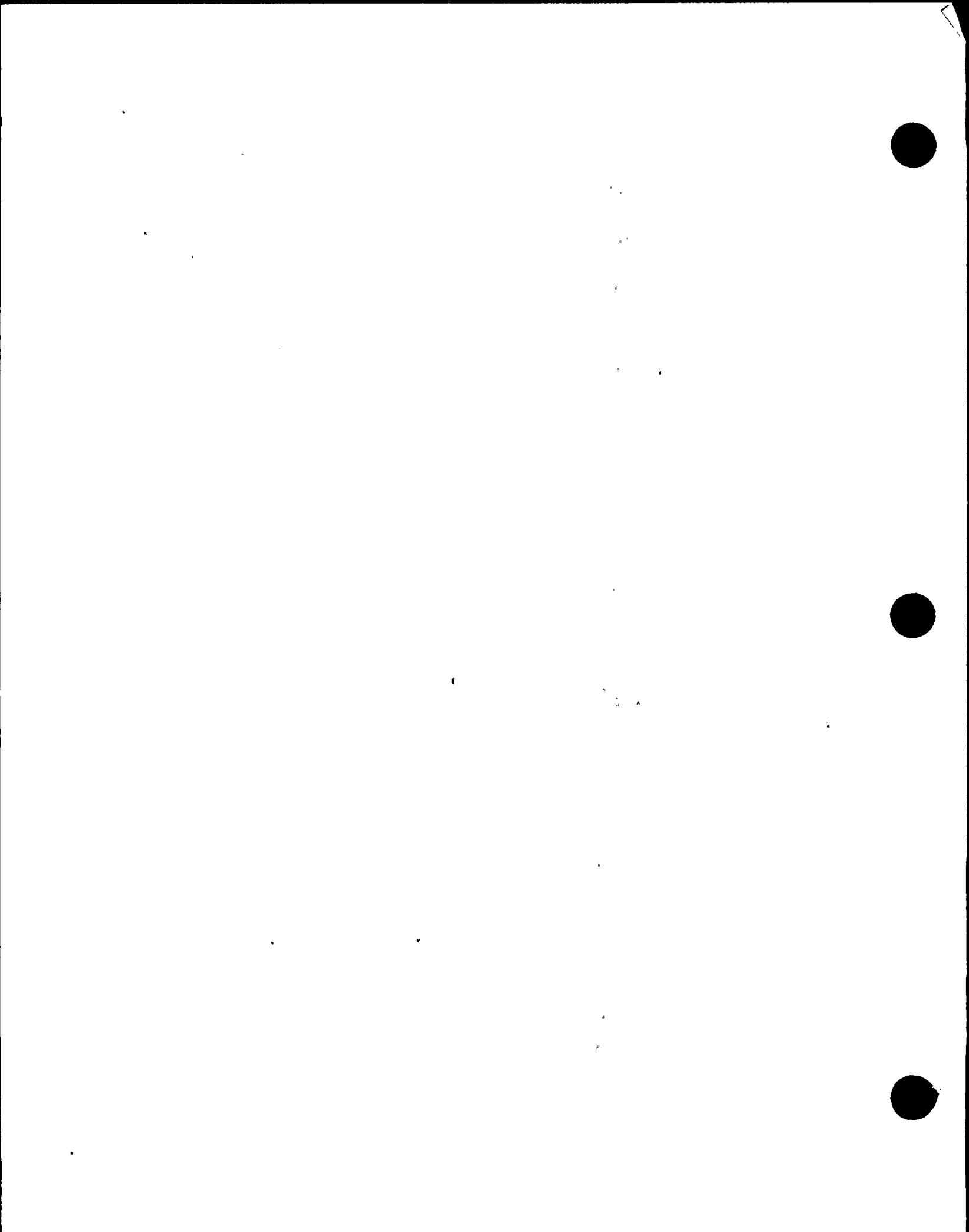
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6.0 REFERENCES:

Listed in "Sensing Element Location" column for each annunciator.

7.0 RECORDS REQUIRED:

Normal Log Entries



ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL A VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION (WHICH VERIFY OR PINPOINT TROUBLE)	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
START-UP XFRM 2B Δ /CURRENT TRIP A-1	1. Start-up XFRM 2B Lock-out relay has been actuated by differential current, isolating the transformer. 2.(A) S/WRD OCBS 8:64 indicate-green. (B) XFRM 4.16-6.9KV output BRK #2-20701, 2-30202 indicate-green. (C) If auxiliaries on S/U XFRM: No Voltage on "B" elect. buses and loss of running "B" Equip.	1. XFRM Lock-out; (A) Both S/U XFRM S/WRD OCBS Open - (4E-4H). (B) S/U XFRM output FDR BRK to 2B4-4.16, 2B1-6.9 KV buses open. (C) Possible Loss of offsite pwr to "B" side 2. Refer to S/U XFRM Off-Normal Procedure No. 2-0910030.	> 40% Current Unbalance	74 DSB Diff. Current Relay Trip Alarm Relay ----- 2B2 4160V	OWD's 902 903
START-UP XFRM 2B FAULT PRESS TRIP A-11	1. S/U XFRM 2B Lock-out relay has been actuated by hi-rate of pressure increase indicating fault. (Isolates XFRM) 2.(A) S/WRD OCBS 8:61-8:64 indicate-green (B) XFRM 4.16-6.9 KV Output BRK 2-20701, 2-30202 indicate-green. (C) If auxiliaries on S/U XFRM: No voltage on "B" elect. buses and loss of running "B" equipment.	1. S/U XFRM Lock-out: (A) Both S/U XFRM S/WRD OCBS Open (4E-4H). (B) S/U XFRM output FDR BRK to 2B4-4.16, 2B1-6.9 KV buses open. 2. Refer to S/U XFRM Off-Normal Procedure No. 2-0910030.	90-150 mmHg sudden pressure	74SP Fault Press Relay ----- 4160 V Bus 2B2 (later brk) (#9 on 2B2)	OWD 903
START-UP XFRM 2B ALARM PANEL A-21	1. Local alarm at XFRM; indicates abnormal condition in 2B S/U XFRM. 2.(A) Temperature Recorder TR-22-30, (B) Transformer asperage	1. No Auto-Action (alarm only) 2.(A) Have Operator check XFRM Alarm Panel at XFRM. (B) Refer to S/U XFRM Off Normal Procedure No. 2-0910030.	LATER	74-X-1, 2, 3, 4 DCX, 63-V Alarm Relays ----- 2B S/U XFRM Cabinet	OWD 908
START-UP XFRM 2B 4 KV GROUND A-31	1. Indicates Presence of Ground on 2B S/U XFRM low side 4160V windings, 4KV bus, or connections to the bus. (alarm only) 2. NONE	1. NONE -(Alarm only) 2.(A) Inspect 4160V bus ground fault relay target. *Ground current may have not been enough to drop local target. (B) Notify Electrical Dept. Immediately (C) Systematically remove bus loads to locate ground.	< 1.6 OHMS to Ground	64-SIB-2 4160 - Ground Relay ----- BRK on 4160 V Bus 2B2 *9 on 2B2	OWD 903
4KV SAGR 2B2 FEEDERS OVERLOAD TRIP A-41	1.(A) Aux S/U XFRM Feeder BRK to 2B2 bus have tripped open from overload. (B) or, breaker has been racked out. (C) or, breaker fuse failure. 2.(A) Feeder BRK lights - green. (B) Loss of "B" condensate pump - ltr Drain Pump.	1.(A) 2B2 4160V bus feeder BRK open - possible loss of offsite pwr. to "B" elect. side. (B) Possible turbine runback and Rx trip from loss of pumps. 2.(A) Refer to S/U or Aux. XFRM Off-Normal Procedures. (B) If Rx trips, refer to Rx Trip Procedure No. 2-0030130.	LATER	74/908 74/915	OWD 907 915
4KV SAGR 2B2 SS ISOL A-51	1. Feeder BRK 2-20302 Norm/Isol switch in Turbine SAGR Room. 2. No BRK indicate lights for BRK 2-20302.	1. BRK control ability is lost from Control Rm. 2.(A) Have Operator Investigate BRK 2-20302. (B) Return NORM/ISOL SW. to "NORMAL" if applicable	NIL/ISOL	SS/ISOL Isolate Switch ----- Turbine SAGR Room on BRK 2-20302	OWD 907

2



ST. LUCIE UNIT NO. 2
 OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL A VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
START-UP XFR 2B -240KV GROUND TRIP A-2	1. S/U XFR 2B lock-out relay has been actuated by 240KV side ground isolating the transformer. 2.(A) SVD OCBS 8-61-8-64 indicate - green (B) XFR 4,16-6.9 KV output BRK 2-20701, 2-30202 - indicate - green. (C) If auxiliaries on S/U XFR; No voltage on "B" elect. buses and loss of running "B" equip.	1. Transformer Lock-out: (A) Both S/U XFR SVD OCBS open - (4E-4D) (B) XFR output FDR BRK to 2B4-4.16, 2B1-6.9 KV buses open. (C) Possible loss of off-site power. 2. Refer to S/U XFR Off-Normal Procedure No. 2-0910030		74-NB	OWD 903
START-UP XFR 2B LOCKOUT RELAY FAILURE A-12	1. Loss of lock-out protection for the 2B S/U XFR due to loss of DC power to lock-out relay. 2. NONE - unless trip signal for XFR is generated, then the BRK will not trip.	1. NONE 2.(A) Immediately investigate cause; contact Elect. Dept. and monitor for XFR trip conditions. (B) Refer to S/U XFR Off-Normal Procedure No. 2-0910030.	"0" DC Volts	74 - SB	OWD 903
4KV SAGR TIES 2B2-2B3 OVRD TRIP A-22	1.(A) Tie BRKs have opened; possible loss of power to the 2B3 4160V bus. (B) OR, overload condition has opened BRKs. 2.(A) Tie BRK - green indicator lights. (B) Loss of running 2B3 Electrical Equipment.	1. Loss of power to 2A3 4160V 2.(A) Ensure other back-up equipment running and investigate cause for overload. (B) Strip all loads from bus. (C) Notify Electrical Department.		74/935 74-1-937	OWD-935 OWD-937
START-UP XFR 2B 6.9KV GROUND A-32	1. Ground Fault on 6.9 KV low side of the 2B S/U XFR (alarm only). 2. NONE	1. NONE - (alarm only) 2.(A) Inspect 6.9 KV Bus Ground Relay Target* ground current may have not been enough to drop local target. (B) Notify Electrical Department immediately. (C) Systematically remove bus loads to locate ground.		64/SDB-1	OWD 903
6.9KV SAGR 2B1 FEEDERS OVRD TRIP A-42	1.(A) Feeder BRK to the 6.9KV 2B1 bus have opened from overload condition. (B) OR, breakers have been racked out. 2.(A) Feeder Breakers - green lights (B) Zero voltage - 2B1 6.9KV bus (C) Loss of "B" FWP, and 2B1, 2A2 RCPs	1.(A) Loss of power to 2B1 6.9KV bus. (B) Possible Turbine Runback, Rx TRIP 2.(A) If Rx trips, see Rx Trip Procedure No. 2-0030130. (B) Open all breakers on bus. (C) Notify Electrical Department		74/905 74/913	OWD-905 OWD-913
4KV SAGR TIES 2B2/2B3 CLOSE FAIL/ SS ISOL A-52	1. Indicates SAGR ties will not close due to loss of DC control power or NORM/ISOL SW. in ISOL position 2. Possible loss of BRK indicate lights on RIGB.	1. NONE 2. Return NORM/ISOL SW. to NORMAL, if normal, then notify Electrical Department.		74-2/937 SS/Isol 935 SS/Isol 937	OWD-935

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ANNUNCIATOR PANEL A VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
6.9KV SWGR 2B1 Δ CURRENT TRIP A-3	1. Indicates 2B1 6.9KV SWGR Feeder BRK have opened, from a differential current trip. 2.(A) Feeder BRK lights green. (B) No voltage 6.9KV 2B1 bus. (C) Loss of B MPWP, 2B1, 2A2 RCP's.	1. De-energization of the 6.9 2B1 bus loss of all running equipment on the bus. 2.(A) If R _x trips, see R _x trip Procedure No. 2-0030130. (B) Open all BRK on bus. (C) Notify Electrical Department	LATER	86/2B1	QTD-905
4KV SWGR 2B2 Δ CURRENT TRIP A-13	1. Indicates feeder BRK to the bus have opened from a differential current trip. 2.(A) Feeder BRK lights green. (B) Zero voltage on 2B2 4160V bus, and any other buses being fed from 2B2. (C) Loss of "B" condensate pump, Htr drain Pump.	1. De-energization of the 4160V 2B2 (A) Bus - loss of all equipment fed (B) Possible turbine runback, R _x trip. 2.(A) Ensure diesel picking up essential bus. (B) If R _x trips, see R _x trip Procedure No. 2-0030130. (C) Notify Electrical Department	LATER	86/2B2	QTD-917
6.9KV SWGR 2B1 /4KV SWGR 2B2 UNDERVOLTAGE A-23	1. Indicates low voltage present on 2B1 6.9KV and/or 2B2 4160V bus. 2. Respective bus voltmeters reading low voltage	1. NONE 2.(A) Check plant electrical parameters to determine cause for low voltage. (B) Check system condition by calling Division Dispatcher. (C) Contact Electrical Department. (D) Check for possible XFER problem.	LATER	27X1/2B1 27X1/2B2	QTD-952
BLANK A-33					
120V AC INSTR BUS MB/MB-1/SB INVERTER TROUBLE R A-43	1. Indicates problem with 2B Inverter/Bus: (A) DC Voltage High/Low (B) AC Voltage High (C) DC BRK Trip (D) Over/Under Frequency (E) Bus undervoltage (F) Ground Fault 2. Possible loss of 1 channel of ESFAS, RPS, NI's, and half of R _x Trip BRKs open.	1.(A) Possible loss of "B" channel ESFAS, RPS, NIs, & R _x trip BRK. (B) If 2 Inst. AC buses are lost; R _x trip will occur. 2.(A) If TX Trip occurs; refer to R _x trip Procedure No. 2-0030130. (B) Put INST Bus onto maint. bypass XFER. (C) Notify Electrical Department	LATER	RA-RAB-13 RA-RAB-29 Reflash Panels ----- 13) South wall of B Cable Spreading Rm. 19) Wall behind B Battery Charger	QTD-1010 QTD-1803
120V AC INSTR BUS MB/MB-1 INVERTER TROUBLE A-53	1. Indicates problem with 2B Inverter/Bus: (A) DC Voltage HI/LO (D) Over/Under Frequency (B) AC Voltage High (E) Bus Under Voltage (C) DC BRK Trip (F) Ground Fault 2. Loss of 1 channel of ESFAS, RPS, NIs, and half R _x Trip BRKs open.	1.(A) Possible loss of "B" channel ESFAS, RPS, NIs, R _x Trip BRK. (B) If 2 Inst. AC buses are lost; R _x trip will occur. 2.(A) If R _x Trip occurs refer to R _x trip Procedure No. 2-0030130. (B) Put Inst Bus onto maint. bypass XFER. (C) Notify Electrical Department	LATER	RA-RAB-15 Reflash Panel South Wall of B Cable Spreading Room	QTD-1010 QTD-1809

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ANNUNCIATOR PANEL A VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
6.9KV/4KV SKCR 2B1/2B2/2B3 DIFF LOCKOUT RELAYS FAILURE R A-4	1. Loss of Lock-out Protection for one or more Elect. buses listed. Indicates loss of relay DC Control power. 2. NONE, unless trip signal is generated for one of the indicated relays; then the assoc. BRK will not trip	1. NONE 2.(A) Contact electrical department. (B) Investigate local relay targets. (C) Monitor Switchgear parameters closely to identify a trip condition	0" DC VOLTS	RA-RAB-1 Reflash Panel South Wall of B Cable Spreading Room	GND-1553
4KV SKCR 2B3 DELTA CURRENT TRIP A-14	1. Indicates Feeder BRK tripped due to differential bus current. 2.(A) Feeder BRK green light. (B) Loss of voltage on 2B3 4160V bus (C) Loss of 2B3 Bus loads; IQW, COW, CVCS. (D) Start-Up of 2B diesel generator.	1. 2B3 loads trip, diesel starts up, and loads will re-sequene onto 2.(A) Determine cause for bus trip (B) Notify Electrical Department (C) Ensure essential equipment running.	LATER	86/2B3	GND-205
START UP XFR 2B 6.9KV/4KV BKR FAILURE A-24	1. Indicates BRK Trip signal was sent to BRK to open, but BRK failed to open. 2. Respective BRK lights 6.9KV/ 2-30202, 4160V; 2-20701 - Red or out.	1. Protective action to isolate XFR is inoperative or failed. 2. Notify System Protection via immediate contact of Division Dispatcher.	N/A	74/BSS	GND-903 903
STA SERV XFR 2B5 TROUBLE R A-34	LATER	LATER	LATER	Reflash Panel Wall Behind 2B5 480V Load Center	GND-1711
4KV SKCR TIES 2B3/2AB OVRD TRIP A-44	1.(A) Indicates 2AB bus overload condition (B) Or, tie breakers are racked out. 2.(A) Tie Bkr lights green. (B) Loss of 2AB 4160V loads - charging, IQW, COW. (C) Zero voltage on 2AB 4160V bus.	1.(A) 2B3-2AB tie breakers open (B) Possible loss of voltage on 2AB 2.(A) Contact Electrical Dept. to investigate cause for 2AB bus overload condition.	LATER	74-1/939 74-1/941	GND-939 GND-941
4KV SKCR TIES 2B3/2AB CLOSE FAIL/ SS ISOL A-54	1.(A) Indicates 2B3 to 2AB 4160V BKR fail to close or local NORM/ISOL SW. in Isolate position. (B) Loss of BRK indicator lights.	1. NONE 2.(A) Have Operator verify NORM/ISOL Switch in NORMAL position. (B) IF in NORMAL, notify Electrical Dept.	NORM/ISOL Switches in "ISOL"	74-2 SS/Isol/939 74-2 SS/Isol/941 Fall Circuit Rly/ Isolate Switches	GND GND-939 GND-941

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ANNUNCIATOR PANEL A VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
4KV S4CR 2A8 LOAD SHED RLY FAILURE A-5	1. Load shed relay has failed for 4160V S4CR 2A8. Indicates relay DC control power is lost. 2. NONE	1. NONE 2. Notify Electrical Department.	"0" DC VOLTS	74-4	GD-951
4KV S4CR 2B3 LOAD SHED RLY FAILURE A-15	1. Load shed relay has failed for 4160V S4CR 2B3. Indicates relay DC control power is lost. 2. NONE	1. NONE 2. Notify Electrical Department.	"0" DC VOLTS	74-4	GD-950
S/U X4MR 2B TIE S4CR 2B4 FIR BKR OVERLOAD TRIP A-25	LATER	LATER	LATER	74	GD-1286
480V S4CR 2B5 VOLT < 90% GROUND A-35	LATER	LATER	LATER	2FX1 64, 2-3 27 IX/2B5	GD-1711 GD-1857
480V S4CR 2B5 LOAD SHED RLY FAILURE A-45	1. Load shed relay has failed for 480V bus 2B5. Indicates loss of relay DC control power. 2. NONE	1. NONE 2. Notify electrical department	0" DC Volts	74	GD-1711
4KV TIE S4CR 2B4 U ID.2 FEED BUS Δ LOCKOUT RELAY FAIL A-55	1. 2B4 4160V bus lock-out relay has failed and will not operate, due to loss of DC power. 2. NONE.	1. NONE 2. Notify System Protection Dept , via contact of Division Dispatcher.	"0" DC VOLTS	74B-2B4	GD-1289

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ANNUNCIATOR PANEL A VERTICAL COLUMN 6

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
EMERG DG 2B BREAKER FAILURE A-6	1. The D/G output BRK has been given an automatic or control sw. close signal, and has failed to close. 2. D/G output BRK - green or out.	1. NONE 2.(A) Attempt reclose breaker (B) Check BRK locally, notify Electrical Department if necessary.		74-1	OMD-963
EMERG DG 2B ONE ENGINE START FAILURE A-16	1. One of 2 diesel engines is either not started, or not carrying sufficient load. 2. Inability to attain full diesel load.	1. NONE 2.(A) Check exhaust temperatures locally (B) Attempt to balance diesels with raise/lower buttons. (C) If 1 diesel is motoring; shut D/G set down.	>200" Exhaust A/B Diesel Temp. Diff.	EUTX ENGINE EXHAUST TEMP DETECTORS A/B DIESEL EXHAUSTS	OMD-972
EMERG DG 2B LOCKOUT / SS ISOL A-26	1. Diesel lock-out mechanism has tripped & locked-out or NORM/ISOL switches have been put to the "ISOLATE" position. 2. Possible diesel trip if lock-out actuates.	1. Possible diesel trip or loss of remote control capability. 2.(A) Determine cause for the alarm locally. (B) Return NORM/ISOL SW to NORMAL if applicable.	Any of Multiple (3) NML/ISOL Switch in ISOL	86 SIRx1, SS-1 SS-3, IR SS/1616	OMD-1129
EMERG DG 2B LOCAL ALARM A-36	1. Local alarm relay has energized at diesel control panel, or from diesel fire alarm. 2. NONE, unless diesel trips.	1. Possible diesel trip or fire sprinkler activation. 2. Determine cause for alarm locally.		70x6	OMD-1128
EMERG 4KV SACR 2B3 VOLT ≤ 90% A-46	1. 2B3 4160V Buss voltage has decayed to ≤ 3744 volts 2. Voltmeter on RIG9-201	1. If voltage continues to decay, undervoltage 2.(A) Increase excitation if on diesel.	Volts	2-1 27DX 2B3	OMD-1887
EMERG DG 2B BREAKER START INHIBIT / SS ISOL A-56	1.(A) No DC power on 2B3 DC bus available to start diesel. 2. D/G start and/or BRK control switch indicating lights out.	1. D/G will not start or close onto bus from Control Room. 2.(A) Investigate DC power loss. (B) Rack in D/G output BRK if applicable. (C) Return output BRK NORM/ISOL SW. to "NORMAL" if applicable.	Batt BRK Open NORM/ISOL ISOL 4160V BRK Racked Out	74/3 SS/ISOL 74/3 LATER	OMD-963 OMD-1802

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ANNUNCIATOR PANEL A VERTICAL COLUMN 7

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
STA SERV XFR 2B1 TROUBLE R A-7	1.(A) Surken casing pressure increase, (B) OR, Winding temp. high, or high-high, (C) OR, Pressure relief device actuation. 2. Loss of XFR - green BRK lights.	1. Possible station service XFR trip. 2. Check XFR locally.	(A) LATER (B) HI-112°C HI-HI 177°C Others LATER	RA-T-7 Ref/ash Panel N. Wall in Front 2A1 480 V Load Center	GND-988
480V SGR 2B1 FEEDERS OVRD TRIP A-17	1.(A) 2B1 SS XFR 4160V feeder BRK overload trip, racked out, or fuses blown. (B) OR; 2B1 SS XFR 480V output BRK overload trip or racked out. 2. XFR BRK lights out or green, loss of voltage and loads on 2B 480V Load Center.	1. Loss of 2B1 480V bus and operating loads on the bus. 2. If not from RACK-OUT; Investigate cause locally.	LATER	74/947 R/976 LATER	GND-947 GND-976
480V SGR 2B1 UNDERVOLTAGE / GROUND A-27	1.(A) Ground on 2B1 SS XFR low side. (B) Ground in loads fed from 2B1 480V bus. (C) Undervoltage condition in SGR (later) 2. Possible alarms A7, A17 (later - possible loss of XFR?)	1. LATER 2.(A) Isolate loads to identify ground (B) Check 2B1 SS XFR for ground.	LATER	27, 64 LATER	GND-988
480V SGR 2B1/2B2/2B5 MCC FUS OVRD TRIP A-37	1. Overload trip of any MCC feeder BRK on 2B1, 2B2, or 2B5 480V buses. 2. Possible indication by loss of MCC equipment which tripped.	1. BRK trip open on overloaded feeder feeder 2. Investigate cause for feeder BRK overload.	LATER	R ----- LATER	GND-989 GND-993 GND-1713 GND-985
480V SGR 2B2/2B5 FDS OVRD TRIP A-47	1.(A) 2B2 SS XFR 4160V feeder BRK has tripped on overload, or BRK is racked out or fuses blown. (B) 2B2 SS XFR 480V output BRK to 2B2 or 2B5 load centers tripped on overload or racked out. 2. BRK indication lights or loss of bus voltage.	1. Opening of overloaded BRK. 2.(A) Check breaker(s) locally. (B) Replace blown fuses. (C) Consult elect. dept. if necessary.	LATER	74-1/947 R/980 R/1712 LATER	GND-948 GND-1712 GND-990
480V SGR 2B2/2B5 FDS CLOSE FAIL/ SS ISOL A-57	1.(A) Indicates feeders did not close when control switch to "CLOSE" position. (B) OR, Loss of DC control power. (C) OR, NORM/ISOL switch(s) in "ISOLATE" position 2. Loss of BRK indicate lights.	1. Loss of remote breaker control 2.(A) Investigate alarm locally. (B) Place NORM/ISOL SW into NORMAL position if applicable.	A) Control Sw. Contacts B) "O" DC V. C) INL/ISOL Switch in "ISOL"	74-2 SS/980 SS/1712 ----- LATER	GND-980 GND-1712

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ANNUNCIATOR PANEL A VERTICAL COLUMN B

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
STA SERV XFMR 2B2 TROUBLE R A-8	1. Trouble or trip of 2B2 station service XFMR from: (A) Sudden pressure alarm/trip (B) Winding temperature HI/HI-HI alarm (C) Oil level low/high temp. (D) Pressure relief actuation. 2. If XFMR trips: loss of running equip. on 2B & 2B5 480V load centers. on 2B and 2B5 480V load centers.	1. If XFMR trips - FDR and output BRK will open 2.(A) Investigate alarm locally. (B) If XFMR trips, ensure other backup equip. working. (C) Notify Electrical Department.	A) 90 - 150 and by sudden B) HI - 112°C C) Lo Level HI Temp. 90°C D) Actuation	RA-RAB-20 Reflash Panel ----- Behind 2A5 480V MCC	OWD-992
BLANK A-18					
480V SWGR 2B2 VOLT < 90%/ GROUND A-28	1. 2B2 480V Load Center, has decayed in voltage to < 432 volts. 2. 2B2 4160 V Bus voltage indication.	1. If voltage continues to decay, undervoltage auto-actions will occur at approx 83%. 2.(A) Increase excitation if on diesel. (B) Check system conditions.	432 Volts	27 X 1, 64 Located in 480V SWGR 2B2 Instr. Compartment	OWD-992 OWD-178
480V SWGR BUS TRIP 2B2 - 2AB OVRD TRIP A-38	1. 2B2-2AB 480V bus tie BRK have tripped open due to overcurrent condition on 2AB bus. 2.(A) Bus tie BRK lights - green. (B) Loss of running equipment on 2AB 480V Load center and 2AB MCC.	1. Tie BRK open on overcurrent. 2.(A) Investigate cause of BRK trip. (B) Notify Electrical Department.	Time Dependent O.C. Trip	52 BRKS 2-40504/2B2 L.C. 2-40706/2AB L.C. O.C. Trip Coils Located in above Breakers	OWD-981 OWD-982 FD & MD Sh. 15
125V DC BATT 2B DISCH HI / BRK OPEN A-48	LATER	LATER	LATER	52B 74	OWD-1802
480V SWGR BUS TIE 2B2-2AB SS ISOL A-58	1. Bus tie BRK 2B2-2AB control has been isolated from Control Room. 2. Loss of one or both tie BRK indicate lights.	1. Loss of BRK control from Control Room 2.(A) Investigate cause for alarm. (B) Return NORM/ISOL SW to "NORMAL" position if applicable.	NORM/ISOL Switch in "ISOLATE" Position	LATER SS/ISOL - 981/982 Switches on L.C. 2AB and 2B2	OWD-981 OWD-982

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ANNUNCIATOR PANEL A VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PRZR HTR XFR 2B TROUBLE R A-9	1. Transformer problem or trip; (A) Hot spot temp high (D) Low Oil Level (B) Hot spot temp trip (E) High Oil Temp. (C) Pressure relief device (F) Winding Temp. HI or HI-HI. 2. Loss of XFR will show FDR BRK - green and loss of pressurizer heaters.	1. LATER 2.(A) Turn-off PZR heaters P-2, BU-4, 5 & 6 until problem is resolved. (B) Have operator check XFR locally. (C) Notify Elect. Department if necessary.	A) HI 112°C B) HI-HI 177°C Others Later	RA-RAD-1 Reflash Panel South Wall of B Cable Spreading Room	G/D-132
PRZR HTR XFR 2B3 4KV FEEDER OVRD TRIP A-19	1. Overload condition on 2B3 SS XFR feeder BRK to PZR htr bus. 2.(A) Feeder BRK indication - green. (B) Loss of 1/2 of pressurizer heaters.	1. 2B3 SS XFR feeder BRK open. 2.(A) Turn-off PZR heaters P-2, BU-4, 5 & 6 until problem is resolved. (B) Notify Elect Dept. and investigate cause for overload.	RM & Later	74-1 LATER	G/D-944 RM & MD
480V SQR 2B2 LOAD SHED RLY FAILURE A-29	1. Loss of DC ctrl power to 2B2 480V load shed relays. 2. NONE	1. Loss of load shedding ability on 2B2 480V load center. 2.(A) Check for blown fuses, or DC power fall. (B) Notify Electrical Department.	"0" DC VOLTS	74 LATER	G/D-992
480V MCC 2B5/2B6/2B3 NON-ESS SECT LOCKOUT A-39	1. Indicates non-essential section of one or all the MCCs listed has been isolated triggered by LATER. 2. Loss of any running equip. on the non-essential sections of the bus(es).	1. Opening of one or more MCC non-essential loads isolation breaker(s). 2.(A) When black-out conditions have cleared, or if D/G can easily handle the added load, close the isolated non-ess. ISOL. BRK.	LATER	M/1013 M/1016 M/1014 LATER	G/D-1016 G/D-1013
480V SQR 2B1 TIE TO 2A1 OVRD TRIP A-49	1. Tie BRK 2A1-2B1 480V turbine MCCs has opened on overload, possibly causing a loss of power to one of the busses 2.(A) Bus tie BRK 2-40420 indicate lights - green. (B) Loss of running equip. on tripped bus.	1. 2A1-2B1 MCC tie BRK 2-40420 opens 2.(A) Identify cause for trip before reloading through the tie brk. (B) Contact Electrical Dept if necessary.	LATER	R LATER	G/D-975
PRZR HTR XFR 2B3 FDR CLOSE FAIL/ SS ISOL A-59	1. Indicates inability to close PZR htr SS XFR 4160V feeder BRK due to loss of DC Control Power, or NORM/ISOL SW in "ISOLATE" position. 2. Loss of XFR FDR BRK indicate lights.	1. Inability to close 2B3 SS XFR 4160V FDR BRK and/or loss of remote BRK Control capability 2.(A) Investigate alarm locally. 2.(B) Check fuses, DC power supply. (C) If NORM/ISOL SW in "ISOLATE" return to "NORMAL" if applicable.	"0" VOLTS ----- NORM/ISOL Switch to "ISOLATE"	74-2 SS/ISOL LATER	G/D-944

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ANNUNCIATOR PANEL A VERTICAL COLUMN 10

WORLDW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
125V DC BUS 2B/2B8 GROUND A-10	1. Positive or negative ground on 2B-2B8 125V DC bus, or equipment fed from bus. 2.(A) Observe if alarm came in concurrent with change in status of any plant equip. which could be fed from bus. (B) Check DC bus electrical parameters.	1. Severe ground could trip DC BRK. 2.(A) If possible, STOP/DE-ENERGIZE strongly suspected equip. which was started/energized concurrent with annunciator receipt. (B) Follow DC Ground Insulation Off-Normal Procedure No. 2-0960030.	79.5 K To Ground	64N, 64P Ground Actuating Relay ----- In 2AB Batt. Charger	GND-1002 GND-1802 FD & MD Sheet 68A
125 V DC BUS 2B/2B8 BATT CHGR 2B/2B8 TROUBLE R A-20	1. Battery charger 2B or 2B8 trouble or trip from; (A) HI or low voltage (B) HI voltage shutdown (C) Loss of AC power (D) Control power off (E) No charge alarm 2. Check 2B-2B8 DC bus voltage and charge/discharge amperage.	1. HI-Voltage will shut down the battery CHG. 2.(A) Investigate cause for alarm locally. (B) If HI Voltage shutdown, try to reset HVSD relay, inside charger. (C) If charger trips, ensure other 2B or 2B8 charger is running carrying the load. (D) If both chargers are lost, or if one cannot handle the load, charging could be aided by the use of 2AB charger through the 2AB-2B bus tie. (E) Notify the Electrical Department.	HI Volts: >144.1 VDC ----- LO Volts <125 VDC ----- HI Volts S/D >151.9 VDC	RA-RAB-10	GND-1002 GND-1802
125V DC BUS 2B UNDERVOLTAGE A-30	1. 125V 2B-2B8 buses voltage has delayed to LATER V. 2. Check the 2B-2B8 DC bus voltmeter and charge/discharge ammeter.	1. NONE 2.(A) Check for charger trip. (B) Re-start charger if possible.	LATER	27	GND-1002
125V DC BUS 2AB GROUND R A-40	1. Positive or negative ground on 2B-2B8 125V DC bus, or equipment fed from bus. 2.(A) Observe if alarm came in concurrent with change in status of any plant equip. which could be fed from bus. (B) Check DC bus voltage and charge/discharge amperage.	1. If ground is severe in running equip., it's DC BRK could trip from overload. 2.(A) If possible STOP/DE-ENERGIZE strongly suspected equipment which was started/energized concurrent with annunciator receipt. (B) Follow DC Ground Isolation Off-Normal Procedure No. 2-0960030.	LATER	64P, 64N GAR	GND-1003
125V DC BUS 2AB BATT CHGR TROUBLE R A-50	1. Battery charger 2AB trouble or trip (A) HI or low voltage (B) HI voltage shutdown (C) Loss of AC power (D) Control power off (E) No charge alarm 2. Check 2AB DC bus voltage, charge/discharge amperage. Loss of charger may not cause loss of power to 2AB DC bus.	1. HI-voltage will shut-down the Batt. Charger. 2.(A) Investigate cause for alarm locally. (B) If HI-voltage shutdown, try to reset HVSD relay. (C) If charger trips, ensure power supply from 2A or 2B DC bus via tie BRKs. (D) Notify Electrical Department.	LATER	RA-RAB-12	GND-1003
125V DC BUS 2AB UNDERVOLTAGE A-60	1. 125V 2AB DC bus voltage has delayed to LATER V. 2. Check the voltage and charge/discharge amperage on the DC bus feeding the AB bus.	1. NONE 2.(A) Start batt. charger if not running, and close output BRK to 2AB bus. (B) Swap Tie BRK to the other DC bus if available.	LATER	27	GND-1003

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL B VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
START - UP XFR 2A Δ CURRENT TRIP B-1	1. S/U XFR 2A lock-out relay has been actuated by differential current, isolating the XFR. 2.(A) SVD OCBs 8#23-8#40 indicate - green. (B) XFR 4,16-6.9KV output BRK 2-20601,2-30102 indicate - green. (C) If auxiliaries are S/U XFR: No voltage on elect. buses and loss of running equipment	1. XFR lockout: (A) Both S/U XFR SVD OCBs open - (2E-2H) (B) XFR output FDR BRK to 2A4-4,16, 2A1-6.9 KV buses open. (C) Possible loss off-site power to "A" side 2. Refer to S/U XFR Off-Normal Procedure No. 2-0910030.	LATER	74 DSA	GD-901
START - UP XFR 2A FAULT PRESS TRIP B-11	1. S/U XFR 2A lockout relay has been actuated by HI rate of pressure increase indicating fault. (Isolates XFR) 2.(A) SVD OCBs 8#23-8#40 indicate-green. (B) XFR 4,16-6.9KV output BRK 2-20601,2-30102 indicate - green. (C) If auxiliaries on S/U XFR: No voltage on elect. buses and loss of running equip.	1. XFR lockout: (A) Both S/U XFR SVD OCBs open - (2E-2H) (B) XFR output FDR BRK to 2A4-4,16, 2A1-6.9 KV buses open. (C) Possible loss off-site power to "A" side. 2. Refer to S/U XFR Off-Normal Procedure No. 2-0910030.	LATER	74 SP Fault Press Relay on 2A2 4160V bus (BRK panel #152-212-2)	GD-901
START - UP XFR 2A ALARM PANEL B-21	1. Local alarm at XFR; indicates abnormal condition in 2A S/U XFR. 2. Temp. reconer TR-22-30, XFR former asperage.	1. No direct auto-action (alarm only). 2.(A) Have Operator check XFR alarm panel at XFR. (B) Refer to S/U XFR Off-Normal Procedure No. 2-0910030.	LATER	74-X	GD-908
START - UP XFR 2A 4KV GROUND B-31	1. Indicates presence of ground on 2A S/U XFR low 4160V windings, 4KV bus, or connections to the bus (alarm only). 2. None	1. None - Alarm only 2.(A) Inspect 4160V bus ground fault relay target. *Ground current may have not been enough to drop local target. (B) Notify Electrical Department immediately. (C) Systematically remove bus loads to locate ground	LATER	64 STA-2	GD-
4KV SAGR 2A2 FEEDERS OVERID TRIP B-41	1.(A) Aux/S/U XFR FDR BRK to 2A2 bus have tripped open from overload. (B) Or, BRK has been racked out (C) Or, BRK fuse failure 2.(A) Feeder BRK lights - green (B) Loss of "A" condensate pump - heater drain pump	1.(A) 2A2 4160V bus Feeder BRK open - possible loss of off-site power to "A" elect (B) Possible turbine runback and Rx trip 2.(A) Refer to S/U or Aux XFR Off-Normal Procedures (B) If Rx trips; refer to Rx trip Procedure No. 2-0030130.	LATER	74/906 74/914	GD-906 GD-914
4KV SAGR 2A2 SS ISOL B-51	1. Feeder BRK 2-20102 NORM/ISOL switch in "ISOLATE" position in Turbine SAGR room. 2. No BRK Indicate Lights for BRK 2-20102.	1. BRK control ability lost from Control Room. 2.(A) Have Operator investigate BRK 2-20102. (B) Return NORM/ISOL SW to "NORMAL" if applicable.	CS in "ISOL"	SS/ISOL Turbine SAGR Room	GD-906

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ANNUNCIATOR PANEL B VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
START - UP XFR 2A 24KV GROUND TRIP B-2	1. S/U XFR A lockout relay has been actuated by 24KV side ground, isolating the XFR. 2.(A) SVD OCBs 8440-8423 indicate - green. (B) XFR 4.16-6.9KV output BRK 2-20601, 2-30102 indicate green. (C) If auxiliaries on S/U XFR: No voltage on "A" elect. buses and loss of running "A" equip	1. XFR lockout: (A) Both S/U XFR SVD OCBs open - (2#-2#) (B) XFR output FIR BRK to 2A2-4.16, 2A1-6.9 KV buses open. (C) Possible loss offsite power to "A" side. 2. Refer to S/U XFR Off-Normal Procedure No. 2-0910030 Off-Normal.		74 - NSA	QTD-901
START - UP XFR 2A LOCKOUT RLY FAILURE B-12	1. Loss of lock-out protection for the 2A S/U XFR, due to loss of DC power to lockout relay. 2. NONE - unless trip signal for XFR is generated, then the BRK will not trip.	1. None 2.(A) Immediately investigate cause; contact Elect. Dept and monitor for XFR trip conditions. (B) Refer to S/U XFR Off-Normal Procedure No. 2-0910030.	"0" DC Volts	74B STA	QTD-901
4KV SGR TIES 2A2-2A3 OVRD TRIP B-22	1.(A) Tie BRK have opened; possible loss of power to the 2A3 4160V bus. (B) Or, overload condition has opened BRK. 2.(A) Tie BRK - green indicator lights (B) Loss of running 2A3 electrical equip.	1. Possible loss of power to 2A3 4160V equip. 2. If power is lost: (A) Ensure other back-up equipment running, and investigate cause for overload. (B) Strip all loads from bus. (C) Notify Electrical Department.		74/934 74-1-936	QTD-934 QTD-936
START - UP XFR 2A 6.9KV GROUND B-32	1. Ground fault on 6.9KV low side of the 2A S/U XFR - (alarm only). 2. NONE	1. None (alarm only). 2.(A) Inspect 6.9KV bus ground fault relay target. *Ground current may not have been enough to drop local target. (B) Notify Electrical Department immediately. (C) Systematically remove bus loads to locate ground.		64/STA-1	QTD-901
6.9KV SGR 2A1 FEEDERS OVRD TRIP B-42	1.(A) Feeder BRK to the 6.9KV 2A1 bus have opened from overload condition. (B) Or, breakers have been racked out 2.(A) Feeder BRK - green lights (B) Zero voltage - 2A1 6.9KV bus (C) Loss of "A" FWP and 2A1, 2B2 PCBs	1.(A) Loss of power to 2A1 6.9KV bus and all running equip. on the bus (B) Possible turbine runback, Rr trip. 2.(A) If Rr trips, see Rr Trip Procedure No. 2-0030130. (B) Open all breakers on bus. (C) Notify Electrical Department		74/904 74/912	QTD-904 QTD-912
4KV BUS TIES 2A2-2A3 CLOSE FAIL/ /SS ISOL. B-52	1. Indicates SGR ties will not close due to loss of DC control power or NORM/ISOL SW in ISOLATE Pos. 2. Possible loss of BRK indicate lights on RIGS.	1. None 2. Return NORM/ISOL SW to NORMAL, if NORMAL, then notify Electrical Department.		74-2 SS/ISOL 934 SS/ISOL 936	QTD-934 QTD-936

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ANNUNCIATOR PANEL B VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
6.9KV SSCR 2A1 Δ CURRENT TRIP B-3	1. Indicates 2A1 6.9KV SSCR FDR BRK have opened, from a differential current trip. 2. (A) FDR BRK lights green. (B) No voltage on 6.9KV 2A1 bus. (C) Loss of MWFP, 2A1, 2B2 RCP.	1. De-energization of the 6.9 2A1 bus loss of all running equipment on the bus. 2. (A) If Rx trips, see Rx trip procedure No. 2-0030130 (B) Open all BRK on bus. (C) Notify Electrical Department.	LATER	86/2A1	QAD-904
4KV SSCR 2A2 Δ CURRENT TRIP B-13	1. Indicates FDR BRK to the bus have opened from a differential current trip. 2. (A) FDR BRK lights - green (B) Zero voltage on 2A2 4160V bus, and any other buses being fed from. (C) Loss of "A" Condensate pump, Heater drain pump.	1. De-energization of the 4160V 2A2 (A) Bus - loss of all equip. fed from bus. (B) Possible turbine runback, Rx trip. 2. (A) Ensure diesel picking up essential bus. (B) If Rx trips, see Rx Trip Procedure No. 2-0030130 (C) Notify Electrical Department.	LATER	86/2A2	QAD-915
6.9KV SSCR 2A1 /4KV SSCR 2A2 UNDERVOLTAGE B-23	1. Indicates low voltage present on 2A1 6.9 KV and/or 2A2 4160V bus. 2. Respective bus voltmeters reading low voltage.	1. None 2. (A) Check plant electrical parameters to determine cause for low voltage (B) Check system condition by calling Division Dispatcher. (C) Contact Electrical Department (D) Check for possible XFMR problem.	LATER	27x1/2A1 27x1/2A2	QAD-952
VIL NON-SAFETY 120 VAC INVERTS TROUBLE R B-33	LATER	LATER		RA-RAB-4 RA-RAB-33 RA-RAB-34	QAD-1008 QAD-1029 QAD-1805 QAD-1806
120V AC INSTR BUS MA/MA-1/SA INVERTER TROUBLE R B-43	1. Indicates problem with 2A Inv./Bus: (A) DC voltage high/low (D) Over/under freq (B) AC voltage high (E) Bus undervoltage (C) DC brk trip (F) Ground fault 2. Possible loss of 1 channel of ESFAS, RPs, NIs, and half RX Trip BRK open.	1. (A) Possible loss of "A" channel ESFAS, RPS, NIs, Rx Trip BRK. (B) If 2 Inst. AC buses are lost; Rx trip will occur. 2. (A) If Rx Trip occurs; refer to Rx Trip Procedure No. 2-0030130. (B) Put Inst bus onto maint bypass XFMR. (C) Notify Electrical Department.	LATER	RA-RAB-16 RA-RAB-28	QAD-1009 QAD-1805
120V AC INSTR BUS MC/MC-1 INVERTER TROUBLE B-53	1. Indicates problem with 2C Inv./Bus: (A) DC voltage high/low (D) Over/under freq (B) AC voltage high (E) Bus undervoltage (C) DC brk trip (F) Ground fault 2. Loss of 1 channel of ESFAS, RPs, NIs, and half Rx Trip BRK open.	1. (A) Possible loss of "C" channel ESFAS, RPs, NIs, Rx Trip BRK. (B) If 2 Inst AC buses are lost; Rx trip will occur. 2. (A) If Rx Trip occurs; refer to Rx Trip Procedure No. 2-0030130. (B) Put Inst. bus onto Maint bypass XFMR. (C) Notify Electrical Department.	LATER	RA-RAB-1	QAD-1009

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ANNUNCIATOR PANEL B VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
R 6.9/4KV SGR 2A1/2A2/2A3/AB DIFF LOCKOUT RELAYS FAILURE B-4	1. Loss of lockout protection for one or more Elect. buses 11stol indicates loss of relay DC Ont. Pwr. 2. N/A, unless trip signal is generated for one of the indicated relays, then assoc. BRK will not trip	1. None 2.(A) Contact Electrical Department. (B) Investigate local relay targets (C) Monitor SGR parameters closely to identify a trip condition.	"0" DC VOLTS	RA-RAB-3	GND-1551
4KV SGR 2A3 Δ CURRENT TRIP B-14	1. Indicates FDR BRK tripped due to differential bus current. 2.(A) Feeder breaker green light (B) Loss of voltage on 2A3 4160V bus. (C) Loss of 2A3 bus loads; IOV, COV, (D) Start-up of 2A D/G	1. 2A3 loads trip, diesel starts up, and loads will re-sequence onto diesel. 2.(A) Determine cause for bus trip (B) Notify Electrical Department (C) Ensure essential equipment running	N/A	86/2A3/924	GND-201
START - UP XFR 2A 6.9KV/4KV BRK FAILURE B-24	1. Indicates BRK trip signal was sent to brk to open but BRK failed to open 2. Respective BRK lights 6.9KV; 2-30102, 4KV; 2-20601 red or out	1. Protective action to isolate XFR is inoperative or failed 2. Notify System Protection via immediate contact of Division Dispatcher	LATER	74/BSA	GND-901
R STA SGRV XFR 2A5 TROUBLE B-34	LATER	LATER	LATER	RA-RAB-25	GND-1701
4KV SGR TIES 2A3/2AB OVRID TRIP B-44	1.(A) Indicates 2AB bus overload condition (B) Or, tie breakers are racked out 2.(A) Tie br lights green (B) Possible loss of 2AB 4160V loads - charging, IOV, COV (C) Zero voltage on 2AB 4160V bus, possibly	1.(A) 2B3 - 2AB tie breakers open (B) Possible loss of voltage on 2AB bus 2.(A) Contact Electrical Dept. to investigate cause for 2AB bus overload condition		74-1/938 74-1/940	GND-938 GND-940
4KV SGR TIES 2A3/2AB CLOSE FAIL/ CS ISOL B-54	1.(A) Indicates 2A3 to 2AB 4160V BRK fail to close or local NORM/ISOL SW in ISOLATE position. (B) Loss of BRK indicator lights.	1. None 2.(A) Have operator verify NORM/ISOL SW in NORMAL position (B) If in NORMAL, notify Electrical Dept.	NORM/ISOL Switches in "ISOL"	74-2 SS/ISOL/938 74-2 SS/ISOL/940 2A3-2AB 4160 TIE BRK Cable Spreading Room	GND-938 GND-940

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL B VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
4KV S4CR 2AB △ CURRENT TRIP B-5	1. 2AB 4160V S4CR bus has isolated on differential current trip 2.(A) Zero volts on 2AB 4160V bus (B) Loss of running "C" equipment (C) Bus tie BRK - green	1. Opening of both sets of the BRK to 2AB 4160V bus 2.(A) Open all BRK on the bus (B) Ensure proper back-up equipment (C) Notify Electrical Department	"0" DC VOLTS	86/2AB	G4D-926
4KV S4CR 2A3 LOAD SHED RLY FAILURE B-15	1. Load shed relay has failed for 4160V S4CR 2A3. Indicates relay DC control power is lost. 2. NONE	1. None 2. Notify Electrical Department	"0" DC "0" DC VOLTS	74-4	G4D-949
S/U XFMR 2A TIE S4CR 2A4 FDR BRK OVERLOAD TRIP B-25	LATER	LATER	LATER	74	G4D-1280
480V S4CR 2A5 VOLT < 90%/ GROUND B-35	LATER	LATER	LATER	27X1, 64.701 2-3; 271X, 2 5/1836	G4D-1701 G4D-1836
480V S4CR 2A5 LOAD SHED RLY FAILURE B-45	1. Load shed relay has failed for 480V bus 2A5. Indicates loss of relay DC control power. 2. None	1. None 2. Notify Electrical Department	"0" DC Volts	74	G4D-1701
4KV TIE S4CR 2A4 U NO. 2 FEED BUS △ LOADOUT RELAY FAIL B-55	1. 2A4 4160V bus lock-out relay has failed and will not operate, due to loss of DC control power.	1. None 2. Notify System Protection Dept via contact of Division Dispatcher	"0" DC Volts	74B-2A4	G4D-1283

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ANNUNCIATOR PANEL B VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
B02G DG 2A BREAKER FAILURE B-6	1. Later 2. D/G output BRK - green light	1. Later 2. Later	LATER	74-1	GND-953
B02G DG 2A ONE ENGINE START FAILURE B-16	1. Later 2. D/G voltage, frequency and start SW yellow light not lit.	1. Later 2. Check local alarms for fault later	LATER	EDXX	GND-962
B02G DG 2A LOCKOUT/ SS ISOL B-26	1. Diesel lockout mechanism has tripped and locked out or NORM/ISOL SW have been put to the ISOL position. 2. Possible diesel trip if lockout actuates.	1. Possible diesel trip or loss of remote control capability. 2. Determine the cause for the alarm locally.	LATER	86, SURXI SS-ISOL-1,3,IR SS/1606	GND-1119
B02G DG 2A LOCAL ALARM B-36	1.(A) Local alarm relay has energized at diesel control panel, or from diesel fire alarm. 2. None, unless diesel trips.	1. Possible diesel trip or fire sprinkler activation. 2. Determine cause for alarm locally.	LATER	70X6	GND-1118
B02G 4KV SWGR 2A3 VOLT < 90% B-46	LATER	LATER	LATER	2-1 27DX 2A3	GND-1836
B02G DG 2A BREAKER START INHIBIT/ SS ISOL B-56	1.(A) No DC Power on 2AA DC bus available to start diesel. (B) D/G Output 4160V BRK NORM/ISOL SW in ISOLATE (C) D/G Output 4160V BRK is racked out. 2. D/G start and/or BRK control SW indicating lights out.	1. D/G will not start or close onto bus from Control Room. 2.(A) Investigate DC power loss. (B) Rack in D.G. output BRK if applicable (C) Return output BRK NORM/ISOL SW to NORMAL if applicable	Batt BRK Open NORM/ISOL ISOL 4160V BRK Racked out	74-2 SS/ISOL 52/B	GND-963 GND-1802

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ANNUNCIATOR PANEL B VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SPA SERV XFR 2A1 TROUBLE R B-7	1.(A) Sudden casing pressure increase or trip. (B) Winding temperature hlg or HI-High. (C) Pressure relief device actuate. (D) Oil temp high. 2. Loss of XFR - green bkr lights.	1. Possible station service XFR trip 2. Check XFR locally.	(A) Later (B) HI-112°C HI HI-117°C Others LATER	RA-T-7	OWD-986
480V S4CR 2A1 FEEDERS OVRD TRIP B-17	1.(A) 2A1 SS XFR 4160V FDR BRK overload trip, racked-out, or fuses blown. (B) OR 2A1 SS XFR 480V output BRK overload trip, or racked out. 2. XFR BRK lights out or green, loss of voltage and loads on 2A1 480V load center	1. Loss of 2A1 480V bus and operating loads on the bus. 2. If not from rackout; investigate cause locally.	LATER	74/945 R/973	OWD-945 OWD-973
480V S4CR 2A1 480V MCC 2C UNDERVOLTAGE/ GROUND B-27	1.(A) Ground on 2A1 SS XFR low side. (B) Ground in loads fed from 2A1 480V bus. (C) Undervoltage condition in S4CR (later). 2. Possible alarms B7, B17. (Later-Possible loss of XFR?)	1. Later 2.(A) Isolate loads to identify ground. (B) Check 2A1 SS XFR for ground.	LATER	27 64/986 27/726	OWD-986 OWD-726 726
480V S4CR 2A-1/2/5 MCC FDRS OVRD TRIP B-37	1. Overload trip of any MCC FDR BRK on 2A1, A2, or A5 480V buses. 2. Possible indication by loss of MCC equipment which tripped.	1. BRK trip open on overloaded feeder. 2. Investigate cause for feeder bkr overload	LATER	R	OWD-987 OWD-991 OWD-1703 OWD-934
480V S4CR 2A2/2A5 FDRS OVRD TRIP B-47	1.(A) 2A2 SS XFR 4160V FDR BRK has tripped on overload, or BRK racked out, or fuses blown. (B) 2A2 SS XFR 480V output BRK to 2A2 or 2A5 load centers tripped on overload or racked out. 2. BRK indication lights or loss of bus voltage.	1. Opening of overloaded bkr. 2.(A) Check breaker(s) locally. (B) Replace blown fuses. (C) Consult Elect. Dept. if necessary.	LATER	74-1/946 R/977 R/1702	OWD-946 OWD-1702 OWD-977
480V S4CR 2A2/2A5 FDRS CLOSE FAIL/ SS ISOL B-57	1.(A) Indicates feeders did not close when SW to close position. (B) Loss of DC control power. (C) NORM/ISOL switches in "ISOLATE" position. 2. Loss of Bkr indicate lights.	1. Loss of remote breaker control. 2.(A) Investigate cause for alarm locally. (B) Place NORM/ISOL SW into "NORMAL" position	N/A	74-2 SS/ISOL - 946 SS/977 SS/1702	OWD-946 OWD-977 OWD-1702

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ANNUNCIATOR PANEL B VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PERFOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
STA SERV XFR 2A2 TROUBLE R B-8	1. Trouble or Trip of the 2A2 SS XFR from: (A) Winding temperature high (B) Sudden pressure high or trip (C) Oil level low (D) Pressure relief device actuate 2. If XFR trips; loss of running equip. on 2A2 and 2A5 480V load centers.	1. If XFR trips - feeder and output bkr will open. 2.(A) Investigate alarm locally (B) If XFR trips; ensure back-up equip. running (C) Notify Electrical Department	LATER	RA-RAB-19	GD-990
BLANK B-18					
480V SGR 2A2 VOLTAGE < 90%/ GROUND B-28	1. Later 2. Later	LATER	LATER	27X1 64	GD-990
480V SGR BUS TIES 2A2-2AB OVERID TRIP B-33	1. 2A2-2AB 480V bus tie BRK have tripped open due to overload condition on 2AB bus. 2.(A) Bus tie bkr lights - green. (B) Loss of running equipment on 2AB 480V load center and MCC fed from it.	1. Tie BRK open on overload. 2.(A) Investigate cause for bkr trip. (B) Notify Electrical Department.	LATER	R/978 R/979	GD-978 GD-979
2AB SGR/ 2AB MCC UNDERVOLTAGE B-48	1. Undervoltage on: (A) 2AB 4160V bus (B) And/or 2AB 480V load center bus. (C) And/or 2AB 480V MCC. 2. None- directly from 2AB, only indications for A or B bus feeding the AB.	1. None 2.(A) Determine cause for undervoltage. (B) Notify elect. dept. if necessary. (C) Check bus ties locally.	LATER	27A/942 27X2/994 27/1008	GD-994
480V SGR BUS TIE 2A2-2AB SS ISOL B-58	1. Bus tie BRK 2A2-2AB control has been isolated from control room. 2. Loss of one or both BRK indicate Lights.	1. Loss of bkr control from Control Room. 2.(A) Investigate cause for alarm locally. (B) Return NORM/ISOL switch to "NORMAL" position.	NORM/ISOL Switch to ISOLATE Position	SS/ISOL - 978, 979	GD-978 GD-979

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL B VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PRZR HTR XFMR 2A TROUBLE R B-9	1. XFMR problem or trip; (A) Hot spot temp high (D) Low oil level (B) Hot spot temp trip (E) High oil temp (C) Pressure relief device (F) Winding temp HI or HI-HI. 2. Loss of XFMR will show FDR BRK - green and loss of pressurizer heaters.	1. Later 2. (A) Turn-off PZR heaters P-2, BU-4, 6, & 6 until problem is resolved. (B) Have Operator check XFMR locally. (C) Notify Elect. Dept. if necessary.	A) HI 112°C B) HI HI 117°C Others LATER	RA-RAB-3	OND-131
PRZR HTR XFMR 2A3 4KV FEEDER OVRD TRIP R B-19	1. Overload condition on 2A3 SS XFMR FDR BRK to PZR heater bus. 2. (A) Feeder BRK indication - green (B) Loss of 1/2 pressurizer heaters	1. 2A3 SSXFMR feeder brk open. 2. (A) Turn-off PZR heaters P-2, BU-4, 5 & 6. until problem is resolved. (B) Notify Elect Dept. and investigate cause for overload.	LATER	74-1	OND-943
480V SAGR 2A2 / 2AB LOAD SHED RLY FAILURE R B-29	1. Loss of DC control power to 2A2 and/or 2AB 480V bus load shed relays rendering inoperable. 2. None	1. Loss of load shedding ability on 2AB/2A2 480V load centers. 2. (A) Check for blown fuses, or DC power fail (B) Notify Electrical Department.	"0" DC Volts	RA-RAB-2	OND-1551
480V MCC 2A5/2A6/2A8 NON-ESS SECT LOCKOUT R B-39	1. Indicates non-essential section of one or all of the MCCs listed has been isolated, triggered by (Later) 2. Loss of any running equipment on the non-essential sections of the buses.	1. Opening of nonessential loads isolation BRK and loss of power to those sections 2. (A) When black-out conditions have cleared, or if diesel gen. can easily handle the added load; close the isolated non-ess. sections ISOL brk.	LATER	M/1011 M/1012 M/1015	OND-1011 OND-1012 OND-1015
480V SAGR 2AB MCC FIR OVRD TRIP R B-49	1. 480V load ctrr BRK 2-40703 feeding 2AB MCC has: (A) Tripped on overload (B) Or, has been racked out. 2. Loss of running equipment on the 2AB bus.	1. 2AB feeder brk opens on overload. 2. (A) Identify cause for trip before re-loading through the FIR brk. (B) Contact Electrical Dept. if necessary.	LATER	R	OND-995
PRZR HTR XFMR 2A3 FDR CLOSE FAIL / SS ISOL R B-59	1. Indicates inability to close PZR htr SS XFMR 4160V brk due to loss of DC control power, or NORM/ISOL SW. in "ISOLATE" position. 2. Loss of XFMR feeder breaker indicate lights	1. Inability to close 2A3 SS XFMR 4160V feeder BRK and/or loss of remote BRK control capability. 2. (A) Investigate cause for alarm locally. (B) Check fuses, DC power supply. (C) If NORM/ISOL switch in "ISOLATE" return to "NORMAL" if applicable.	"0" Volts Switch to "ISOL" pos.	74-2 SS/ISOL	OND-943

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL B VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
125V DC BUS 2A/2AA GROUND B-10	1. Positive or negative ground on 2A - 2AA 125V DC bus, or equipment fed from bus. 2.(A) Observe if alarm came in concurrent with the change in status of any plant equipment, which could be fed from bus. (B) Check DC bus electrical parameters.	1. If ground is severe in running equipment, it's DC bkr could trip from overload. 2.(A) If possible, Stop/De-energize strongly suspected equipment which was started/energized concurrent with annunciator receipt. (B) Follow DC ground insulation Off-Normal Procedure #2-0960030.	LATER	64P 64N GAR, GAR2AA	GD-1001 GD-1801
125V DC BUS 2A/2AA BATT CHGR 2A/2AA TROUBLE R B-20	1. Battery charger 2A or 2AA trouble or trip: (A) HI or low voltage (U) Control power off (B) HI voltage shutdown (E) No charge alarm (C) Loss of AC power 2. Check 2A-2AA DC bus voltage and charge/discharge amperage.	1. HI-voltage will shutdown the batt. Charger 2.(A) Investigate cause for alarm locally. (B) If HI-Volt shutdown; try to reset HVSD relay (C) If charger trips, ensure other 2A or 2AA charger is running carrying the load. (D) If both chargers are lost, or if one cannot handle the load, charging could be aided by use of 2AB charger through the 2AB-2A bus tie. (E) Notify Electrical Department.	LATER	RA-RAB-11 RA-RAB-26	GD-1011 GD-1801
125V DC BUS 2A UNDERVOLTAGE B-30	1. 125V 2A-2AA buses voltage has decayed to <u>later</u> V. 2. Check the 2A-2AA DC bus voltmeter, and charge/discharge ammeter.	1. None 2.(A) Check for charger trip. (B) Re-start charger if possible	LATER	27	GD-1001
AVIATION LIGHT POWER FAILURE B-40				27	GD-1194
125V DC BATT 2A DISCH HI/ BKR OPEN B-50	1.(A) High rate of discharge amperage from 2A batt. (B) OR, indicates 2A batt. output BRK to 2A DC bus has been switched to the test load. 2.(A) Batt. Charge/Discharge ammeter. (B) Battery bus voltage low.	1. None 2.(A) Examine battery output BRK locally, and reposition if applicable. (B) Examine DC chargers to be running NORMAL. (C) Examine loads on bus.	Later Apps Battery Bkr	52/B 74 ----- Battery output breaker	GD-1801
BEING 125V DC 4KV-480V AB BUSES MISALIGNED B-60					GD-

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
GENERATOR Δ CURRENT TRIP C-1	1.(A) Primary lockout has been actuated by a difference in generator current trip. (B) Gen. lock-out trips turbine. 2.(A) Turbine trip - valves closed, possible Rx trip if >15% IWR. (B) Target drops on Gen Diff current trip relay and lock-out actuates behind RTGB-201.	1.(A) Lockout actions. (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (B) Notify Electrical and System Protection Departments.	Trip Relays Actuate	74 GD 87G/887 Relays (3) Behind RTGB-201	G/D-883
GEN - XFR Δ CURRENT TRIP C-11	1.(A) Pack-up lockout has been actuated by diff. current on lines between main. (B) Gen. lockout trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% IWR. (B) Target drops on Gen. XFR diff. current relay and lockout actuates behind RTGB-201.	1.(A) Lockout actions. (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (B) Notify Electrical and System Protection Departments.	Trip Relays Actuate	74 GF ----- 87GT/879 Relays (3) Behind RTGB - 201	G/D-885
GEN IN XFR 24KV FWR Δ CURRENT TRIP C-21	1.(A) Primary lockout has been actuated by a difference in current on III-lines between main XFR and SWD (B) Gen. lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% IWR (B) Primary lockout actuates behind RTGB-201	1.(A) Lock out actions (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (B) Notify System Protection Department (C) Check SWD relay panel - 13.	Trip Relays Actuate	74 TTX Prot. relays in SWD house relay panel #13	G/D-883
GENERATOR ICUT M.Y/ TRIP CIRCUIT FAILURE R C-31	1. Loss of DC control power to: (A) Primary lock-out relay (B) Pack-up lock-out relay (C) Under-frequency lock-out relay 2. See reflash module to pinpoint troubled relay. (later-location)	1. No auto action 2.(A) Notify System Protection Dept. via contact with Division Dispatcher. (B) Trip unit manually if a valid gen. trip condition develops.	"0" DC Volts	(74/94-1)* (7494-2)* RA-RAB-18 RTGB-201 Rear *From gen. prot. rlys	G/D-882
GENERATOR ISOL HS HS COOLER TROUBLE R C-41	1. Trouble with 2A or 2B ISO-HWASE coolers: (A) Loss of power, or not running (B) Clogged air filter (C) Differential pressure SW. 2. Reflash module (later-location)	1. Standby cooler starts if running cooler is lost. 2.(A) Determine cause for alarm locally. (B) Return stopped cooler to service. (C) If no bus cooling is available; remove turbine generator from service.	LATER	RA-RAB-18 LATER	G/D-866
GENERATOR ISOL HS HS TEMP HI C-51	1. High temperature in Isophase hot air return duct. 2. Other Isophase related alarms.	1. None 2.(A) Have operator put standby cooler in serv. (B) Determine cause for insufficient cooling.	167°F (75°C) Not return Air temp	Vendor Temp. Switch On top of common hot air return duct. Turbine Moxazine	G/D-865

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
GENERATOR GROUND TRIP C-2	1. Turbine has tripped on generator ground. 2.(A) Megawatt indications read "ZERO". (B) Turbine valves closed. (C) Rx trip if IWR >15%. (D) Target drop on ground trip relay behind RTGB-201	1. Turbine trip/possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130 (B) Notify Elect. Dept. and System Protection Dept.	Trip Relay Actuate	74GG/883 74GG/885 ----- (Relay RTGB-201 Rear)	GWD-883 GWD-885
GENERATOR NEG SEQ/ OUT OF STEP TRIP C-12	1. Turbine has tripped due to imbalance in generator phases due to system grid fault. 2.(A) Megawatt indications read "ZERO" (B) Turbine valves closed. (C) Rx trip if >15% power. (D) Target drop on gen. neg. seq. rly (RTGB-201 rear) (E) Possible high generator temperature.	1. Turbine trip/possible Rx trip 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (B) Notify Elect. Dept. and System Protection Department.	Trip Relay Actuate	74S 74-1/0S ----- (Relay-RTGB-201 Rear)	GWD-883
GENERATOR NEGATIVE SEQUENCE C-22	1. Indicates imbalance exists between generator phases due to system fault. 2.(A) Difference in phase current readings. (B) Possible HI generator temperature. (TO BE REVISED LATER)	1. If condition worsens, could cause turbine 2.(A) Consult main generator Off-Normal Procedure #2- (later) . (B) If trip occurs, see Rx trip Off-Normal Procedure No. 2-0030130.	LATER	46 46A ----- LATER	GWD-883
GENERATOR PT FAILURE C-32	1. Generator potential instrumentation step-down XFR has blown fuse. (B/V lock-out) (Also soon revise info) 2.(A) Loss of generator parameter indications. (B) Target drop on PT failure relay behind RTGB-201.	1.(A) Voltage Regulator shifts to manual (B) DEL control shifts to manual (C) Loss of trip protection. 2.(A) Take actions necessary to stabilize (B) Monitor turb./gen trip parameters closely for trip condition. (C) Notify System Prot. & Elect. Depts.	LATER	60YA/885 60/880 ----- PT failure relay 60-881 behind RTGB-201	GWD-885 GWD-881
GEN FIELD GND IET/ BRUSH CONTACT FAILURE C-42	1. Indicates the automatic ground detection system has detected a ground existing on gen. rotating	1. None 2. Notify Electrical Department.	LATER	64X, K1, K2 625 ----- LATER	GWD-872
GENERATOR ISOL HIS HIS HYDROGEN IET/FAIL R C-52	1. Hydrogen leakage out of the generator into an isolated phase duct. 2. Generator gas pressure decreasing.	1. Dampers re-position to purge system. 2.(A) Check Gen. gas press., for rate of decr. (B) Have Operator ensure dampers positioned to the purge mode. (C) Determine validity and severity of leak, possibly remove Turb. Gen. from service.	LATER	Contacts from vendor H2 Panel ----- Turbine mezz.	GWD-865

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL C VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
GENERATOR TURBINE TRIP C-3	1. Turbine has been tripped by a generator primary or back-up lockout. 2.(A) Turbine trip - valves closed. (B) R _x trip if >15% power. (C) Lock-out relay(s) actuate behind RTCB-201.	1.(A) Prim. and/or back-up lockout trips Turb. (B) Turbine trip, possible R _x trip. 2.(A) Follow R _x trip Off-Norm. Proc. 2-0030130 2.(B) Determine cause for lockout. (C) Notify Elect. or Sys. Protection Dept.	Lock-out(s) Actuations	74T --- Gen-Turbine Trip Relay RTCB-201 Rear	C/D-683
GEN EXCIT SPLY FR TRIP C-13	1.(A) Field FRK opening while synchronized causes primary lock-out actuation. (B) Lock-out trips turbine. 2.(A) Turbine trip-values closed, R _x trip if >15% FR. (B) No excitation on machine. (C) Primary lockout actuates behind RTCB-201.	1.(A) Loss of generator excitation. (B) Lock-out relay actions. (C) Turbine trip, possible R _x trip. 2.(A) Follow R _x trip Off-Norm. Proc. 2-0030130 (B) Determine cause for FRK trip. Notify Electrical Department if necessary.	Breaker Contracts	41CS/877/875 41A1/877 --- Excitation SWGR Turbine mozt.	C/D-875 C/D-877
GEN V/IZ HI TRIP C-23	(Later - Info Update)	LATER	LATER	59-1 59-2 74CE --- Gen. protection Relay cabinet	C/D-872
GEN V/IZ HI LIMIT C-33	(Later - Info Update)	LATER	LATER	V/IZ --- Excitation SWGR Turbine mozt.	C/D-872
GENERATOR VOLT REG SENSING LOST C-43	1. Voltage Reg. input from Gen. voltage has been lost probably due to Gen. P-T fuse failure. 2.(A) Voltage Regulator trips to MANUAL (B) Other Voltage Regulator/P-T fuse alarms.	1.(A) Voltage regulator trips to "manual". 2.(A) Take voltage regulator to "OFF". (B) Control voltage with PASE adjust. (C) Notify electrical dept.	LATER	Loss of sensing K7 --- Excitation SWGR Turbine Moztatic	C/D-875
EXCITER COOLER AIR TEMP HI C-53	1. Exciter Air Cooling insufficient: (A) High cooler exdt cold air temp. (B) High cooler inlet hot air temp. 2. Exciter Air Temp. on TR-22-30 Gen. temp recorder points 17 thru 20.	1. None 2. Increase flow (or lower temperature) of water to coolers.	45°C Cold Air --- 105°C	TR-22-30 Points 17 thru 20 --- RTCB-201 Recorder	C/D-890

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 4

WARNING TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
GENERATOR FIELD FAIL TRIP C-4	1. loss of field back-up Gen. lockout has tripped Turb 2.(A) Gen. back-up lockout actuation behind (P) MW load indicates "ZERO" (C) Turbine trip valves closed.	1.(A) Generator lock-out. (B) Turbine trip, possible R _x trip. 2.(A) Follow R _x -trip Off-Norm. Proc. 2-0030130 (E) Notify Electrical Department.	LATER	74QF ----- Back-up Lock-out Relay KICB-201 Rear	Q/D-885
GENERATOR VOLT REG TRIP C-14	1. Indicates loss of automatic portion of voltage regulator. (Inputs - later) 2. Indicating lights above regulator switch.	1. Voltage regulator trips to "MANUAL". 2.(A) Turn Volt Reg switch to OFF. (E) Control voltage Man. using BASE adjust (C) Notify Elect. Dept. to investigate	LATER	94RB ----- Excitation SWGR Turbine mzz.	Q/D-875
GENERATOR OVEREXCIN C-24	(Later - such better info to follow)	LATER	LATER	K3(OXP-2) ----- Excitation SWGR Turbine mzz.	Q/D-872
EXCITATION FIRING CKT No. 1 TROUBLE C-34	1.(A) Loss of DC from #1 Firing Ckt. (P) Or, loss of input to #1 firing ckt. from RMC. (C) Or, loss of pulses which fire the diodes. 2. None NOTE: Loss of 1 firing CKT does not cause a loss of generator field.	1. If BOTH ccts are lost, Turbine Trip will occur. 2. Notify Elect. Dept. to investigate failure.	LATER	#1 Ckt. Drawer ----- Excitation SWGR Turbine mzz.	Q/D-872
EXCITATION FIRING CKT NO. 2 TROUBLE C-44	1.(A) Loss of DC from #1 firing ckt. (P) Or, loss of input to #1 firing ckt. from RMC. (C) Or, loss of pulses which fire the diodes. 2. None NOTE: Loss of 1 firing ckt. does not cause a loss of generator field.	1. If BOTH ccts are lost, turbine trip will occur. 2. Notify Elect. Dept. to investigate failure.	LATER	#2 Ckt. Drawer ----- Excitation SWGR Turbine mzz.	Q/D-872
GENERATOR VOLT REG FORCING C-54	1. Indicates excessive field current. 2.(A) Exciter Ammeter on KICB. (E) Voltage regulator output scale.	1. None 2. Reduce reactive load as necessary to reduce field current.	LATER	Forcing Alarm K-4 ----- Excitation SWGR Turbine mzz	Q/D-875

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL -C VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
GENERATOR DISTANCE F/U TRIP C-5	1.(A) Gen. lock-out has been tripped by the lock-up distance fault relay. (Persistent distant fault primary SWD trip OVT failure to clear fault) (B) Gen. lockout trips turbine. 2.(A) Turbine trip-valves closed, R _x trip if >15% I _{FR} . (F) Respective faulted lines OCB's - Open. (C) Lockout actuated behind RTGB-201.	1.(A) Gen. lock-out, turbine trip, possible R _x trip. (B) Multiple SWD OCB's open to clear fault 2.(A) Follow R _x trip Off-Norm. Proc. 2-0030130. (B) Notify System Protection Department.	Distance Relay Trip	74.21 ----- Distance fault Gen. Back-up Rly 62-21/882 RTGB-201 Rear	C/D-882
GENERATOR OCB FAIL/ F/U TRIP R C-15	1.(A) Gen. lock-out has been tripped by (later) relay to protect Gen. from adjacent line or bus fault when nearest Gen. OCB fails to open. (F) Gen. lockout trips turbine. 2.(A) Turb. tripped-valves closed, R _x trip if >15% I _{FR} (E) Backup lockout actuates behind RTGB-201.	1.(A) Gen. lock-out, turbine trip, possible R _x trip. (B) Multiple SWD OCB's open to clear fault 2.(A) Follow R _x trip Off-Norm Proc. 2-0030130 (E) Notify System Protection Dept.	Relay Trip	74LE ----- (later) SWD Ovtl House	C/D-885
GEN IFR 849 TRIP C-25	1. Gen. OCB 849 (3E) has tripped open. (Anytime ERK is opened). 2. 3E OCB Indicate lights - green.	1. OCB 849 opens. 2. If Gen. still on line: (A) Notify Div. Dispatcher - try to reclose (F) If unable to close report ERK to Sys. Protection Department	ERK Contacts	52.83/SE ----- (later)	C/D-886
GEN IFR 8452 TRIP C-35	1. Gen. OCB 8452 (3I) has tripped open. (Anytime ERK is opened) 2. 3I OCB Indicate lights - green.	1. OCB 8452 opens. 2. If Gen. still on line: (A) Notify Div. Dispatcher - try to reclose (F) If unable to close-report ERK to System Protection Department.	ERK Contacts	52.83/3I ----- (later)	C/D-886
GEN EXCS 8449 / 8452 AIR PRESS LO R C-45	1. Low operating air press. on OCB 3E or 3I; possible low compressor start setpoint or compressor ERK trip	1. ERK air Comp. starts on lo-press of 250-260 PSIG. 2. If alarm has not cleared in 10 mins; (A) Have operator check comp. lkr locally (B) If alarm persists call Div. Dispatcher	235 PSIG	63-3E/1107 63-3I/1107 ----- later Reflash Location?	C/D-886
EXCITATION EQUIP CLG FAILURE R C-55	1. Failure in ventilation equip. for voltage Reg/ excitation cabinets. (A) Cool fans R1/R2 not running. (B) Or, main circ. fan not running. 2. None	1. Possible excitation fluctuations if equip. overheats. 2. Check cabinet and reflash panel locally: (A) Switch to alternate fans (B) Notify Electrical Dept. immediately. (C) If no fans running, monitor equipment closely for overheat.	Gravity Dumper(s) Closed	RA-T-1 Reflash Module ----- Column East of Excitation SWGR Turbine nozzelne	C/D-875

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL C VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MN XFR 2A Δ CURRENT TRIP C-6	1.(A) Primary lockout has been actuated from 2A Main XFR current differential. (E) Lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% PWR. (E) Target drop on Main XFR diff. current relay and lockout actuated behind RTCB-201.	1.(A) Lock-out actions (E) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Norm. Proc. 2-0030130 (B) Consult Main XFR O-N Proc. 2-0910031 2-0910031.	Diff. Relays Trip	74FA 87D/878 RELAYS (3) Behind RTCB 201	C/D-884
MN XFR 2A FAULT PRESS TRIP C-16	1.(A) Prim. lockout has been actuated from high rate of press. increase in 2A main XFR. (Indicates internal fault) (E) Lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% PWR (E) Fault press. relay blinking, lockout actuated, both behind RTCB-201.	1.(A) Lock-out actions (E) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Norm. Proc. 2-0030120 (E) Consult Main XFR O-N Proc. 2-0910031.	90-150 mm hg Pressure Increase	74 FT-1 63X1/884 RELAY Behind RTCB 201	C/D-884
MN XFR 2A GND CURRENT TRIP C-26	1.(A) Back-up lockout has been actuated from Ground on 2A main XFR. (E) Lock-out trips the turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% PWR. (E) Target drop on Main XFR ground relay and lockout actuated behind RTCB-201.	1.(A) Lock-out actions (E) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Norm. Proc. 2-0030130 (E) Consult Main XFR O-N Proc. 2-0910031.	Ground Relay Trip	74TR 51TRV/878 RELAY Behind RTCB 201	C/D-885
MN XFR 2A ALARM PANEL C-36	1. Local XFR panel in alarm, indicating abnormal condition with XFR. (later) 2. None	1. None 2.(A) Have operator check alarm panel at XFR. (B) Refer to Main XFR O-N Proc. 2-0910031.	LATER	74X1, 74X2 74X3 2A Main XFR Control Cabinet	C/D-863 863
MN XFR 2A ALARM PANEL EMERG CONDITN C-46	1. Local XFR panel in alarm, with a more serious alarm: (A) Loss of 480V power to cooling fans. (E) Or, loss of 125 VDC to alarm panel. 2. None	1. None 2.(A) Have operator check XFR panel locally (E) Notify Electrical Department	LATER	74X4 ICX 2A Main XFR Control cabinet	C/D-863
MN XFR WINDINGS TEMP III C-56	1. High temp. on 2A and/or 2B main XFR low side wind. 2.(A) Temp. recorder TR-22-30, points 13, 14. (E) III reactive load on generator. (E) III reactive load on generator. (C) III current output on generator.	1. None 2.(A) Verify alarm (E) Verify all fans & cooling pumps running (C) Start reducing reactive load, then MW load until alarm clears.	115°C	TR-22-30 Points 13, 14 RTCB-201 Recorder	C/D-860

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MN XFMR 2B Δ CURRENT TRIP C-7	1.(A) Primary lockout has been actuated from 2B Main XFMR current differential. (B) Lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% FWR. (F) Target drop on Main XFMR diff. current relay and lockout actuated behind RTCB-201.	1.(A) Lock-out actions. (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Norm. Proc. 2-0030130 (B) Consult Main XFMR O-N Proc. 2-0910030. (C) Notify Division Dispatcher.	Diff Relays Trip	74TB ----- 2A XFMR Diff. Relays (3) 87TA/87B Behind RTCB 201	OWD-884
MN XFMR 2B FAULT PRESS TRIP C-17	1.(A) Primary lockout has been actuated from high rate of pressure increase in 2A main XFMR. (Indicates internal fault). (B) Lock-out trips turbine 2.(A) Turbine trip-valves closed, Rx trip if >15% FWR (E) Fault press. relay blinking, lockout actuated both behind RTCB-201.	1.(A) Lock-out actions. (B) Turbine trip, possible Rx Trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (E) Consult Main XFMR Off-Normal Procedure No. 2-0910030.	90-150 mm hg sudden pressure increase	74FT-2 ----- 2B Fault Press Relay-63X2 Behind RTCB 201	OWD-284
MN XFMR 2P GRD CURRENT TRIP C-27	1.(A) Rack-up lockout has been actuated from 2B Main XFMR ground. (F) Lock-out trips the turbine. 2.(A) Turbine valves closed, Rx trip if >15% FWR. (E) Target drop on 2B main XFMR ground relay and lock-out actuation behind RTCB-201.	1.(A) Lock-out actions. (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure 2-0030130. (B) Consult main XFMR Off-Normal Procedure 2-0910031.	Ground Current Relay Trip	74TB ----- Main XFMR 2B Ground Relay 51TB Behind RTCB 201	OWD-885
MN XFMR 2B ALARM PANEL C-37	1. Local XFMR control panel in alarm from: (A) Lo-flow on cooler(1 2 3 4 or 5) (D) Hot Spot (B) Oil - Lo level (2) (E) Loss of DC FWR (C) Pressure relief actuate (F) Gas Detector 2. NONE	1. None 2.(A) Have Operator check alarm panel at XFMR (E) Refer to Main XFMR Off-Normal Procedure No. 2-0910031.	(A) (B) (C) LATER (D) (E) (F)	74X1, 74X2 74X3 ----- 2B Main XFMR Control cabinet	OWD-864
MN XFMR 2B ALARM PANEL EMERG CONDITN C-47	1. Local XFMR panel in alarm with a problem of higher severity than (C-37). (A) Loss of 480 VAC power to cooling fans. (B) Or, loss of 125 VDC to alarm panel. 2. None	1. None 2.(A) Have Operator check XFMR panel and FWR supply ERK locally. (E) Follow Main XFMR O/N Procedure 2-0910031 (C) Notify Elect. Dept. & Div. Dispatcher.	LATER	74X4, DCX ----- 2A Main XFMR Control cabinet	OWD-864
XFMR FIRE DELUXE SYS LOCAL ALARM C-57	(LATER) More Info Needed	(LATER) More Info Needed	LATER	RA-T-2 ----- LATER	OWD-859

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
AUX XFMR 2A △ CURRENT TRIP C-8	1.(A) Primary lockout has been actuated from 2A Aux XFMR current differential. (B) Lock-out trips the turbine. 2.(A) Turbine trip-valves closed, R _x trip if >15% PWR (E) Lockout actuated behind RTCB-201.	1.(A) Lock-out actions. (B) Turbine trip, possible R _x trip. 2.(A) Follow R _x trip Off-Normal Procedure No. 2-0030130. (E) Consult Aux XFMR O/N Proc. No. 2-0910032. (C) Notify System Protection Department	LATER	74 ATA Diff current relays on 2A2 4160V bus HKR panel 152-2A2-1	OWD-883
AUX XFMR 2A FAULT PRESS TRIP C-18	1.(A) Pack-up lockout has been actuated from high rate of pressure increase in 2A main XFMR. (Indicates internal fault). (E) Lock-out trips turbine. 2.(A) Turbine trip-valves closed, R _x trip if >15% PWR (F) Fault press. relay blinking, lockout actuated, both behind RTCB-201.	1.(A) Lock-out actions. (B) Turbine trip, possible R _x trip. 2.(A) Follow R _x trip Off-Norm Proc #2-0030130 (E) Consult Aux XFMR O/N Procedure 2-0910032 (C) Notify System Protection Department	90-150 mm hg sudden pressure increase	74PT-3 63X3 fault press Relay behind RTCB 201	OWD-884
AUX XFMR 2A 4KV GROUND C-28	1. Ground exist on 2A Aux XFMR 4KV low side windings 2. None	1. None - alarm only. 2.(A) Follow Aux XFMR Off-Normal Procedure No. 2-0910032. (E) Notify System Protection Dept.	LATER	64/ATA-2 Ground relay on 2A2 4160V bus bkr panel 152-2A2-1	OWD-910
AUX XFMR 2A 6.9KV GROUND C-38	1. Ground exist on 2A Aux XFMR 6.9KV low side windings 2. None	1. None - alarm only. 2.(A) Follow Aux XFMR Off-Normal Procedure 2-0910032. (E) Notify System Protection Dept.	LATER	64-ATA-1 GROUND RELAY ON 2A2 4160V bus bkr panel 152-2A2-1	OWD-910
AUX XFMR 2A ALARM PANEL C-48	1. 2A Aux XFMR panel in alarm from: (A) Oil-Low level/HI temp/Lo flow (B) Over-pressure relief actuate (C) Gas Detector (D) Hot spot temp HI 2. None	1. None - alarm only 2.(A) Have operator check panel locally. (B) Consult Aux XFMR Off-Normal Procedure 2-0910032. (C) Notify Division Dispatcher if necessary	(A) (B) (C) (D)	74X-1, X2, X3, X4 DCX, 63V Alarm relays in Aux XFMR Control cabinet	OWD-909
TRANSFORMER FIRE C-58	(LATER - Info check)	(LATER - Info check)	LATER	OR-1, OR-2, OR-3 (LATER)	OWD-859

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
AUX XFR FR FAILURE/ E/U TRIP C-9	1.(A) (Later - cause) (Actuates IU lock-out) (B) lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% FR. (B) LATER and Lockout actuates behind RTCB-201.	1.(A) Lock-out actions (B) Turbine trip, possible Rx trip. 2. Follow Rx trip Off-normal Proc. #2-0030130. (A) Notify Div. Dispatcher & Sys. Prot. Dept. (B) Consult Aux. XFR O/N Proc. 2-0910032.	LATER	74FB ----- LATER	Q/D-885
GENERATOR MOTORING TRIP C-19	(LATER)	(LATER)	<15 ISID HP turbine and 2/3 EH TEMP in 203° F or B) Field FRK closed >main	74TH/885 - (LoRly) FDIS-22-43/885 (P) 41AX3/883/885 EH TX-3/710/885 ----- Turbine - Ex. SWGR	Q/Ds 833, 885 710 ISID (later)
GENERATOR MOTORING C-29	(LATER)	(LATER)	LATER	74RP ----- LATER	Q/D-885
GENERATOR UNDERFREQ 57 HZ TRIP C-39	(LATER)	(LATER)	LATER	86LF ----- LATER	Q/D-882
CONTINUOUS MOTORING EQUIPMENT OFF/TROUBLE C-49	(LATER) (CS-888 SW)	(LATER)	LATER	Q/E, QW-888 ----- LATER	Q/D-888
GENERATOR 59.5 HZ UNDERFREQ C-59	1. Generator frequency has lowered to 59.5 hertz with the generator breakers closed. 2.(A) Frequency meter (B) Frequency recorder NOTE: Alarm is generated from recorder.	1. This is an alarm only; but if freq. decays to (later) an UF-lockout will occur. 2. Prepare for possible separation from the grid.	Frequency Recorder 59.5 HZ with Gen. lhrs closed	F-REC/881 52 GX3/885 ----- Recorder RTCB-201	Q/D-882 Q/D-885

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
AUX XFMR 2B Δ CURRENT TRIP C-10	1.(A) Primary lockout has been actuated from 2B Aux XFMR current differential. (F) Lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% IWR. (F) Lockout actuates behind RTCP-201.	1.(A) Lock-out actions. (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (B) Consult Aux XFMR O/N Procedure 2-0910032. (C) Notify System Protection Department	(later)	74 ATB ----- Diff current relays on 2B2 4160V bus bkr panel 152-2B2-1	GWD-883
AUX XFMR 2B FAULT PRESS TRIP C-20	1.(A) Pack-up lockout has been actuated from high rate of pressure increase in 2B Aux XFMR. (Indicates internal fault) (F) Lock-out trips turbine. 2.(A) Turbine trip-valves closed, Rx trip if >15% IWR. (B) Fault press. relay blinking, lockout actuated.	1.(A) Lock-out actions. (B) Turbine trip, possible Rx trip. 2.(A) Follow Rx trip Off-Normal Procedure No. 2-0030130. (B) Consult Aux XFMR O/N Procedure 2-0910032 (C) Notify System Protection Dept.	90-150 mm hg sudden pressure increase	74 FT-4 ----- 63X4 Fault Press Relay, behind RTCP-201	GWD-884
AUX XFMR 2B 4KV GROUND C-30	1. Ground exist on 2B Aux XFMR 4KV low side windings 2. None	1. None- alarm only. 2.(A) Follow Aux XFMR Off-Normal Procedure 2-0910032. (B) Notify System Protection Department	(later)	64/ABT-2 ----- Ground relay on 2A2 bus bkr panel 152-2B2-1	GWD-911
AUX XFMR 2B 6.9KV GROUND C-40	1. Ground exist on 2B Aux XFMR 6.9KV low side windings 2. None	1. None-alarm only 2.(A) Follow Aux XFMR Off-Normal Procedure No. 2-0910032. (F) Notify System Protection Dept.	(later)	64/ABT-1 ----- Ground relay on 2A2 4160V bus bkr panel 152-2B2-1	GWD-911
AUX XFMR 2B ALARM PANEL C-50	1. 2A Aux XFMR panel in alarm from: (A) Oil - lo level / HI temp / lo flow (F) Overpressure relief actuate (C) Gas detector (D) Hot spot temp HI 2. None	1. None- alarm only 2.(A) Have operator check panel locally. (F) Consult Aux XFMR Off-Normal Procedure 2-0910032. (C) Notify Division Dispatcher if necessary	(A) (B) later (C) (D)	74X1, X2, X3, X4 LCX, 63V ----- Alarm relays in Aux XFMR Control Cabinet	GWD-009
AUX / START-UP XFMR WINDING TEMP HI C-60	1. High winding temp. exists on 2A, 2B Aux XFMRs, or 2A, 2B S/U XFMRs. 2. Temperature recorder TR-22-30 - RTCP-201 Points 1-8	1. None 2.(A) Check XFMR cooling locally. (B) Reduce loads on XFMR within plant. (C) Notify Division Dispatcher if necessary	100° C Winding Temp	TR-22-30 Points 1-8 Temp. Recorder RTCP-201	GWD-860

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SG 2A/2P LEVEL HI-HI/ TURBINE/FW PP 2A/2P TRIP	1. HI-HI S/G level either S/G has: (A) Tripped the turbine (B) Closed the 100% FW bypass MD's (C) Tripped off 2A & 2P main feed pumps 2. (A) Steam Gen. level indicators. (B) Turbine trip, Rx trip if >15% power. (C) Main feed pumps trip indications.	1. (A) Turbine trip, possible Rx trip. (B) Main FW pumps 2A-2B trip (C) Both 100% FW bypass MD's close. (D) Turbine trip closes main feed reg. and opens 15% feed reg to 5% flow. 2. (A) If still on-line; restart MWP when S/G level decreases to <90%. (B) If Rx trips; follow Rx trip Off-normal Procedure No. 2-0030130.	90% Level (2/4 same 5/6)	74L/in RUGB 201 LIC-9013 A, B, C, D LIC-9023 A, E, C, D on RTGB-202	GND-709 GND-711 P&ID 2998-079 Sheet 1 of 2
TURB LUBE OIL PSVR VTR EXTR OFF	1. Lube oil resv. vapor extractor motor has: (A) Tripped on overload (B) FLOW fuse in start circuit (C) Bkr opened at MCC-2F1 (D) Or, Control switch to stop. 2. Extractor breaker indicate lights - green or out	1. None 2. (A) Restart extractor if possible. (B) Out in air jet vapor extractor to ventilate reservoir. (C) Notify Electrical Department	O.C. Trip 68 Amps CS to "STOP"	42 Trip Coil 2-41628/MCC-2B1	GND 735 FD & MD 2998-B-335 Sheet #24
TURBINE LUBE OIL CONDTR FILTER LV, HI/LO	1. Turb. lube oil conditioner High or Low level, or conditioner filter bags have been detected as dirty 2. None	1. (A) HIGH - shuts solenoid valve (B) LOS - stops lube oil filter pump 2. (A) Check conditioner level locally. (B) Correct condition or secure the oil conditioner from service.	High - (later) Low - (later) Dirty - (later)	IS-17-4 IS-17-5 IS-17-11 Level switches on lube oil conditioner tank	O-D 734
TURBINE PKG LIFT OIL PP OVRID TRIP	1. Turbine PKG lift oil PP motor has: (A) Tripped on overload (B) FLOW fuse in start circuit (C) Breaker manually opened at MCC-2B1 2. (A) Rep Bkr indicating light - green or out (B) Turning gear engaged light - goes out.	1. (A) Lift pump stops (B) If no oil lift press.; turning gear stops 2. (A) Attempt to reset/restart lift pump motor (B) Notify Electrical Department.	O.C. trip 180 Amps	74 Trip Coil Bkr 2-41623/MCC-2B1	GND 732 FD & MD 2998-B-335 Sheet #23
TURBINE TURNING GEAR MTR OVRID/ TURP STOPPED	1. Turning gear/turbine not rotating as indicated by: (A) Tripped on overload (B) FLOW fuse in start circuit (C) Breaker manually opened at MCC-2C (D) Control switch placed in "OFF" (E) Or, turbine shaft has stopped rotating 2. Turning gear indications	1. If turning gear trips, turbine rotation will start 2. (A) Attempt to reset/restart/re-engage turning gear motor. (B) Notify Electrical Dept. if necessary (C) If turbine is hot, and no rotation, see Turbine Tech Manual for actions	Thermal Overload or O.C. Trip 686 Amps ZSI (later)	74 14/ZSX (2sind Pt later) Trip Coil Bkr 2-42510/MCC-2C	GND 730 P&ID later FD & MD 2998-B-335 Sheet #26
SEAL OIL P/U PP OVRID TRIP	1. (A) Seal oil back-up pump has tripped on motor overload. (B) Or, pump motor bkr has been (later) 2. (A) Hydrogen system alarm panel annunciator if back-up pump running (check this is trip-later)	1. (A) (later) 2. (B) (later)	Thermal Overload or 290 Amp O.C. Trip	74 Trip Coil Bkr 2-41638/MCC-2B1	GND 727 FD & MD 2998-B-335 Sheet #24

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE ERG OIL PRESS LO TRIP D-2	1. Later (Alarm/pump start?) 2.(A) Bearing lube oil hdr pressure low. (B) Turbine trip, valves closed, Rr trip if >15% FWR	1.(A) (later) pump starts (B) Turbine trip, possible Rr trip. 2.(A) Follow Rr trip Off-Form Proc #2-0030130 (B) Start or restart AC bearing oil pump	5-7 ISIG decreasing	74LFO ----- -----	O/D-711
TURBINE BEARING OIL PRESS LO D-12	1. Turbine bearing oil header pressure low. 2. Turbine bearing oil header pressure gauge indicates < (later) ISIG.	1. If pressure continues to decrease, turbine 2.(A) Start/restart AC bearing oil pump (B) If pressure continues to decline, prepare for unit trip.	6-8 ISIG decreasing	63LFO ----- -----	O/D-711
TURBINE BEARING OIL TEMP HI D-22	1. Turbine bearing return line oil high temperature. 2.(A) Turbine temp. recorder; bearing and oil return temperatures.	1. None 2. (Later - turbine start up Proc Ref)		TIS-22-5 Temperature Ind. Switch ----- -----	O/D-795
TURBINE ERG OIL PP OVERLO TRIP D-32	1. Turbine AC bearing oil pump has: (A) Tripped on overload (B) Or, pump hkr has been opened at MCC-2C 2.(A) Rrp indicating lights - out or green. (B) Decreasing bearing oil pressure (C) Emerg. bearing oil pump running	1. Emergency DC oil pump will start as press. decays. 2.(A) Start Emerg. DC oil pump if not already running. (B) Ensure adequate oil supply to bearings or trip turbine	Therm Ovld or 950 Asp O.C. Trip	74 ----- Over-current trip in Erkr 2-42506/MCC-2C	O/D 726 ----- PD & MD Sht #26
TURB EMERG ERG OIL PP RUNNING D-42	1. Alarm is in anytime AC bearing oil pump running (A) Auto starts on low pressure of <u>later</u> (B) CS start will also give alarm. 2.(A) AC bearing oil pump indicate light - red. (B) Turbine bearing oil header pressure low.	1. None 2. If auto-start on low pressure: (A) Ensure adequate supply/pressure of oil to bearings. (B) Determine cause for auto-start.		NZ ----- -----	O/D-728
TURB EMERG ERG OIL PP OVERLOAD/ CONT INR LOSS D-52	1.(A) Emerg DC B. O. pump has tripped on over-load (B) Or, DC ctr control power is lost. 2.(A) Emerg DC oil ERG oil PP indicate lights out or green	1. Rrp trips 2.(A) Start AC bearing oil pump if possible (B) Determine cause for overload trip	Thermal Overload	74 49 ----- Thermal overload in hkr 2-00609/125 VDC - 2C	O/D-728 ----- PD & MD Sh 66C

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE VACUUM LO TRIP D-3	1. Turbine has tripped due to low condenser vacuum. 2. (A) Turb. trip-valves closed, possible Rx trip if >15% power. (E) Condenser vacuum indicates >22" H _g .	1. (A) Turbine low vacuum mech trip (B) Possible Rx trip 2. (A) Follow Rx trip Off-Normal Proc #2-0030130 (B) Consult loss of vacuum O/N Pro. 2-0610031	18-22" H _g decreasing vacuum	74LV Vacuum Trip Device Turbine front Standard	GND-711 P&ID (later)
TURBINE VACUUM LO D-13	1. Indicates low condenser vacuum exist in main Cond. 2. (A) Condenser vacuum-lo/bad:pressure-HI (F) Gland seal steam indications (C) SJA&E Steam Pressure (D) Circ water temp.	1. None, until vacuum decreases to trip setpt. 2. Follow loss of condenser vacuum Off-Normal Procedure #2-0610031.	25" H _g decreasing vacuum	63/LV (later) ----- (later)	GND-711 P&ID (later)
VACUUM TRIP RESET LATCH ENGAGED D-23	1. Vacuum trip latches has been reset at no vacuum condition and is now in the hi press. trip mode set for +3 PSIG trip press, not 25" vacuum. (Loss of turbine protection) 2. None	1. (A) Turbine trip on <u>LOW VACUUM</u> has been defeated. (B) Later 2. (A) Check vacuum trip latch locally, repos. if applicable for present vacuum. (B) Notify I & C Dept. if necessary	Trip in latch posi- tion w/ <19" hg vacuum (OSP Trip) (LATER)	33/RO 33/VTL vacuum trip / (later) Turbine Front Standard	GND-711 P&ID (later)
VACUUM BRK VLV 1A/1E OVERLOAD D-33	1. Loss of motor operating capability for 2A or 2B vacuum breaker valves from: (A) Overload trip of breaker(s) (B) Breaker(s) opened at respective 480V MCC (C) Flow Control circuit fuse(s). 2. Valve position lights are extinguished.	1. None 2. (A) Try to reset thermal overloads. (B) If no reset, stroke Man. if necessary (C) Contact Electrical Department	Thermal Overload 8 Amp O.C. Trip (Each Valve)	74/754 74/755 Thermal Overload or Magnetic Trip in (1A) 2-40815/MCC 2A1 (1B) 2-41622/MCC 2E1	GND-754 GND-755
TURBINE LUBE OIL RESVR LEVEL HI/LO D-43	1. Indicates HI or LO level exist in turbine lube-oil reservoir. 2. None	1. None 2. (A) Verify indications at reservoir. (B) If low, check for system leak. (C) If level rapidly decreasing; lower load & remove unit from the line. (D) If high; check valve line-up, conditioner and possible L.O. cooler TOW leak.	+/- 10" From Normal Level of 45.5"	71/OL/HI 71/OL/HI IS-22-3 ----- Level switch in lube oil reservoir	GND-726 P&ID (LATER)
SJA&E STEAM PRESS LO D-53	1. Indicates steam to SJA&Es is low. 2. Decreasing steam pressure on indicator.	1. Possible loss of condenser vacuum. 2. Follow loss of condenser vacuum Off-Normal Procedure #2-0610031.	(later) PSIG decreasing	ES-12-31 (later) ----- (later)	GND-669 P&ID (later)

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE EXHAUST HOOD TEMP HI TRIP D-4	Check Trip Info			74EH	GD-711
TURBINE EXH HOOD TRIP HI D-14	1. Exhaust hood temperature is high, due to possible (A) Low/no steam flow for extended period (B) High back pressure operation (C) Insufficient EXH spray flow. 2. Turbine temp recorder (later) Points (later)	1. Turbine (later) (trip or lockout) temp. increases to (later) °F. 2.(A) Ensure Ex. hood spray valves are open fully. (B) Pick-up load/increase steam flow (C) increase vacuum.	175°F	26/EXH-1 26/EXH-2	GD-711
GLND SEAL STEAM PRESS HI/LO D-24	1. HI or lo gland seal ste press. (which one 135 or 22 # HUR?) 2. Gland seal steam HUR press. gauges (high and low)	1. None 2.(A) Check regulators locally - check valve line-up. (B) Regulate steam pressures using bypasses and block valves as appropriate.		63/CS 3, 4, 5, 6	GD-711
GLAND STEAM COND PSVR LEVEL HI/LO D-34	1. HI or lo level in gland steam condenser condensate reservoir tank. 2. None	1.(A) HIGH - pump should start before alarm received. (B) LOW - (later) 2.(A) Check tank locally (B) Later	HI - Low -	IS-12-12 Low IS-12-13 High Easement Level	GD-774
GLAND-STM OVER EXR 2A/2B OVERD TRIP D-44	1. Overload trip on 2A or 2B gland steam condenser exhauster. 2. Running exhauster indicating lights - out.	1. None 2.(A) Start standby exhauster (B) Open valve for standby exhauster close valve on tripped exhauster. (C) Notify Electrical Department		74/768 74/769	GD-768 GD-769
AUX STEAM HUR PRESS LO D-54	1. Low pressure on RAE Aux Steam supply header. 2. Aux steam supply pressure gauge.	1. HI temp. in RAB will isolate steam line. 2.(A) Have Operator check regulated supply locally (B) Check for demand change or possible leak.		IS-16-3	GD-669

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ST. LUCIE UNIT NO. 2
 OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE OVERSPEED TRIP D-5	1. Turbine trip on 111.5% overspeed from (later) 2. (A) Turbine trip-valves closed, possible Rx trip if >15% FR.	1. (A) Turbine trip. Possible Rx trip. (B) Generator lock-out trip if turbine trips with OCB's closed. 2. (A) Follow Rx trip Off-Idm Proc #2-0030130	111.5% of rated speed (2008) RPM (later?)	740s (later IEH & MECH?) (later) FD/VB Later	OWD-711 (later)
TURBINE VIBRATION ABNORMAL D-15	1. Turbine vibration excessive on one or more turbine bearings. 2. Vibration as indicated/printed on VIB/EOC recorder later Points later.	1. None 2. (A) Check lube oil parameters. (B) If Vib. trace shows an increasing trend, reduce unit load. (C) If vibration > mills; trip unit	7 mills (cut-out) (below) (600 RPM)	Later Later	OWD-711
TURB ROTR Δ EXPAN/EOCY ABNORMAL D-25	1. Indicates rotor eccentricity high. (Bowling of the rotor) 2. Eccentricity recorder indication/print-out.	1. None 2. Consult Turbine Generator Tech Manual for actions.	later	Nb. 1, 2 Rotor Long Nb. 1, 2 Rotor Short (later behind RTGE?)	OWD-711
PAWK D-35					
REHEATER TEMP HI D-45	1. HI-Steam temp. at LP turbine inlet from MSRs 2. (A) LP turbine inlet temp. as indicated on RCV Panel temp. gauges, and turbine temp recorder. (E) HI temp valve trip light on RCV panel.	1. HI temp. will cause all reheater TCVs to close. 2. When temp declines: (A) Reset RCV panel (E) if valves don't reopen; reduce load consistent for no MSRs. (add more later)	LATER	RCV PANEL High Temp Alarm Reheater control Valves Panel RTGE-201	OWD-699
IEH FLUID TEMP HI D-55	1. Temp. IEH fluid has risen to 120°F in (later) reservoir? 2. None	1. None 2. Increase OJ flow or decrease TOW temp.	120° F (check later)	261ft	OWD-721

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE THRUST ERG TRIP D-6	1. HI-press. from thrust ERG wear detector indicative of axial Turb. shaft movement, has tripped turbine 2. HI thrust ERG face Temp. hi; temp. rec. TR-22-1, Points 1, 2, 15, & 16.	1. (A) Turbine solenoid trip (20/AST). (B) Rx trip if >15% power. (C) Generator lock-out if Gen. CCBs shut. 2. (A) Follow Rx trip Off-Norm Proc #2-030130 (B) Notify Mech. Maint. - DO NOT attempt turbine restart until checked.	(later) PSIG	74IB ----- (later)	GND-711
TURBINE THRUST ERG PRE-TRIP D-16	1. HI-press. from thrust ERG wear detector indicative of axial turbine shaft movement. 2. HI thrust ERG face temp. hi; temp. rec TR-22-1, Pnts 1, 2, 15, 16.	1. None 2. (A) Monitor bearing temps closely. (B) Ensure Feed/STM heating equip. removal from service is consistent with load	(later) PSIG	63/IE ----- (later)	GND-711
TURBINE BEARING TEMP HI D-26	1. HI TURE ERG temp. from temp. recorder 2. (A) TURB Temp. recorder TR-22-1, points (F) ERG oil header temp. indicator	1. None 2. (A) Check lube oil coolers and TCW to reduce temperature. (B) Reduce load to decrease temperature (C) If bearing temp reaches (later) ^o F		TR 22-1 -----	GND-794
DEH PP 2A/2P OARLD TRIP D-36	1. Running DEH pump has tripped on overload. 2. DEH pump indicating lights - out.	1. (A) Standby DEH pump starts. (B) Turb./Rx trip may occur if press. delays 2. (A) Immediately start standby PP if not run. (B) If turb. trips, refer to Rx trip Procedure No. 2-0030130 (C) Notify Electrical Department		74/720 ----- 74/721 ----- later	GND 720
DEH RETURN PRESS HI D-46	1. Indicates fluid return to reservoir press. high probably due to plugged return filter. 2. None	1. None 2. (A) Have operator select filter not in use. (B) Notify Mech. Maint. Dept.	(later) PSIG	63PR (later) ----- (later)	GND 720 PSID (later)
DEH RESERVOIR LEVEL LO-LO D-56	1. Lo-Lo level in DEH reservoir is close to causing a DEH lock-out. 2. (A) DEH pumps trip off - green lights (F) DEH lock-out actuated behind RTGP-201.	1. (A) DEH lock-out - pumps trip. (B) Possible turbine/Rx trip. 2. (A) Try to reset lockout quickly & restart DEH pump. (B) If turb./Rx trips; refer to Rx trip Off-Normal Procedure 2-0030130.	(later) Inches from bottom	71/FL1 (later) ----- (later)	GND 720 PSID (later)

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL D VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE GEN LOCKOUT TRIP D-7	Later	Later Investigate	later	74G ----- Later	GWD-711
TURBINE EMERG STOP/ AUTO STOP LC FAILURE D-17	1. Indicates power lost to trip circuitry for 20 AST and/or ET electrical trip circuits. 2. None	1. Trip circuit failures will block some trips 2. (A) Station operator at turb. front standard with direct communications to room for manual trip purposes until problem resolved.	Later	74/710 74/711 -----	GWD-711
TURBINE RUNBACK D-27	1. Turbine runback has been actuated from: (A) Loss of both heater drain pumps (>92%). (B) Loss of one main feed pump (>60%). 2. (A) Turbine load decreasing at 2.2%/sec. (B) Indications associated with loss of main FD FP or heater drain pump.	1. (A) Loss of both htr drain FP; runback to 92% (B) Loss of feed FP; runback to 60% 2. (A) Take actions to stabilize unit (B) Follow Loss of Feed O/N Proc. 2-0700040. (C) If Ex trips, follow Ex Trip O/N Proc. No. 2-0030130.	(later trigger) Runs back to TFS Press of (A) or (B)	RK1 (later) ----- (later)	GWD-712
DEH FP 2A/2B FILTER Δ /P HI D-37	1. Indicates high differential pressure across 2A or 2B DEH (later) filters. 2. None	1. None (check below) 2. (A) Start opposite pump (B) Remove pump with high : D/P from service, and have mechanic clean strainer.	(later) PSID	63D/MIF-1 63D/MIF-2 ----- EH Fluid Reservoir	GWD-720 GWD-721 P&ID (LATER)
DEH FP DISCH PRESS HI/LO D-47	1. DEH FP Disch. press. hi or lo (later-check cause) 2. EH fluid header pressure gauge.	1. Back-up PP starts on lo press. 2. (A) W/hi press.; start back-up PP & secure operating pump. (B) Notify Mechanical Maintenance Department (check this)	HI - (later) Lo -	63IP 63LP ----- EH Fluid Reservoir	GWD-721 P&ID (LATER)
DEH RESERVOIR LEVEL HI-LO D-57	1. EH fluid reservoir has high or low level. 2. None	1. None 2. Have operator check level locally: (A) If rapidly decreasing: prepare for DEH lock-out and subsequent turbine trip. (B) If High -drain down, slowly. (C) If Low -determine cause, have Mechanical Maintenance fill reservoir.	HI - Lo - (later)	71FL-1 71FL-2 ----- EH Fluid Reservoir	GWD-720 P&ID (LATER)

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE REACTOR TRIP D-8	1. Turb. solenoid trip from Rx trip (loss of voltage on CFA trip bus). 2. (A) Rx trip ERK open - CFAs on bottom. (B) Turbine tripped - valves closed.	1. Turbine trip (ZAST) 2. Follow Rx trip Off-Normal Proc. 2-0030130.	(2/4) 0 Voltage	74R ----- (later)	G/D-711
EXTR STEAM DRIP LFG LEVEL III D-18	(later)	(later)	(later)	IS-10-6A, B IS-10-7A, B IS-10-8A, B (LATER)	G/D-1292 G/D-1293
125V DC BUS 2C BATT CHGR 2C TROUBLE R D-28	1. Trouble on 2C battery charger: (later) 2. (A) 2C battery bus voltage. (B) In-plant elect. frequency and voltage.	1. None 2. (A) Check batt. CHG and its reflash panel. (B) Notify Elec. Dept. if necessary.	A) B) C) D) E) F)	RA-T-8/999 Reflash Panel ----- Reflash - (later) Charger - Turbine SWGR Room	G/D-999
125V DC BUS 2C GROUND D-38	1. Ground on 2C 125V DC bus 2. None	1. NONE 2. (A) Follow DC CR ISOL. Off-Nom. Procedure (B) Notify Elec. Dept. if necessary	(later)	64P, 64N, GAR ----- 125V DC Bus Turbine SWGR Room	G/D-999
125V DC BUS 2C UNDERVOLTAGE D-48	1. Voltage has delayed on 2C 125V DC bus to <u>LATER</u> V. 2. 2C DC bus voltreter on RTGB-201.	1. None (later-possible dgr. trip?) 2. (A) Check charger operation locally. (B) Contact Electrical Dept.	(later)	----- 27	G/D-999
EH RESERVOIR LOCKOUT TRIP/FAIL D-58	1. (A) EH reservoir Lo-Lo level has caused EH lockout to actuate, stopping EH pumps. (B) Or, lock-out relay has lost DC control power. 2. (A) Check EH pumps - if still running then lockout relay has lost DC power. (B) Check lock-out behind RTGB-201. (C) Check other Lo Res. level Annunciators D-57	1. Turbine/Rx trip from low EH HIR press. if pumps are not running. 2. (A) Lockout actuation; try to reset lockout & restart PIs. If no PIs restart try to reduce Turb./Rx load as low as possible prior to trip. Then follow Rx trip O/N Procedure No. 2-0030130. (B) If EH Pps continue to run; have operator check reservoir level. (C) If relay has lost power, call Elect. Dept.	(LATER)	74-1 86FT/720	G/D-720

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
DEH SYSTEM DC BUS FAIL TRIP TRIP D-9	1. Loss of 125 V DC bus inside DEH control cabinet has caused a turbine solenoid trip. 2. (A) Turbine trip - valves closed, possible Rx trip if >15% power. (B) Loss of turbine DEH indications/response.	1. (A) Turbine trip (20AST) (P) Rx trip if >15% pwr. (C) Gen. lockout actions if turb. trip with OCBs closed. 2. (A) Follow Rx trip O/N Proc. 2-0030130 (B) Notify I & C Department.	(later)	74/DCF (later)	GWD-711
DEH DC SUPPLY TROUBLE D-19	1. Loss of +15, +10 or 48 volt bus in DEH controls has (swapped to manual?) (later) 2. (later)	1. (later) 2. Contact I & C to pinpoint & repair fault.		DEH (later)	GWD-717
HYDROGEN SYS ALARM PANEL D-29	1. Alarm on local hydrogen control panel. (One or more of 12 alarms) 2. Problems with seal oil or hydrogen systems.	1. Seal oil back-up pump starts on low press. 2. Have operator check local alarm panel for dropped target.	(later)	RI/TREB (later)	GWD-867
GEN H ₂ /EXCIR AIR TO CLR TEMP HI D-39	1. High temp. of hydrogen or air at respective cooler inlet. (From temp recorder) 2. (A) Generator temp. recorder TR-22-30 points LATER.	1. None 2. Follow main generator Off-Normal Procedure (# later)	(later)	TR-22-30 PT'S, 15, 16, 19, 20 (later)	GWD-890
GEN H ₂ FRON CLRS TEMP HI D-49	1. High temp. of hydrogen or air at respective cooler disch. (Gen. temp. monitoring system). 2. (A) HI temp. on points (LATER) when data is called up on Gen. Temp. Monitor System Terminal. (E) Generator temp. recorder temperatures high.	1. None 2. Follow Main Generator Off-Normal Procedure Procedure #later.	(later)	Ramp/Scanner (later)	GWD-892
STATOR HYDROGEN TEMP HI D-59	1. High hydrogen temp. from stator. (from temp. rec.) 2. (A) Gen. Temp. recorder TR-22-30 points (LATER) (F) HI Temp. on points (LATER) when data is up on Gen. Temp. Monitor System Terminal.	1. None 2. Follow Main Generator Off-Normal Procedure later.	(later)	YE 22-2 (later)	GWD-890

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL D VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TURBINE MANUAL TRIP D-10	1. Turb. has been tripped by manual turb. trip on RTGB or locally at turbine front standard. 2. (A) Turbine trip - valves closed, low EH fluid press (B) Rx trip of >15% power, CEAs in, power Dec.	1. (A) Turbine trip (20 AST and 20 ET) (B) Rx trip if >15% power. (C) Generator lockout actions if CEBs closed 2. Follow Rx trip O/N Proc. 2-0030130.	Pushbutton depressed or trip handle to "TRIP"	FE/710 Pushbutton (later - handle) Pushbutton - RTGB-201 Handle - Turbine Front Standard	G/D-711
PLANK D-20					
HYDROGEN SYS ALARM PANEL DC FAILURE D-30	1. Indicates DC H ₂ to hydrogen panel has been lost 2. Hydrogen/GEN indications possibly erroneous.	1. None 2. (A) Investigate cause locally. (B) Notify Elect. Department if necessary	"0" DC Volts	R2 (later) ----- (later)	G/D-867
SEAL OIL DC P/U FP RUNNING D-40	1. Indicates anytime seal oil back-up pump is running 2. None in Control Room.	1. FP auto-starts when seal oil press. decays to (LATER) PSI < hydrogen pressure. 2. (A) Have Operator check seal oil sys. locally	(later)	HX (later) (LATER)	G/D-870
SEAL OIL DC E/U FP OVERLOAD D-50	1. Indicates DC seal oil back-up pump has tripped on overload. 2. None in Control Room.	1. None 2. (A) Reset breaker, try restart. (B) If no restart, and DC FP required for seals integrity; shut down unit & purge generator.	(later)	OL (later) ----- (later)	G/D-870
GEN ERG OIL VAPOUR EXTR OFF D-60	1. GEN ERG oil defoaming tank vapor extractor has: (A) Tripped on overload. (B) Control Switch to Stop. (C) BRK racked out at MCC (LATER)	1. None 2. (A) Restart extractor if possible. (B) Out in air jet vapor ext. to ventilate tank. (C) Notify Electrical Dept.	(later trip) ----- CS to "Stop"	42 (later) ----- (later)	G/D-873

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CIRC WIR IP SEAL/ LUBE WATER PRESS FLD LD E-1	1.(A) LOW LUBE WATER PRESS. O/P's 2A1, 2A2, 2B1, 2B2 (P) Low seal water press. O/P's 2A1, 2A2, 2F1, 2F2 (C) Low lube water flow O/P's 2A1, 2A2, 2B1, 2F2 2. Lube water backup supply service (Ann. E-16).	1. Back-up lube water supply will open up if pressure decays to (LATER) PSIG. 2.(A) Check condition of lube-wtr system. (P) Stop affected pump if necessary.	8 PSIG 6 GPM	RA-IS-1 Reflash Panel ----- Intake Structure	GD-1217 F&ID 2998-G-082
BLANK E-9	BLANK				
HYPOCHLORIN 1ST ALARM E-17	1. Indicates an alarm on Hypochlorinator Control Panel 2. None	1. None 2. Dispatch AED to intake to determine cause of alarm and take corrective action.	See hypo- chlorinator panel summary	RT-1 ALARM RELAY Hypochlorinator Alarm Panels	GD-693
HYPOCHLORIN 2ND ALARM E-25	1. Indicates that a second alarm has been registered on the local Hypochlorinator Control Panel. 2. None	1. None 2. Dispatch AED to intake to determine cause of alarm and take corrective action.	See hypo- chlorinator summary	RT-2 2ND ALARM RELAY Hypochlorinator Alarm Panel	GD-693
COND GRAVITY TANK LEVEL LD E-33	1. Indicates a condenser tube sheet leak has developed, as detected by lo-level in tube sheet leak-detect head tank. 2. None	1. None 2. (A) Notify Mechanical Maintenance. (B) Ensure tank is refilling with conden- sate or demin water.	(Later)	IS-12-26 Level Switch ----- On gravity tank turbine deck	GD-782
BLANK E-41	BLANK				

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CIRC WTR PP 2A1 OVRID/TRIP E-2	1. (A) O/P 2A1 has tripped on overload. (B) Or, blown fuse or bkr racked out. 2. (A) Pump motor ammeter. (B) Pump bkr indicate lights - out or green.	1. Closure of pump disch. valve MV-21-2A1 2. (A) Have operator check pump and fuses. (B) Reduce turbine load to match condenser efficiency losses.	Therm. Overload or Time Dependent O. C. Trip	74-1 74-2 Therm. Overload & Time Dependent O.C. Relay in BRK 2-20103/4160V-2A2	GWD-810 FD & MD Sheet 2
CIRC WTR PP 2A1 PRG TEMP III E-10	1. High thrust bearing temperature. 2. May be accompanied with excessive leakage indication.	1. No Auto Action 2. (A) Have operator check local temp. & oil. levels. (B) If pump must be shut down, reduce load to match condenser loss in efficiency	(later)	TS-21-22-1A1-1, 2, 3 Thrust PRG Temp. Probes 2A1 Circ. Water Pump Intake 74	GWD-827
CIRC WTR PP 2A1 DISC MV-21-2A1 OVERLOAD E-18	1. MV-21-2A1 has stopped travel in the open or closed direction due to excessive torque. 2. Loss of breaker indicating lights.	1. No auto action 2. (A) Determine cause of overload and reset breaker if necessary. (B) May have to open or close manually	Thermal overload or 42 Amps O.C. trip	74 ----- Thermal overloads and O.C. trip coil in BRK 2-41003/MCC-2A3	GWD-811 FD 7 MD Sheet 47
CONDENSER WATER FOX VACUUM ID E-26	1. No-condenser vacuum of less than 25" hg exist in exist in condenser. (From one or more of 4 instr) 2. (A) S/JAE Sta pressure. (B) Steam seal pressure. (C) Other vacuum/backpressure instruments.	1. Turbine will trip if vacuum decays to 18 - 22" vacuum. 2. Follow loss of condenser: Vacuum Off-Normal Procedure #2-0610031.	<25" mercury vacuum (from 1 or more of 4PS)	FA-T-3/(Reflash) IS-12-36A & 36B IS-12-37A & 37B / Pres. switches (LATER)	GWD-742
TOW PP 2A OVERID/TRIP E-34	1. (A) 2A TOW pump has tripped on overload. (B) Or, blown fuse, or been racked out. 2. (A) Check pump motor ammeter. (B) Motor bkr indicate lights-out or green.	1. None 2. (A) Follow TOW System Off-Normal Procedure #2-0330030. (B) Check pump, motor and fuses.	THEM. OVRD OR TIME Dependent O. C. Trip	74-1 74-2 Thermal Overloads and Time Dependent O.C. Relays in Breaker 2-20106/4160V-2A2	GWD-825 FD & MD Sheet 2
TOW PP 2A PRG TEMP III E-42	1. High temperature on 2A TOW pump in board or out-board bearings. 2. None	1. None 2. (A) Have operator check locally; oil temp. (B) Shut down pump if necessary (C) Follow TOW System Off-Normal Procedure 2-0330030	100° F	TIS-13-44-2A1 TIS-13-44-2A2 Inboard / Outboard Bearing Temps 2A TOW Pump	GWD-827

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CIRC WTR FP 2B1 OVRID / TRIP E-3	1. (A) OVP 2B1 has tripped on overload, (B) Or, blown fuse or lkr racked out. 2. (A) Pump motor ammeter. (B) Pump lkr indicate lights - out or green.	1. Closure of pump disch. valve MV-21-2B1 2. (A) Have operator check pump and fuses. (B) Reduce turbine load to match condenser efficiency losses.	Thermal Overload or Time Dependent O. C. trip	74-1 74-2 Thermal Overloads and Time Dependent O.C. Relay in BRK 2-20104/4160V-2A2	GWD-812 FD & MD Sheet 2
CIRC WTR FP 2B1 BRG TEMP HI E-11	1. High thrust bearing temperature. 2. May be accompanied with excessive seepage indication.	1. No auto action 2. (A) Have operator check local temp. and oil levels. (B) If pump must be shut down, reduce load to match condenser loss in efficiency.	(later)	TS-21-22-1B1-1, 2, 3 -----	GWD-827
CIRC WTR FP 2B1 DISCH MV-21-2B1 OVERLOAD E-19	1. MV-21-2B1 has stopped travel in the open or closed direction due to excessive torque. 2. Loss of breaker indicating lights.	1. No auto action 2. (A) Determine cause of overload and reset breaker if necessary. (B) May have to open or close manually.	Thermal overload or 42 Amps O.C. Trip	74 ----- Thermal overloads and O.C. trip coil in BRK 2-41006/MCC-2A3	GWD-813 FD 7 MD Sheet 47
TRNG SCRN FAILURE E-27	1. High differential on one of four indicators. 2. A green or no light indication on associated screen.	1. No Auto Action 2. Have operator check for overloaded screen, high temperature on drive motor, loss of lubricant.	"O" RPM	Speed SW 62/821-824 ----- Speed detectors on 2A1, 2A2, 2B1, 2B2 screen shafts	GWD-813
TOW FP 2B OVRID/TRIP E-35	1. (A) 2B TOW pump has tripped on overload (B) Or, blown a control circuit fuse (C) Or, has been racked-out 2. (A) Check pump motor ammeter (B) Motor breaker indicating lights - out or green	1. No Auto Action 2. (A) Follow TOW Off-Normal Procedure #2-0330030. (B) Check pump, motor, and fuses	Thermal Overload or Time Dependent O.C. trip	74-1 74-2 Thermal Overloads and Time Dependent O.C. Relays in BRK 2-20306/4160V-2B2	GWD-826 FD & MD Sheet 3
TOW FP 2B BPC TEMP HI E-43	1. High temperature on 2A TOW pump inboard or outboard bearings. 2. None	1. No Auto Action 2. (A) Have operator locally check oil and (B) Shut pump down if necessary (C) Follow TOW Off-Normal Procedure #2-0330030.	100° F	TS-13-44-2B1 TS-13-44-1B2 Temp. switches 2B TOW Inboard/Outboard Bearings	GWD-827

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CIRC WIR FP 2A2 OVRLD/TRIP E-4	1. (A) OVP 2A2 has tripped on overload, (P) Or, blown fuse, or bkr racked out. 2. (A) Pump motor ammeter. (B) Pump bkr indicate lights - out or green.	1. Closure of pump disch. valve MV-21-2A2. 2. (A) Have operator check pump and fuses. (B) Reduce turbine load to match condenser efficiency losses.	THERM OVRLD OR Time Dependent O.C. Trip	74-1 74-2 Thermal Overloads and Time Dependent O.C. Relay in ERK 2-20303/4160V-2B2	GD-814 PD & MD Sheet 3
CIRC WIR FP 2A2 ENG TMP HI E-12	1. High thrust bearing temperature 2. May be accompanied with excessive amperage indication.	1. No Auto Action 2. (A) Have operator check local temp. and oil levels. (P) If pump must be shutdown, reduce load to match condenser loss in efficiency.	(later)	TIS-21-22-1A2-1, 2, 3 -----	GD-827
CIRC WIR FP 2A2 DISCH MV-21-2A2 OVERLOAD E-20	1. MV-21-2A2 has stopped travel in the open or closed direction due to excessive torque. 2. Loss of Breaker Indications Lights	1. No Auto Action 2. (A) Determine cause of overload and reset breaker if necessary. (B) May have to open or close valve manually	THERM. OVRLD OR 42 AMPS O.C. Trip	74 Thermal Overloads and O.C. Trip Coil in IRK 2-41801/MCC-2B3	GD-815 PD & MD Sheet 47
TRVLC SCRN Δ LEVEL HI E-28	1. Clogged Screens 2. Differential press. indicating meters on control console high PDI-21-14A, 15B, 15A & 15B	1. Starts screen wash PIs & screen rotation 2. (A) If SCR WSH SYS has not started, actuate manually from CTRL ED. (P) Have Operator check intake for excessive trash & continuous run screen until condition has cleared.	(LATER)	PIS-21-14A2, -14B2 PIS-21-15A2, -15B2	GD-819
TW SURGE TANK LEVEL HI/LO E-36	1. HI or LO level in TW Surge Tank possibly because (A) Auto makeup has actuated and overfilled (B) OR leak has developed and low level has occurred 2. NONE	1. Makeup valve close before hi level and open before low level alarm 2. Have Operator verify level at local gauge glass. Check auto operation	(LATER)	IS-13-1 IS-13-2	GD-733
H/ENG CLG WIR AIR SYS PRESS 10/BARRIER VALS OPEN E-44	1. (A) LATER (B) LATER (C) LATER (D) LATER 2. LATER	(LATER)	(LATER)	(LATER)	GD-818

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CIRC WTR PP 2E2 OVRLD/TRIP E-5	1. Clogged screens (B) Hts a blown fuse or, (C) Breaker has been racked out. 2. (A) Pump motor ammeter (B) Pump Bkr Indicating Lights - out or green	1. Starts screen wash pumps & screen rotation 2. (A) Have operator check pump and fuses (E) Reduce turbine load to match condenser efficiency losses	Overload GR Time Dependent O.C. Trip	MS-21-14A2, -14E2 74-2 Thermal Overloads and Time Dependent O.C. Relay in 2-2-4/4160V-2E2	G/D-816 FD & MD Sheet 3
CIRC WTR PP 2E2 PRG TEMP III E-13	1. High thrust bearing temperature 2. May be accompanied by excessive amps indication	1. No Auto Action 2. (A) Have Operator check local temp. & oil LVL (B) If PP must be shut down, reduce load to match condenser loss in efficiency.	(LATER)	TIS-21-22-1E2-1, -2, -3 74 Thermal overloads and O.C. Trip Coil in ERK 2-41802/MCC-2B3	G/D-827 FD & MD Sheet 47
CIRC WATER PP 2E2 DISCH MV-21-2E2 OVERLOAD E-21	1. MV-21-2E2 has stopped travel in the open or closed direction due to excessive torque. 2. Loss of breaker indicating lights.	1. No Auto Action 2. (A) Determine cause of overload and reset breaker if necessary. (B) May have to open or close manually.	Thermal Overload or 42 Amps O. C. trip	FDIS-21-12A, -12B	G/D-1007
SCRN WASH PP STRAINERS Δ/P III E-29	1. A plugged or dirty screen wash pump strainer either IA or IP 2. Lo screen wash PP HIR press. as a result of plugged strainer may result in loss of auto start feature on travelling screens	1. No Auto Action 2. Backwash strainers	(LATER)	ES-13-4 TS-13-45A, -B	G/D-1007
TOW INX OUTLET PRESS LO/ TEMP III E-37	1. Either a plugged HT EXHTR, insufficient ICW flow or loss of TOW pump. 2. (A) Indicating lights on ICW and TOW pumps. (B) ICW discharge header pressure (C) Pt. 48 and Pt. 49 on FM and SIM Temp. Indicator behind RTCB-202 (TOW Temp)	1. No Auto Action 2. Have operator check TOW system locally. 3. If any system failure occurs, refer to TOW Off-Normal Procedure #2-0330030.	(LATER)		
BLANK E-45	BLANK				

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ICW PP 2A OVRLD/TRIP E-6	1. (A) ICW PP 2A has tripped on overload or, (F) has blown a fuse or, (C) breaker has been racked out. 2. (A) Rmp motor ammeter (F) Rmp bktr indicating lights - (later)	1. No Auto Alarm 2. (A) Check breaker 2-20207 locally. (B) Refer to ICW Off-Normal Procedure #2-06/0030.	Thermal Overload or Time Depen- dent O. C. trip	74-1 74-2 Thermal Overloads and Time Dependent O.C. Relay in ERK 2-20207/4160V-2A3	G/D-832 FD & MD Sheet 4
PIANK E-14	PIANK			-----	
ICW HR A MV-21-3 OVRLD/SIAS FAIL TO CLOSE E-22	1. MV-21-3 has tripped 2.(A) VLV indicating lights out if tripped on overload (B) VLV does not indicate closed w/SIAS Sig. present	1. No Auto Action 2. (A) Check breaker (B) Refer to ICW Off-Normal Procedure #2-06/0030.	THRM OVRLD OR 8 Arps O.C. Trip	74, 33, 3X Thermal Overloads and O.C. Trip Coil In ERK 2-41301/MUC-2A6	G/D-835 FD 7 MD Sheet 35
ICW HEAFPS IPRESS LO E-30	1. ICW header A or B low pressure 2.(A) ICW HR press. as indicated on PIS-21-8A or 8B (E) Reflash Panel Indication	1. No Auto Action 2.(A) Check related ICW parameters (B) Refer to ICW Off-Normal Proc. 2-06/0030	(LATER)	RA-RA8-17/Reflash ----- PT-21-8A PT-21-8B	G/D-1556 G/D-831
ICW PP 2A LUBE WATER FLOW LO E-38	(LATER)	(LATER)	(LATER)	----- FIS-21-3A-1 & 2 -----	G/D-1217
ICW PP 2A PR FAIL / SS ISOL E-46	1.(A) ICW PP 2A ERK has been given a start signal, (S or ESPAS) and has failed to close. (F) Or, has isolated from the control room at it's 2. Breaker indicate lights - green or out.	1. None 2.(A) Start Failure; check ERK locally, contact Electrical Dept. for assistance. (B) ISOLATED; return NLI/ISOL switch to "NORMAL", if applicable.	Start Signal >5 sec. w/ ERK open NRM/ISOL Switch In	74-3 SS/ISOL T.D. Relay/ISOL SJ ERK 2-20207 4160V Bus 2A3	G/D-832

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PURSUE TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ICW PP 2B OVRD/TRIP E-7	1. (A) ICW PP 2B has tripped on overload or, (E) has blown a fuse or, (C) breaker has been racked out 2. (A) Pump motor ammeter (B) Pump breaker indicating lights - (later)	1. No Auto Action 2. (A) Check breaker (B) Refer to ICW Off-Normal Procedure #2-06/0030.	Thermal OVRD OR Time Dependent O.C. Breaker	74-1 74-2 Thermal Overloads and Time Dependent O.C. 2-20410/4160V-2B3	GD-833 PD & MD Sheet 5
ICW PWS LURE WATER PRESS/FLOW LO E-15	(LATER)	(LATER)	(LATER)	RA-IS-1	GD-1556
ICW MV 2 MV-21-2 OVRD/STAS FAIL TO CLOSE E-23	1. MV-21-2 has tripped 2. (A) VLV indicating lights out if tripped on overload (B) VLV does not indicated closed w/STAS signal present.	1. No Auto Action 2. (A) Check breaker 2-42101 locally. (B) Refer to ICW Off-Normal Procedure #2-06/0030.	Thermal Overload or 8 Amps O. C. trip	74,33,3X Thermal overloads and O. C. trip coil in BRK 2-42101/MCC-2B5	GD-836 PD & MD Sheet 41
COV IX STRK Δ / P HI E-31	(LATER)	(LATER)	(LATER)	RA-CC-1	GD-1007
ICW PP 2B LURE WATER FLOW LO E-38	(later)	(later)	(LATER)	FIS-21-38-1 & 2	GD-1217
ICW PP 2B BRK FAIL / SS ISOL E-47	1. (A) ICW pump 2B breaker has been given a start signal, (OV or ESFAS) and has failed to close, (P) Or, has isolated from the Control Room at it's NORM/ISOL SW. 2. Breaker indicate lights - green or out.	1. None 2. (A) Start Failure; check brk locally, contact Electrical Department for assistance. (B) ISOLATE; return NML/ISOL switch to "NORMAL", if applicable.	Start Sig. >5 sec W/ BRK open NORM/ISOL Sw. In "ISOL"	74-3 SS/ISOL Brk 2-20410 4160V Bus 2B 3	GD-833

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL E VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT THERM ORLD OR TIME Dependent O.C.Trip	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ICW PP 2C OVL/D/TRIP E-8	1. (A) ICW PP 2B has tripped on overload or, (B) has a blown fuse or, (C) Breaker has been racked out. 2. (A) Pump motor ammeter (B) Pump bkr indicating lights - (later)	1. (later) 2. (later)		74-1 74-2 Thermal Overloads and Time Dependent O.C. Relay in IRK 2-20503/4160V-2AB	G/D-834 FD & MD Sheet 6
CIRC WTR PP LUBE WTR SPLY PACKLP IN SERVICE E-16	1. lube water from ICW HR to G/Ws has been lost, from lube wtr strainers plugged, or isolation & domestic wtr supply valve has opened to supply Circ. Pumps. 2. (A) Lube WTR Strainer HI D.P. Alarms (LA-4, LB-4) on HVAC Panel. (B) SIAS: MV-214A, & 4E Closed - Green.	1. Domestic lube water supply valve opens at (later) ISIG to supply circ. wtr pumps. 2. (A) Have operator back-wash lube wtr strainers & check lube wtr ldr. (B) SIAS: re-open ISOL VALV if SIAS NOT Valid	(later) ISIG	IGW-21-26 LHM SW Domestic Water Supply Valve ----- Intake structure bldg.	G/D-810 P & ID
BLANK E-24	BLANK			-----	
TOW HYS HY STRAINER Δ/P HI R E-32	(LATER)	(LATER)	(LATER)	TA-T-9 -----	G/D-1007
ICW PP 2C LUBE WATER FICW LO E-40	(LATER)	(LATER)	(LATER)	FIS-21-3C-1 & 2 -----	G/D-1217
ICW PP 2C IRK FA I/ SS ISOL E-48	1. (A) ICW pump 2C breaker has been given a start signal, (O) or ESFAS) and has failed to close, (B) Or, has isolated from the control room at it's NORM/ISOL switch 2. Breaker indicate lights - green or out.	1. None 2. (A) Start Failure; check bkr locally, contact Electrical Dept. for assistance. (B) ISOLATED; return NML/ISOL switch to "NORMAL", if applicable.	Start sig. >5 sec w/ bkr open NORM/ISOL SW In "ISOL"	74-3, SS-1/ISOL Bkr 2-20503 4160V Russ 2AB	G/D-834

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LP HTR 2-1A LEVEL HI F-1	1. Greater than normal level in L.P. HTR 2-1A due to malfunction of LCV-11-1A1, LCV-11-7A-1 & LCV-11-1A2 2. NONE	1.(A) Open drain to condenser LCV-11-1A1, close feed from 2A htr LCV-11-7A1, open 7A2. (B) HI-HI will open LCV-11-1A2 & LCV-11-7A2 (2A-Alt-to-ctrl.) 2.(A) Check local gage glass & OFS of LCV's (B) Man. OFS of LCV's may be required.	2' 1 1/4" BELOW £	IS-11-3A Level SW L.P. Heater 2-1A	OWD-665 PID 2998-G-081 Sheet 1 of 2
LP HTR 2-2A LEVEL HI F-9	1. Greater than normal level in L.P. heater 2-2A due to malfunction of LCV-11-13A1 or LCV-11-7A2. 2. NONE	1. Closes drain from 2-3A L.P. HTR LCV-11-13A1, HI HI will open LCV-11-7A2. 2.(A) Check local Gauge Glass & OFS of LCV's. (B) Manual OFS of LCV's may be required.	2'0" below £	IS-11-9A Level SW L.P. Heater 2-2A	OWD-666 PID 2998-G-081 Sheet 1 of 2
LP HTR 2-3A LEVEL HI F-17	1. Greater than Normal in L.P. HTR 2-3A due to malfunction of LCV-11-13A2 or LCV-11-13A1. 2. HI-Level alarm on heater 2-2A if LCV-11-13A1 is stuck in the open position.	1. HI or HI HI Signal opens LCV-11-13A2 (Alt. drain to the condenser) 2.(A) Check local gage glass & OFS of LCV's (B) Manual OFS of LCV's may be required.	1' 2 3/4" below £	IS-11-15A Level SW L.P. Heater 2-3A	OWD-667 PID 2998-G-081 Sheet 1 of 2
LP HTR 2-4A LEVEL HI/LO F-25	1. L.P. HTR 2-4A may be higher or lower than NORM LM. (LCV-18A may be stuck open) LCV-11-24A2 malfunction 2.(A) 2A HTR Drain PP trip and alarm. (P) HI level alarm 2C and/or 2D H.S.R. (C) HI level alarm H.P. heater 2-5A	1.(A) Modulate open LCV-11-18, open LCV-11-25A2, close LCV-11-24A1. (E) Open LCV-11-18A, dump to condenser (C) LO-LO level will trip associated HTR drain PP 2A. 2.(A) Verify Cont. VLV OFS & level locally (E) Take manual control	IS-11-20A HI Level 9 1/8" below £ IS-11-22A LO Level 2'2" below £	IS-11-20A IS-11-22A Level Switches L.P. Heater 2-4A	OWD-667 PID 2998-G-081 (Sh 1 of 2)
HP HTR 2-5A LEVEL HI F-33	1. Higher than Normal level may be due to malfunction of LCV-11-24A1, LCV-11-30C1 or LCV-11-30D. 2.(A) Low level alarm on L.P. heater 2-4A (P) HI-level alarm 2C & 2D drain collection tank	1.(A) Open LCV-11-24A1 (B) HI & HI-HI will close LCV-11-30C1 & LCV-11-30D1, open LCV-11-30C2 & LCV-30D2 (C) Close non-return VLV SC-10-5A on HI-HI 2.(A) Verify levels locally (B) Take man. control & throttle as necessary	1 ft. 8 7/8" Below £	IS-11-26A Level SW H.P. Heater 2-5A	OWD-667 PID 2998-G-081 Sheet 1 of 2 and Sheet 2 of 2
 F-41	(BLANK)	(BLANK)	(BLANK)		

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
IP HTR 2-1B LEVEL HI F-2	1. Greater than normal level in L.P. HTR 2-1B due to malfunction of LCV-11-1B1, LCV-11-1F2 or 2. NONE	1.(A) Open drain to condenser LCV-11-1B1, close feed from LP htr 2-2B LCV-11-7B1, open 7B2 (B) HI-HI will open LCV-11-1B2 alt. drain. 2.(A) Check local gage glass (B) Manually Operate LCV's as required.	2' 1 1/4" BELOW ☒	IS-11-3B Level SW L.P. Heater 2-1B	GND-665 P&ID 2998-G-081 Sheet 1 of 2
IP HTR 2-2F LEVEL HI F-10	1. Greater than normal level in L.P. heater 2-2b due to malfunction of LCV-11-13B1 or LCV-11-7B1. 2. NONE	1. Closes drain from 2-3B L.P. HTR LCV-11-13B1, HI HI will open LCV-11-7B2., alt. drain to cond. from L.P. heater 2-2F 2.(A) Check local Gauge Glass & OFS of LCV's. (B) Manually Operate LCV's as required.	2' 0" below ☒	IS-11-9B Level SW L.P. Heater 2-2B	GND-666 P&ID 2998-G-081 Sheet 1 of 2
IP HTR 2-3B LEVEL HI F-18	1. Greater than Normal in L.P. HTR 2-3B due to malfunction of LCV-11-13F2 or LCV-11-13F1. 2. HI-Level alarm on heater 2-2B if LCV-11-13B1 is stuck in the open position.	1.(A) HI or HI HI Signal opens LCV-11-13F2 (Alt drain to the condenser) (B) HI-HI Sig. closes non-retn. VLV SC-10-3B 2.(A) Check local gage glass & OFS of LCV's (E) Manual OFS of LCV's may be required.	1' 2 3/4" Below ☒	IS-11-20B Level SW L.P. Heater 2-3B	GND-667 P&ID 2998-G-081 Sheet 1 of 2
IP HTR 2-4B LEVEL HI/LO F-26	1. L.P. heater 2-4B may be higher or lower than normal level (LCV-11B may be stuck open) LCV-11-24B1 or LCV-11-24B2 malfunction 2.(A) 2B heater drain pump trip and alarm. (B) HI level alarm 2A & 2B M.S.R. (C) HI level alarm H.P. heater 2-5B	1.(A) Modulate open LCV-11-18B, open LCV-11-24B2 close LCV-24B1 alt. drain to the cond. (B) Open LCV-11-18B, alt. drain to cond. (C) Lo-Lo level will trip assoc. htr. PP 2B 2.(A) Verify control VLV OFS & level locally (B) Man. operate LCV's as required	IS-11-20B HI 9 1/8" below ☒ IS-11-22B LO 2' 2" below ☒	IS-11-20E IS-11-22B Level Switch L.P. Heater 2-4B	GND-667 P&ID 2998-G-081 Sheet 1 of 2
HP HTR 2-5B LEVEL HI F-34	1. Higher than NORM level may be due to malfunction of LCV-11-24B1, LCV-11-30A1 or LCV-11-30B1 2.(A) Low level alarm on L.P. htr 2-4F (B) HI Level alarm 2A and/or 2B drain collection tank	1.(A) Open LCV-11-24B1 (B) HI & HI-HI will close LCV-11-30A1 & LCV-11-30B1, open LCV-11-30A2 & E2 (C) Close non-return VLV SC-10-5B on HI-HI 2.(A) Verify VLV OFS & level locally. (B) Man. Operate LCV's as required.	1' 8 7/8" Below ☒	IS-11-26B Level SW H.P. Heater 2-5E	GND-667 P&ID 2998-G-081 Sheet 1 of 2 and Sheet 2 of 2
HTR DRN. PP 2A/2B STRNR Δ/P HI F-42	1. Indicates strainer blockage on Htr. Drain PP 2A or 2B or high heater drain pump flow. 2.(A) Check heater drain pump ops. (B) Check for tripped heater drain pump (C) Check FW PP for low suction press.	1. No Auto Action 2.(A) If due to hi flow start second htr. drain pump if not already running. (B) Check strainer Delta P locally	(LATER)	RA-T-4 Reflash Panel Turbine Building 19'5" E1. (LATER)	GND-640

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
DRN COLL 2A LEVEL HI F-3	1.(A) 2A collector drain LCV-11-30A1 to 2-5A H.P. htr. malfunctioning (B) HI-level alarm H.P. htr. 2-5A. 2. HI level alarm H.P. htr. 2-5A	1. HI level drop to cond. LCV-11-30A2 will open (LC-11-30A or IS-11-37A) 2.(A) Check VLV O/S and level locally (B) Operate LCV-11-30A1 & LCV-11-30A2 man. as necessary to control level.	1/2" below ξ	IS-11-31A Level Switch 2A drain collector tank	GND-670 P&ID 2998-G-081 Sheet 2 of 2
DRN COLL 2B LEVEL HI F-11	1.(A) 2B collector drain LCV-11-30B1 to 2-5B H.P. htr. malfunction (B) HI-level alarm H.P. heater 2-5B 2. HI level alarm H.P. heater 2-5B	1. HI level drop to cond. LCV-11-30B2 will open (LC-11-30B or IS-11-37B) 2.(A) Check VLV O/S and level locally. (B) Operate LCV-11-30B1 & LCV-30B2 man. as necessary to control level.	1/2" Below ξ	IS-11-31B Level Switch 2B drain collector tank	GND-670 P&ID 2998-G-081 Sheet 2 of 2
DRN COLL 2C LEVEL HI F-19	1.(A) 2C collector drain LCV-11-30C1 to 2-5B H.P. htr. malfunction (B) HI-level alarm H.P. heater 2-5B 2. HI level alarm H.P. heater 2-5B	1. HI level drop to cond. LCV-11-30C2 will open (LC-11-30C or IS-11-37C) 2.(A) Check VLV O/S and level locally. (B) Operate LCV-11-30C1 & LCV-30C2 man. as necessary to control level.	1/2" Below ξ	IS-11-31C Level Switch 2C drain collector tank	GND-670 P&ID 2998-G-081 Sheet 2 of 2
DRN COLL 2D LEVEL HI F-27	1.(A) 2D collector drain LCV-11-30D1 to 2-5B H.P. htr. malfunction (B) HI-level alarm H.P. heater 2-5B 2. HI level alarm H.P. heater 2-5B	1. HI level drop to cond. LCV-11-30D2 will open (LC-11-30D or IS-11-37D) 2.(A) Check VLV O/S and level locally. (B) Operate LCV-11-30D1 & LCV-30D2 man. as necessary to control level.	1/2" Below ξ	IS-11-31D Level Switch 2D drain collector tank	GND-670 P&ID 2998-G-081 Sheet 2 of 2
HTR DRN PP 2A OVRD/TRIP F-35	1. 2A Htr. dm. PP OVRD and/or tripped from excessive flow or pump/motor FRG failure. 2.(A) Motor Aops (B) Motor ERK indicator lights	1. Heater drain pump trips 2.(A) If PP tripped, verify RNEK if applicable (B) Determine cause of overload (C) Start 2B Htr. drain PP if not already running.	(LATER)	74-1, 74-2 (LATER) 2A2 4160V SACK FRK 2-20108	GND-625
HTR DRN PP 2A TRIP FIO IO/HTR LEVEL IO-LO F-43	1.(A) Htr. Drain PP disch. VLV malfunction (B) Lo level in 2-4A L.P. htr. (C) Suction strainer clogged 2.(A) 2-4A L.P. heater low level alarm (B) Pump ERK indicator lights (C) Strainer Delta P alarm	1. Htr. drain pump trips 2.(A) Check L.P. htr. 2-4A for lo level and correct valve operation. (B) If strainer blockage is indicated, isolate and clean strainer (C) If Disch. VLV failed, manually operate VLV and restart PP if needed.	(LATER)	80 X RTUC-202	GND-625

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINTPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MSR 2A LEVEL HI F-4	1. Increased level may be due to malfunction of LCV-11-32A 2. HI Level alarm from 2-4B L.P. Heater	1. LCV-11-32A opens drn to Cord. for level Ctrl on HI-HI Signal only. (VLV fails open) 2.(A) Check local gauge glass & VLV position (B) Take manual control of LCV's as necessary	3" above Base	IS-11-33A Level Switch 2A MSR	G-4-670 P&ID 2998-G-081 Sheet 2 of 2
MSR 2B LEVEL HI F-12	1. Increased level may be due to malfunction of LCV-11-32B 2. HI Level alarm from 2-4B L.P. Heater	1. LCV-11-32B opens drn to Cord. for level Ctrl on HI-HI Signal only. (VLV fails open) 2.(A) Check local gauge glass & VLV position (B) Take manual control of LCV's as necessary	3" above Base	IS-11-33B Level Switch 2B MSR	G-4-670 P&ID 2998-G-081 Sheet 2 of 2
MSR 2C LEVEL HI F-20	1. Increased level may be due to malfunction of LCV-11-32C 2. HI Level alarm from 2-4B L.P. Heater	1. LCV-11-32C opens drn to Cord. for level Ctrl on HI-HI Signal only. (VLV fails open) 2.(A) Check local gauge glass & VLV position (B) Take manual control of LCV's as necessary	3" above Base	IS-11-33C Level Switch 2C MSR	G-4-670 P&ID 2998-G-081 Sheet 2 of 2
MSR 2D LEVEL HI F-28	1. Increased level may be due to malfunction of LCV-11-32D 2. HI Level alarm from 2-4B L.P. Heater	1. LCV-11-32D opens drn to Cord. for level Ctrl on HI-HI Signal only. (VLV fails open) 2.(A) Check local gauge glass & VLV position (P) Take manual control of LCV's as necessary	3" above Base	IS-11-33D Level Switch 2D MSR	G-4-670 P&ID 2998-G-081 Sheet 2 of 2
HTR DRN PP 2F OVRD/TRIP F-36	1.(A) 2B htr. drn. PP rotor has become overloaded. (B) Stopped by Control switch (C) Blown fuses 2.(A) Loss of indicating lights and arps (F) HI arp condition	1. Htr. drain PP trip 2.(A) Verify RNEK if applicable when PP tripped (B) Start 2A htr. drn. PP if not running (C) Determine cause of overload	(LATER)	74-1, 74-2 2F2 41GV SWR ERK 2-20307	GWD-626
HTR DRN PP 2F TRIP FLO 10/HTR LEVEL 10-10 F-44	1.(A) 2B htr. drain PP low disch. flow (B) Lo level in 2-4F L.P. heater 2. Loss of indicator lights and arps	1. Htr drain pump trip 2.(A) Check L.P. htr. 2-4B for lo level & correct valve. (B) If strainer blockage is indicated, isolate & clean strainer (C) If disch. vlv failed manually operate valve and restart pump if needed	(LATER)	80 X KTGR-202	GWD-626

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PIRQUINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
INSTR AIR PRESS HI/LO F-5	1.(A) Inst. Air receiver press. HI or LO (B) Inst. Air HDR PRESS LO from compressor (C) Dyer/filter malfunction 2.(A) Inst. Air Press. Indicator on KTCB-202 (B) Inst. Air Comp. auto start alarm (C) Inst. Air Comp. Temp./OVRD trip alarm	1. Standby Inst. Air Comp. auto starts 2.(A) Check Comp. locally & start standby Comp. if necessary (B) If Press. continues to drop cross-connect stat. & Inst. air (C) Refer to "Loss of Inst. Air" O/N Proc. No. 2-1010030	HI-110 PSIG Lo- 80 PSIG Lo- 75 PSIG	IS-18-4 Inst. Air Comp. Cont. Cab Inst. Air Header	GND-592 P&ID 2998-G-085 Sheet 1 of 2
INSTR AIR COMP 2A TRIP HI/ OVRD/TRIP F-13	1.(A) HI Temp. T.C.W. outlet from 2A Inst. Air Comp. (B) 2A Inst. Air Comp. HI Temp/OVRD Trip. (C) Control power fuse blown. 2.(A) Inst. Air Comp. auto start alarm (B) Inst. Air Low Press. alarm	1. 2A Inst. Air Comp. tripped on HI Disch. air temp. or overload. 2.(A) Verify auto start 2F Comp. if 2A tripped (B) Inspect Comp. locally to determine cause of trip/alarms	160° 395°	(TS-13-40A,TS-13-41A)/ 592 Inst Air Comp. Jacket Coolers (TS-18-2A,74)/593 Inst. Air Comp. Disc. Piping	GND-592 GND-593 P&ID 2998-G-089
INSTR AIR COMPRESSOR AUTO START F-21	1. Standby Inst. Air Comp. Auto Start on Lo Inst. Air Pressure 2.(A) Inst. Air Press. Indicator (B) Inst. Air HI/LO Press. alarm	1. Auto start standby compressor 2. Have T.O. Check operation of air Comp. to determine cause of low press.	(LATER)	CS/593-1, 63X-A/593, 63X-B/594, CS/594-1 Inst. Air Comp. Control Cabinet	GND-593 GND-594
INSTR AIR COMP 2B TRIP HI/ OVRD TRIP F-29	1.(A) HI Temp. T.C.W. outlet from 2B Inst. Air Comp. (B) 2B Inst. Air Comp. HI Temp/OVRD Trip. (C) Control power fuse blown. 2.(A) Inst. Air Comp. auto start alarm (B) Inst. Air Low Press. alarm	1. 2B Inst. Air Comp. tripped on HI Disch. air temp. or overload. 2.(A) Verify auto start 2B Comp. if 2B tripped (B) Inspect Comp. locally to determine cause of trip/alarms	160° 395°	(TS-13-40B,TS-13-41B)/ 592 Inst Air Comp. Jacket Coolers (TS-18-2B,74)/594 Inst. Air Comp. Disc. Piping	GND-529 GND-594
SER TRIP/FAIL F-37	1.(A) Loss of power to printer (B) Loss of power to language processor unit (C) Loss of power to contact processor unit 2. Sequence of events recorder inoperable	1. N/A 2.(A) Energize printer if de-energized (B) Notify I & C that S.E.R. has failed	(LATER)	RA-RAB-17 Reflash Panel RAB 43' EI. (LATER)	GND-1213
FRI WTR TK/ CST TK LEGAS LEVEL HI/ VACUUM LO F-45	1. High level or not enough vacuum in Cond. Storage tank degasifier 2. NONE	1. High Level; stops all running vacuum PPs for water slug. 2. Have Operator check locally: (A) HI Level; check level controls & transfer pps, restart vacuum pump (B) Low Vacuum; ensure vacuum PP running normally, or start another	HI Level 8' 6" Lo Vacuum 22" Mercury G	DJI, LVA Level/Vacuum, Switches CST Degasifier Package	GND-1591 GND-1595

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
STATION AIR PRESS HI/LO F-6	1.(A) HI Press-comp. not unloading (B) LO press-comp. has not loaded or line ruptured 2.(A) Station Air Press. Instr. (RICE-206)	1. NONE 2.(A) Have T.O. Stop Comp. if HI Press. (B) Check for proper loading or check for air leak and isolate leak (C) Notify I.L.P. to remove air supplied rad. workers from hazards & remove air supplied equipment	HI: 120 PSIG LO: 80 PSIG LO: 75 PSIG	IS-18-14 Station Air Rec. Pressure Switch IS-18-15	GWD-592 R&ID 2998-G-085
STATION AIR COMPRESSOR TEMP HI/ OVRD/TRIP F-14	1.(A) HI temp. of air after entering cooler (B) HI temp. of TOW from comp. jacket or cooler (C) Overload condition or trip 2. LO press. in header	1. NONE 2.(A) Check temp. locally and adjust TOW as necessary (B) If tripped investigate cause (C) Attempt to reset IRK and restart	440°F TS-13-42 140°F TS-13-43 160°F	(TS-18-5(592)(r,t))/591 (LATER) (TS-13-42, TS-13-43/592 (LATER)	GWD-591 GWD-592 R&ID 2998-G-089
DISTR AIR COMP. EMERG COOLING SYS OVRD TRIP F-22	1. Cooling Sys. Water PP or Cooling Fan OVRD 2. NONE	1. NONE 2.(A) Restore EMERG. Cooling (B) Restore TOW Cooling if possible (C) Stop Air Comp. if unable to restore cooling (refer to "Loss of Inst. Air" O/N Procedure No. 2-1010030	(LATER)	74-1, 74-2 (LATER) 2AB MCC, 480VAC	GWD-1250
UNIT 1 & 2 INST. AIR TIE OPEN F-30	1. Unit 1's INST Air supply press. has fallen to lo enough press. to open the Unit 2 to Unit 2. Inst. air Press. Gauge PI-18-9.	1. At 70 psig the tie VLV will shut to prevent draining Unit 2 of Inst. Air. 2. Follow Loss of Inst. Air O/N Proc. No. 2-1010030	75 PSIG LOW	33/AC Limit Switch Unit 2 Tie Valve FCV-18-6	GWD-1249
MAINT HATCH SEAL DEFLATED F-38	1. Low N ₂ press. between "O" ring seals 2. NONE	1. NONE 2.(A) Check for proper gas press. setting and adjust as necessary (B) Comply with Tech. Specs. on Containment Integrity	HI: 35 PSIG LO: 25 PSIG	IS-18-42A IS-18-42B Pressure Switches Maintenance Hatch	GWD-1230
WTP INST. AIR PRESS LO F-46	1. Lo Inst. Air Press. due to loss of Inst. Air Comp. or line rupture. 2. Inst. Air Hdr Press. indication	1. Backup Inst. Air Comp. Starts 2.(A) Check Inst. Air Comp. for Norm. O/S (B) Bypass dryers and filters if clogged (C) Investigate possible leak and isolate	75 PSIG	IS-18-18 Pressure Switch Inst Air to Oxm. Feed/ Misc. Service (local)	GWD-1007

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FIRE ALARM (TEMP) F-7	(LATER)	(LATER)	(LATER)		(LATER)
PRIMARY WATER DISCHARGE AIR PRESS LO/LO F-15	1. (A) Primary water PP Trip OR (B) Break in line 2. (A) Pp indicating lights (B) Primary water tank level	1. Standby Primary Water PP starts on low 2. Follow Primary Water Sys. O/N Procedure No. 2-1560030	85 PSIG	PS-15-7 Pressure Switch Primary Water Rump	OWD-1007 P&ID 2998-G-084
IWT LEVEL HI/LO F-23	1. (A) HI level in IWT (B) LO Level in IWT 2. Primary water tank level indication on RTCE-206	1. NONE 2. (A) Fill IWT if necessary (B) If BA Conc. are running and level is low, check for proper O&S, if level high, stop water to IWT	HI: 21 ft. Above Base LO: 18 ft. Above Base	LIS-15-9 Level Indicating RTCE-202	OWD-851 P&ID 2998-G-084
H ₂ SEAL OIL FIRE SYSTEM TROUBLE/ LCL ALARM OFF F-31	(LATER)	(LATER)	(LATER)	ZISR, ZISR, CS/855-2 Turb. Lube oil/Reserv. & Conditioner/H ₂ Seal Oil/Fire Protection Local Control Panel	OWD-855
LUBE OIL RESRV/ PIPING FIRE SYS TROUBLE/ LCL ALARM OFF F-39	(LATER)	(LATER)	(LATER)	1-3ISR, 1-3IS, CS/855-1-3 Turb. Lube oil/Reserv. & Conditioner/H ₂ Seal Oil/Fire Protection Local Control Panel	OWD-855
FW/COND/ HTR IRN HYS FIRE SYS TRIL F-47	(LATER)	(LATER)	(LATER)	(LATER)	OWD-856

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUBSIDIARY

ANNUNCIATOR PANEL F VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FIRE PUMP RUNNING F-8	(LATER)	(LATER)	(LATER)	52 R Unit 1, 480VAC, MCC 1A2 & 2B2	G/D-852 Unit 1 Sh 852 8770-B-327
TRANSFORMER DELUCE OPERATING F-16	(LATER)	(LATER)	(LATER)	DIS/1 Main XFR 2A & 2L DPS/2 Aux. XFR 2A & 2L DPS/2 S/U XFR 1A & 1B	
INST AIR ISOL ICV-18-1 CIAS CLOSE OVERRIDE F-24	1. CIAS signal has been overridden to open Inst. Air Isol ICV-18-1 2. ICV-18-1 open with a CIAS signal present as indicated on RTGB-206	1. NONE 2. Acknowledge alarms and presence of open flow path through the containment and shield bldgs. while a CIAS is present	CIAS Signal present with RTGB Cont SH take to close over- ride & then to open	3A/94 RTGB-206 (LATER)	G/D-317
H ₂ SEAL OIL FIRE/ DELUCE OVER/ LCL ALARM OFF F-32	(LATER)	(LATER)	(LATER)	2OR, CS/855-5 Turb lube oil/reservoir & Conditioner/H ₂ seal oil/fire prot. local cont. panel	G/D-855
LUBE OIL FSR/ PIPING FIRE/ DELUCE OVER/ LCL ALARM OFF F-40	(LATER)	(LATER)	(LATER)	1-3OR, CS/855-4-6 Turb lube oil/reservoir & Conditioner/H ₂ seal oil/fire prot. local cont. panel	G/D-855
FW/COND/ PTR DRN PIS FIRE SYS OVER F-48	(LATER)	(LATER)	(LATER)	(LATER)	G/D-856

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SC 2A LEVEL HI/LO G-1	1. 2A steam generator level high or low (alarm only) 2.(A) Compare indications on all channels of indicators & recorders. (B) Check condensate pumps, MFW pumps, etc. (C) Check feed reg flow rates & controls.	1. None, unless LVL continues to increase or decrease. 2.(A) Take Man. control of affected part of FW system, to control level. (B) If losing level; follow loss of S/G level Emergency Procedure 2-0700040.	Hi - 85% (increasing) Lo - 56% (decreasing)	LIA - 2005 S/G Level SIGMA Indicators A, E, C, & D Channels (Safety) ----- RTCB - 202	GWD-619 P&ID (later)
SC 2B LEVEL HI/LO G-9	1. 2B S/G level high or low (alarm only) 2.(A) Compare indications on all channels of indicators & recorders. (B) Check condensate pumps, MFW pump etc. (C) Check feed reg flow rates & controls.	1. None, unless level continues to increase or decrease. 2.(A) Take manual control of affected part of FW system, to control level. (B) If losing level; follow loss of S/G level Emergency Procedure #2-0700040.	Hi - 85% (increasing) Lo - 56% (decreasing)	LIA - 2006 S/G Level SIGMA Indicators A, E, C, & D Channels (Safety) ----- RTCB-202	GWD-624 P&ID (later)
FW PP DISCH HDR PRESS LO G-17	1. Low feedwater pump pressure to HP #5 FW heaters. 2. (A) Feedwater Header Discharge Pressure <850 PSIG (B) MFW pump recirc valve position.	1. None 2. Check FW PPs OIS parameters, noise, amps, temp., press., have operator check for excessive recirc. to condenser. Leak or break in discharge line.	850 PSIG decreasing	FSI-09-5 -----	GWD-603 P&ID (later)
AFAS CABINET TROUBLE G-25	(LATER)	(LATER)	(LATER)	AFAS CAB-A, E, C, D ----- AFAS Cabinet - Behind RTCB-204	GWD-1638
AFAS-1/AFAS-2 BYPASS G-33	(LATER)	(LATER)	(LATER)	AFAS CAB - A, E, C, D ----- AFAS Cabinet - Behind RTCB-204	GWD-1638
SC 2A/2B ATM STM D/P VALS SS EOL G-41	1. Control of MV-08-19P, and/or 18A atmospheric dump valves has been isolated from the Control Room by NRM/ISOL switch. 2. Loss of control switch lights.	1. Loss of control from Control Room. 2. Return NRM/ISOL switch to "NORMAL", if applicable, in cable spreading room.	NRM/ISOL switch in "ISOLATE" (one or both)	SS-1/603/654 SS-2/603/654 (NRM/ISOL Switches) ----- Cable Spreading Room - Isolate Panel.	GWD-603

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FWP 2A SUCTION PRESS LO TRIP G-2	1. 2A Main feedwater pump has tripped on low suction pressure from: (A) Loss of condensate pump, or ltr drain pump. (B) Suction strainer plugged. 2. (A) MFW pump breaker indication - green. (B) Feed pump suction pressure gauge.	1. (A) MFW pump trip (B) Turbine runback if >60% power 2. (A) If MFWP has not tripped, start standby condensate or HDP. (B) Verify RBEK to <60% power, if applicable (C) Follow loss of S/G FW Emergency Procedure 2-0700040.	350 PSIG decreasing (later - time delay)	(74-3, 62X/TUC) / 615 (42/MOC, ES-12-15A) / 616 (later)	GWD-615 GWD-616
FW FP 2A FLO LO/ IRG OIL IP/ CP INTLK TRIP G-10	1. 2A main feedwater pump has tripped from: (A) Low feed water flow. (E) Low bearing oil pressure (C) Loss of a condensate pump 2. (A) Condensate pump indications. (B) Main feed flow.	1. (A) Main feed pump trip. (B) Turbine runback if >60% power. 2. (A) Verify RBEK to <60% FWR, if applicable (B) Start other MFW FP or Cond. FP if available. (C) Follow loss of S/G FW Emerg. Proc. No. 2-0700040	(A) (B) (later) (C) (Time delayed too)	74-3, 62X/TLO (later)	GWD-615
FW FP 2A OVRID/TRIP G-18	1. 2A main feedwater pump has: (A) Tripped on overload. (B) Lose control power to breaker (C) Motor breaker has been racked-out 2. (A) Breaker indicate lights - green or out.	1. (A) MFW pump trip (B) Turbine runback if >60% power. 2. (A) Verify RBEK to <60% FWR, if applicable. (B) Start other MFWP if available (C) Follow loss of S/G FW Emerg. Proc. No. 2-0700040.	Thermal Overload or time dependent trip	74-1, 74-2 Thermal overload and time dependent O.C. relay in breaker. ----- 2-30103/2A1-6.9KV Bus	GWD-615 HD 7 MD Sheet 1
FW FP 2A FLO LO G-26	1. 2A main feed PP recirc VLVs not providing sufficient recirc flow for present pump flow. (A) Not controlling recirc flow correctly, (E) Main feed flow (C) # of feed pumps vs unit MW load.	1. Recirc VLV should open to provide at least (LATER) GPM flow through pump. 2. (A) Check # of feed pumps vs unit load. (B) Check stability of main feed flow. (C) Have operator check recirc VLV locally if not responding.	(LATER)	FS-09-1A1, 62Y (LATER)	GWD-615
FW FP 2A IRG OIL PRESS LO/ RESERVE ROTN G-34	1. 2A main feed pump: (A) Low bearing oil header pressure. (E) HL IRG oil suction press. indicative of reverse pump rotation. 2. (A) Aux oil pump indicator lights - green.	1. Aux oil PP should start on lo IRG oil Press. of (LATER) PSIG. 2. Check pump locally; (A) Start aux oil pump if not running. (B) If pump has reverse rotation; manually isolate discharge line from pump.	Lo Press - (LATER) Rev rotation 35 PSIG oil press.	62Y/615 63X/618 IS-09-2A3 (LATER)	GWD-615 GWD-618
FW FP 2A IRG TEMP HI G-42	1. HL IRG Temp. on one or more FP or motor IRG of MFWP. 2. Check condition/alarms of TCM system.	1. None 2. Have operator locally check pump: (A) Lube oil flow from bearings. (B) TCM flow to heat exchanger. (C) Local bearing temp indicators.	185° F (increasing) on any bearing	TIS-09-7-1A1/1A2 TIS-09-8-1A1/1A2 TIS-09-0-1A1/1A2 Alarms from Temp. Ind. on local FP Monitor Inlet	GWD-628

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FWP 2B SUCTION PRESS LO TRIP G-3	1. 2B FWP PP has tripped on lo suction press. from: (A) Loss of running cond. or HTR Drain PP. (B) Suction Strainer plugged 2.(A) FWP PP FRK indication - green. (B) Feed pump suction pressure gauge.	1.(A) FWP pump trip. (B) Turbine runback if >60% power. 2.(A) If FWP has NOT tripped, start standby Cond. or Htr drain PP if available. (B) Verify runback to <60% power. (C) Follow loss of S/G FW Emer. Proc. No. 2-0700040.	350 PSIG decreasing	(74-3,62X/TUC) / 620 (52/110C, FS-12-15H)/621	G/D-620 G/D-621
FW PP 2P FLOW LO/ IRG OIL LP/ CP INTK TRIP G-11	1. 2B main feedwater pump has tripped from: (A) Low feedwater flow. (B) Low bearing oil pressure. (C) Loss of a condensate pump. 2.(A) Condensate pump indications. (B) Main feed flow.	1.(A) Main feed pump trip. (B) Turbine runback if >60% power. 2.(A) Verify RNEK to <60% power, if applicable (B) Start other FWP PP or Cond. PP if available. (C) Follow Loss of S/G FW Emer. Proc. No. 2-0700040.	(LATER)	74-3,62X / TDO	G/D-620
FW PP 2P OVRID/TRIP G-19	1.2B Main Feedwater Pump has: (A) Tripped on overload. (B) Lost control power to breaker. (C) Motor breaker has been racked-out. 2.(A) Breaker indicate lights - green or out.	1.(A) FWP pump trip (B) Turbine runback if >60% power. 2.(A) Verify RNEK to <60% power, if applicable (B) Start other FWP if available (C) Follow Loss of S/G FW Emerg. Proc. No. 2-0700040.	Therm OVRD OR TIME Dependent TRIP	74-1, 74-2 Thermal overloads and time dependent O. C. relay in breaker 2-30203/6900V-2B1	G/D-620 PD & MD Sheet 1
FW PP 2B FLOW LO G-27	1. 2B Main Feed PP recirc VALV not providing sufficient recirc flow for present pump flow. (A) Not controlling recirc flow correctly. (B) Or, large fluctuations in main feed flow. (C) Too many feed pumps on, for present unit load 2.(A) Recirc valve position indicators. (B) Main Feed flow. (C) # of feed pumps vs unit MW load.	1. Recirc valve should open to provide at least(LATER) GPM flow through pump. 2.(A) Check # of feed pumps vs unit load. (B) Check stability of main feed flow. (C) Have operator check recirc valve	(LATER)	FS-09-1B1 & 62X	G/D-620
FW PP 2B IRG OIL PRESS LO/ REVERSE ROTN G-35	1. 2B Main Feed pump: (A) Low bearing oil header pressure. (B) HI IRG oil Suct. press. indicative of reverse PP rotation. 2.(A) Aux oil pump indicator lights - green.	1. Aux oil PP should start on lo IRG Oil Press. of (LATER) PSIG. 2. Check pump locally; (A) Start aux oil pump if not running. (B) If pump has reverse rotation; manually isolate discharge line from pump.	Lo Press - (LATER) Rev Rotation 35 PSIG oil press.	62Y/620 63X/623 FS-09-0E3	G/D-620 G/D-623
FW PP 2B IRG TEMP HI G-43	1. High IRG Temp. on one or more pump or motor IRG of MFWP. 2. Check condition/alerts of TOW system.	1. None 2. Have operator locally check pump: (A) Lube oil flow from bearings. (B) TOW flow to heat exchanger (C) Local bearing temp indicators	185° F (Increasing) on any bearing	TIS-09-7-1B1/1B2 TIS-09-8-1B1/1B2 TIS-09-0-1B1/1B2 Alarms from Temp. Ind. on Local PP Monitor Panel	G/D-628

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FW PPS 2A & 2B STRAINER Δ /P HI R G-4	1. Plugged suction strainer on 2A or 2B FWP Pump 2. None	1. None 2.(A) Check strainer Diff. press. gage locally, to verify D.P. (B) Reduce load I.A.W. 2-0030123, (load change guidelines) to <60%. (C) Remove FWP from SVC, to clean strainer	(LATER)	RA-T-5/Reflash FDIS-12-51A & 51E Strainer D.P. Ind. (LATER)	GND-640
AFW TO SG 2A VLVS MTR OVRD / AFAS OVRD G-12	1. One or more of the following valves: (A) 2A AFW to 2A S/G MV-09-9 (E) 2B AFW tie to 2A S/G MV-09-14 (C) 2C AFW to 2A S/G MV-09-11 Has * tripped on OVRD, * Mtr turned off, * lost control power, * or AFAS (later) (AFAS () later) 2.(A) Respective valve ind. lights - out. (E) (AFAS later - - - - -)	1. None 2.(A) If VLV motor BRK trips; check BRK locally notify Elect. Dept. if necessary (E) If AFAS override; (LATER)	Therm. OVRD Trip OR 8 Amp O.C. Trip (LATER AFAS)	RA-5T-1/Reflash Thermal overloads and O.C. trip coil in bkrs 2-41209/MCC-215/CSRa 2-42063/MCC-2B5/CSRa 2-60977/DCPP-255/ -0.SRAB	GND-1638 PD & MD Sheet 33, 40, 69F
CONDENSATE CONDUCTIVITY/SODIUM HI G-20	1. Seawater leaking into condenser as indicated by: (A) HI-chlorides (cation conductivity); from CR-12-200 behind RTGB. (B) HI-sodium content in condensate; from sodium analyzer. 2. Conductivity recorder CR-12-100 behind RTGB-202 rear.	1. None 2.(A) Notify Chemistry Department immediately (E) Follow condenser tube leak O/N Proc. 2-0120041, and S/G Chem. Out-of-Limits O/N Proc. 2-0120038.	0.5 u-mhos cation conductivity 10 PPE sodium content	COND ANALYZER Conductivity Recorder 625-06 sodium analyzer / rec. CR-12-100; behind RTGB-202, NA analyzer Cold Lab.	GND-600 GND-607
AFW PP 2A OVRD/TRIP G-28	1.(A) 2A Aux feed PP has tripped on motor overload (P) OR, has been racked out. (C) OR, has lost control power 2.(A) 2A AFW PP Aps, BRK Indicate lights-out or green (P) 2A AFW HR, flow and pressure.	1. 2A AFW pump trips. 2.(A) Use 2C AFW PP to feed 2A S/G if necessary (E) Investigate cause for pump overload.	Therm. OVRD OR TPE Dependent O.C.Trip	74-1, 74-2 Thermal OVRDJE and Time Dependent O.C. Relays in BRK 2-20212/2A3-4160V bus	GND-629 PD & MD Sheet 4
AFW PP 2A SUCTION PRESS LO G-36	1. Low suction pressure to 2A AFW pump from; (A) Momentary large increase in feed rate, (B) Or, low-level in CST. 2.(A) CST level indication (E) Feed rate	1. None 2.(A) Increase in feed; insure alarm clears momentarily, or reduce feed rate. (B) CST low; have operator start make-up	3.0 PSIG	ES-12-17A suction pressure SW 2A AFW PP Suction Side	GND-629
AFW PP 2A BRK FAILURE / CS STOP/ SS ISOL G-44	1.(A) The 2A Aux feed PP start circuitry has been given a start signal, but PP has failed to start (P) OR, the 2A AUX. FD PP has been ISOL from Control Room by NORM/ISOL SW. 2.(A) Failure; pump indicate lights - green. (P) Isolate; pump indicate lights - out.	1. If Isolate; loss of control from control Rm 2.(A) Investigate BRK failure locally, contact Elect. Dept. for assistance (B) Return NORM/ISOL SW to "NORM" if applic.	Start Signal >5 sec w/ Mtr open NORM/ISOL SW In "ISOLATE"	SS/ISOL, 74-3, CS/629 MTR BRK 2-20212 4160V Bus 2A3 and NORM/ISOL SW Cable Spreading Room	GND-629

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
AFW PP 2A/B/C STRNR 2A/B/C Δ/P HI G-5	1. One or more Aux feed pump suction strainers indicates dirty 14 In-D/P. 2. None	1. None 2. (A) Check local strainer D/P gauges. (B) Remove PP from SVC as soon as possible to clean strainers.	(LATER) HI D/Press	RA-RAE-5-Refresh From PDIS-12-52A, E, C Strainer D/P Switches (LATER)	GND-640
AFW TO SG 2B VLVS MTR OVRD/ AFAS OVRD R G-13	1. One or more of the following valves: (A) 2E AFW to 2B S/G MV-09-10 (B) 2A AFW tie to 2B S/G MV-09-13 (C) 2C AFW to 2B S/G MV-09-12 Has * tripped on overload, * PRK turned off, * lost control power, * or AFAS (later) (AFAS LATER) 2. (A) Respective valve ind. lights - out. (P) (AFAS later)	1. None 2. (A) If VLV motor IRK trips; check ERK locally, notify Elect. Dept. if necessary (B) If AFAS override; (LATER)	Therm. OVRD Trip OR 8 Acp O.C. Trip	RA-ST-2 ----- Thermal overloads and O. C. trip coil in bkrs 2-41210/MCC-2A5 2-42062/MCC-2B5 2-60952/UCPP-254	GND-11639 HD & MD Sheets 33, 39, 69E
AFW PP 2C LUBE OIL TRIP LO G-21	1. Low lube oil temp in 2C AFW PP lube oil system (heater not functioning properly) 2. None	1. None 2. Have operator check temp. on 2C AFW PP and check ltr power supplies.	(LATER)	TS-2 Temp. Switch 2C Aux. Feed Pump Lube Oil System	GND-631
AFW PP 2B OVRD/TRIP G-29	1. (A) 2B Aux feed pump has tripped on motor overload (B) Or, has been racked-out, (C) Or, has lost control power. 2. (A) 2E AFW PP arps, ERK Ind. lights - out or green (B) 2E AFW header, flow and pressure.	1. 2A AFW pump trips 2. (A) Use 2C AFW PP to feed 2B S/G if necessary (B) Investigate cause for PP overload.	Therm. OVRD Trip OR Time Dependent O. C. Trip	74-1, 74-2 Thermal OVRD and Time Dependent O.C. RLYS in ERK 2-20412/4160V-2B3	GND-630 PD & MD Sheet 5
AFW PP 2B SUCTION PRESS LO G-37	1. Low suction pressure to 2B AFW pump from; (A) Momentary large increase in feed rate, (B) Or, low-level in CST. 2. (A) CST level indication (B) Feed rate	1. None 2. (A) Increase in feed; insure alarm clears momentarily, or reduce feed rate. (B) CST low; have operator start make-up to CST.	3.0 ESIG	IS-12-17B Suction Pressure Switch 2B AFW Pump Suction Side	GND-630
AFW PP 2B FR FAILURE/ CS STOP/ SS ISOL. G-45					

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
COND FP 2C HEARING TEMP HI G-6	1. Thrust BKG temp. hi due to loss of cooling or loss of oil. 2.(A) Motor Amps (B) TCM low press/high temp. alarm	1. No Auto Action 2.(A) Check local temp. indicator (B) Check motor oil level & cooling water supply (C) If temp. exceeds 200° F., stop pump (D) Reduce power to below 60% power before removing pump	(LATER)	TIS-12-27-1G1, 1G2 (LATER)	GWD-219
SG 2A/2F TO AFWP 2C VLVS W/U CLOSE/AFAS OVRD/SS ISOL R G-14	(LATER)	(LATER)	(LATER)	RA-6T-3 (LATER)	GWD-638
CST N ₂ FLANKET PRESS HI-HI/LO G-22	1. HI-HI press., or Lo press. in CST of nitrogen cover gas. 2. None	1. SE-29-1, N ₂ Gas fill solenoid Isol. closes on HIGH pressure. 2.(A) Verify N ₂ Lineup (B) Insure alarm not caused by sudden insurge or outsurge of water. (C) Check loop seal and tank vent supply water in service.	Lo-(alarm) 1.0" h ₂ CG HI-(shut V.) 5.8" h ₂ CG HI-HI-Alarm 6.0" h ₂ CG	IS-29-4-1/Lo IS-29-4-2/HI HI Pressure switches Mounted on Condensate Tank	GWD-743
AFW PP 2C STEAM PRESS LO G-30	1. Low STM Press. in 2C AFW PP STM supply header. 2. 2A AFW PP supply STM press. indicator PI-08-5, RICB-202.	1. None 2.(A) If 2A or 2B Elec. AFW PNs available, switch over to elec. purps. (B) If not available, use of 2C STM PP is acceptable, as long as STM Press >50 PSIG	740 PSIG	IS-08-6	GWD-631 F&ID
AFW PP 2C SUCTION PRESS LO G-38	1. low suction pressure to 2C AFW pump from; (A) Momentary large increase in feed rate, (B) OR, low-level in CST. 2.(A) CST level indication (E) Feed Rate	1. None 2. (A) Increase in feed; insure alarm clears momentarily, or reduce feed rate. (B) CST low; have operator start make-up to CST	3.0 PSIG	IS-12-17C Suction pressure Switch ----- 2C Aux Feed	GWD-631 F&ID 2998-6-000 (2 of 2)
AFW PP 2C TURB FAIL/TRIP/ CS ISOL G-46	1.(A) 2C AFW pump failure/trip (later explanation of inputs) (E) OR, NML/ISOL SW has ISOL 2C AFWP from Control Rm 2.(A) Failure; pump ind. lights - green. (B) Isolate; pump ind. lights - out.	1. FAILURE; 2C AFWP will trip. 2.(A) FAILURE; wait 3 min. for governor, then take MV-08- K.Sw. to CLOSE then open, pump will reset & restart. (B) ISOLATE; return NML/ISOL SW to "NORM" if applicable.	(LATER) failure) NRM/ISOL SW to ISOL	SS-632-ISOL Switch CON-1, CRI 7 2/failure 2C Aux. Feed Pump Control Panel and ISOL Panel	GWD-631

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
COND PP 2A/2C OVRD/TRIP G-7	1. The 2A or 2C Cond. PP on the 2A BRK has tripped on overload. 2.(A) Pump amps, flow, pressure. (B) Hic indicate lights - out.	1.(A) Associated 2nd feed pump trip if 2 cond. pumps running. (B) Turbine runback to <60% if MEWP trips 2.(A) Ensure RNEK, & stabilize plant if applic. (B) Check PP out locally-consider swapping to other 2A/2C pump.	Therm. OVRD trip Or Time Dependent O.C. Trip	74-1, 74-2 Therm. OVRDS & Time Dependent Relays In BRK 2-20107/4160V-2A2	OND-605 FD 7 HD Sheet 3
COND PP 2A BEARINGS TEMP HI G-15	1. Hi temp. on 2F Cond. PP motor guide or thrust BRG 2. None	1. None 2.(A) Have operator check BRG temps. locally check TOW flow. (B) Remove PP from SVC if temp. exceeds (LATER) ° F.	Not Determined (LATER)	TIS-12-27-1A1, 1A2 Bearing Temp. Switch 2A Condensate Pump	OND-219
COND PP BRG CLG WIR FLO LO R G-23	1. Low TOW flow to Cond. PP BRG present on 2A, 2B, or 2C Cond. PP. 2. None	1. None 2. Have operator check Reflash Panel & adjust Alarming Pump's TOW flow.	Not yet determined (LATER)	RA-T-6/Reflash From TOW flow Switch FIS-13-21A, B, C	OND-1007
COND PP 2A/B/C RECIRC FLOW LO G-31	1. Cond. PP output flow low, and recirc. flow is insufficient on (2A, 2B and/or 2C pumps) 2. Respective pump recirc valve pos. indicator lights	1. Recirc VLV should open when PP flow is < 2500 GPM. 2.(A) Ensure recirc valve open. (B) Ensure # of Cond. PPs running consistent with Cond. system load.	<80% Recirc. Flow While Pump in Recirc.	2, 2-1, FS-12-6b/C/A Acoustic Flow Detectors Cond. Pump Recirc Lines	OND-604 OND-606
CST LEVEL HI G-39	1. Condensate tank has been over filled. 2. CST level gauges _____	1. LCV - _____ should close when level reaches _____ 2. Have operators stop CST fill, and/or isolate (_____)	44'.5" CST Level High	IS-12-8 Level Switch Condensate Tank	OND-743
CST LEVEL LO G-47	1. Condensate tank level has fallen below 33 feet. 2. CST level gauges _____	1. LCV should regulate level normally between alarm points. 2.(A) Initiate fill to CST. (B) Consult Tech Specs to ensure adequate	33' CST Level Low	IS-1-8 Level Switch Condensate Tank	OND-743

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ST. LUCIE UNIT NO. 2
OFF-NORMAL PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL G VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
COND FP 2P/2C OVRLD/TRIP C-8	1. The 2P or 2C Cond. FP on 2B HXK tripped on OVRLD 2.(A) Pump amps, flow, pressure. (B) Hxk indicate lights - out	1.(A) Associated 2nd feed PP trips if 2 Cond. pumps running. (B) Turbine runback to <60% if MPP trips. 2.(A) Ensure RHEK & stabilize plant if applic. (B) Check pump out locally-consider swapping to other 2B/2C pump.	Therm. OVRLD Trip or Time Dependent O.C. Trip	74-1, 74-2 Thermal overloads and time dependent relays 2-20307/4160V-2B2	OVD-606 FD & MD Sheet 4
COND FP 2B HEARINGS TEMP HI C-16	1. Ht temp. on 2B cond. FP thrust or guide HRG. 2. None	1. None 2.(A) Have operator check HRG temps locally - check TOW flow (B) Remove pump from service if temp. reaches (LATER) ° F.	Not Determined (LATER)	TIS-12-27-1B1,1B2 HRG Temp. Switch 2B Condensate Pump Motor	OVD-219
COND FP 2A/B/C STRAINER Δ/P HI C-24	1. HI Diff. Press. across 2A, 2B, or 2C Cond. FP suction strainer, indicating pluggage 2. NONE	1. NONE 2.(A) Check strainer D.P. locally. (B) Follow Cond. Sys. Operating Procedure 2-(LATER) for strainer removal from SVC.	14" Water Differential Pressure	RA-T-6/Reflash From FDIS-12-53A, B, & C Strainer D.P. SW. Condensate Pump Suction Strainer	OVD-640 P&ID 2998-6-080 (1 of 2)
FW FP SFAL IFANFF TK LEVEL HI/LO C-32	1. HI or lo level in feed FP leak-off collection tank 2. low vacuum in Cond. could impede tank draining ability.	1. LCV-12-21 should open & close to regulate level between alarm setpoints. 2.(A) Check condenser vacuum. (B) Check OPS of drain VLV & SIS alignment locally.	Lo-4'-4" HI-8' from Tank Base	LIS-12-22 Tank Level SW Main FW FP Leak-Off Collection Tank	OVD-628 P&ID 2998-6-091
HOTWELL LEVEL HI/LO C-40	1. High or low level in the main condenser hotwell 2.(A) hotwell level gauge LI-12-1. (B) Reject Valve Position	1.(A) <u>Hi Level</u> - reject VLV opens if unisolated (B) <u>Low Level</u> - hotwell sprays - open. (C) <u>Lo-Lo Level</u> - lg. Makeup VLV opens. 2. Take appropriate action to return NWL (A) Open/close MST vacuum drag. (B) Check hotwell sprays locally.	Lo - 25" HI - 43" From Hotwell Base	IS-12-24/Lo IS-12-3/Hi IS-12-24/Lo Level Switches (2, 3)/2B, (24)/2A Condenser Hotwell	OVD-741 P&ID 2998-6-080 (1 of 2)
COND TO HDPS 2A & 2B FLOW LO C-48	1. Lo Cond. flow through SJA/E/GSC cond. 2. Lo vacuum, low covl. flow	1. Cond. recirc. VLV (LATER) should maintain recirc. flow >7500 GPM. 2.(A) Check LCV (LATER) (B) Check VLV lineup per Cond. Operating Procedure lb. 2-(LATER)	<7500 GPM Header Flow	FS-21-1 Flow SW Off Flow XFR 12-1 Condensate Header After 6 STM Cond.	OVD-1007 P&ID 2998-6-080 (1 of 2)

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TH/LP SETPOINT HI/LO ORL A II-1	1. Indicates problem within core protect calculator as generated setpoint has exceeded it's operating band. 2. TH/LP setpoint meter PIA-1102 on RIGB 203.	1. Could generate a channel trip if set too high. 2.(A) Ensure setpoint actually in error. (B) Consult Tech. Specs for action. (C) Notify I & C Department.	HI-2375 PSIA Lo- 190 PSIA	PIA-1102 TH/LP Setpoint Meter RIGB-203	GTD-372 Instrument List
PRZR ORL X PRESS HI-LO II-9	1. Indicates HI/Lo press. transient in excess of capability of press. control system. 2.(A) Compare all channels of PZR press. indications (B) Check controls; hrs and spray.	1.(A) Hrs htrs, full spray @ 2325 PSIA. (B) All hrs on full by 2200 PSIA Dec. 2. Follow Pressurizer Press. & Level Off Normal Procedure No. 2-010035.	HI-2340 PSIA Lo-2100 PSIA	PA-1100X Pressure Alarm Bistables Pressure Control Circuitry (RIGB-203)	GTD-97 Instrument List
PRZR ONL X LEVEL HI-LO II-17	1. Indicates HI/Low pressurizer level in excess of capability of level control system. 2.(A) Compare all channel sof PZR level indications. (B) Check charging pumps and charging/letdown flow	1.(A) PRZR level controls should control PRZR level to RRS setpoint. (B) All Hrs will be lost if level decays to 27% actual PRZR level. 2. Follow PRZR press. & level O/N Proc. No.	HI > + 10% Lo < - 5% PRZR Level error from RRS Setpoint	IA-1110X1 63X/IA-11190XL Alarm Bistables Level Control Circuitry (RIGB-203)	GTD-139 RCS Training Lesson Plan
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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TM/LP SETPOINT HI/LO GRG. B H-2	1. Indicates problem within core protect calculator as general setpoint has exceeded it's normal operating limit. 2. TM/LP setpoint meter PIA-102B on RTGB-203.	1. Could generate channel trip if set too high 2.(A) Ensure setpoint actually in error. (B) Consult Tech. Specs for Action (C) Notify I & C Department.	HI-2375 PSIA Lo-1900 PSIA	PIA-1102B TM/LP Setpoint Meter RTGB-203	OWD-373 Instrument List
PZRZ ONLY PRESS HI-LO H-10	1. Indicates HI/Low press. transient in excess of capability of press. control system. 2.(A) Compare all channels of PZR Press. indication (B) Check controls; Htrs and spray.	1.(A) Hs htrs. full spray @ 2325 PSIA (B) All htrs on full by 2200 PSIA Dec. 2. Follow Pressurizer Press. & Level Off Normal Procedure 2-0120035.	HI-2340 PSIA Lo-2100 PSIA	PA-1100Y Pressure Alarm Bistable Pressure Control Circuitry (RTGB-203)	OWD-98 Instrument List
PZRZ ONLY LEVEL HI-LO H-18	1. Indicates HI/Lo PZRZ level in excess of capability of press. control system. 2.(A) Compare all channels of PZR level indications (B) Check charging pumps and charging/letdown flow	1.(A) PZRZ level controls should control PZRZ level to RRS setpoint. (B) All heaters will be lost if level decays to 27% actual PZR level. 2. Follow Pressurizer Press. & Level O/H 2-0120035	HI > + 10% Lo < - 5% PZRZ Level error from RRS Setpoint	IA-1110M 63X/IA-1110YL Alarm Bistables Level Control Circuitry (RTGB-203)	OWD-139 Instrument List
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FORV 1474 LTOP CONDIN SELECT LTOP H-34	1. RCS temp. has decreased to a range where the FORVs required to be in LTOP position. 2.(A) RCS pressure indicators. (B) RCS T-Cold indicators.	1. None - (Informational Alarm Only) 2. Select "LTOP" position on FORV V-1474 Mode select SW, as per steps in RCS Cooldown Procedure	280°F Dec. T-Cold with FORV Mode sel. in "NORMAL"	68X/1474 63X/1476 LTOP 63X/T1115 CIRCUITS RTGB-203	OWD-1629 FSAR 5.2-28
FORV 1474 NORM CONDIN SELECT NORM H-42	1. RCS temp. has increased to a range where FORVs required to be in "NORMAL" position. 2.(A) RCS press indicators. (B) RCS T-Cold indicators. (C) FORV Mode select switch position.	1. None - (Informational Alarm only) 2. Select "NORM" position on FORV V-1474 Mode select SW, as per steps in RCS Heat-Up Procedure	320°F Inc. T-Cold with FORV Mode select in "LTOP"	68X/1474 63X/1474 LTOP 63X/T1115 CIRCUITS ----- RTGB-203	OWD-1629 FSAR 5.2-28

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PIRPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SECURITY	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TM/LP SETPOINT III/LO GRZ. C H-3	1. Indicates problem within core protect calculator as generated setpoint has exceeded it's normal operating band. 2. TM/LP setpoint meter PIA-1102C on RTGB-203.	1. Could generate channel trip if set too high 2.(A) Ensure setpoint actually in error. (B) Consult Tech Specs for action (C) Notify I & C Department	HI-2375 PSIA LO-1900 PSIA	PIA-1102C TM/LP Setpoint Meter RTGB-203	Q/D-374 Instrument List
PRZR SFTY RLF V-1200 DISCH TRIP III H-11	1. PRZR safety VLV V-1200 open or leaking as indicated by hi temp. in relief disch tailpipe. 2.(A) Tailpipe temp. indicator. (B) PRZR press. indications (C) Quench tank parameters. (D) Acoustic monitor display and alarm (IC-1)	1. None 2. Follow Pressurizer Safety/Relief Valve O/N Procedure Ib. 2-0120036.	120°F	TIA-1107 Safety Tailpipe Temp Indicator RTGB-203 SIGMA	Q/D-134 Instrument List
PRZR SFTY RLF V-1201 DISCH TRIP III H-19	1. PRZR safety VLV V-1201 open or leaking as indicated by high temp. in relief disch tailpipe. 2.(A) Tailpipe temp. indicator (B) PRZR press. indications (C) Quench tank parameters. (D) Acoustic monitor display and alarm (IC-1)	1. None 2. Follow Pressurizer Safety/Relief Valve Off Normal Procedure #2-0120036.	120°F	TIA-1108 Safety Tailpipe Temp Indicator RTGB-203 SIGMA	Q/D-135 Instrument List
PRZR SFTY RLF V-1202 DISCH TRIP III H-27	1. PRZR safety VLV V-1202 open or leaking as indicated by hi temp. in relief disch tailpipe. 2.(A) Tailpipe temp. indicator. (B) PRZR press. indications (C) Quench tank parameters	1. None 2. Follow Pressurizer Safety/Relief Valve Off Normal Procedure #2-0120036.	120°F	TIA-1109 Safety Tailpipe Temp Indicator RTGB-203 SIGMA	Q/D-135 Instrument List
FORV 1474 TEST/OVRD H-35	1. FORV 1474 is in the "TEST" or "OVERRIDE" position 2. FORV-1474 switch position.	1. FORV operation is disabled with switch out of "OFF" (normal pos.) 2. Return FORV Override/Test switch to "OFF" if applicable.	Switch out of "OFF" Position	IS-1474-2/1629 FORV Override/Test Switch RTGB-203	Q/D-1629 FSAR 5.2-27
LTOP ONL A TRANSIENT H-43	1. Lo temp/hi press. transient may be occurring in RCS needing immediate attention. 2. RCS temperature & pressure indicator.	1. FORV 1474 will open <u>IF</u> ; (A) Mode select Sw. in LTOP, (B) T-Cold < 325°F, (C) And, RCS press >490 PSIG 2. Immediately take steps to reduce RCS press.	Te < 280°F or Sw in "LTOP" with 1105 & 1106 pressure >490 PSIG	68X/1474 63X/T-1115 P-1103, P-1104 LTOP Circuitry RTGB-203	Q/D-1639 FSAR 5.2-28

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL II VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TH/LP SETPOINT HI/LO CHLD H-4	1. Indicates problem within core protect calculator as general setpoint has exceeded it's normal operating band. 2. TH/LP setpoint meter PIA-1102D on RIGB-203.	1. Could generate channel trip if set too high 2.(A) Ensure setpoint actually in error. (B) Consult Tech Spec for action (C) Notify I & C Department.	HI-2375 PSIA Lo-1900 PSIA	PIA-1102D TH/LP Setpoint Meter RIGB-203	GD-375 Instrument List
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FORV 1475 RELIEF LINE TRIP HI H-20	1. FORV-1475 open or leaking as indicated by high downstream tailpipe temp. 2.(A) Pressurizer pressure indications. (B) Valve position indicator lights. (C) Quench tank parameters. (D) Acoustic monitor indications & alarm LC-1	1. None 2. Follow PRZR Safety/Relief VLV O/N Procedure No. 2-0120036.	120°F	TIA-1106 FORV Tailpipe Temperature Indicator RIGB-203 SIG/A	GD-134 Instrument List
PRZR SURGE LINE TEMP LO H-28	1. PZR surge line temp. low due to: (A) Insurge into the pressurizer, (B) Or, insufficient mini-flow bypass spray flow. 2.(A) Pressurizer level changes. (B) Pressurizer spray flow.	1. None 2.(A) Ensure pressurizer level controls normal (B) Consider adjusting mini-flow bypass spray valves, or putting PZR on recirc	590°F	TIA-1105 Surge Line Temperature Indicator RIGB-203 SIG/A	GD-134 Instrument List
FORV 1474 RELIEF LINE TRIP HI H-36	1. FORV-1474 is open or leaking as indicated by high downstream tailpipe temperature 2.(A) Pressurizer pressure indications. (B) Valve position indicator lights. (C) Quench tank parameters.	1. None 2. Follow Pressurizer Safety/Relief Valve Off Normal Procedure #2-0120036.	120°F	TIA-1110 FORV Tailpipe Temperature Indicator RIGB-203 SIG/A	GD-135 Instrument List
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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL II VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LOOP 2A HOT LEG TEMP HI II-5	1. 2A Hot Leg temp has increased to 610°F. 2. Check all other T-hot indication channels for comparison.	1. None 2.(A) Assure valid alarm. (B) Reduce RCS temp. using boron addition or CEA insertion.	610°F High T-HOT	TIA-1111X 2A Hot Leg Temp. SIGMA Indicator RIGB-203	OWD-136 Instrument List
LOOP 2B1 SPRAY LINE TEMP LO II-13	1. PRZR spray line from 2B1 Cold Leg low temp. due to: (A) Insufficient spray valve bypass line flow, (B) Or, RCS not at normal oper. temp. 2.(A) Pressurizer spray line temp indicator TIA-1104 (B) Pressurizer surge line temp.	1. None 2.(A) Adjust main-flow bypass valves around spray valves when practical. (B) Ensure no spray from this line when temp diff. >350°F.	515°F Low	TIA-1103 2A Spray Line Temp. SIGMA Ind. RIGB-203	OWD-133 Instrument List
SG 2A SHR OIL RSVR LEVEL LO II-21		1. None 2.(A) Notify Mechanical Maintenance Dept. (B) Consult Tech Spec Action Statement	Later	PS-1950A Accumulator Pressure Switch LATER	OWD-461
PRZR FROM HTRS LO LVL TRIP/ SS ISOL II-29	1.(A) Proportional htrs have been tripped off by 27% low PRZR level, (B) Or, back-up htrs have been isolated from Control Room by Normal/Isolate Sw. 2. Back-up heater control switches indicate lights-	1. Loss of proportional heater control. 2.(A) Follow PRZR Press/Level O/N Proc. No. 2-0120035. (B) Return Nbra/Isol SW to "NORM" if applic.	27% Actual PRZR Level NORM/ISOL SW IN	74-Alarm Contact in Level Control Circuitry PRZR Level Controls RIGB-203	OWD-122 OWD-123
PRZR HEATERS LVL/PRESS INTLK OVRID II-37	1. The hi press./Lo-Lo lvl. htr. cut-off sys. has been partially or totally disabled by operator action 2. Backup Interlock bypass keyswitch position.	1. Ability to regain & control PRZR Htrs. 2. Follow PRZR Press/Level O/N Procedure No. 2-0120035.	Back-up Interlock Bypass SW Out of "LOCKED OFF" Position	HS-124 Backup Interlock Bypass Key Switch RIGB-203	OWD-122
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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL II VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR FURTHER TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LOOP 2B HOT LEG TEMP II H-6	1. 2B hot leg temp has increased to 610°F 2. Check all other T-hot indication channels for comparison.	1. None 2.(A) Assure valid alarm. (B) Reduce RCS temperature using boron	610°F High T-HDT	TIA-1121X 2B Hot Leg Temp SIGMA Indicator RTCB-203	GND-137 Instrument List
LOOP 2B2 SPRAY LINE TEMP LO H-14	1. PRZR spray line from 2B cold leg low temp. due to: (A) Insufficient spray vlv bypass line flow, (B) Or, RCS not at normal oper. temp. 2.(A) PRZR spray line temp indicator TIA-1104 (B) PRZR surge line temp	1. None 2.(A) Adjust mini-flow bypass valves around spray valves when practical (B) Ensure no spray from this line when temp diff. >350°F.	515°F Low	TIA-1104 2B2 Spray Line Temp SIGMA Ind.	GND-133 Instrument List
93 2B SBR OIL RSVR LEVEL LO H-22		1. None 2.(A) Notify Mechanical Maintenance Dept. (B) Consult Tech Spec Action Statement	(LATER)	PS-1950B Pressure Switch S/G Accumulator	GND-461
PRZR B/U HTRS LO LVL TRIP/ SS ISOL H-30	1.(A) Backup htrs. have been tripped off by 27% low PRZR level, (B) Or, back-up htrs have been isolated from Control Room by Normal/Isolate Sw. 2. Back-up htr control switches indicate lights - out	1. Loss of backup heater control 2.(A) Follow PRZR Press/Level O/N Proc. No. 2-02120035. (B) Return Norm/Isol SW to "NORMAL" if applicable	27% Actual PRZR Level NORM/ISOL SW in "NORMAL"	74-Alarm Contact in Level Control Circuitry PRZR Level Controls RTCB-203	GND-124 GND-129
FORV 1475 LTOP CONTROL SELECT LTOP H-38	1. RCS temp. has decreased to a range where the FORVs required to be in LTOP position. 2.(A) RCS pressure indicators. (B) RCS T-Cold indicators. (C) FORV mode select switch position.	1. None - (Informational alarm only) 2. Select "LTOP" position on V-1475 FORV Mode select SW, as per steps in RCS Cooldown Proc	280°F Dec. T-Cold with FORV Mode select in "NORMAL"	68X/1475 63X/1477 LTOP 63X/T1125 CIRCUITS RTCB-203	GND-1630 FSAR 5.2-28
FORV 1475 NORM CONTROL SELECT NORM H-46	1. RCS temp. has increased to a range where FORVs required to be in "NORMAL" position. 2.(A) RCS pressure indicators. (B) RCS T-Cold indicators. (C) FORV mode select switch position.	1. None - (Informational alarm only) 2. Select "NORMAL" position on FORV V-1475 mode select switch, as per steps in RCS Heat-Up Procedure.	320°F Inc. T-Cold with FORV Mode sel. in "NORMAL"	68X/1475 63X/1477 LTOP T1125 CIRCUITS RTCB-203	GND-1630 FSAR 5.2-28

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ANNUNCIATOR PANEL II VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION (WHICH VERIFY OR PINPOINT TROUBLE)	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LOOP 2A2 COLD LEG TEMP HI II-7	1. Loop 2A2 cold leg temp. has risen above Tech Spec T-Cold limit. 2. Compare all RCS T-Cold temperature indications.	1. None 2. Reduce RCS temp. below T.S. limit of 538°F, by boration of CEA insertion.	556°F HI T-Cold	63X/TIC 1111Y Temp. Indicating SIGMA RTCB-203	OWD-136 Instrument List
REACTOR HEAD SEAL PRESS HI II-15	1. Indicates RCS leakage past the first O-Ring seal of Rv head. 2. None	1. None 2. (A) Determine magnitude of leak by draining down pressure switch. (B) Continue monitoring of leak-rate and assure compliance with Tech Specs.	1000 PSIG IN Between Seal Rings	PS1118 Press. Switch On Line From Rv Vessel To Switch/Gauge Outside Bio-Shield	OWD-141 Instrument List
LOOSE PARTS MONITORING ALARM II-23	1. Loose parts monitor has detected abnormal noise level in RCS, Rv vessel, or steam generator. 2. Loose parts monitor panel; alarming channel in RED	1. None 2. (A) Monitor RCS/Rv for anomalies. (B) Record trace of noise, if possible. (C) Notify I & C to compare traces with	Variable Multiple Levels On LPM Channels	LPM CNTL INL Alarm Output Rly Loose Parts Monitor Panel Behind RTCB-202	OWD-1212
BLANK II-31	BLANK			-----	
FORV 1475 TEST/OVRD II-39	1. FORV 1475 is in the "TEST" or "OVERRIDE" position. 2. FORV 1475 switch position.	1. FORV OPS disabled with SW out of "OFF" (Normal Pos.) 2. Return FORV Override/Test SW to "OFF" if applicable.	SW out of "OFF" Position	HS-1475-2/1630 FORV Override/Test SW RTCB-203	OWD-1630 FSAR 5.2-27
LTOP CIRCUIT B TRANSIENT II-47	1. Low temp/HI press. transient may be occurring in RCS needing immediate attention. 2. RCS temperature & pressure indicators.	1. FORV 1475 will OPEN IF; (A) Mode select Sw. in LTOP, (B) T-Cold <325°F. (C) And, RCS press >490 PSIG 2. Immediately take steps to reduce RCS	TC <280°F OR Sw in "LTOP" WITH 1105 & 1106 Pressure	63X/1475 63X/T1125 PC-1105, PC-1106 LTOP Circuitry RTCB-203	OWD-1630 FSAR 5.2-28

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PIVPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LOOP 202 COLD LEG TEMP HI H-8	1. Loop 202 cold leg temp. has risen above Tech Spec. T-Cold limit. 2. Compare all RCS T-Cold temperature indications.	1. No Auto Action. 2. Reduce RCS temp. below T.S. limit of 548°F, by boration of CEA insertion.	556°F HI T-Cold	63X/TIC-1121Y Temp. Indicating Alarms/SIGMA RIGB-203	OWD-137 Instrument List
QUENCH TANK PRESS HI H-16	1. HI quench tank temp. (near bottom of tank) 2. Quench tank pressure indicator on RIGB-203.	1. None, unless press. increases to Q.T. Safety Pressure of 75 PSIG. 2. Follow Quench Tank Normal Operating Procedure 2- (LATER)	15 PSIG HI	TIA-116 Pressure Indicating Alarms/SIGMA RIGB-203	OWD-141 Instrument List
QUENCH TANK TEMP HI H-24	1. HI quench tank temp. (near bottom of tank) 2. Quench tank temperature indicator on RIGB.	1. No Auto Action. 2. Follow quench tank Normal Operating Procedure #2- (LATER) to reduce temp.	200°F HI	TIA-1116 Temp. Indicating Alarm/SIGMA RIGB-203	OWD-135 Instrument List
QUENCH TANK LEVEL HI/LO H-32	1. Quench tank lvl out of Norm. Operating band. 2. Quench tank lvl indicator on RIGB.	1. No Auto Action. 2. Follow Quench Tank Normal Operating Procedure #2- (LATER) to return to	HI - 64% Lo - 44% Level	74-1, 74-2/1629 Level Indicating Alarm/SIGMA RIGB-203	OWD-140 Instrument List
FORV 1474/1475 DC CONTROL FAILURE H-40	(LATER)			-----	
HW RBT SYS STAND-BY POWER ON H-48	(Exact cause being determined)	(later)	(later)	KJA, KIB -----	

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ANNUNCIATOR PANEL J VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR FURTHER TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2A1 OVRD/TRIP J-1	1.(A) RCP has tripped on over current, (B) OR, RCP has lost control power, (C) OR, RCP has been racked out 2.(A) Pump Amps Zero (B) Breaker indicator lights - green or out.	1.(A) Pump Trips - stops. (B) RCP will trip on-low RCS flow. 2.(A) If critical, follow RCP trip O/N Procedure 2-0030130. (B) If critical and <u>ALL</u> pumps lost; follow Nit-Circ. Cooldown Emerg. Proc. 2-0120040 (C) Refer to RCP O/N Proc. 2-0120034.	Therm. OVRD OR Time Depend TRIP	74-1, 74-2 Trip Contracts Bkr 2-30104 2A1 6.9KV Bus	GND-101
RC PP 2A1 VIBRATION III J-9	1. Excessive vibration or axial shaft thrust movement detected on 2A1 RCP. 2. Vibration and thrust monitor meters on vibration monitoring equipment behind RIGB-204.	1. None 2.(A) Check display indicators behind RIGB-204 (B) Follow RCP Off-Normal Proc. 2-0120034	Variable Setpoint Set 10% Higher Than Normal	VK-REL-01-1 Vib. Detection Equip. Behind RIGB-204	GND-92
RC PP 2A2 OVERLOAD/TRIP J-17	1.(A) RCP has tripped on overcurrent, (B) OR, RCP has lost control power, (C) OR, RCP has been racked out. 2.(A) Pump Amps Zero (B) Breaker indicator lights - green or out.	1.(A) Pump trips - stops. (B) RCP will trip on - low RCS flow. 2.(A) If critical; follow RCP Trip Off-Normal 2-0030130. (B) If critical and <u>ALL</u> pumps lost, follow Nit-Circ. Cooldown Emerg. Proc. 2-0120040 (C) Refer to RCP Off-Norm Proc. #2-0120034	Therm. OVRD OR TIME Dependent O.C. Trip	74-1,74-2 Trip Contracts BKR 2-30204 2B1 6.9KV Bus	GND-109
RC PP 2A2 VIBRATION III J-25	1. Excessive vib. or axial shaft thrust movement detected on 2A2 RCP. 2. Vibration and thrust monitor meters on vibration monitoring equipment behind RIGB-204.	1. None 2.(A) Check display indicators behind RIGB 204 (B) Follow RCP Off-Normal Proc. #2-0120034.	Variable Set 10% Higher Than Normal	VK-REL-01-4 Vib. Detection Equip. Behind RIGB-204	GND-92
RC PPS SEAL TUBE LEAK J-33	1. Leakage of hot RCP coolant from RCS to COH System inside seal water IX as detected by HI IX Diff. Temp. on 2A1, 2A2, 2B1 or 2B2 RCPs 2.(A) ICV-14-11A1, A2, B1, B2 IX ISOL Valve position (B) COH activity process RAD monitor.	1. Respective leaking IX VLV will Isol. on hi diff. temp. 2. Follow applic. steps in subsequent actions of RCP Off-Norm Proc #2-0120034.	203° Difference in inlet/ outlet temp.	(TD15-14-32A1,B1,A2,B2) 2X-1, 2X-2/93,2X-1, 2X-2/94-(IX Ts) On each RCP seal tube Heat Exchanger	GND-93 GND-94
ICC CNL A SUBCOOL MARGIN LO J-41	(LATER)	(LATER)	(LATER)	YIOC, AIMA, YRVIA, YCEA -----	GND-1870

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ANNUNCIATOR PANEL J VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2A1 SEAL J-2	1.(A) HI press; pump gasket leak detect, (B) HI-temp; lower cavity, (C) HI or Low-press; upper seal cavity, (D) HI or Low-press; bleed-off cavity, (E) HI or Low-flow; controlled bleed-off. 2. Observe pump indicated parameters.	1. None 2.(A) Identify alarming SIGMA indicator. (B) If no SIGMA ind. abnormal; alarm from PP gasket leak. (C) Follow RCP Off-Norm. Proc. #2-0120034.	A) 500 PSIG B) 170° F C) 945/545 PSIG D) 150/25 PSIG E) 1.25/.75 GM	FIA-1150, TIA-1151, PIA-1152-1153, PS-1150 FIA, TIA, PIA on RTGB-203 PS is on RCP	GND-103
RC PP 2A1 OIL PRESS/FLO/LVL HI/LO R J-10	1.(A) Loss HIR press. to lower bearings. (B) Low flow to lower guide bearings. (C) Low flow from cooler. (D) High or low level in upper or lower reservoirs 2.(A) Oil level indicators high or low (B) Bearing temperatures. (C) Reflash panel RA-RAB-47 behind RTGB	1. None 2.(A) Check refl. pan. behind RTGB to determine alarm cause. (B) Follow RCP Off-Norm. Proc. #2-0120034.	A) 2000 PSIG B) 7 GRM C) 7 GRM D) ±2" from Normal	RA-RAB-47 Reflash Panel Behind RTGB-204	GND-103
RC PP 2A2 SEAL J-18	1.(A) HI-press; pump gasket leak detect, (B) HI-temp; lower cavity, (C) HI or Low-press; upper seal cavity, (D) HI or Low-press; bleed-off cavity, (E) HI or Low-flow; controlled bleed-off. 2. Observe pump indicated parameters.	1. None 2.(A) Identify alarming SIGMA indicator (B) If no SIGMA indicators abnormal; alarm is from pump gasket leak. (C) Follow RCP Off-Norm. Proc. #2-0120034	A) 500 PSIG B) 170° F C) 945/545 PSIG D) 150/25 PSIG E) 1.25/.75 GM	FIA-1160, TIA-1161, PIA-1162-1163, PS-1168 FIA, TIA, PIA on RTGB-203, PS is on RCP	GND-111
RC PP 2A2 OIL PRESS/FLO/LVL HI/LO R J-26	1.(A) Low HIR press. to lower BRG. (B) Low flow to lower guide bearings. (C) Low flow from cooler. (D) High or low level in upper or lower reservoirs 2.(A) Oil level indicators high or low. (B) Bearing temperatures. (C) Reflash panel RA-RAB behind RTGB	1. None 2.(A) Check reflash panel behind RTGB to determine alarm cause. (B) Follow RCP Off-Normal Proc. #2-0120034.	A) 2000 PSIG B) 7 GRM C) 7 GRM D) ±2" from Normal	RA-RAB-49 Reflash Panel Behind RTGB-204	GND-111
BLANK J-34	BLANK			-----	
IOC ORL A RX VESSEL LEVEL LO J-42	(LATER)	(LATER)	(LATER)	YQIRBLIA, YFALIA, YSMA -----	GND-1370

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ANNUNCIATOR PANEL J VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2A1 TEMP HI J-3	1. High temp. on 2A1 RCP; (A) Upper thrust bearing, (B) OR, lower thrust bearing. 2.(A) Upper/lower thrust BRG Temp. SIGMA indicators (B) Thrust BRG Monitor behind RIGB-204	1. None 2.(A) Check COW flow to pump. (B) Follow RCP Off-normal. Proc. #2-0120034.	200° HI Temp	TIA-1158, -1159 Temp Indicating Alarm SIGMA RIGB-203	OWD-102
RC PP 2A1 CLG WTR FLO LO J-11	1. Lo COW flow from 2A1 RCP, on individual PP COW return line. 2.(A) Individual (203) and combined (206) COW flow. (B) Seal HS, and RCP "N" HDR-valve positions. (C) Pump oil and seal temperatures. (D) SIAS signal presence.	1. Individual PP return line low-to Auto Action 2.(A) Low; Adjust RCP COW return HDR VLV outside Bio-Shield. (B) Follow RCP Off-normal. Proc. #2-0120034.	190 GPM Low Flow	FIA-1158 Flow Indicating Alarm Sys. RIGB-203	OWD-101
RC PP 2A2 TEMP HI J-19	1. High temp. on 2A2 RCP; (A) Upper thrust bearing, (B) OR, lower thrust bearing. 2.(A) Upper/lower thrust BRG Temp. SIGMA indicators (B) Thrust BRG monitor behind RIGB-204	1. None 2.(A) Check COW flow to pump. (B) Follow RCP Off-normal. Proc. #2-0120034.	200° F HI Temp	TIA-1168, - 1169 Temp Indicating Alarm SIGMA RIGB-203	OWD-110
RC PP 2A2 CLG WTR FLO LO J-27	1. Lo COW flow from 2A2 RCP, on individual PP COW return line. 2.(A) Individual (203) and combined (206) COW flow (B) Seal HX, and RCP "N" HDR-valve positions. (C) Pump oil and seal temperatures. (D) SIAS signal presence.	1. Individual PP return line low-to Auto Action 2.(A) Low; Adjust RCP COW return HDR VLV outside Bio-Shield. (B) Follow RCP Off-normal. Proc. #2-0120034	190 GPM Low Flow	FIA-1168 Flow Indicating RIGB-203	OWD-109
BLANK J-35	BLANK			-----	
ICC CORE A RX CORE EXIT TEMP. HI J-43	(LATER)	(LATER)	(LATER)	YQIRBLIA, YPFALLA, YSWA -----	OWD-1870

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ANNUNCIATOR PANEL J VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2A1 REVERSE ROTATION J-4	1. 2A1 RCP rotating in reverse as detected by hi rev. oil flow thru thrust runner oil PP. PP seal damage probably occurring. 2.(A) Pump Amps, breaker position indication (B) Low oil pressure alarm.	1. None 2.(A) On A Running Pump; determine the validity of alarm. (B) On Stopped/Started Pump - Valid Alarm; STOP ALL RCPs, follow Nat.-Circ. Cooldown Emergency Proc. #2-0120040	12.7 GR1 Reverse Flow	FS-1156, - 1157 2A1 RCP	OWD-103
RC PP 2A1 LIFT PP OVERLOAD J-12	1. 2A1-A, and/or 2A1-B oil lift pump; (A) Has tripped on overload, (B) Has lost control power, (C) OR, has been racked out. 2. Respective oil lift pump bkr indicate lights-out.	1. Pump trips. 2.(A) Ensure 2A1 RCP oil lift PP running if required. (B) Check breakers locally, (C) Notify Elect. Dept. if necessary.	Therm. OVRD OR or 140 Amp O.C. Trip	74A, 74B, 38X/P-2A1 62Y (A) 2-41229/2A5 MCC (B) 2-42032/2B5 MCC	OWD-103
RC PP 2A2 REVERSE ROTATION J-20	1. 2A2 RCP rotating in reverse as detected by hi reverse oil flow thru thrust runner oil PP. PP seal damage probably occurring. 2.(A) Pump Amps, breaker position indication. (B) Low oil pressure alarm.	1. None 2.(A) On A Running Pump; determine the validity of alarm. (B) On Stopped/Started Pump-Valid Alarm; STOP ALL RCPs, follow Nat. Circ. Cooldown Emergency PROC. 2-0120040.	12.7 GR1 Reverse Oil Flow	FS-1166, - 1167 2A2 RCP	OWD-111
RC PP 2A2 LIFT PP OVERLOAD J-28	1. 2A2-A, AND/OR 2A2-B oil lift pump; (A) Has tripped on overload, (B) Has lost control power, (C) OR, has been racked out. 2. Respective oil lift pump bkr indicate lights-out	1. Pump trips 2.(A) Ensure 2A2 RCP oil lift pump running if required. (B) Check breakers locally, (C) Notify Elect. Dept. if necessary	Therm. OVRD OR 140 Amp O.C. Trip	74A, 74B 38X/P-2A2, 62Y (A) 2-42134/2B6 MCC (B) 2-41327/2A6 MCC	OWD-111
BLANK J-36	BLANK			-----	
IOC CNL A TROUBLE J-44	(later)	(later)	(later)	YQIRBLJA, YPFAILB, YSVAB -----	

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ANNUNCIATOR PANEL J VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2B1 OVRID/TRIP J-5	1.(A) RCP has tripped on overcurrent, (B) OR, RCP has lost control power, (C) OR, RCP has been racked out. 2.(A) Pump Amps Zero (B) Breaker Indicator Lights - green or out.	1.(A) Pump trips - stops. (B) Rx will trip on -low RCS flow. 2.(A) If critical; follow Rx trip Off-Norm. Procedure 2-0030130. (B) If critical and ALL pumps lost; follow Nat.-Circ. Cooldown Emerg. Proc 2-0120040 (C) Refer to RCP Off-Norm. Proc. 2-0120034.	Therm. OVRID OR TME Dependent O.C. Trip	74-1, 74-2 Trip Contacts BRK 2-30205 2B1 6.9 KV Bus	O/D-105
RC PP 2B1 VIBRATION III J-13	1. Excessive vibration or axial shaft thrust movement detected on 2B1 RCP. 2. Vibration and thrust monitor meters on vibration monitoring equipment behind RIGB-204.	1. None 2.(A) Check display indicators behind RIGB-204 (B) Follow RCP Off-Normal Proc. 2-0120034	Variable Setpoint Set 10% Higher Than Normal	YB-REL-01-3 Vibration Detection Equipment Behind RIGB-204	O/D-92
RC PP 2B2 OVRID/TRIP J-21	1.(A) RCP has tripped on overcurrent, (B) OR, RCP has lost control power, (C) OR, RCP has been racked out. 2.(A) Pump Amps Zero (B) Breaker Indicator Lights - green or out.	1.(A) Pump trips - Stops. (B) Rx will trip on-low RCS flow. 2.(A) If critical; follow Rx trip O/N Proc. 2-0030130. (B) If critical and ALL PP lost; follow Nat. Circ. Cooldown Emerg. Proc. 2-0120040	Therm. OVRID OR TME Dependent O.C. Trip	74-1, 74-2 Trip Contacts BRK 2-30105 2A1 6.9KV Bus	O/D-113
RC PP 2B2 VIBRATION III J-29	1. Excessive vibration or axial shaft thrust movement detected on 2B2 RCP. 2. Vibration and thrust monitor meters on vibration monitoring equipment behind RIGB-204.	1. None 2.(A) Check display indicators behind RIGB-204 (B) Follow RCP O/N Proc. 2-0120034	Variable Setpoint Set 10% Higher Than Normal	VB-43L-01-2 Vibration Detection Equipment Behind RIGB-204	O/D-92
RCP VIB MONITORING SYSTEM/POWER FAILURE J-37	1. Power supply lost to upper or lower vibration equipment rack. 2. Loss of indications on RCP vibration and thrust monitors in affected area.	1. Loss of vibration monitoring capability. 2.(A) Check fuse "14" on "NB" PWR supply & fuse "5" on "NA" power supply, inside RIGB (B) Notify I & C Department	"0" AC Voltage On Either Rack	VB-PS/SI-01-1,2 Vibration Monitoring Equip. Power Supplies Behind RIGB-204	O/D-92
ICC OBNL B SUBCOOL MARGIN LO J-45	(LATER)	(LATER)	(LATER)	-----	

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ANNUNCIATOR PANEL J VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2B1 SEAL J-6	1.(A) HI-press; pump gasket leak detect, (B) HI-temp; lower cavity, (C) HI or low - press; upper seal cavity, (D) HI or low - press; bleed-off cavity, (E) HI or low - flow; controlled bleed-off. 2. Observe pump indicated parameters	1. None 2.(A) Identify alarming SIGMA indicator. (B) If no SIGMA indicators abnormal; alarm is from pump gasket leak. (C) Follow RCP Off-Norm. Proc. #2-0120034.	A) 500 PSIG B) 170° F C) 945/55 PSIG D) 150/25 PSIG E) 1.25/.75 GPM	FIA-1170, TIA-1171, PIA-1172-1173, PS-1170 FIA, PIA, and TIA on RIGB-203 and PS is on RCP	GND-107
RC PP 2B1 OIL PRESS/FLO/LVL HI/LO R J-14	1.(A) Low HDR pressure to lower bearings. (B) Low flow to lower guide bearings. (C) Low flow from cooler (D) High or low level in upper or lower reservoirs 2.(A) Oil level indicators high or low. (B) Bearing temperatures. (C) Reflash panel RA-RAB-48 Behind RIGB	1. None 2.(A) Check REFL panel behind RIGB to determine alarm cause. (B) Follow RCP Off-Norm. Proc. #2-0120034.	A) 2000 PSIG B) 7 GPM C) 7 GPM D) ± 2" from Normal	RA-RAB-48 Reflash Panel Behind RIGB-204	GND-107
RC PP 2B2 SEAL J-22	1.(A) HI-press; pump gasket leak detect, (B) HI-temp; lower cavity, (C) HI or low-press; upper seal cavity, (D) HI or low-press; bleed-off cavity, (E) HI or low-flow; controlled bleed-off. 2. Observe pump indicated parameters.	1. None 2.(A) Identify alarming SIGMA indicator (B) If no SIGMA indicators abnormal; alarm is from pump gasket leak. (C) Follow RCP Off-Norm. Proc. 2-0120034.	A) 500 PSIG B) 170° F C) 945/545 PSIG D) 150/25 PSIG E) 1.25/.75 GPM	FIA-1180, TIA-1181, PIA-1182-1183, PS-1180 FIA, PIA, and TIA on RIGB-203, and PS is on RCP	GND-115
RC PP 2B2 OIL PRESS/FLO/LVL HI/LO R J-30	1.(A) Low HDR pressure to lower bearings. (B) Low flow to lower guide bearings. (C) Low flow from cooler. (D) High or low level in upper or lower reservoirs 2.(A) Oil level indicators high or low. (B) Bearing temperatures. (C) Reflash panel RA-RAB- RIGB	1. None 2.(A) Check reflash panel behind RIGB to determine alarm cause. (B) Follow RCP Off-Norm. Proc. #2-0120034.	A) 2000 PSIG B) 7 GPM C) 7 GPM D) ± 2" from Normal	RA-RAB-50 Reflash Panel Behind RIGB-204	GND-115
BLANK J-38	BLANK			-----	
IOC ONL. B RX VESSEL LEVEL LO J-46	(LATER)	(LATER)	(LATER)	-----	

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL J VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2B1 TBP HI J-7	1. High temperature on 2B1 RCP; (A) Upper thrust bearing, (B) OR, lower thrust bearing 2.(A) Upper/lower thrust bearing temperature SIGMA indicators. (B) Thrust bearing monitor behind RTGB-204.	1. None 2.(A) Check COW flow to pump (B) Follow RCP Off-Norm. Proc. 2-0120034.	200° F HI Temp	TIA-1178, 1179 Temp Indicating Alarm SIGMAS RTGB-203	OMD-106
RC PP 2B1 CLG WTR FLO LO J-15	1. Low COW flow from 2B1 RCP, on individual PP COW flow. 2.(A) Individual (203) and combined (206) COW flow. (B) Seal lck, and RCP "N" IIR-valve positions. (C) Pump oil and seal temperatures. (D) SIAS signal presence.	1. Individual pump return line low - No Auto Action. 2.(A) <u>Low</u> ; Adjust RCP COW return header valve outside Bio-Shield. (B) Follow RCP Off-Norm. Proc. #2-0120034.	190 GPM Low Flow	FIA-1178 Flow Indicating Alarm System RTGB-203	OMD-105
RC PP 2B2 TMP HI J-23	1. High temperature on 2B2 RCP (A) Upper thrust bearing, (B) OR, lower thrust bearing. 2:(A) Upper/lower thrust BRG Temp. SIGMA indicators (B) Thrust BRG monitor behind RTGB-204	1. None 2.(A) Check COW flow to pump. (B) Follow RCP Off-Norm. Proc. #2-0120034.	200° F HI Temp	TIA-1188, - 1189 Temp Indicating Alarm SIGMAS RTGB-203	OMD-114
RC PP 2B2 CLG WTR FLO LO J-31	1. Low COW flow from 2B2 RCP, on individual pump COW return line. 2.(A) Individual (203) and combined (206) COW flow. (B) Seal lck, and RCP "N" IIR-valve positions. (C) Pump oil and seal temperatures. (D) SIAS signal presence.	1. Individual PP return line low-No Auto Action 2.(A) <u>Low</u> ; Adjust RCP COW return header valve outside Bio-Shield. (B) Follow RCP Off-Norm. Proc. #2-0120034.	190 GPM Low Flow	FIA-1188 Flow Indicating Alarm SIGMA RTGB-203	OMD-113
BLANK J-39	BLANK			-----	
LOC ONL B RX CORE EXIT TEMP HI J-47	(LATER)	(LATER)	(LATER)	-----	

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL J VERTICAL COLUMN B

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETTING	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RC PP 2B1 REVERSE ROTATION J-8	1. 2B1 RCP rotating in reverse as detected by reverse oil flow thru the thrust runner oil pump. Pump seal damage probably occurring. 2.(A) Pump Amps, breaker position indication. (B) Low oil pressure alarm.	1. None 2.(A) On A Running Pump; determine validity of alarm. (B) On Stopped/Started Pump - Valid Alarm; STOP ALL RCPs, follow Nit.-Circ. Cooldown Emergency Proc. 2-0120040.	12.7 GRM Reverse Oil Flow	FS-1176, - 1177 Thrust Runner Oil Pump 2B1 RCP	OND-107
RC PP 2B1 LIFT PP OVERLOAD J-16	1. 2B1-A or 2B1-B oil lift pump; (A) Has tripped on overload, (B) Has lost control power, (C) OR, has been racked out. 2. Respective oil lift pump bkr indicate lights-out	1. Pump trips 2.(A) Ensure 2B1 RCP oil lift PP running if required. (B) Check breakers (C) Notify Elect. Dept. if necessary	Thrust. OVRD OR 140 Amp O.C. Trip	74A, 74B 38X/P-2B1,62Y BRK Contacts (A) 2-42029/2B5 MOC (B) 2-41230/2A5 MOC	OND-107
RC PP 2B2 REVERSE ROTATION J-24	1. 2B2 RCP rotating in reverse, as detected by high reverse oil flow thru the thrust runner oil pump. Pump seal damage probably occurring 2.(A) Pump Amps, breaker position indication. (B) Low oil pressure alarm	1. None 2.(A) On A Running Pump; determine the validity of alarm. (B) On Stopped/Started Pump - Valid Alarm; STOP ALL RCPs, follow Nit.-Circ. Cooldown Emergency Procedure #2-0120040.	12.7 GRM Reverse Oil Flow	FS-1186, -1187 2B2 RCP	OND-115
RC PP 2B2 LIFT PP OVERLOAD J-32	1. 2B2-A and/or 2B2-B oil lift pump; (A) Has tripped on overload, (B) Has lost control power, (C) OR, has been racked out. 2. Respective oil lift pump bkr indicate lights-out	1. Pump trips 2.(A) Ensure 2B2 RCP oil lift pump running if required. (B) Check breakers locally, (C) Notify Elect. Dept. if necessary	Thrust. OVRD OR 140 Amp O.C. Trip	74A, 74B, 38X/P-2B2,624 (A) 2-41328/2A6 MOC (B) 2-42133/2B6 MOC	OND-115
BLANK J-40	BLANK				
ICC ORL B TROUBLE J-48	(LATER)	(LATER)	(LATER)		

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX TRIP BKR TCB-2 OPEN K-1	1. Reactor trip circuit breaker #2 has; (A) Tripped opened by RPS trip signal, (B) Tripped open by manual pushbutton on RIGB (C) Tripped open from loss of control DC power (D) OR, has been racked out. 2. Breaker position lights on RPS trip SGR Buss Mimic - green	1. (A) Breaker TCB-2 opens. (B) If power is lost to CEA buss; Rx trips 2. (A) If Rx Trips; follow Rx Trip Off-Norm. Procedure #2-0030130 (B) If one breaker only; check breaker locally	Mech. Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93302 CEA Trip Buss	OND 413
RX TRIP BKR TCB-1 OPEN K-9	1. Reactor trip circuit breaker # _____ has; (A) Tripped opened by RPS trip signal, (B) Tripped open by manual pushbutton on RIGB (C) Tripped open from loss of control DC power, (D) OR, has been racked out. 2. Breaker position lights on RPS trip SGR Buss Mimic - green	1. (A) Breaker TCB-1 opens. (B) If power is lost to CEA buss, Rx trips. 2. (A) If Rx Trips; follow Rx Trip Off-Norm. Procedure #2-0030130. (B) If one breaker only; check breaker locally, notify Elect. Dept. if necessary	Mech. Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93301 CEA Trip Buss	OND 411
REACTOR TAVG/TREF TEMP HI K-17	1. RCS average temperature has risen above secondary reference temperature for present turbine power level. 2. (A) A/P Annunciator - alarming (K-18). (B) TAVE/TREF Recorders/Displays (C) CEDMS Auto Insertion of CEAS (D) RCS temperature indications	1. (A) Automatic CEA insertion starts when Temp. difference exceeds 2° F. (B) Automatic CEA insertion, FAST SPEED when Temp. difference exceeds 4° F. 2. Reduce RCS temperature by adjusting turbine load, boration, or CEA insertion to match reactor and turbine power.	6.6° F RCS TAVE Greater Than TREF	RRS, HS-1100-10 Temp. Error Alarm ----- Selected Reactor REG RIGB-204 Rear	OND 404
REACTOR TAVG/TREF TEMP LO K-25	1. RCS average temperature has fallen below secondary reference temperature for present turbine power 2. (A) TAVE/TREF Recorders/Displays (B) CEDMS Auto-w/drawal lights illuminated. (C) RCS temperature indications	1. None (Auto-withdrawal feature disabled) 2. Match RCS TAVE with TREF by adjusting turbine load, dilution, or CEA withdrawal.	6.6° F RCS TAVE Less Than TREF	RRS, HS-1100-10 Temp. Error Alarm ----- Selected Reactor REG RIGB-204 Rear	OND 404
BLANK K-33	BLANK			-----	
BLANK K-51	BLANK			-----	

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX TRIP BKR TCB-6 OPEN K-2	1. Reactor Trip Circuit Breaker #6 has; (A) Tripped opened by RPS trip signal, (B) Tripped open by manual pushbutton on RIGB (C) Tripped open from loss of control DC Power (D) OR, has been racked out. 2. Breaker position lights on RPS Trip SGR Bus Mimic - green.	1. (A) Breaker TCB-6 opens. (B) If power is lost to CEA buss, Rx trips. 2. (A) If Rx Trips; follow Rx Trip Off-Normal Procedure #2-0030130. (B) If one breaker only; check breaker locally, notify Elect. Dept. if necessary	High Contact From Actual Breaker Position	52a Mechanical Bkr Contact ----- Bkr 2-93306 CEA Trip Buss	OWD 414
RX TRIP BKR TCB-5 OPEN K-10	1. Reactor Trip Circuit Breaker #5 has; (A) Tripped opened by RPS trip signal, (B) Tripped open by manual pushbutton on RIGB (C) Tripped open from loss of control DC power (D) OR, has been racked out. 2. Breaker position lights on RPS Trip SGR Bus Mimic - green.	1. (A) Breaker TCB-5 opens. (B) If power is lost to CEA buss, Rx trips. 2. (A) If Rx Trips; follow Rx Trip Off-Normal Procedure #2-0030130. (B) If one breaker only; check breaker locally, notify Elect. Dept. if necessary	High Contact From Actual Breaker Position	52a Mechanical Bkr Contact ----- Bkr 2-93305 CEA Trip Buss	OWD 412
AUTO WITHDRAWAL PROHIBIT K-18	1. Multiple inputs indicative of HI-Reactor Power will give "AWP"; (A) HI-TOOLD RCS Temperature (B) Steam bypass demand signal (C) TAVE/TREF Deviation (D) CEA drop from (ADS) 2. Plant parameters indicating above conditions	1. Prevents automatic withdrawal of CEAS by CEMCS. (NOTE: Auto Withdrawal Feature Defeated) Functions as alarm function only. 2. Determine if abnormal plant conditions exist and take action to correct	A) 556° F B) Contact from SDCS C) 6.6° F D) Rod Bottom Rod Switch	CEMCS AWP ALARM OUTPUT ----- CEMCS	OWD 1097
CEA WITHDRAWAL PROHIBIT K-26	1. CEA withdrawal in any mode being prevented by presence of 2 of the same RPS pretrips below; (A) Local power density - High (B) Rx power-high (C) Start-Up rate - high (D) Thermal margin/low pressure - low 2. Pretrip RPS indicators and respective annunciators	1. Prohibited from CEA withdrawal in any mode 2. (A) Take action to reduce respective pre- trip condition.(CEA INSERTION IS available) (B) If CEA withdrawal could add an LFD condition, bypass capability is provided	2/4 On Any Of Listed Pre-trips (see RPS setpoints)	CEMCS OWP ALARM OUTPUT ----- Control Element Drive Master Control System	OWD 1097
CEA REG GROUP WITHDRAWAL PROHIBIT K-34	1. CEMCS is preventing any Reg. CEAS to be withdrawn in a GROUP Mode because shutdown CEAS are not all full out. 2. (A) CEA positions displayed on ADS screen. (B) CEA positions from DDCS.	1. Inability to withdraw Reg CEAS in a Group Mode. 2. Withdraw all shutdown CEAS out, if Reg Group withdrawal is desired.	Any Shutdown CEA not at UEL.	CEMCS "IRG" Interlock ----- RIGB-204	OWD 1097
CEA S/D GROUP INSERTION PERMISSIVE K-42	1. All Reg CEAS are inserted and a CEMCS permissive now exist to insert the shutdown CEAS in a Group Mode. 2. (A) CEA positions displayed on ADS screen. (B) CEA positions from DDCS.	1. Inability to drive shutdown CEAS into the core in a Group Mode. 2. Insert all CEAS to less than 9" if shutdown CEA insertion is desired.	Any regulat- ing CEA not or below IFL.	CEMCS "ISIT" Interlock ----- RIGB-204	OWD 1097

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ST. LUCIE UNIT NO. 2
 OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX TRIP BUS TIE BKR TCB-9 OPEN K-3	1. CEA trip buss the breaker No. 9 is open 2. CEA Rx trip SAGR Minc on RPS.	1. None 2. Maintain tie Bkr-9 closed during normal Ops to assure CEA MG set synchronization capability	Mech. Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93309 CEA Trip Buss	GD 419
CEA MOTION INHIBIT K-11	1. All CEA motion in all modes has been stopped due to abnormal conditions; (A) CHRP - Interlock on Reg & (PL) CEAs. (B) OHSI - Interlock on shutdowns (C) Group out of sequence (D) Group Deviation (E) PDIL Violation 2. (A) CEA position display on ADS screen. (B) Individual motion inhibit annunciators	1. All CEA motion has been inhibited in all Modes, by ADS generated CEA Motion Inhibit 2. (A) Determine cause for the OMI. (B) Follow FLCEA Off-Normal Proc 2-00110030	A) < 122" SUCEAs B) > 10" RPG CEAs C) < 83" Sep D) > 4" Dev E) < PDIL	CEMCS "OMI" Interlock ----- From Analog Reed Switch Pos.	GD 1097
GROUP OUT OF SEQUENCE (DOFS) K-19				DATA PROCESS, o.o.s -----	GD 1550
GROUP OUT OF SEQUENCE (ADS) K-27				ANALOG DISPLAY -----	GD 1097
GROUPED CEA CEMCS K-35				CEMCS -----	GD 1097
ADS COOLING FAILURE K-43				ADS -----	GD 1097

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX TRIP BKR TCB-3 OPEN K-4	1. Reactor trip circuit breaker #3 has; (A) Tripped open by manual pushbutton on RTGB, (B) Tripped open by manual pushbutton on RTGB (C) Tripped open from loss of control DC power (D) OR, has been racked out 2. Breaker position lights on RPS Trip SGR Bus Mimic - green.	1. (A) Breaker TCB-3 opens. (B) If power is lost to CEA buss, Rx trips 2. (A) <u>If Rx Trips</u> ; follow Rx Trip Off-Normal Procedure #2-0030130. (B) If one breaker only; check breaker locally, notify Elect. Dept. if necessary	High Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93304 CEA Trip Buss	GD 415
RX TRIP BKR TCB-4 OPEN K-12	1. Reactor trip circuit breaker #4 has; (A) Tripped open by RPS trip signal, (B) Tripped open by manual pushbutton on RTGB (C) Tripped open from loss of control DC power, (D) OR, has been racked out. 2. Breaker position lights on RPS Trip SGR Bus Mimic - green.	1. (A) Breaker TCB-4 opens (B) If power is lost to CEA buss, Rx trips 2. (A) <u>If Rx Trips</u> ; follow Rx Trip Off-Normal Procedure #2-0030130. (B) If one breaker only; check breaker locally, notify Elect. Dept. if necessary	High Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93304 CEA Trip Buss	GD 417
CEA PRE-PWR DEPENDENT INSERTION (DDPS) K-20	1. Indicates one or more CEAs is about to exceed acceptable insertion limits for existing T power level as determined by the DDPS. 2. (A) CEA pulse counter position indicators (B) DDPS; CEA Position Log and T power. (C) CEA positions as displayed on ADS screen.	1. None 2. (A) Stop CEA insertion prior to reaching FDIL limit, if possible. (B) If dropped CEA, follow FLCEA-Off-Normal Procedure #2-0110030. (C) Ensure CEA position meets Tech Spec Insertion Limits.	5" Above FDIL Variable Setpoint	Data Process, PFIL Alarm Output ----- DDPS Computer	GD 1550
CEA PRE-PWR DEPENDENT INSERTION (ADS) K-28	1. Indicates one or more CEAs is about to exceed acceptable insertion limits for existing Q-Power as determined by ADS display. 2. (A) CEA positions & PPI alarm on ADS display (B) RPS highest Q-Power lever. (C) Back-up display system readout	1. None 2. (A) Stop insertion prior to reaching FDIL limit, if possible. (B) If dropped CEA, follow FLCEA Off-Norm. Procedure #2-00110030. (C) Ensure CEA positions meet Tech Spec insertion limits.	Variable as Function of Q-Power	Analog Display Alarm Output ----- ADS Micro-Computer Behind RTGB-204	GD 1097
CONTINUOUS GRIPPER VOLT HI K-36	(later)	(later)	(later)	CEMKS Alarm Output -----	GD 1097
CEA MOTION CONTINUOUS K-44	1. One or more CEAs has been inserting or with- drawing for greater than 30 seconds. 2. (A) CEA position display on ADS screen. (B) DDPS pulse counter CEA position displays (C) CEMKS Control Panel Displays	1. None 2. Ensure CEA motion is under operator control	30 Seconds of continuous CEA motion	CEMKS Alarm Output ----- ADS Micro-Computer Behind RTGB-204	GD 1097

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX TRIP BKR TCB-7 OPEN K-5	1. Reactor trip circuit breaker #7 has; (A) Tripped opened by RPS Trip Signal (B) Tripped open by manual pushbutton on RTGB (C) Tripped open from loss of control DC power (D) OR, has been racked out. 2. Breaker position lights on RPS Trip Sgr Buss Minc - green.	1. (A) Breaker TCB-7 opens. (B) If power is lost to CEA Buss, Rx Trips 2. (A) If Rx Trips; follow Rx Trip Off-Normal Procedure #2-0030130. (B) If on breaker only; check breaker locally, notify Elect. Dept. if necessary	Mech Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93307 CEA Trip Buss	OND 416
RX TRIP BKR TCB-8 OPEN K-13	1. Reactor trip circuit breaker #8 has; (A) Tripped opened by RPS Trip Signal, (B) Tripped open by manual pushbutton on RTGB (C) Tripped open from loss of control DC power (D) OR, has been racked out 2. Breaker position lights on RPS Trip SGR Buss Minc - green.	1. (A) Breaker TCB-8 opens. (B) If power is lost to CEA Buss, Rx Trips 2. (A) If Rx Trip; follow Rx Trip Off-Normal Procedure #2-0030130. (B) If one breaker only; check breaker locally, notify Elect. Dept. if necessary	Mech Contact From Actual Breaker Position	52a Breaker Contact ----- Bkr 2-93308 CEA Trip Buss	OND 418
CEA POWER DEPENDENT INSERTION (DDPS) K-21	1. One or more CEAs is inserted to or below the DDPS Power dependent insertion limit for existing T Power Level. 2. (A) DDPS; CEA positions, and T Power. (B) CEA positions on ADS screen.	1. No Auto function on PDIL from DDPS. 2. (A) Ensure CEA insertion has ceased. (B) If dropped CEA, follow FLCEA Off-Normal Procedure #2-0110030.	Variable as Function of Delta-T Power	Data Process, PDIL Alarm Output ----- DDPS Computer Behind RTGB-204	OND 1550
CEA POWER DEPENDENT INSERTION (ADS) K-29	1. One or more CEAs is inserted to or below the ADS Power dependent insertion limit existing Q-Power Level. 2. (A) CEA positions on ADS screen. (B) RPS highest Q-Power Level. (C) Back-up display system read-out	1. CEA Motion Interlock is generated stopping all CEA Motion, except in manual individual 2. (A) Commence rotation and start withdrawal of CEAs to above PDIL. (B) If dropped CEA; follow FLCEA Off-Normal Procedure #2-0110030. (C) Ensure CEA insertion within Tech Specs	Variable as Function of RPS Q-Power	Analog Display Alarm Out ----- AHS Micro-Computer Behind RTGB-204	OND 1097
BLANK K-37	BLANK			-----	
BLANK K-45	BLANK			-----	

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CEA AUTO MOTION LOW POWER PROHIBIT K-6	1. Automatic CEA motion signals from RRS have been prohibited, due to low power level. 2. Nuclear linear range power on 9 & 10 Power Recorder JR-009/010 on RTGB-204	1. No Automatic CEA 2. (A) Ensure proper power level for prohibit (B) Operate CEA in manual modes.	Below 11% Decreasing, Up to 15% Increasing (Linear [9/10]power)	RRS, IS-1100-10 Low Power Motion Interlock ----- Selected Reactor Regulating System RTGB-204 Rear	GD 403 RRS Tech Manual 2998-12809
RX REG SELECTED SYS INOPERATIVE K-14	1. The selected reactor REG System; (A) Has lost one or more power supplies, (B) OR, RRS in Test, as sensed by one more Oper/ Cal switches out of operate. 2. (A) Unexplained CEA motion or TAVE/TREF Abnormal (B) RRS drawer "TEST" and "POWER" indicator lights	1. None (later) 2. (A) Swap reactor REG systems with select Switch. (B) Stabilize plant; take manual control of SICS, CEMCS, and Pressurizer Level Controls if necessary.	Selected RRS A) Loss of power B) In Test Mode	RRS, IS-1100-10 Inoperative Alarm Output ----- Selected Reactor Regulating System RTGB-204 Rear	GD 403 RRS Tech Manual 2998-12809
CEA POSITION +/- 4 INCH DEVIATION (DDPS) K-22	1. A deviation exist of $\geq 4"$ in CEAs within a Group as sensed by pulse counter position, from CEM Coil Power Programmers. 2. (A) DDPS CEA Position Log. (B) Read switch position on ADS screen or back-up display system.	1. None - (DDPS Dev. - alarm only) 2. (A) Check Reed Switch positions (B) Check DDPS Log of CEA positions (C) Correct DDPS pulse counter CEA positions if applicable (D) Follow FLCEA Off-Normal Proc. 2-0110030	+/- 4" Highest to Lowest CEA IN A Group	Data Process. Dev (Deviation Alarm) ----- DDPS Computer Behind RTGB-204	GD 432
CEA POSITION +/- 4 INCH DEVIATION (ADS) K-30	1. A deviation exist of $\geq 4"$ in CEAs within a Group, as sensed by ANALOG Read Switch Position from the ADS. 2. (A) ADS Read Switch CEA positions. (B) Back-up display system read-out	1. CMI-CEA motion inhibit, preventing CEA motion in any mode. 2. (A) Follow FLCEA Off-Normal Proc. 2-0110030 (B) CMI may be bypassed to allow MI mode ability, to realign CEAs.	+/- 4" Highest to Lowest CEA in a Group	ANALOG DISPLAY "PPL" Alarm ----- CEA Micro-Computer Behind RTGB-204	GD 1097
CEA POSITION +/- 8 INCH DEVIATION (DDPS) K-38	1. A deviation exist of $\geq 8"$ in CEAs within a Group as sensed by pulse counter position, from CEM Coil Power Programmers. 2. (A) DDPS CEA Position Log. (B) Read switch position on ADS screen or back-up display system read-out.	1. None - (DDPS Dev. - alarm only) 2. (A) Check Reed Switch Positions (B) Check DDPS Log of CEA positions (C) Correct DDPS pulse counter CEA positions if applicable. (D) Follow FLCEA Off-Normal Proc 2-0110030	+/- 8" Highest to Lowest CEA in a Group	DATA PROCESS (Deviation Alarm) ----- DDPS Computer Behind RTGB-204	GD 432
ISOL CAB POWER FAIL / GROUND LET K-46	1. (A) Loss of 125V DC power to, (B) OR, IC ground detected in; HA, HB, HC, HD, SA, or SB Isolation cabinets in control room. 2. DC Ground Alarm	1. None 2. Notify I & C and Elect. Departments	(later)	Power Failure Ground Detected Relays ----- In each Safety Isolation Cabinet in	GD 1004

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ANNUNCIATOR PANEL K VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CEA DRIVE MG SET 2A OVERCURRENT TRIP K-7	1. Indicates 2A CEA MG set has tripped on overload. 2. (A) MG set output breaker indication - Green on CEA trip buss Mimic. (B) Local Alarm Annunciator (K-16)	1. (A) If other MG set ON; None (B) If other MG set OFF; CEA buss will de- energize, causing a reactor trip. 2. (A) <u>If Rx Trips</u> ; follow Rx Trip Off-Normal Procedure 2-0030130. (B) Check MG set locally	(Later)	t,r (later) ----- (later)	GD 401
CEA DRIVE MG SET 2A LOCAL ALARM K-15	1. Indicates Local Alarm Annunciator at the 2B MG set control cabinet. (later - list) 2. None	1. (later) 2. Have operator check MG set locally.	(List Later)	CONTROL CAB. (Alarm Output) ----- 2A MG SET	GD 409
CEMCS TROUBLE K-23	1. CEMCS timer clock "A" has failed, as detected (more information later) 2. None	1. Automatic transfer of system to clock "B" causing no disturbance to system operation 2. Notify I & C Department	Fall-Over Transfer to Clock "B"	CEMCS "Trouble Alarm" ----- CEMCS Cable Spread Room	GD 1097
CEMCS ABNORMAL K-31	1. Indicates removal of any rack-mounted circuit card in CEMCS System. 2. Abnormal functions of CEMCS System.	1. None 2. Notify I & C Department	Circuit- Card Removal From Contacts in	CEMCS "Card Removal" ----- CEMCS in Control Room and Cable Spread Room	GD 1097
BLANK K-39	BLANK			-----	
ANNUNCIATOR POWER SUPPLY FAILURE K-47	(LATER)	(LATER)		-----	

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CEA DRIVE MG SET 2B OVERCURRENT TRIP K-8	1. Indicates 2A CEA MG set has tripped on overload 2. (A) MG set output breaker indication - green on CEA trip buss main (B) Local alarm annunciator (K-16)	1. (A) If other MG set ON; None (B) If other MG set OFF; CEA buss will de- energize causing a reactor trip 2. (A) If Rx Trips; follow Rx trip Off-Normal Procedure #2-0030130. (B) Check MG set locally	(later)	T, R (later) ----- (later)	GD 402
CEA DRIVE MG SET 2B LOCAL ALARM K-16	1. Indicates local alarm annunciation at the 2B MG Set Control Cabinet (later List) 2. None	1. (Later) 2. Have operator check MG Set locally	(later list)	CONTROL CAB. (Alarm Output) ----- 2B MG SET Control Cabinet	GD 410
ANALOG DISPLAY SYS TROUBLE K-24	1. ANALOG display system trouble. (later information add) 2. (A) Loss of flashing "Live Computer" square. (B) Information later	1. None 2. Notify I & C	(later)	ANALOG DISPLAY ----- (later)	GD 1097
ANALOG DISPLAY SYS TEST K-32	1. ANALOG display system is in the teste mode. (later information add)	1. None 2. Notify I & C	(later)	ANALOG DISPLAY ----- (later)	GD 1097
BLANK K-40	BLANK			-----	
ANNUNCIATOR GROUND DETECTED K-48	(LATER)	(LATER)		-----	

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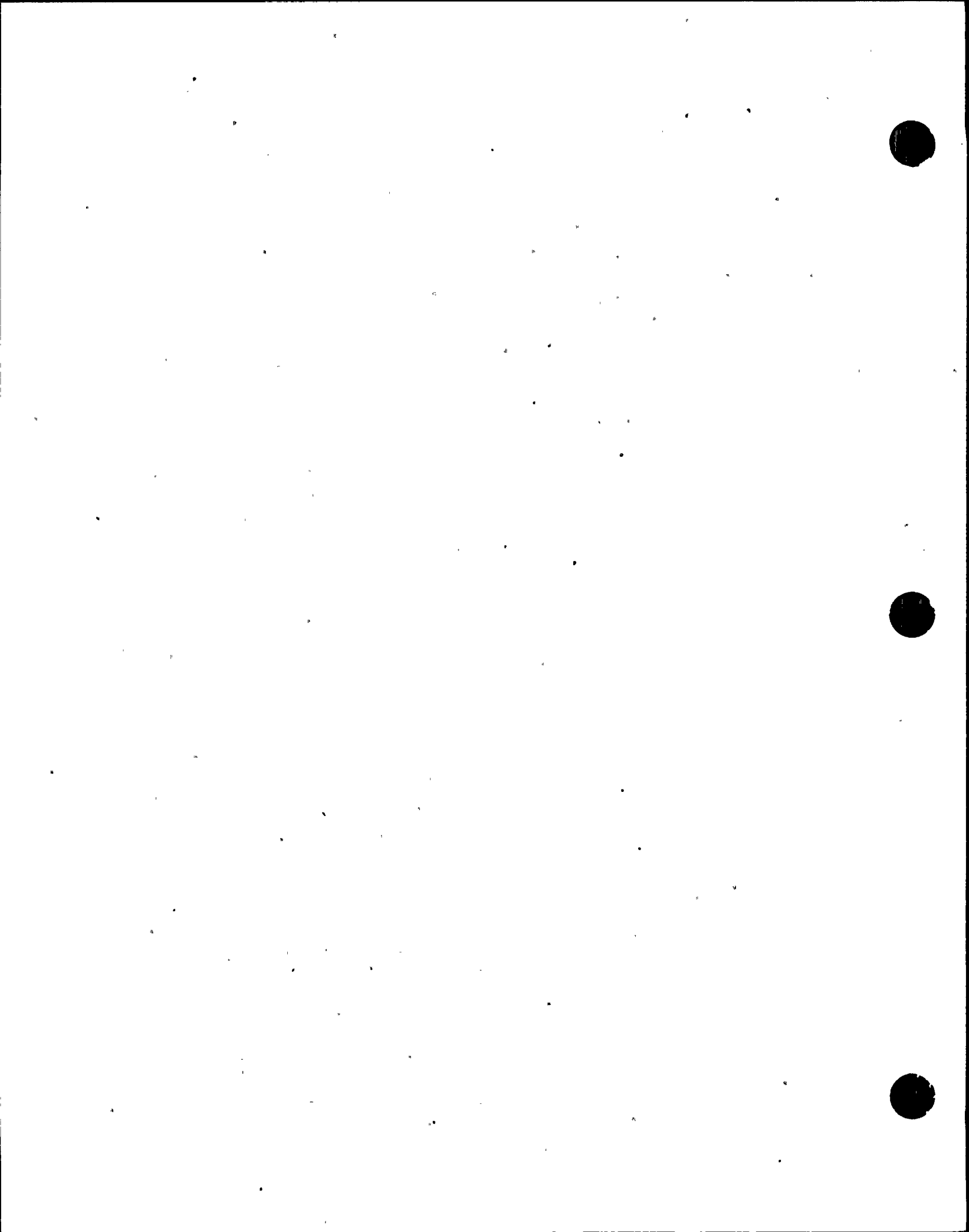


ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL L VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
REACTOR MANUAL TRIP L-1	1. Reactor has been tripped by depressing Rx Trip buttons on RTGB-204 or 201. 2. (A) Reactor trip circuit breakers open (E) Sequence-of-Events Recorder Print-Out	1. (A) Rx Trip Breakers open (B) Turbine Trip 2. Follow Rx Trip Off-Normal Proc. 2-0030130.	Rslbutton Depressed (Takes 2)	PE/MT1-1,-2 PE/MT2-1,-2 Rx Trip Rslbuttons ----- RTGB-204 and RTGB-201	CWD 411, 413, 415,417
REACTOR TRIP LVL III CINL TRIP L-9	1. RFS has tripped the reactor from a 2/4 HI reactor power condition. 2. (A) Reactor Trip Circuit Breakers - open (F) Q-Power meters, prior to trip	1. (A) Rx Trip Breakers open (B) Turbine Trip 2. Follow Rx Trip Off-Normal Proc. 2-0030130	2/4 Logic 9.6I > Last Reset (107% Max)	RFS TB(4) 5-2 Trip Estables ----- Reactor Protection System	CWD 406
REACTOR TRIP LVL III CINL PRE-TRIP L-17	1. Reactor Q-Power is within 2X of Trip Setpoint on at least one of the RFS Trip Estable. 2. (A) Q-Power meters on RTGB (E) Illuminated III-Power reset pushbuttons (C) Channel Pretrip Indicator(s)-Illuminated	1. QWP, withdrawal prohibit on 2/4 pretrips. 2. (A) Depress the WHP reset buttons. (B) Reduce reactor power by CEA insertion and/or boration if necessary	1/4 Logic 7.6IX > Last Reset	RFS TB(4)5-57 Trip Estables ----- Reactor Protection System	CWD 408
REACTOR START-UP RATE HI CINL TRIP L-25	1. RFS has tripped the reactor from a 2/4 HI-rate of power increase 2. (A) Reactor trip circuit breakers - open (B) Start-up rate prior to trip (C) Estable trip indicators - illuminated.	1. (A) Rx trip breakers open (B) Turbine trip 2. Follow Rx Trip Off-Normal Proc. 2-0030130	2/4 Logic ≥ 2.49 DM	RFS TB(4) 5-4 Trip Estables ----- Reactor Protection System	CWD 406
REACTOR START-UP RATE III CINL PRE-TRIP L-33	1. Start-up rate is high, and close to Trip setpoint 2. (A) Start-up rate meters (B) Positive reactivity addition rate. (C) Estable pretrip indicator(s) - illuminated.	1. QWP, withdrawal prohibit on 2/4 pretrips. 2. (A) Ensure CEA withdrawal, or positive reactivity additions have been slowed to within Admin SUR limit of 1.4 DM.	1/4 Logic SUR >1.3 DM	RFS TB(4) 5-50 Trip Estables ----- Reactor Protection System	CWD 408
REACTOR START-UP RATE TRIP BYPASSED L-41	1. (LATER) III-Start Up Rate Trip Estable Trips have been automatically bypassed by reactor power level not in range for trip. 2. Wide/Linear Range displayed power levels.	1. SUR Trip will be disabled 2. Ensure proper operation of bypass (NOTE: Normal Alarm-Information Only)	Bypassed <10-4% and >15% Power	RFS TB (4) 5-44 "Linear I" & "LOG" Estables ----- RFS Safety NI Drawers	CWD 408

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ANNUNCIATOR PANEL L VERTICAL COLUMN 2

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CEMS RIS UNDERVOLTAGE L-2	1. One or more undervoltage relays on the CEIM Trip Riss have de-energized, probably due to reactor 2. CEA Trip Riss Mimic - Breaker, MG set, and under- voltage relay status indicators.	1. (A) Turbine trip from (2/4) under voltage coils. (B) Steam Bypass Control System may Quick- open from (4/4) undervoltage coils. 2. Follow Rx Trip Off-Normal Proc. 2-0030130	(Later)	UV 1, -2, -3, -4 Under Voltage Relays ----- CEIM Control Cabinets in C.S. Room	OND 419
REACTOR COOLANT LOW FLOW GEN. TRIP L-10	1. RCS Low Flow has caused RIS to trip the reactor. 2. (A) Reactor trip circuit breakers open (B) RCP status and RCS flow indicators (C) Bistable TRIP indicators illuminated	1. (A) Rx Trip Breakers Open (B) Turbine Trip 2. (A) Follow Rx Trip Off-Normal Procedure #2-0030130 (B) Follow Rat-Circ/Loss Flow Emergency Procedure if all RCBs are lost.	95% of Rated RCS Flow	RIS TB (4) 5-6 Trip Bistables ----- Reactor Protection System	OND 406
REACTOR COOLANT LOW FLOW GEN. PRE-TRIP L-18	1. RCS flow is less than 97% of rated RCS flow, close to trip setpoint 2. (A) RCP status, and RCS flow indicators (B) System Grid frequency low. (C) Bistable pretrip indicator(s) illuminated	1. None 2. If reactor trips; follow Rx Trip Off-Normal Procedure #2-0030130	97% of Rated RCS Flow	RIS TB (4) 5-61 Trip Bistables ----- Reactor Protection System	OND 420
BLANK L-26	BLANK			-----	
REACTOR NUCLEAR/ Δ T POWER GEN. DEV L-34	1. A deviation exist of greater than (LATER) % between Delta-T and nuclear power on one or more channels. 2. RFS nuclear and thermal power as displayed on RIS CIP panel	1. Alarm only - none. 2. Perform Nuclear/Delta-T	(Later)	RIS TB(4) 5-32 NUC/ T Indicator ----- RIS RFS CIP PANEL	OND 408
RX ZERO INR MODE GEN. PYP L-42	1. Anyone of 4 ZHIP keyswitches in bypass, and block actuation. 2. Zero power mode: bypass keyswitch positions on RFS.	1. Bypassing of low RCS flow and thermal margin low pressure trips. 2. None; Normal during testing	Any ZHIP Block Action	RIS TB (4) 5-40 Auxiliary Relays ----- Reactor Protection System	OND 408

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ANNUNCIATOR PANEL L VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
STM GEN WTR LVL LO CIRCL TRIP L-3	1. Low steam level on one or both steam generators has tripped the reactor. 2. (A) Reactor trip circuit breakers-open. (B) S/G water level indications-Low (C) Pistable Trip indicators-Illuminated.	1. (A) Rx Trip breakers open (E) Turbine trip, APAS actuation 2. (A) Follow Rx Trip Off-Normal Procedure #2-0030130.	2/4 on Auctioneered Low S/G, @ 39% Level (Dec)	RIS TE(4) 5-8 Trip Eistables ----- Reactor Protection System	GND 406
STM GEN WTR LVL LO CIRCL. PRE-TRIP L-11	1. S/G level in one or both Steam Generators has decreased to near the RIS Trip Setpoint 2. (A) S/G water level indications (202) (206) (B) Feedwater system parameters (C) Eistable pretrip indicator(s) - illuminated	1. None until reaches trip setpoint. 2. (A) Increase feedwater to Steam Generator (E) Follow loss of S/G level & Flow Emergency Procedure #2-0700040	1 Channel Low 42% Level (Narrow Rng)	RPS TB(4) 5-63 Trip Eistables ----- Reactor Protection System	GND 420
STM GEN PRESS LO CIRCL TRIP L-19	1. S/G pressure has fallen to RPS tripset point and has tripped reactor 2. (A) Reactor trip circuit breakers - open (B) S/G pressures low (206) PCS Tave low. (C) Pistable trip indicators-Illuminated	1. (A) Rx Trip Breakers open (E) Turbine Trip 2. (A) Follow Rx Trip Off-Normal Procedure #2-0030130 (B) Follow Main Stream Line Break Emergency Procedure 2-0810040	2/4 Auctioneered Low @ 60° PSIA	RIS TB (4) 5-10 Trip Eistables ----- Reactor Protection System	GND 406
STM GEN PRESS LO CIRCL. PRE-TRIP L-27	1. S/G pressure is decreasing and is close to RPS trip setpoint. 2. (A) Steam Generator pressures-(206) (B) Condition of steam dump systems (C) Channel pre-trip indicator(s)-Illuminated	1. None 2. (A) Check all possible sources of steam leakage, such as ADA's SECS valves etc. (B) Reduce turbine load to inc. steam pressure	Any Onnl Lo-700 PSIA	RIS TB (4) 5-65 ----- Reactor Protection System	GND 420
STM GEN PRESS LO CIRCL TRIP BYPASSED L-35	1. Steam Generator low pressure trip has been bypassed with keyswitch on RIGB 2. Bypass lights and keyswitch positions on RIS channels.	1. S/G low pressure trip has been disabled. 2. (A) Normal during testing (B) If not Intest; remove keys	S/G low Press Trip keyswitch(s) In bypass	RIS TB (4) 5-38 Auxiliary Relays ----- Reactor Protection System	GND 408
REACTOR FWR RATIO CALCULATOR DEVIATION L-43	(later)	(later)	(later)	RIS TB (4) 5-79 Auxiliary Relays ----- Reactor Protection System	GND 420

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ANNUNCIATOR PANEL L VERTICAL COLUMN 4

2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
STM PYP SYS UNAVAILABLE L-4	1. (A) SYSTEM TEST switch not in OPERATE (F) VALVE SELECTOR switch not in NORMAL (C) Condenser vacuum interlock (D) SBCS EMERGENCY OFF 2. (A) Observation of SBCS valve test panel. (B) Condenser vacuum indications	1. No Steam Bypass available to condenser 2. (A) Use atmospheric pumps if necessary (B) Check/improve condenser vacuum (C) Check/reset SBCS valve panel	C) Vacuum Interlock 12" Hg Abs. (Increasing)	RIS-2 Alarm Contact Steam Bypass RICE-204 Rear	OND 748 SBCS Tech. Man. 2998-12810
STEAM BYPASS BYHAND AMP L-12	1. Indicates excessive energy present in RCS and a O.O. or isolation signal permissive to allow valves to open has been generated. 2. RCS temperatures, Rr and turbine power, and steam bypass valves & system.	1. Steam Bypass MAY actuate & open 2. Take actions to balance reactor and turbine power.	O.O. or modulation signal preset	RIS-2 Alarm Contact Steam Bypass Control System RICE-204 Rear	OND 748 SBCS Tech Man. 2998-12810
PRZR PRESS HI CINL TRIP L-20	1. High RCS Pressurizer Pressure has caused the RPS to trip the reactor. 2. (A) Pressurizer Pressure High (203)(206) (B) Bistable Trip Indicators-illuminated	1. (A) Rr Trip Breakers open (B) Turbine Trip 2. (A) Follow Rr Trip Off-normal Procedure #2-0030130. (B) Follow Pressure & Level Off-normal Procedure #2-0120035.	2/4 High Trip 2375 PSIA	RIS TB (4) 5-12 Trip Bistables Reactor Protection System	OND 406
PRZR PRESS HI CINL PRE-TRIP L-28	1. RCS pressure has risen above normal control range and is close to reactor trip setpoint. 2. (A) All available PZR pressure indications (B) Pressure control system status (C) Bistable Pretrip indicator(s)-illuminated	1. Pressure Control System should have no back-up, minimum prop. hrs, and full PZR spray 2. Follow Pressurizer Pressure and Level Off- Normal #2-0120035	2350 PSIA	RIS TB (4) 5-67 Trip Bistables Reactor Protection System	OND 420
TR/LP CINL TRIP L-36	1. RIS has tripped the reactor on low pressurizer pressure, to maintain acceptable DNER 2. (A) Reactor Trip Circuit Breakers-Open (B) Pressurizer pressure - low (C) Bistable Trip Indicators - illuminated	1. (A) Rr Trip Breakers open (B) Turbine Trip 2. (A) Follow Rr Trip Off-normal Procedure #2-0030130. (E) Take actions to increase DNER and RCS subcooling.	2/4 variable with ASI, Tcold, Prr (Min. of 1900 PSIA)	RIS TB (4) 5-14 Trip Bistables Reactor Protection System	OND 406
TR/LP CINL PRE-TRIP L-44	1. Pressurizer Pressure is insufficient to maintain acceptable DNER margin and is close to causing a reactor trip. 2. (A) DNER parameters; Rr Power, ASI, bistable pre- trip indicator(s) - illuminated.	1. ONP-withdrawal prohibit on 2/4 pretrips. 2. (A) Check all available DNB displayed parameters, and take actions to increase DNER and subcooling	Variable 50 PSID than TRIP Setpoint	RIS TB (5) 5-69 Trip Bistables Reactor Protection System	OND 420

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ANNUNCIATOR PANEL L VERTICAL COLUMN 5

2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPoint	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ONHT PRESS HI QNL TRIP L-5	1. High containment pressure has caused the RPS to Trip the reactor. 2. (A) Containment pressure safety indicators. (B) RCS pressurizer pressure indications. (C) Bistable Trip Indicators - illuminated	1. (A) Rx Trip Breakers - open (B) Turbine Trip 2. (A) Follow Rx Trip Off-Normal Procedure #2-0030130 (B) Follow applicable LCCA/MSLB Emergency Procedure	HI Trip - 4.0 PSIG	RIS TB (4) 5-18 Trip Eatables ----- Reactor Protection System	O&D 406
ONHT PRESS HI QNL PRE-TRIP L-13	1. Pressure in containment has risen to ≥ 2.5 PSIG, and is close to trip setpoint 2. (A) Containment pressure safety indicators (B) RCS pressurizer pressure indicators. (C) Bistable pretrip indicator(s) - illuminated	1. NONE 2. (A) Establish cause for high pressure (B) If not accident caused, pressure may be reduced with continuous containment purge system	HI 2.5 PSIG	RIS TB (4) 5-71 Trip Eatables ----- Reactor Protection System	O&D 420
LOSS OF LOAD QNL TRIP L-21	1. Turbine Trip has tripped the reactor by loss of load trip sensed from low EH header pressure 2. (A) EH header pressure - low (201) (B) Bistable Trip Indicators - illuminated	1. (A) Rx Trip Breakers open (B) Turbine Trip 2. Follow Rx Trip Off-Normal Procedure #2-0030130	(later)	RIS TB (4) 5-1 Trip Eatables ----- Reactor Protection System	O&D 406
LOSS OF LOAD/ LCL IWR DENS QNL TRIP BYPASS L-29	1. Reactor power has fallen to below 15% and loss of load, and LPD Trips have been automatically 2. Q-Power Level Indicators.	1. Loss of load and local power density trips are automatically bypassed. 2. NONE; normal alarm on power reduction	<15% RPS Q-Power	RIS TB (4) 5-42 Auxiliary Relays ----- Reactor Protective System	O&D 408
BLANK L-37	BLANK			-----	
BLANK L-45	BLANK			-----	



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ANNUNCIATOR PANEL L VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RCP CW FLO LO TRIP L-6	1. RPS has tripped the reactor due to low CW return header flow from the RCPs 2. (A) Reactor Trip Circuit Breakers - open (B) RCP return header flow/valve indicators (206) (C) Individual RCP CW return flow indicators (203) (D) Bistable Trip Indicators - illuminated	1. (A) RCP Trip Breakers open (B) Turbine Trip 2. (A) Follow RCP Trip Off-Normal Procedure #2-0030130. (B) Also follow RCP-Off-Normal Procedure #2-0120034.	2/4 <636 GPM CW Return Header Flow > 10 mins.	RPS TB (4) 5-22 Trip Bistables ----- Reactor Protection System	CND 406
RCP CW FLO LO 10 MIN TIC L-14	1. One or more of the RCP-CW return headers is below minimum flow trip setpoint. 2. (A) RCP return header flow/valve indications (206) (B) Individual RCP CW return flow indications (203) (C) CW system parameters (206)	1. None for 10 minutes 2. (A) Follow RCP-Off Normal Procedure 2-0120034 to restore CW to RCPs expeditiously. (B) If CW cannot be restored; reduce unit load as low as possible prior to automatic reactor trip	<636 GPM CW Return Hdr Flow	BOX A, B, C, D C/S-206-1, 2, 3, & 4 Time delay trip/test Sw ----- Inside RTGB-206	CND 206
LOCAL POWER IDENTITY ORNL TRIP L-22	1. Reactor ASI has exceeded the RIS ASI Trip Setpoint, and has generated a reactor trip. 2. (A) Reactor Trip Circuit Breakers - open (B) ASI recorded prior to trip on JR-012 (204) (C) Bistable Trip indicators - illuminated	1. (A) RCP Trip Breakers open (B) Turbine Trip 2. (A) Follow RCP Trip Off-Normal Procedure #2-0030130 (B) Notify Reactor Engineering	Variable with ASI exceeding Trip-Setpt	RPS TB (4) 5-20 Trip Bistables ----- Reactor Protection System	CND 406
LOCAL POWER IDENTITY CHN. PRE-TRIP L-30	1. Reactor ASI has exceeded the RPS ASI pretrip alarm setpoints, on one or more channels 2. (A) ASI and Trip Setpoint Indicators (206) (B) ASI and Trip Setpoint on RPS. (C) Channel Pre-Trip Indicator(s) illuminated	1. OHP - withdrawal prohibit on 2/4 Pretrips. 2. Follow ASI Control Operating Procedure #2-3200021	Variable with ASI exceeding Pretrip-Setpt	RIS TB (4) 5-73 Trip Bistables ----- Reactor Protection System	CND 420
RCP FLO SETPOINT ERROR L-38	1. Flow dependent setpoint selector switches on REPCIP Panel are selected to other than proper number of pumps running (4 pump) 2. (A) Select switch positions (B) RCP pump breaker positions	1. Changes T power calculation functions of the core protect calculator(s) 2. Return switch(es) to proper position for number of pumps running	Error Purp Sel. Sw -vs- RCP Hdr Position	RCP TB (4) 5-34 Select Switch -vs- purp bkr pos. ----- RPS Aux Relays	CND 408
BLANK L-46	BLANK			-----	

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ANNUNCIATOR PANEL L VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR POINTOUT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
S/U RANGE NI-1 CIS HI L-7	(later)	(later)	(later)	RY-005/007 -----	
TEMPERATURE RISE > 15% PER HOUR L-15	1. Rate of Thermal Power change has exceeded 15% per hour, and Specific Activity Surveillance Requirements now apply. 2. DDPS Power History Record	1. NONE 2. Notify Chemistry to take required Tech Spec required Iodine Samples.	>15% delta T Power Change per Hour	DDIS Power Alarm ----- DDIS Computer Behind RTCB-204	Q/D 1550
REG OEA LONG TERM STEADY STATE INSERT LIMIT L-23	1. CFAs have been inserted into the Tech Spec long term insertion limit area. 2. (A) CFA positions on ADS screen, and DDPS. (B) O-Power on RPS and RTCB displays	1. NONE 2. Consult Technical Specifications for Action Requirements	Insertion Below (later)	DDIS Insertion Alarm ----- DDPS Computer Behind RTCB-204	Q/D 1550
BLANK L-31	BLANK			-----	
BLANK L-39	BLANK			-----	
BLANK L-47	BLANK			-----	

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ANNUNCIATOR PANEL L VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
S/U RANGE NI-2 CIS HI L-8	(later)	(later)	(later)	KY-006/008	OWD 57
MOVABLE INCORE GUIDE TUBES PRESS HI/ LEAK L-16	(later)	(later)	(later)	63X/82 63X/83 DDES	OWD 1550
RBE CEA SHORT TERM STEADY STATE INSERT LIMIT L-24	1. CEAs have been inserted into the Tech Spec Short Term Insertion Limit Area 2. (A) CEA positions on AIS screen and DDES. (F) O-Power on RIS, and RTGB displays	1. NONE 2. Consult Technical Specifications for Action Requirements	Insertion Below (later)	LDIS Short Term Alarm DDES Computer Behind RTGB-204	OWD 1550
BLANK L-32	BLANK				
NI CHANNEL INOPERATIVE L-40	1. One or more NI Channel Drawers has; (A) OVER/CAL Switches - out of operate. (B) Circuit card(s) removed (C) (later more) 2. Switch positions on each NI Drawer	1. Trip insertion on functions fed by inoperative drawer. 2. (A) Identify source of alarming channel (B) Notify I & C Department if necessary	Switch Positions Out of Operate	RPS TB (4) 5-30 (later)	OWD 408
BLANK L-48	BLANK				

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ANNUNCIATOR PANEL M VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINTPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PURIFICATION FILTER 2A Δ/P HI M-1	1. High differential pressure across filter 2. Check letdown flow indicator FIA-2202 for proper flow.	1. No Auto Action 2. (A) Verify Alarm (E) Bypass filter and clean/replace element	20 psid	FDI-2202 Pressure Differential Indicator ----- CVCS/VCT Area Room	OWD 152
BORON CONC HI/LO M-9	1. Off-normal Boron Concentration 2. (A) Boronmeter range lights (E) Check boron concentration recorder AR-2203 on RTCB 205 (C) Check last chemistry sample	1. No Auto Action 2. (A) If abnormal: Verify boron concentration by analysis. (B) If due to normal operation at power, reset alarm set points.	Present Boron Con- centration + 50 ppm	AT-2203 Boronmeter Alarm ----- Boronmeter Control Panel Behind RTCB-204	OWD 191
BORONMETER/ BPOC RAD MON FLOW LO M-17	1. Low flow to boronmeter and process monitor 2. (A) Check letdown flow (F) Check letdown temperature	1. No Auto Action 2. (A) Check for proper valve line-up (E) Check for auto closure of V-2468 on high letdown temperature	0.5 GPM	FIA - 2203 Flow indicating Alarm ----- (later)	OWD 152
BORON LOAD CONTROL V-2525 OVERLOAD M-25	1. V-2525 will not operate electrically due to: (A) Breaker trip on overcurrent or, (E) Breaker trip on thermal overload or, (C) Breaker turned off on MCC-2B5 or, (D) Control power fuse blown 2. Loss of position indication lights	1. No Auto Action 2. (A) Operate valve locally if necessary (E) Refer to Boron Concentration Control Off-normal Procedure #2-0250031	Thermal Overload or 42 Amps O.C. Trip	Relay 74 ----- Thermal overloads and O.C. trip relay in Bkr 2-42019/MCC-2B5	OWD 190 PD & MD Sh. 38
BA GRAVITY V-2508 OVERLOAD/ SS ISOL M-33	1. V-2508 will not operate electrically due to: (A) Breaker trip on overcurrent or, (E) Breaker trip on thermal overload or, (C) Breaker turned off on MCC-2B5 or, (D) CONTROL POWER FUSE BLOWN OR, (E) Normal/Isolate switch is in ISOLATE position 2. Loss of position indication lights	1. No Auto Action 2. (A) Check breaker for proper operation (E) Operate valve locally if necessary (C) Call Electrical Dept. for assistance	Thermal Overload or 42 Amps O.C. Trip	SS/ISOL, 74 Isolate Switch/Contact ----- Thermal overloads and O.C. trip relay in Bkr. 2-42012/MCC-2B5	OWD 165 FD 7 MD Sh. 38
BA GRAVITY V-2509 OVERLOAD/ SS ISOL M-41	1. V-2509 will not operate electrically due to: (A) Breaker trip on overcurrent or, (E) Breaker trip on thermal overload or, (C) Breaker turned off on MCC-2B5 or, (D) Control power fuse blown or, (E) Normal/Isolate switch is in ISOLATE position 2. Loss of position indication lights	1. No Auto Action 2. (A) Check breaker for proper operation (E) Operate valve locally if necessary (C) Return Normal/Isolate switch to NORMAL as soon as permissible	Thermal Overload or 42 Amps O.C. Trip ----- Normal/ Isolate switch is in ISOLATE position	SS/ISOL, 74 Isolate Switch/Contact ----- Thermal overloads and O.C. trip relay in Bkr 2-42052/MCC-2B5 and Normal Isolate Switch	OWD 166 PD & MD Sh. 39

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ANNUNCIATOR PANEL M VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PURIFICATION FILTER 2B Δ/P HI M-2	1. High differential pressure across filter 2. Check letdown flow indicator FIA-2202 on RTGB 205 for proper flow.	1. No Auto Action 2. (A) Verify alarm (B) Bypass filter and clean/replace element	20 psid	FDI-2210 Pressure Differential Indicator ----- CVCS/VCR - Area Room	OWD 152
IX BYPASS TEMP HI M-10	1. Indicates a high letdown temp. due to excessive letdown flow or low COW flow to letdown lk. 2. (A) Check regen lk outlet temp. & compare with letdown lk outlet temp. (B) Check letdown flow and pressure (C) Check letdown control valves positions	1. Bypass valve diverts at 145° F 2. (A) Refer to Charging & Letdown Off-Normal Procedure #2-0210030.	140° F HI	TRC-2224 Temp. Indicating Controller ----- RTGB-205	OWD 152
FLANK M-18	FLANK			-----	
DEMIN WATER MAKE UP FLOW HI/LO M-26	1. Demineralizer flow excessively high or low. 2. Chart indicator FRC-2210X on RTGB-205 indicates + 10 GPM from setpoint.	1. No Auto Action 2. (A) Check RMW tank level & RMW pump operation. (B) Check valve lineup to ensure flow path	+ 10 GPM from present set point	FA-2210X, IS-2210 62X-2512 ----- Make-up water flow Flow Reactor RTGB-205	OWD 192
AUX SPR VALS I-SE 02-03/ I-SE 02-04 OPEN/SS ISOL M-34	1. (A) Either auxiliary spray valve has been opened (B) Either auxiliary spray valves Normal/Isolate 2. (A) Decreasing pressurizer pressure (B) Position indicating lights for valves I-SE 02- 03 or I-SE 02-04 on RTGB-203	1. No Auto Action 2. (A) Verify position of Aux. Spray Valves (B) Check the Normal/Isolate switches and return applicable switch to "NORMAL" as soon as permissible.	Either valve Open ----- Either valve "Normal / Isolate" switch in the "Isolate position	SS-1, 2/ISOL, CS-189 -3, -4 ----- Later	OWD 189
EMERG BYPASS V-2514 OVERLOAD/ SS ISOL M-42	1. Emergency borate valve V-2514 will not operate electrically from the RTGB because: (A) Breaker tripped on electrical fault or, (B) Breaker turned off at MCC-2A5 or, (C) Control circuit fuse is blown or, (D) The breaker Normal/Isolate switch is in ISOLATE 2. Position indication lights will be out if brk trips	1. No Auto Action 2. (A) Check breaker for proper operation (B) If Normal/Isolate switch is in ISOLATE return to NORMAL as soon as permissible. (C) Operate valve locally if necessary (D) Call Electrical Dept. for assistance	Thermal Overload or 42 Amp O.C. trip ----- Normal / Isolate switch is in ISOLATE	S/ISOL, 74 ----- Thermal overload & O.C. trip coil are in brkr. 2-41214/MCC-2A5	OWD 167 ----- FD & MD Sh 31

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR POINTOUT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
VCT LEVEL HI/LO H-3	1. (A) Possible leak in RCS (F) Charging/letdown flows are unbalanced (C) Auto makeup system is malfunctioning (D) Level control system is malfunctioning 2. Check level indicator on RTCB-205	1. (A) Contacts close to stop automatic make-up to VCT on HI level. (B) Contacts close to initiate automatic make up to VCT on low level 2. Refer to Boron Concentration Control Off-Normal Procedure #2-0250031	HI - >90% LO - <35% Level	IA-2226 Level Alarm ----- Local on VCT	GND 154
VCT LEVEL IO-LO H-11	1. (A) Possible leak in RCS (F) Charging/letdown flows are unbalanced (C) Auto makeup system is malfunctioning (D) Level control system is malfunctioning 2. Check level indicator on RTCB-205.	1. At 5% VCT level, valve V-2504 (RWI to charging pump suction) will open and valve V-2501 (VCT Discharge) will shut. 2. Refer to Boron Concentration Control Off-Normal Procedure #2-0250031.	5% Level	IA-2227 Level Alarm ----- Local on VCT	GND 154
VCT TEMP HI H-19	1. High temperature in VCT 2. Check temperature indicator TIA-2225 on RTCB-205	1. No Auto Action 2. Refer to charging and letdown Off-Normal Procedure #2-0210030.	HI-130° F	TIA-2225 Temp Indicating Alarm ----- RTCB-205	GND 154
BLANK H-27	BLANK	BLANK			
VCT DISCH V-2501 OVERLOAD H-35	1. Indicates that VCT discharge valve V-2501 will not operate electrically due to: (A) Flow control power fuse or, (P) Breaker has tripped on thermal overload or, (C) Breaker has tripped on over-current or, (D) Breaker has been turned off at MCC-2A5 2. Loss of position indicating lights	1. No Auto Action 2. (A) Valve may be operated manually if required (B) Refer to Charging & Letdown Off-Normal Procedure #2-0210030 (C) Call Electrical Dept. for assistance	Thermal Overload or 42 Amp O.C. Trip	74 ----- Thermal overloads and O.C. Trip coil in lkr. 2-41215/MCC-2A5	GND 161 FD & MD Sh. 31
REFUEL WTR V-2504 OVERLOAD / SS ISOL H-43	1. (A) Normal/Isolate Switch is in ISOLATE position or (B) V-2504 will not operate electrically due to: 1. Flow Control Power fuse or, 2. Breaker has tripped on thermal overload or, 3. Breaker has tripped on overcurrent or, 4. Breaker has been turned off at MCC-2A5 2. If electrical fault, position indicating light are off.	1. No Auto Action 2. (A) Valve may be operated manually if (B) Return Normal/Isolate switch to Normal position when permissible (C) Call Electrical Dept. for assistance	Thermal Overload or 23 Amp O.C. Trip ----- Normal / Isolate Switch in Isolate Position	74 and Normal/Isolate Switch ----- Thermal overloads and O.C. Trip coil in lkr. 2-42036/MCC-2B5	GND 162 FD & MD Sh. 38

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
VCT PRESS HI/LO H-4	1. (A) H ₂ or H ₂ regulators are improperly set (B) A leak exists in the VCT 2. Check pressure indicator PIA-2225 on RTGB-205	1. On high pressure: VCT reliefs will open at 75 PSIG 2. HI Press: Open VCT vent V-2513 and reduce press to normal range LO Press: Check VCT vent V-2513 and check N ₂ & H ₂ gas regulators	HI > 65 psig LO < 4 psig	PIA-2225 Pressure Indicating Alarm RTGB-205	OWD 154
FLANK H-17	FLANK				
RCP CONTROLLED BLEED OFF ISOL VALVES CIS OVERRIDE H-20	1. With a CIS signal present: (A) RCP controlled bleedoff isolation valve(s) failed to shut or, (B) Operator re-opened either isolation valve 2. Valve position indication lights	1. No Auto Action 2. Shut affected valve(s) if they failed to shut.	Valve(s) in- dicate not full shut by limit switch with CIS present	3-1, 3-2 Later	OWD 159
RECEN INX OUTLET TEMP HI H-28	1. Low charging flow or high letdown flow 2. Check temperatures on temperature indicators TIC-2221 and TI-2229	1. Letdown stop valve V-2515 will shut if temp. exceeds 475° F. 2. Refer to charging & letdown Off-Normal Procedure #2-0210030	460° F	TIC-2221	OWD 150
CIG LINES 2A2/2B1 VALV I-SE-02-01/02 SS ISOL H-36	1. Capability of operating either valve from RTGB - 205 has been removed. 2. (A) Loop charging valve indicate lights - out (B) Inability to open or shut either valve with the RTGB control switches	1. No Auto Action 2. Return Normal/Isolate switch to Normal when permissible	Normal / Isolate Switch is in Isolate	SS-1,2/ISOL	OWD 176
CONTAINMENT ISOL V-2516 SS-ISOL H-44	1. Containment Isolation valve V-2516 cannot be operated from RTGB-205 2. Inability to open or shut V-2516 with its control on RTGB-205	1. No Auto Action 2. Return Normal/Isolate switch to Normal when permissible.	Normal / Isolate Switch is in Isolate Position	SS-ISOL	OWD 157

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SURRIARY

ANNUNCIATOR PANEL M VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PIDPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LETDOWN PRESS HI/LO M-5	1. (A) Letdown control valves LCV-2110 P or Q mal- function or (B) Pressure control valves PCV-2101 P or Q mal- function 2. (A) Check letdown flow indicator FIA-2202 on RTGB 205. (B) Check pressurizer level deviation (C) Check valve position indicating lights	1. No Auto Action 2. (A) Return pressure to normal by taking manual control of PCV-2101 P or Q (B) If letdown is lost, refer to charging and letdown Off-normal Proc. 2-0210030.	HI →500# LO ←420#	EA-2201 ----- -----	Q/D 151
LETDOWN FLOW HI M-13	1. (A) Failure of letdown level controller (B) Failure of pressurizer level controller 2. (A) Check pressurizer level deviation (B) Check letdown flow indicator FIA-2202 on RTGB-205	1. No Auto Action 2. (A) Return letdown flow to normal by taking manual control of letdown control valves (B) If letdown is lost refer to charging and letdown Off-normal Proc. 2-0210030.	>135 GPM	FIA-2202 ----- -----	Q/D 152
LETDOWN ISOL V-2522 SS-ISOL M-21	1. Control of letdown isolation valve V-2522 has been removed from RTGB-205. 2. Inability to open or shut V-2522 from RTGB-205.	1. No Auto Action 2. Return Normal/Isolate switch to the Normal position when permissible.	Normal / Isolate Switch in Isolate Position	SS-1/ISOL ----- -----	Q/D 194
LETDOWN STRAINER Δ/P HI M-29	1. Indicates dirty strainer or excessive letdown flow 2. Check letdown flow indicator FIA-2202 on RTGB-205.	1. No Auto Action 2. (A) Check strainer diff. press indication locally (B) Adjust LCV-2110 P or Q to reduce flow (C) If letdown is lost, refer to charging and letdown Off-normal Proc. 2-0210030	<19 psid	PDI-2204 ----- -----	Q/D 152
LETDOWN STOP V-2515 SS ISOL M-37	1. letdown stop valve V-2515 Normal/Isolate switch is in Isolate position. 2. Inability to open or shut V-2515 from RTGB-205	1. No Auto Action 2. Return Normal/Isolate switch to the Normal position as soon as permissible.	Normal / Isolate Switch is in Isolate Position	SS/ISOL ----- -----	Q/D 157
LETDOWN LCV-2110 P/O LIMITER BYPASSED M-45	1. (A) Letdown Control valves LCV-2112 P/O can be fully opened or shut. (B) Position limiter bypass switch is in bypass position.	1. No Auto Action 2. (A) When initiating letdown flow - None (B) During normal operation - return position limiter bypass switch to Normal	Position Limiter Bypass Switch in BYPASS	SS-2/158 ----- -----	Q/D 158

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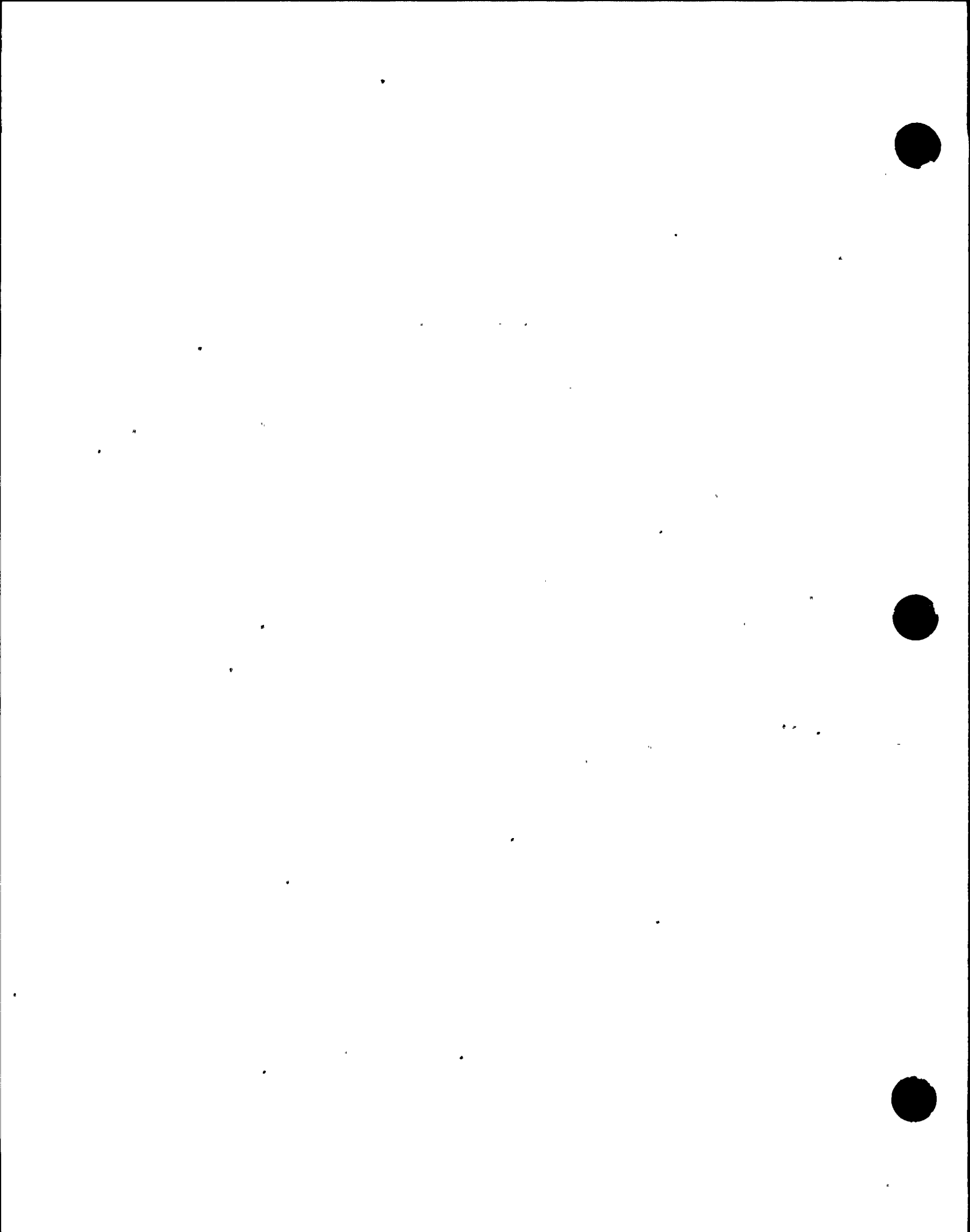


ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL K VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
OIG LINE ISOL V-2523 SS ISOL H-6	1. Charging line isolation valve V-2523 cannot be operated from RTCB-205. 2. Inability to open or shut V-2523 from RTCB-205	1. No Auto Action 2. Return Normal/Isolate switch to the Normal position as soon as permissible.	Normal / Isolate Switch is in Isolate Position	SS-2/ISOL	O&D 194
OIG PUMPS FLOW LOW H-14	1. Inadequate flow from operating charging pumps. 2. (A) Check charging flow indicator FIA-2212 on RTCB-205 (B) Charging pump running indicating lights	1. No Auto Action 2. Refer to charging and letdown Off-normal Procedure 2-0210030	< 40 GPM	FIA-2212	O&D 150
OIG IP 2A SUCT PRESS LO/ OVRD/TRIP H-22	1. (A) Suction pressure available to pump is too low (B) Charging pump has tripped due to: 1) Overcurrent 2) Breaker racked out at local center 2. (A) Check flow indicator FIA-2212 on RTCB-205 (B) Charging pump running indicating lights	1. Pump breaker opens 2. Refer to charging and letdown Off-normal Procedure #2-0210030.	< 10 psig Time Dependent O.C. Trip	2X-1, r, t ES-2224 X Time dependent O.C. Trip is in Breaker: 2-40217/L.C. 2A2	O&D 150 FD & MD Sh. 16
OIG IP 2A OIL IP TRIP / OIL LVL LO / STPG PX LVL LO H-30	1. (A) Insufficient oil pressure to pump brngs. (B) Insufficient oil in pump (C) Insufficient level in stuffing box 2. None	1. No Auto Action 2. (A) Start backup pump (B) Secure the affected pump (C) Check oil parameters locally (D) Determine cause and correct	Oil LP: < 2.5 psig Oil Lvl LO: Oil in pump STPG EX LVL LO < 10"	6X, 2X, 71X, LIA-2233X IS-2234X	O&D 177
HANK H-38	HANK				
OIG IP 2A RECIRC V-2555 OVERLOAD SS ISOL H-46	1. Charging pump recirc to VCT valve V-2555 (A) Will not operate from RTCB-205 (B) Breaker has tripped on overload or, (C) Breaker has tripped on overcurrent or, (D) Breaker has been turned off on MCC - 2. Valve position indicating lights	1. No Auto Action 2. (A) If electrical-call Electrical Dept. for assistance. (B) Return Normal/Isolate switch to the Normal position as soon as permissible	Thermal- Overload or O.C. Trip at 28 Amps Normal/ISOL Switch In Isolate	SS/ISOL/177, 74/196 Thermal overload and O.C. trip coils in bkr 2-41261/MCC-2A5	O&D 196, 177 FD & MD Sh. 33

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL H VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CLOSED BLOWDOWN IIX TEMP HI H-7	1. High temp from closed blowdown IIX 2. Loss of blowdown flow as indicated on FIA-23-12 FIA-23-14 on back of RTGP-203	1. No Auto Action 2. OPERATOR ACTION - VALID ALARM 1. High temp isolation valve 2-TCV-23-8 shuts Determine cause of high temperature and 2. Determine cause of high temperature and correct	140° F	23X-3(2-TIS-23-8) ----- -----	GWD 1350
CHG PUMP HEADER PRESS LO H-15	1. Charging pump(s) discharge pressure has dropped below 2000 psig. 2. (A) Check discharge pressure on PIA-2212 on RTGP- 205. (B) Check pump running lights	1. No Auto Action 2. (A) Start backup pump (B) If charging is not regained, refer to charging and letdown Off-normal Procedure 2-0210030	<2000 psig	PIA-2212 ----- -----	GWD 150
CHG PP 2B SUCTION PRESS LO/ OVERLD/TRIP H-23	1. (A) Suction pressure available to pump is too low (B) Charging pump has tripped due to: 1) Overcurrent 2) Breaker racked out at load center 2. (A) Check flow indicator FIA-2212 on RTGP-205 (B) Charging pump running indicating lights	1. Pump breaker opens 2. Refer to Charging & Letdown Off-normal Procedure #2-0210030.	< 10 psig ----- Time Dependent O.C. Trip	2X-1, r,t IS-2224 Y ----- Time Dependent O.C. Trip is in breaker 2-40508/L.C. 262	GWD 178
CHG PP 2B OIL LP TRIP / OIL IXL ID / STFG EX IXL ID H-31	1. (A) Insufficient oil pressure to pump brings (B) Insufficient oil in pump (C) Insufficient level in stuffing box 2. None	1. No Auto Action 2. (A) Start backup pump (B) Secure the affected pump (C) Check oil parameters locally (D) Determine cause and correct	OIL LP: <2.5 psig ----- OIL LVL LO: <7 Gal in pump ----- STFG EX LVL LO < 10"	63Y, 2Y, 71Y LIA-2233Y ----- IS-2234 Y	GWD 178
FLANK H-39	FLANK			----- -----	
CHG PP 2B RECTRC V-2554 OVERLOAD SS ISOL H-47	1. Charging pump recir to VCT valve V-2554 (A) Will not operate from RTGP-205 (B) Breaker has tripped on overload or, (C) Breaker has tripped on overcurrent or, (D) Breaker has been turned off on MCC - (E) Control power fuse has blown 2. Valve position indicating lights	1. No Auto Action 2. (A) If electrical; cal Electrical Dept. for assistance. (B) Return Normal/Isolate switch to the Normal position as soon as permissible.	Thermal Overload or O.C. Trip at 28 Amps ----- Normal / Isolate Switch is in Isolate	SS/ISOL/178 74/197 ----- Thermal overload and O.C. Trip coils in Hkr. 2-42014/MCC-2B5	GWD 178 197 FD & MD Sh. 40

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL M VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RCP CONTROL BLEEDOFF PRESS HI-HI M-8	1. Possible RCP seal failure 2. (A) Check bleedoff pressure at PIA-2215 on RTCB - 205 (B) Check RCP seal pressures on RTCB-203 (C) Check controlled bleedoff flow indicators on RTCB-203	1. No Auto Action 2. Refer to reactor coolant pump Off-Normal Procedure #2-0120034	> 250 psig	PIA-2215 -----	OWD 150
RCP CONTROL BLEEDOFF PRESS HI M-16	1. Possible RCP seal failure 2. (A) Check bleedoff pressure at PIA-2215 on RTCB - 205 (B) Check RCP seal pressures on RTCB-203 (C) Check controlled bleedoff flow indicators on RTCB-203	1. No Auto Action 2. Refer to reactor coolant pump Off-Normal Procedure #2-0120034	>120 psig	PIA-2215 -----	OWD 150
CHG HP 2C SUCTION PRESS LO / OVRID/TRIP M-24	1. (A) Suction pressure available to pump is too low (B) Charging pump has tripped due to: 1) Overcurrent 2) Breaker racked out at load center 2. (A) Check flow indicator FIA-2212 on RTCB-205 (B) Charging pump running indicating lights	1. Pump breaker open 2. Refer to Charging & Shutdown Off-Normal Procedure 2-0210030	< 10 psig ----- Time Dependent O.C. Trip	ZZ-1, r, t IS-2224Z ----- Time dependent O.C. Trip is in Breaker 2-40707/L.C. 2AB	OWD 179 FD & MD Sh. 16
CHG HP 2C OIL LP TRIP / OIL LVL LO / STFG EX LVL LO M-32	1. (A) Insufficient oil pressure to pump brings (B) Insufficient oil in pump (C) Insufficient level in stuffing box 2. N/A	1. No Auto Action 2. (A) Start backup pump (B) Secure the affected pump (C) Check oil parameters locally (D) Determine cause and correct	Oil LP: <2.5 psig ----- Oil LVL LO: < 7 Oil in pump ----- STFG EX LVL LO <10"	63Z, 2Z, 71Z LIA-2233Z ----- IS-2234Z	OWD 179
FLANK M-40	FLANK			-----	
CHG HP 2C RECIRC V-2553 OVERLOAD SS ISOL M-48	1. Charging pump recirc to VCT valve V-2553 (A) Will not operate from RTCB-205 (B) Breaker has tripped on overload or, (C) Breaker has tripped on overcurrent or, (D) Breaker has been turned off on MCC- 2. Valve position indicating lights	1. No Auto Action 2. (A) If electrical: call Electrical Dept. for assistance (B) Return Normal/Isolate switch to the Normal position as soon as permissible	Thermal Overload or O.C. Trip at 28 Acp ----- Normal / Isolate Switch is in Isolate	SS/ISOL/179, 74/198 ----- Thermal overload and O.C. Trip coils in Bx. 2-42406/MCC-2AB	OWD 179 198 FD & MD Sh. 44

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL N VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR POINTOUT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
H/U TK 2A LEVEL HI/LO N-1	1. High or low level in 2A Holdup Tank 2. Holdup Tank 2A Level Indicator (LIA-6610)	1. Stops holdup drain pumps on low level 2. Check tank level. If high, secure tank & line up another tank to receive degassed liquid. If low, secure discharge lineup.	HI-97% LO-4%	LIA-6610 LIA RTCB-205	Q/D 538 P&ID 2998-G160
H/U TK 2A PRESS HI/LO N-9	1. High or low press. in 2A Holdup tank 2. Holdup Tank 2A Pressure Indicator (PS-6610)	1. NONE 2. If Press High, check level. If full secure tank for processing & place another tank in service. If level normal, chk N ₂ regulator. If press. low, check reg. for proper setting. Adjust as necessary.	HI-10psig LO-.5psig	PS-6610 Holdup Tank 2A	Q/D 540 P&ID 2998-G160
RDT LEVEL HI/LO N-17	1. High or low level in reactor drain tank 2. Reactor drain tank level indicator	1. Stops RDT pumps on low level. 2. Check RDT level. If high, start RDT pumps & disch. RDT to HRT's. If low, stop or verify stopped RDT pumps.	HI-88% LO-21%	LIA-6601 LIA RTCB-205	Q/D 541 P&ID 2998-G160
RDT PRESS HI/LO N-25	1. High or low press. in reactor drain tank. 2. Reactor drain tank press. indicator	1. NONE 2. Check RDT press. & level. If high & tank full, disch. to HRT's. If high & level normal, chk N ₂ regulator. Vent excess press. to containment vent header	HI-10 psig LO-.5 psig	PIA-6601 PIA RTCB-205	Q/D 540 P&ID 2998-G160
PRIMARY COOL SAMPLE VALS CIS OVERRIDE N-33	1. Primary Coolant Sample valves open with CIS present 2. CIS Actuation Indicating Lights, CIS annunciation & sample valve indicating lights.	1. NONE 2. Verify valves are actually open & determine if necessary that they are open.	N/A	3-1, 3-2/578 IS-5200 IS-5203 RTCB-206	Q/D 578
WASTE CONCENTRATOR CONTROL PANEL N-61	1. Alarm condition on waste concentrator control panel. 2. NONE	1. NONE 2. Check waste concentrator control panel & take action as indicated by alarm condition	N/A	Incal Annunciator Waste Concentrator Control Panel	Q/D 568 P & ID 2998-G167

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL N VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
H ₂ O TK 2B LEVEL HI/LO N-2	1. High or low level in 2B Holdup Tank. 2. Holdup Tank 2B Level Indicator (LIA-6609)	1. Stops holdup drain pumps on low level. 2. Check tank level. If high, secure tank & line up another tank to receive degassed liquid. If low, secure discharge lineup.	HI-97% LO- 4%	LIA-6609 ----- LIA RICB-205	OWD 538 ----- P&ID 2998-G160
H ₂ O TK 2F PRESS HI/LO N-10	1. High or low press. in 2B Holdup Tank. 2. Holdup Tank 2B Pressure Indicator (PS-6609)	1. NONE 2. If press. high, check level. If full, secure tank for processing & place another tank in service. If level normal, chk H ₂ regulator. If press. low, chk regulator for proper setting. Adjust as necessary.	HI-10 psig LO-.5 psig	PS 6609 ----- Holdup Tank 2B	OWD 541 ----- P&ID 2998-G160
N ₂ MANF SPLY PRESS HI/LO N-18	1. High or low N ₂ supply pressure. 2. NONE	1. NONE 2. Check N ₂ INVAR, press. regulator, and system lineup. If low, place standby N ₂ bottles in service. If high, adjust reg. to proper setting.	HI - 660 psig LO - 600 psig	PS-6662 ----- N ₂ supply manifold	OWD 566 ----- P&ID 2998-G163
H ₂ MANF SPLY PRESS HI/LO N-26	1. High or low H ₂ supply pressure. 2. NONE	1. NONE 2. Check H ₂ press. regulator and system line- up. If low, place standby H ₂ bottles in service. If high, adjust reg. to proper setting.	HI - 110 psig LO - 90 psig	PS-6666 ----- H ₂ supply manifold	OWD 566 ----- P&ID 2998-G163
GAS ANALYZER TROUBLE N-34	1. Alarm condition on gas analyzer 2. NONE	1. NONE 2. Notify Chemistry Dept. to check gas analyzer and take action as indicated by alarm condition.	N/A	N/A ----- Gas Analyzer	OWD 564 ----- P&ID 2998-G164
EA CONC 2A CONTROL INL N-42	1. E/A concentrator 2A trouble 2. Local control panel 2A	1. NONE 2. Check E/A concentrator control panel 2A for alarm & take necessary action.	N/A	Local Annunciator ----- '2A' EA CONC. Control Panel	OWD 570 ----- P&ID 2998-G165

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL N VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
H ₂ O TK 2C LEVEL HI/LO N-3	1. High or low level in 2A Holdup Tank 2. Holdup Tank 2C Level Indicator (LIA-6608)	1. Stops holdup drain pumps on low level 2. Check tank level. If high, secure tank & line up another tank to receive degassed liquid. If low, secure discharge lineup.	HI - 97% LO - 4%	LIA-6610 ----- LIA RTGB 205	GW 539 ----- PID 2998-G160
H ₂ O TK 2C PRESS HI/LO N-11	1. High or low press. in 2C Holdup Tank 2. Holdup Tank 2C Pressure Indicator (IS-6608)	1. N/A 2. If press. high, check level. If full, secure tank for processing & place another tank in service. If level normal, ck N ₂ regulator. If press. low, ck regulator for proper setting. Adjust as necessary	HI - 10 psig LO - .5 psig	IS-6608 ----- Holdup Tk 2C	GW 541 ----- PID 2998-G160
FLASH TANK LEVEL HI/LO N-19	1. High or low level in Flash Tank. 2. Flash Tank level indicator controller	1. Stops Flash Tank pps on low level. Diverts to Holdup Tanks on high. 2. If level low, ck pps secured. If level high, ck for diverting & flash tank pps running. If pumps did not auto start, determine cause.	HI - 85% LO - 10%	LA-6604 ----- IA RTGB-205	GW 541 ----- PID 2998-G160
FLASH TANK PRESS HI/LO N-27	1. High or low pressure in Flash Tank 2. Flash Tank Pressure Indicator (PIA-6603)	1. N/A 2. If press. high, close N ₂ supply valve (V- 6308). If pressure low check V-6308 to be open & N ₂ system lineup to determine cause of low pressure.	HI - 10 psig LO - .5 psig	PIA-6603 ----- Flash Tank	GW 540 ----- PID 2998-G160
N ₂ SUPPLY PRESS HI/LO N-35	1. High or low N ₂ supply pressure 2. NONE	1. N/A 2. Check N ₂ DEMAR, press. regulator, and system lineup. If low, place standby N ₂ bottles in service. If high, adjust reg. to proper setting.	HI - 240 psig LO - 200 psig	IS-6661 ----- N ₂ Supply MANIFOLD	GW 566 ----- PID 2998-G163
EA OXIC 2P CONTROL PNL N-43	1. E/A concentrator 2B trouble 2. Local control panel 2B	1. N/A 2. Check E/A concentrator control panel 2B for alarm & take necessary action.	N/A	Local Annunciator ----- '2B' EA OXIC Control Panel	GW 572 ----- PID

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ANNUNCIATOR PANEL N VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
H/U TK 2D LEVEL HI/LO N-4	1. High or low level in 2D Holdup Tank 2. Holdup Tank 2D Level Indicator (LIA-6607)	1. Stops holdup drain pumps on low level. 2. Check tank level. If high, secure tank & line up another tank to receive degassed liquid. If low, secure discharge lineup.	HI - 97% LO - 4%	LIA-6660 ----- LIA RIGB-205	OWD 539 ----- P&ID 2998-G160
H/U TK 2D PRESS HI/LO N-12	1. High or low press. in 2D Holdup Tank. 2. Holdup Tank 2D Pressure Indicator (PS-6607)	1. NONE 2. If press. high, check level. If full, secure tank for processing & place another tank in service. If level normal, ck N ₂ regulator for proper setting. Adjust as necessary	HI - 10 psig LO - .5 psig	PS-6607 ----- Holdup Tank 2D	OWD 541 ----- P&ID 2998-G160
FUEL H/LC BLDG IN/OUT SEAL DEFLATED N-20	1. Low N ₂ pressure between "O" ring seals. 2. NONE	1. NONE 2. (A) Check for proper gas pressure setting and adjust as necessary. (F) Comply with Tech Specs on Containment Integrity.	25 psig	74 ----- Fuel Handling Bldg latch	OWD 186
FUEL POOL PP DISCH IHR PRESS LO N-28	1. Fuel Pool cooling pumps low discharge pressure. 2. NONE	1. NONE 2. Verify alarm by local inspection start second pump or restart first pump if cause of trip is corrected.	25 psig	PS-4403 ----- Fuel Pool PIS Discharge IHR	OWD 182 ----- P&ID 2998-G140
WM LOCAL ALARM GROUND DET / POWER FAIL N-36	1. Ground or power failure in the Waste Management Controls or associated relaying. 2. NONE	1. NONE 2. Check local WM annunciator panel and notify I & C Dept.	N/A	OWD Det, Pwr Fail ----- Local WM Annunciator Panel	OWD 557
FUEL POOL PP OVERLOAD N-44	1. Breaker open, loss of control power, or thermal overload on fuel pool cooling pumps or fuel pool purification pump.	1. Pump trips 2. Investigate cause of pump trip and correct.	N/A	74/180, 74/181 74/182 ----- Pump Breaker	OWD 180 181 182

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ANNUNCIATOR PANEL N VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SCBIF LOCAL ALARM N-5	1. Local alarm or power failure at SCBIF. 2. NONE	1. NONE 2. Check local SCBIF panel for alarm condition	N/A	74 ----- SCBIF	O/D 1435 ----- S/G Blowdown Treatment O/D 3509-B-327
UNPROC HLON UNIT 2 RADIATION III N-13	1. Unprocessed blowdown has high radiation at SCBIF 2. NONE	1. Discharge valve to canal (2-RCV 23-1) closes and valve to Blowdown Treatment Facility (23-2) opens. 2. Verify valves 23-1 & 23-2 cycle as required Notify Chemistry Dept. for chemical sample.	(later)	74 ----- SCBIF	O/D 1359 ----- S/G Blowdown Treatment O/D 3509-B-327
RX CAVITY SUMP LEVEL HI-HI N-21	1. High level in Reactor Cavity Sump 2. Reactor cavity sump level indicator	1. NONE 2. Notify operator to rack in the Rx Cavity Sump Pumps to reduce lecl. Determine source of water. If excessive RCS leakage refer to Off-normal Procedure #2-0120031.	4'8" From Top	IS 06-2 ----- Rx Cavity Sump	O/D 574 ----- P&ID 2998-0088
RX CAVITY SUMP LEVEL HI N-29	1. High level in Reactor Cavity Sump 2. Reactor cavity sump level indicator	1. Reactor Cavity Sump pumps will start if racked in. 2. Check alarm clears as sump is pumped down. If alarm does not clear, check for pump failure or high leak rate into sump.	5'4" From Top	IS 06-2 ----- Rx Cavity Sump	O/D 574 ----- P&ID 2998-0088
BLANK N-37	BLANK			-----	
WASTE MANAGEMENT LOCAL ALARM N-45	1. Alarm condition on Waste Management Control Panel. 2. NONE	1. NONE 2. Check Waste Management Control Panel for for alarm condition and take necessary action.	N/A	RE-XMIT ----- Waste Management Local Panel	O/D 587 ----- P&ID 2998-0092 2998-G160 thru 2998-G171

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ANNUNCIATOR PANEL N VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
W/ PA HT TR SYS 2A/2B LOCAL ALARM R N-6	1. Trouble in 2A or B Waste Management Boric Acid Heat Tracing Systems. 2. NONE	1. NONE 2. Check local control panel or reflash module RA-RAB-6 on EI -.5' of the RAB. Take necessary action.	N/A	RA-RAB-6 ----- W/BA Heat Tracing Local Control Pnl	G/D 584 ----- P&ID 2998-092, 152, 161, 165, 166, 167
PROC FLDN TO DISCH CANAL RADIATION HI N-14	1. Processed blowdown to discharge canal has high radiation.	1. Blowdown discharge valve to canal (2-RCE 23-1) closes. 2. Verify 2-RCV 23-1 closes (RTGB 205) as required. Notify Chemistry Dept. for chem-	(later)	74 ----- SGMP	G/D 1362 ----- Blowdown Treatment G/D 3509-E-327
LAUN & CHEM DRAIN SUMP LEVEL HI N-22	1. Laundry and chemical drain sump has high level. 2. NONE	1. NONE 2. Check pps start for laundry and/or chem. drain sump. Check if level alarm clears as sumps pumped down. Check that pumps stop when sump is pumped down.	1 Ft. from on both sumps	IS-06-3 IS-06-4 ----- Laun & Chem Drain Sump	G/D 534 ----- P&ID 2998-G162
COND PIT / YARD SUMP LEVEL HI N-30	1. High level in the Condenser Pit Sump or the Yard Sump. 2. NONE	1. NONE 2. Verify sump pumps are running. Determine leakage source and isolate.	COND PIT- 4 Ft. Yard Sump 3'3"	IS-06-7 IS-06-8 ----- Condenser Pit & Yard Sump	G/D 535, 745 ----- P&ID 2998-0087
FLANK N-38	FLANK			-----	
RX CAVITY LEAK HI N-46	1. High leakage rate into reactor cavity sump. 2. Reactor Cavity Leakage Recorder (FR-07-03) & Level Indicator (LS-07-06).	1. NONE 2. Determine source & isolate leakage if possible. If RCS leakage, refer to the Off-Normal Procedure #2-0120031 "EXCESSIVE RCS LEAKAGE".	1 GIN into Reactor cavity sump	IS-07-12 ----- Reactor Cavity Sump	G/D 576 ----- P&ID 2998-0088

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ANNUNCIATOR PANEL N VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FORIC ACID MKUP TK 2A LEVEL HI/LO N-7	1. High or low level in the '2A' B/M Tank. 2. B/M '2A' Level Indication (LIA-2206)	1. NONE 2. Check level. If high, secure filling if in progress. If low, fill tank with BA batch tank. Refer to Tech Specs 3.1.2.7 & 3.1.2.8	HI - 92% LO - 86%	LIA-2206 LIT/LIA-2206 LIA RTGB-205	Q/D 155 P&ID 2998-G121
FORIC ACID MKUP TK 2A LEVEL LO/LO N-15	1. Low-low level in the '2A' B/M Tank. 2. B/M '2A' Level Indication (LIA-2206)	1. NONE 2. Check level. Verify B/M pump off and fill tank with BA batch tank. Refer to Tech Specs 3.1.2.7 & 3.2.1.8.	18%	LIA-2206 LIA RTGB-205	Q/D 155 P&ID 2998-G121
CVCS BA HTC SYS 2A/2B LOCAL ALARM N-23	1. Trouble in 2A or 2B CVCS Boric Acid Heat Tracing 2. NONE	1. NONE 2. Check local control panel or reflash modules RA-RAB-7, -8, and -9 on El. 19.5' in the RAB. Refer to Tech Specs 3.1.2.1 & 3.1.2.2 for necessary actions.	N/A	RA-RAB-7 CVCS/BA Heat Tracing Local Control Pnl	Q/D 1558 P&ID 2998-G121 2998-G122
FORIC ACID MKUP TK 2A TEMP HI/LO N-31	1. High or low temperature in B/M Tank 2A. 2. NONE	1. NONE 2. Verify local alarm and take necessary action. Refer to Tech Spec Figure 3.1-1	HI - 165°F LO - 135°F	TIC-2206/168 TIC-2207/169 B/M Tank 2A	Q/D 168 169 P&ID 2998-G121
BA MKUP PP DISCHARGE PRESS LO N-39	1. Low BA pump discharge pressure with low level demand from VCT auto makeup system (40%). 2. NONE	1. NONE 2. Verify condition of B/A makeup pps. If pp is not operating, start backup as necessary. If pump was operating, determine cause of low press. & take necessary action.	85 psig	PS-2206 IS-2208 B/M Pumps Discharge Hdr	Q/D 174 P&ID 2998-G121
FORIC ACID MKUP PP 2A OVERLOAD / CS OFF/SS ISOL N-47	1. Motor overload, control switch off, makeup pump selector misaligned, breaker trip, fuse failure. 2. Control switch lights.	1. NONE 2. Verify alignment of control switch & selector switch. Reset if necessary or notify Electrical Dept.	N/A	SS/ISOL, IS/OFF, 74, IS-BR-2A RTGB 205	Q/D 174 P&ID 2998-G121

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ANNUNCIATOR PANEL N VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FORIC ACID MKUP TK 2B LEVEL HI/LO N-8	1. High or low level in the '2B' BAW Tank 2. BAWT '2B' Level Indication (LIA-2208)	1. NONE 2. Check level. If high, secure filling if in progress. If low, fill tank with BA batch tank. Refer to Tech Specs 3.1.2.7 and 3.1.2.8.	HI-92% LO-86%	LIA-2208 LIT/LIA-2208 LIA RTGB 205	GW 155 P&ID 2998-G121
FORIC ACID MKUP TK 2F LEVEL LO/LO N-16	1. Low-low level in the '2B' BAW Tank. 2. BAWT '2B' Level Indication (LIA-2208)	1. NONE 2. Check level. Verify BAW pump off and fill tank with BA batch tank. Refer to Tech. Specs 3.1.2.7 & 3.1.2.8.	18%	LIA-2208 BAW TK 2B	GW 155 P&ID 2998-G121
REACTOR SUMP ISOL VALVES CIS/SIAS OVERRIDE N-24	1. Rx sump isolate valves (LCV-07-11A & LCV-07-11B) open with CIS or SIAS present. 2. NONE	1. NONE 2. Close LCV-07-11A & LCV-07-11B on RTGB-205 IF NOT NEEDED.	N/A	94-1, 94-2 3-1, 3-2 LCV-07-11A LCV-07-11B RTGB-205	GW 576 P&ID 2998-U088
FORIC ACID MKUP TK 2F TEMP HI/LO N-32	1. High or low temperature in BAW Tank 2F. 2. NONE	1. NONE 2. Verify local alarm and take necessary action. Refer to Tech Spec Figure 3.1-1.	HI - 165°F LO - 135°F	TIC-2208/170 TIC-2209/171 BAW TK 2B	GW 170/171 P&ID 2998-G121
FORIC ACID FLO HI/LO N-40	1. Deviation bet. BA flow setpoint and actual flow. 2. FRC 2210Y	1. NONE 2. Check BA flow & determine why it has changed from the desired setpoint.	1 GPM Difference Bet. Setpnt. & Actual Flow	FA-2210Y IS-2210/163 62X-2512 FRC 2210Y RTGB 205	GW 192 P&ID 2998-G121
FORIC ACID MKUP PP 2F OVERLOAD/ CS OFF/SS ISOL N-48	1. Motor overload, control switch off, makeup pump selector misaligned, breaker trip, fuse failure. 2. Control switch lights.	1. NONE 2. Verify alignment of control switch & selector switch. Reset if necessary or notify Electrical Dept.	N/A	SS/ISOL, IS/OFF, 74, IS-BR-2B RTGB 205	GW 175

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ANNUNCIATOR PANEL P VERTICAL COLUMN 1

WARNING TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR POINTOUT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MINIFLOW ISOL V-3495/3659 RAS-FAIL OPEN/ NO RAS-CLOSED P-1	1. (A) Miniflow isolation valve(s) 3495/3659 failed to close on RAS, or (B) Valve(s) in closed position with no RAS. 2. (A) RAS actuation indicating light chnl. A (F) Valve position indication	1. NONE 2. (A) RAS: Place valve(s) in closed position. (F) No RAS present; place valve(s) in open position.	Valve Limit Switch Position with/or without RAS Signal	33XA, 1S-3491 1/1520 1S-3659-1/244 RASXA Valve Limit Switches ----- V-3495/V-3659 (LATER)	OWD 1520
BLANK P-11	BLANK			-----	
MINIFLOW ISOL V-3659 OVERLOAD P-21	1. (A) Breaker trip on overload. (B) Fuse Flow 2. Valve position indication	1. NONE 2. Verify valve position/close locally if required.	(later)	74 ----- Local at Breaker	OWD 244
S/D CLG IN 2A W/U V-3536 OPEN P-31	1. SDC Warrup valve train A open 2. Valve position indication	1. NONE 2. Close V-3536 unless warring up SDC or equalizing boron.	N/A	33 Value Limit Switch	OWD 1510
BLANK P-41	BLANK			-----	
BLANK P-51	BLANK			-----	

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ANNUNCIATOR PANEL P VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PIRHOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MINIFLO ISOL V-3496/3660 RAS-FAIL OPEN / NO RAS-CLOSED P-2	1. (A) Valve(s) failed to close on RAS. (P) Valve(s) in closed position with no RAS. 2. (A) RAS actuation indicating light chnl. A (E) Valve position indication	1. NONE 2. (A) Place valve(s) in closed position. (E) Place valve(s) in open position	RAS Present	33XB, IS-3496-1/1520 IS-3660-1/245, RAS X B	OWD 1520
FLANK P-12	FLANK			-----	
MINIFLO ISOL V-3660 OVERLOAD P-22	1. (A) Breaker trip on overload (B) Fuse blown 2. Valve position indication	1. NONE 2. Verify Valve position /close locally if required.	(later)	74	OWD 245
S/D CLG IN 2B W/U V-3539 OPEN P-32	1. SIC warmup valve train A open 2. Valve position indication	1. NONE 2. Close V-3536 unless warming up SIDC or equalizing boron.	N/A	33	OWD 1511
FLANK P-42	FLANK			-----	
FLANK P-52	FLANK			-----	

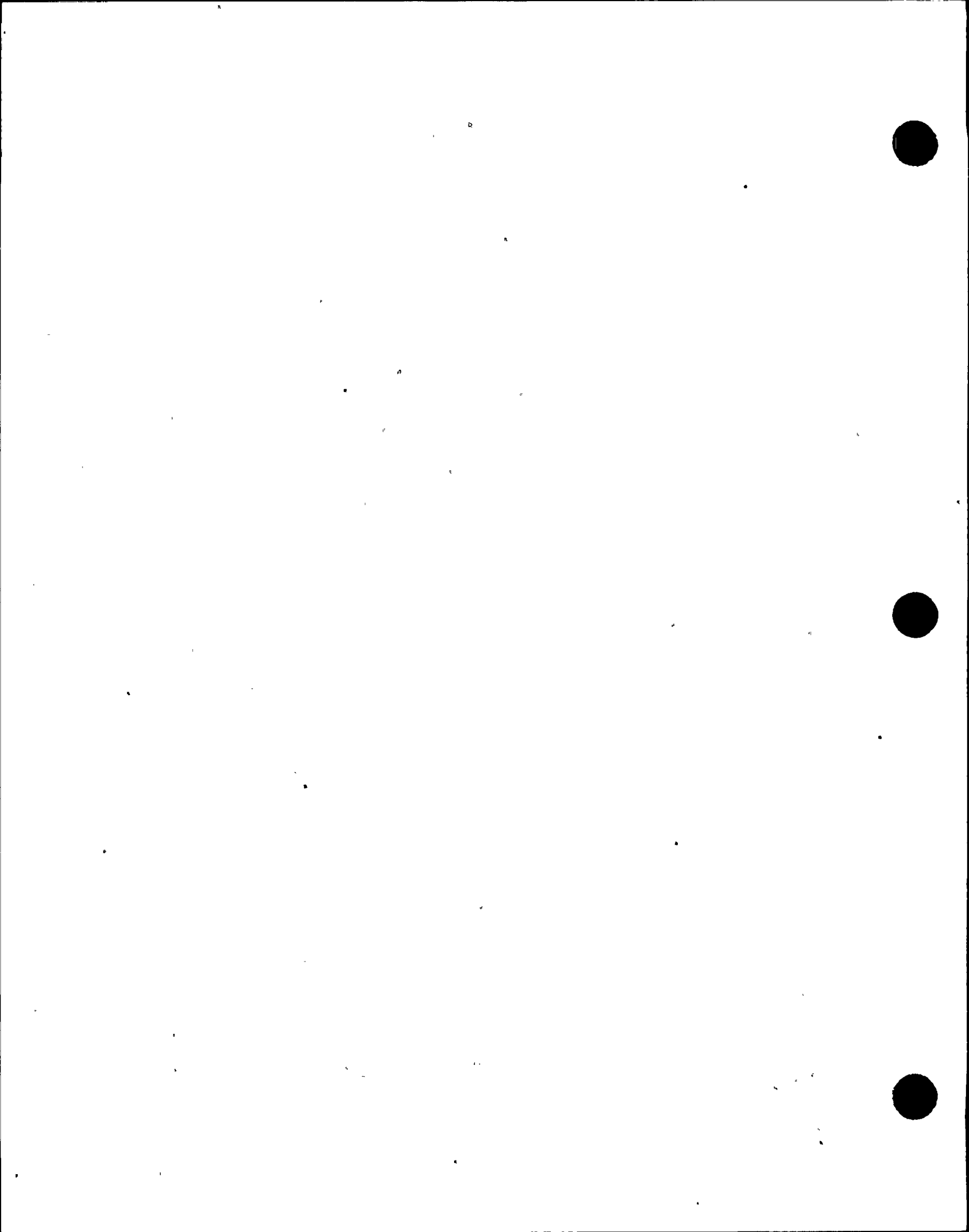
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ANNUNCIATOR PANEL P VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CIS ACTUATOR CHANNEL A/P P-3	1. Containment isolation actuated 2. (A) Containment press indicators (P) Containment Rad. indicators.	1. CIS components actuate 2. (A) Carry out reactor/turbine trip procedure if not a dnl. malfunction and refer to LOCA/MSLB Procedures as appropriate. (E) If malfunction unisolate cont. using overrides as applicable.	5 psig or 10 R/IR	CIS-A, CIS-B ----- ESFAS Panel	G/D 330/331
CONTAINMENT PRESS HI CIS CINL TRIP P-13	1. One or more containment pressure bistables tripped 2. ESFAS CIS Press MA, MB, MC, MD	1. CIS initiates if 2 or 4 2. (A) If only one tripped check for malfunction (B) If 2 or more verify CIS components actuate carry out P-3 above.	5 psig	CIS-MA, MB, MC, MD -----	G/D 295
CONTAINMENT PRESS HI CIS CIN. H/E-TRIP P-23	1. Indicates increased containment pressure. 2. ESFAS CIS press MA, MB, MC, MD	1. NONE 2. (A) Verify increased cont. pressure. (B) Insure Reactor/Turbine Trip if pressure exceeds 4 psig.	(later)	RA-RAB-17 ----- ESFAS Panel	G/D 1570
BLANK P-33	BLANK			-----	
BLANK P-43	BLANK			-----	
BLANK P-53	BLANK			-----	

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ANNUNCIATOR PANEL P VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FIANK P-4	FIANK			-----	
FIANK P-14	FIANK			-----	
LUBE WIR TO CW PIS ISOL VALS OVRLO/ SIAS OVRFD P-24	1. Motor overload or valves open with SIAS present 2. Position indication lights	1. NONE 2.(A) Check Breaker (B) Close valve(s) as applicable	N/A	Limit SW at Valve(s)	
H ₂ ANALYZER CONC HI P-34	1. Indicates increasing containment H ₂ concentration 2. H ₂ Panel & Recorder	1. NONE 2. Notify Chemistry Dept.	4%	ANI-1 ----- Behind RTGB	O/D 1205
H ₂ ANALYZER SYSTEM FAILURE P-44	1. Indicates failure of analyzer 2. Verify poer ON, valve alignment on H ₂ panel	1. NONE 2. Notify Chemistry Dept.	N/A	CR2 ----- Behind RTGB	O/D 1205
FIANK P-54	FIANK			-----	

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ANNUNCIATOR PANEL P VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT RAD HI CIS QNL TRIP P-5	1. One or more CIS HI RAD bistables tripped. 2. ESFAS CIS RAD MA, MP, MC, MD	1. CIS initiates if 2 of 4 2. (A) If only one channel check for malfunction. (B) If 2 or more verify CIS components actuate carry out reactor/turbine trip	10 R/lr	CIS-MA, MB, MC, MD ----- ESFAS Panel	QND 295
CONTAINMENT RAD HI CIS QNL PRE-TRIP R P-15	1. Indicates increased cont. radiation. 2. ESFAS CIS RAD MA, MP, MC, MD	1. NONE 2. Compare cont. RAD monitors	(later)	74 ----- ESFAS Panel	QND 1570
BLANK P-25	BLANK			-----	
IPSNL/EMERG ATR LCK DOOR OPEN P-35	1. Personnel or Emergency Airlock one or more doors OPEN 2. Notification of containment entry in progress.	1. NONE 2. Verify alarm is due to normal Ingress & Egress notify Tech. Staff if not.	N/A	IS-2, IS-4, IS-6, IS-8 ----- Door limit switches thru Sec. Computer.	QND 514
BLANK P-45	BLANK			-----	
BLANK P-55	BLANK			-----	

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ANNUNCIATOR PANEL P - VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MN FLOW ISOL ICV-09-1A ACCUM PRESS LO/CONT PWR P-6	1. Main feed isolation valve low accumulator press or loss of control power. 2. Valve position lights	1. NONE 2. (A) Have operator verify local panel for specific LO press condition. (B) Check fuses for Control Pwr. (C) Notify I & C	(later)	74, IS1, IS2, IS3 ----- Local Aux Feed Area	OND 655
MN FLOW ISOL ICV-09-1P ACCUM PRESS LO/CONT PWR P-16	1. Main feed isolation valve low accumulator press or loss of Control Power. 2. Valve position lights	1. NONE 2. (A) Have operator verify local panel for specific LO press condition. (B) Check fuses for Control Pwr. (C) Notify I & C	(later)	74, IS1, IS2, IS3 ----- Local Aux Feed Area	OND 656
MN FLOW ISOL ICV-09-2A ACCUM PRESS LO/CONT PWR P-26	1. Main feed isolation valve low accumulator press or loss of Control Power. 2. Valve position lights	1. NONE 2. (A) Have operator verify local panel for specific LO press condition. (B) Check fuses for Control Pwr. (C) Notify I & C	(later)	74, IS1, IS2, IS3 ----- Local Aux Feed Area	OND 671
MN FLOW ISOL ICV-09-2B ACCUM PRESS LO/CONT PWR P-36	1. Main feed isolation valve low accumulator press or loss of Control Power. 2. Valve position lights	1. NONE 2. (A) Have operator verify local panel for specific LO press condition. (B) Check fuses for Control Power (C) Notify I & C	(later)	74, IS1, IS2, IS3 ----- Local Aux Feed Area	OND 672
BLANK P-46	BLANK			-----	
BLANK P-56	BLANK			-----	

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ANNUNCIATOR PANEL P VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MSIS QNL A ACTUATION P-7	1. Main Steam Isolation A Train actuated 2. (A) "A" S/G press and actuation indicating lights (B) Cont. press indications	1. MSIS components isolated 2. (A) Verify components function in auto or perform manually (B) Carry out Reactor/Turbine Trip & refer to Main Steam Line Break Proc. 2-0810040.	600 psig S/G Press 5 psig Cont. Press	MSIS-A ----- ESFAS Panel	OWD 330
MSIS SG 2A PRESS IO QNL TRIP P-17	1. One or more MSIS S/G "A" press bistables tripped. 2. ESFAS MSIS press S/G 2A-VA, MB, MC, MD	1. MSIS if 2 of 4 2. (A) If only one channel check for malfunction (B) If 2 or more carry-out trip procedure and refer to MSIB Procedure 2-0810040.	600 psig	MSIS-VA, MB, MC, MD ----- ESFAS Panel	OWD 295
BLANK P-27	BLANK			-----	
BLANK P-37	BLANK			-----	
MSIV ICV-08-1A AIR PRESS IO/ DC FAILURE P-47	1. Low air press in accumulator or loss of D.C. Control Power. 2. (A) Local panel air pressure (B) Valve position indicating lights	1. NONE 2. (A) ICV-08-1A fails shut on total loss of air. Restore air supply to accumulator. (B) Determine cause of D.C. failure.	70 psig	74, IS-08-12A ----- (later)	OWD 312
MSIV ICV-08-1A FAIL TO CLOSE P-57	1. ICV-08-1A failed to close 2. Valve position indicating lights	1. NONE 2. Determine cause of failure	N/A	94X, 33X ----- Valve Limit switches	OWD 312

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ANNUNCIATOR PANEL P VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MSIS QNL A ACTUATION BLOCKED P-8	1. Channel A MSIS blocked 2. S/G press MA, MB, MC, MD	1. Blocks MSIS Qnl A 2. Vrfy S/G press < 700 psia	N/A	MSIS-A ----- ESFAS Panel	Q/D 330
MSIS QNL A ACTUATION BLOCK PERMISS P-18	1. "A" S/G press < 700 psia 2. S/G PRESS MA, MB, MC, MD	1. NONE 2. Verify S/G "A" press < 700 psia block MSIS "A" if shutdown in progress.	700 psia	MSIS-A ----- ESFAS Panel	Q/D 330
ELANK P-28	ELANK			-----	
FW FP 2A/2B DISCH MV-09-1/2 OVERLOAD P-38	1. Fuse failure or bkr trip on overload 2. Valve position lights	1. Valves fall as is 2. (A) Have operator check fuses/reset over- load (B) Notify Electrical Dept.	(later)	74/621, 74/616 ----- Local at Breaker	Q/D 621
ELANK P-48	ELANK			-----	
MSIV IYP MV-08-1A OVERLOAD P-58	1. Fuse failure or bkr trip on overload 2. Valve position lights	1. Valve falls as is 2. (A) Have operator check fuses/reset over- load (B) Notify Electrical Dept.	(later)	74 ----- Local at Breaker	Q/D 311

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL P VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MSIS CHNL F ACTUATION P-9	1. Main Steam Isolation B Train actuated 2. (A) "F" S/G press and actuation indicating lights (F) Cont. press indications	1. MSIS components isolate 2. (A) Verify components function in auto or perform manually (B) Carry out reactor/turbine trip & refer to MSLB 2-0810040	600 psia S/G press 5 psig Cont. Press	MSIS-B -----	OWD 331
MSIS SG 2R PRESS LO CHNL TRIP P-19	1. One or more MSIS S/G "F" press bistables tripped. 2. ESFAS MSIS press S/G 2R-1A, MB, MC, MD	1. MSIS 1f 20F4 2. (A) If only on channel check for malfunction (B) If 2 or more carry out trip procedure and refer to MSLB Procedure 2-0810040	600 psia	MSIS-1A, MB, MC, MD -----	OWD 295
FLANK P-29	FLANK			-----	
FLANK P-39	FLANK			-----	
MSIV ICV-08-1B AIR PRESS LO/ DC FAILURE P-49	1. low air press in accumulator or loss of DC power 2. (A) Local panel air pressure (B) Valve position indicating lights	1. NONE 2. (A) ICV-08-1B fails shut on total loss of air. Restore air supply to accumulator (B) Determine cause of DC failure	70 psig	74, IS-08-12B -----	OWD 315
MSIV ICV-08-1B FAIL TO CLOSE P-59	1. ICV-08-1B failed to closed 2. Valve position indicating lights	1. NONE 2. Determine cause of failure	N/A	94X, 33X -----	OWD 315

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL P VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
MSIS OVL P ACTUATION BLOCKED P-10	1. Channel F MSIS blocked 2. S/G Press MA, MB, MC, MD	1. Blocks MSIS Channel F 2. Verify S/G prss < 700 psia	N/A	MSIS B ----- ESFAS Panel	OWD 331
MSIS OVL P ACTUATION BLOCK PERMISS P-20	1. "F" S/G prss < 700 psia 2. S/G prss MA, MB, MC, MD	1. N/A 2. Very S/G "F" prss < 700 psia block MSIS "F" if shutdown in progress.	700 psia	MSIS-B ----- ESFAS PANEL	OWD 331
BLANK P-30	BLANK			-----	
RAP TEMP III/ AUX STEAM LINE TCV-08-06/ RCV-16-1 CLOSE P-40	1. Fuse failure or bkr trip on overload 2. Valve position lights	1. Valves fail as is 2. (A) Have operator check fuses/reset over- load. (B) Notify Electrical Department	(later)	TS-08-7B(1-6) TS-16-1A(1-6) ----- Local at Breaker	OWD 751/752
BLANK P-50	BLANK			-----	
MSIV BYP MV-08-1B OVERLOAD P-60	1. Fuse failure or bkr trip on overload 2. Valve position lights	1. Valve fails as is 2. (A) Have operator check fuses/reset over- load (B) Notify Electrical Department	(later)	74 ----- Local at Breaker	OWD 314

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL 0 VERTICAL COLUMN 1

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ENG SFCD MODULE REMOVED 0-1	1. One or more safeguards modules removed. 2. NONE	1. NONE 2. (A) Determine which module removed and why (B) Ensure Tech. Spec. requirements are met	(later)	ESC-1A, MB, MC, MD SA, SE ----- Behind RTGB-206 or or HVAC Panel	Q/D 1580
FLANK 0-11				-----	
HESI PP 2B OVERLOAD 0-21	1. Thermal overload of HESI Pump 2B 2. (A) Ammeter High before trip. (B) Breaker indicate lights - out	1. Pump trips 2. (A) Verify HESI pump 2B tripped (B) Verify HESI pump A running or start if required. (C) Check HESI Pwr 2-20405 locally	(later)	74-1, 74-4 (later) ----- Breaker 2-20405/2B3- 4160V Bus	Q/D 238
HESI IP 2B START FAIL / SIAS OVRD 0-31	1. (A) HESI Pump 2B fail to auto start on SIAS (B) OR, HESI Pump 2B control switch in stop 2. (A) HESI pump 2B ammeter (B) HESI Pump Breaker indication.	1. NONE 2. (A) Attempt start of 2B HESI Pump by CSW and verify HESI Pump 2A operation, start as required (B) Place control switch to "Auto".	(later)	74-3, 74-4 (later) ----- Breaker 2-20405/2B3- 4160V Bus	Q/D 238
FLANK 0-41				-----	
HESI VLV 3616/26/36/46 OVERLOAD / SIAS OVRD 0-51	1. One or more HESI Injection header valves tripped on thermal overload or CS in closed position. 2. Valve control switch position or valve position indication lights	1. Thermal Overload; valve fails as is. 2. (A) Place control switch to Auto (B) Check Breaker(s) locally, notify Electric Department if necessary (C) Attempt to operate with CS or manually	(later)	3, 74, 258, 261, 264, 267 (later) ----- Breakers (16) 2-42057/2B5 MOC (26) 2-42123/2B6 MOC (36) 2-42122/2B6 MOC (46) 2-42054/2B5 MOC	Q/D 258

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ANNUNCIATOR PANEL 0 VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
AUTO TEST INSERTION FAULT 0-2	1. One or more ESFAS bistables out of calibration, or failure 2. (A) Auto test lamp falls to flash on undertest (B) Auto test lamp on steady on overtest	1. N/A 2. (A) Determine which bistable is out of calibration (B) Place in bypass if required by T.S. (C) Notify I & C	5% Above Setpoint 5% Below Setpoint	ESC-6A ----- ESFAS Panel behind RTCB-206	OWD 1500
FLANK 0-12	FLANK			-----	
FLANK 0-22	FLANK			-----	
FLANK 0-32	FLANK			-----	
FLANK 0-42	FLANK			-----	
FLANK 0-52	FLANK			-----	

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ANNUNCIATOR PANEL 0 VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ONHT PRESS SIAS MEAS CEN. TRIP 0-3	1. High containment pressure 1 or more channels has exceeded trip value. 2. RTGB-206 containment pressure indication channels MA, MF, MC, or MD high pressure indication	1. 2/4 Logic, SIAS actuates 2. (A) Verify high containment pressure condition (B) Verify SIAS or initiate manually (C) Verify Reactor & Turbine Trip (D) Follow LOCA Procedure #2-0120042	5 psig HI	SIAS-MA, MB, MC, MD ----- ESPAS Cabinet or SA, SE Actuation Cabinets	OWD 295
FLANK 0-13	FLANK			-----	
HPSI PP 2F DISCH V-3654 CLOSE 0-23	1. HPSI Pump 2B discharge valve not fully open 2. Valve position indication	1. NONE 2. (A) Verify control switch in locked open position unless Hot Leg Injection in (B) Open locally if required.	< Fully Open Limit Switch Contact	33 Valve position Limit Switch ----- V-3654 2H HPSI ROOM	OWD 277
HPSI PP 2A DISCH V-3656 CLOSE 0-33	1. HPSI Pump 2A discharge valve not fully open 2. Valve Position Indication	1. NONE 2. (A) Verify control switch in locked open position unless Hot Leg Injection in operation. (B) Open locally if required	< Fully Open Limit Switch Contact	33 Valve Position Limit Switch ----- V-3656 2A HPSI Room	OWD 279
FLANK 0-43	FLANK			-----	
FLANK 0-53	FLANK			-----	

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL C VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FLANK 0-4	FLANK			-----	
FLANK 0-14	FLANK			-----	
FLANK 0-24	FLANK			-----	
SI TK ISOL V-3614/3624 CLOSE 0-34	1. 2A2 and/or 2A1 SIT Isolation valve not fully open. 2. Valve position indication	1. Valves automatically open when RCS pressure > 500 psia. 2. Verify power available and open the valve(s) if RCS pressure \geq 500 psia	< Fully Open Limit Switch Contact	33 Open Limit switch on ----- V3614, 3624 In Containment (19.5)	GM's 269 270
SI TK ISOL V-3614/3624 OVERLOAD 0-44	1. (A) Motor operator on either 2A2 or 2A1 SIT Isolation valve tripped on thermal overload, (B) OR, valve(s) have been racked out. 2. Valve position indication; lights-out	1. Valves fail as is. 2. (A) Have operator check breaker(s) 2-41219/ 2-41311 locally, notify Electrical Dept. if necessary. (B) Manually operate valves if required	(later)	74 (later) ----- breakers; (14) 2-41219/2A5 MOC (24) 2-41311/2A6 MOC	GM's 269 270
FLANK 0-54	FLANK			-----	

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ANNUNCIATOR PANEL 0 VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FLANK 0-5	FLANK			-----	
FLANK 0-15	FLANK			-----	
FLANK 0-25	FLANK			-----	
SI TK ISOL V-3634/3644 CLOSE 0-35	1. 2B1 and/or 2B2 SIT Isolation valve(s) not fully open 2. Valve position indication	1. Valves automatically open when RCS pressure \geq 500 psia 2. Verify power available and open the valve(s) if RCS pressure \geq 500 psia	< Fully Open Limit Switch Contact	33 ----- Open Limit Switch on Valves	GW's 271 272
SI TK ISOL V-3634/3644 OVERLOAD 0-45	1. Motor operator on either 2B1 or 2B2 SIT Isolation Valve tripped on thermal overload 2. Valve position indication; lights-out	1. Valves fail as is. 2. (A) Have operator check breaker(s) 2-42117/2-42048 locally, notify Electrical Dept. if necessary (B) Manually operate valves locally	(later)	74 (later) ----- Breakers (34) 2-42117/2B6 MCC (44) 2-42048/2B5 MCC	GW's 271 272
FLANK 0-55	FLANK			-----	

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL Q VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SUC SECTION CROSS TIE V-3545 OPEN Q-6	1. SUC suction cross connect valve V-3545 open 2. Valve position indication	1. NONE 2. (A) Verify V-3545 HS in local closed (B) Close manually if required	< Fully Closed Limit Switch Contact	33 Open Limit Switch V-3545 (later)	OWD 1501
HOT LEG INJECT LOOP 2A PRESS HI Q-16	1. Indicates high pressure between Hot Leg Injection check valves V-3524 & V-3525 due to leakage of RCS isolation valves. 2. "HRSI to Hot Leg 2A" pressure gauge PIA-3310	1. NONE 2. (A) V-3572 to relieve pressure (B) Consult RCS Leakage Tech Specs	HI - 1000 psig Reset 900 psig	PIA-3310 Press. Indicating Alarm SIGMA RIGB-206	OWD 1512
HPSI TO HOT LG 2A V-3540/50 OVERLOAD R Q-26	1. Loop 2A Hot Leg Injection Valve Motor Operators tripped on thermal overload 2. Valve position indication	1. Valves fail as is on overload 2. (A) Have operator check breaker(s) 2-41307/ 2-41344 locally, notify Electrical Dept. if necessary (B) Operate locally if required	(later)	74/233, 74/234 (later) ----- (40) 2-41307/2A6 MCC (50) 2-41344/2A6 MCC	OWD's 233 234
HPSI PP 2A DISOI V-3656 OVERLOAD Q-36	1. HPSI pump 2A discharge valve has tripped on overload 2. Valve position indication; lights-out	1. Valve fails as is 2. (A) Have operator check breaker 2-41255 locally, notify Electrical Dept. if necessary (B) Operate locally if required	(later)	74 (later) ----- Breaker 2-41255/2A5 MCC	OWD 279
HOT LEG INJECT LOOP 2A V-3540/3550 OPEN Q-46	1. Hot Leg Injection valves Loop 2A open 2. Valve position indication	1. NONE 2. Verify hand switches in local closed position or close manually, unless Hot Leg Injection in operation.	< Fully Closed Limit Switch Contact	33/233, 33/234 Valve Limit Switches V-3540, V-3550 2A HPSI Room	OWD's 233 234
S/O CLG CONT V-3306 CLOSE/CONT SIGNAL LOSS Q-56	1. SUC Heat Exchanger Bypass FCV-3306; (A) Less than fully open from valve Lim. Sw. (B) OR, remote local CS out of "Locked Open" (C) Flow signal to FIC-3306 has been lost 2. (A) Valve position indications (B) SUC Flow Indications	1. NONE 2. <u>NORMAL AT POWER;</u> (A) Verify V-3306 CS in "Locked Open" position. <u>ON SHUTDOWN COOLING;</u> (B) Take manual control on Modutronic Controller and open. (C) Verify \geq 3000 GPM flow on SUC	Limit Sw. <Full Open ----- Remote Local CS out of Locked Open ----- FIC-3306 Controller Loss of flow Signal	33/Lim. Switch V-3306, & SS-3306-1 Local Res. Switch Both in a LPSI Room. ----- FC 3306-1/Controller RIGB-206	OWD's 1516 1528

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ANNUNCIATOR PANEL Q VERTICAL COLUMN 7

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SUC SUCTION CROSS TIE V-3545 OVERLOAD Q-7	1. SUC suction cross connect V-3545 has tripped on 2. Valve position indication lights - out	1. Valve falls as is on overload. 2. (A) Have operator check breaker 2-42404 locally, notify Elect. Dept. if necessary (B) Operate valve locally, if possible	(later)	74 (later) ----- Breaker 2-42404 MCC 2AB	OAD 1501
HOT LEG INJECT LOOP 2B PRESS HI Q-17	1. Indicates high pressure between Hot Leg Injection check valves V-3526 & V-3527 2. "HPSI to Hot Leg 2A" pressure indicator alarm PIA-3320	1. NONE 2. (A) Align system thru leakage valve V-3571 to relieve pressure (B) Consult Tech Spec Leakage requirements	HI - 1000 psig Reset - 900 psig	PIA-3320 Pressure Indicating Alarm SIGMA ----- RIG8-206	OAD 1513
HPSI TO HOT LG 2B V-3551/23 OVERLOAD Q-27	1. One or both Loop 2B Hot Leg Injection Valve Motor Operators tripped on overload 2. Valve position indication lights - out	1. Valves fall as is on overload 2. (A) Have operator check breaker(s) 2-42066/2-42065 locally and notify Electrical Dept. if necessary (B) Operate valves manually if necessary	(later)	74/235, 74/236 (later) ----- (51) 2-42066/2B5 MCC (23) 2-42065/2B5 MCC	OAD's 235 236
HPSI PP 2B DISCH V-3654 OVERLOAD Q-37	1. 2B HPSI pump discharge valve 2B-3654 has tripped on motor overload 2. Valve position indication lights-out	1. Valve falls as is on overload 2. (A) Have operator check breaker 2-42059 locally, notify Elect. Dept. if necessary (B) Open locally if required	(later)	74 (later) ----- Breaker 2-42059/2B5 MCC	OAD 277
HOT LEG INJECT LOOP 2B V-3523/3551 OPEN Q-47	1. One or both Hot Leg Injection valves Loop 2B open 2. Valve position indications	1. NONE 2. Verify Control Switch in locked closed position	< Fully Closed Limit Switch Contact	33/235, 33/236 Limit Switches ----- Hot Leg Injection Valves V-3523/51 2B HPSI Room	OAD 235 236
S/D CLG CONT V-3301 CLOSE/CONT SIGNW. LOSS Q-57	1. SDC Heat Exchanger Bypass FCV-3301. (A) Less than fully open from valve limit switch (B) Route local CS out of "Locked Open" (C) OR, flow signal to FIG-3301 has been lost. 2. (A) Valve position indications (B) SDC flow indications	1. NONE 2. (A) Verify V-3301 HS in open position (B) Take manual control on Motoronic Controller and open (C) Verify ≥ 3000 GPM flow on SDC	Limit Switch <Fully Open ----- Remote Local CS out of Locked Open ----- FIG 3306 Controller Loss of Flow Signal	33/Lim. Switch SS3301-1 Rem. CS Both in HPSI Room ----- FC 3301-1 Controller RIG8-206	OAD 1517 1528

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ANNUNCIATOR PANEL Q VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PERSISTENT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
S/D CLG ISOL V-3651/3652 OPEN Q-8	1. Loop 2B Hbt Leg Suction Valves V-3651/3652 open 2. Valve position indication	1. Valves Auto Close at ≥ 275 psia 2. (A) None, if on SDC. (B) Place hand switch to locked closed position	< Fully Closed Limit Switch Contacts	33/253, 33/254 Limit Switches V-3651, 3652	OWD's 253 254
S/D CLG ISOL V-3651/3652 OVERLOAD Q-18	1. Loop 2B Hbt Leg Suction Valves V-3651/3652 over-load trip 2. Valve position indication	1. Valves fail as is on overload 2. (A) Have operator check breaker(s) locally notify Electrical Dept. if necessary (B) Operate locally if required	(later)	74/253, 74/254 (later) Breakers (51) 2-42121/2B6 MCC (52) 2-41243/2A5 MCC	OWD's 253 254
S/D CLG ISOL V-3664 OPEN Q-28	1. Loop 2A Hbt Leg Suction Valve V-3664 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitch to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contacts	33/Limit Switch V-3664 (later)	OWD 1502
S/D CLG IX 2A V-3456 OPEN Q-38	1. 2A SIC Heat Exchanger Return Valve V-3456 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitch to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contacts	33/Limit Switch V-3456 2A LPSI Room	OWD 1504
S/D CLG IX 2A V-3517 OPEN Q-48	1. 2A SDC Heat Exchanger Inlet Valve V-3517 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitch to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contacts	33/Limit Switch V-3517 2A LPSI Room	OWD 1506
S/D CLG TCV V-3657 OPEN Q-58	1. 2A SDC temperature control valve open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitches to locked closed position	< Fully Closed Limit Switch Contacts	33/Limit Switch V-3657 (later)	OWD 1514

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ANNUNCIATOR PANEL Q VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SEQUINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
S/D CLG ISOL V-3480/3481 OPEN Q-9	1. Loop 2A Hbt Leg Suction Valves V-3480/3481 open 2. Valve Position Indication	1. Valves Auto Close \geq 275 psia 2. (A) None, if on SDC (B) Place handswitch(es) to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contact	33/249, 33/250 Valve Limit Switch ----- V-3480/81	OWD 249 250
S/D CLG ISOL V-3480/3481 OVERLOAD Q-19	1. Loop 2A Hbt Leg Suction Valves V-3480/3481 Over- load trip 2. Valve position indication	1. Valves fail as is on overload 2. (A) Have operator check breaker(s) locally notify Electrical Dept. if necessary (B) Operate manually if required	(later)	74/249, 74/280 (later) ----- Breakers (80) 2-42013/2B5 MCC (81) 2-41204/2A5 MCC	OWD 249 250
S/D CLG ISOL V-3665 OPEN Q-29	1. Loop 2B Hbt Leg Suction Valve V-3665 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitch to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contact	33, Valve Limit Switch ----- V-3665 (later)	OWD 1503
S/D CLG HX 2B V-3457 OPEN Q-39	1. 2B SDC Heat Exchanger Return Valve V-3457 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitch to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contact	33, Valve Limit Switch ----- V-3457 2B LPSI Room	OWD 1505
S/D CLG HX 2B V-3658 OPEN Q-49	1. 2B SDC Heat Exchanger Inlet Valve V-3658 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place handswitch to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contact	33, Valve Limit Switch ----- V-3658 2B LPSI Room	OWD 1507
S/D CLG TCV V-3612 OPEN Q-59	1. 2B SDC Temperature Control Valve V-3612 open 2. Valve position indication	1. NONE 2. (A) None, if on SDC (B) Place hand switches to locked closed position (C) Close manually if required	< Fully Closed Limit Switch Contact	33, Valve Limit Switch ----- V-3612 (later)	OWD 1515

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ANNUNCIATOR PANEL Q VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK Q-10	BLANK			-----	
S/D COOLING V-3664/3536 OVERLOAD Q-20	1. Loop 2A Hot Leg Suction Valve V-3664 and/or SDC 2A warmup valve V-3536 Mech. Overload 2. Valve position indication	1. Valves fail ASLS on overload 2. (A) Have operator check breakers locally, notify Electrical Dept. if necessary (B) Operate valve(s) manually if required	(later)	74/1504, 74/1510 (later) ----- Breakers (64) 2-41318/2A6 MCC (36) 2-41325/2A6 MCC	GND's 1502 1510
SD COOLING V-3665/3539 OVERLOAD Q-30	1. Loop 2B Hot Leg Suction Valve V-3665 and/or SDC 2B Warmup Valve V-3539 Mechanical Overload 2. Valve position indication	1. Valves fail as is on overload 2. (A) Have operator check breakers locally, notify Electrical Dept. if necessary (B) Operate valve(s) manually if required	(later)	74/1503, 74/1511 (later) ----- (65) 2-41318/2A6 MCC (39) 2-42131/2B6 MCC	GND 1503
S/D COOLING V-3456/3517/ 3657 OVERLOAD Q-40	1. 2A SDC Heat Exchanger Inlet, Outlet & Temperature Control Valves Mechanical Overload 2. Valve position indication	1. Valves fail as is on overload 2. (A) Have operator check breakers locally; notify Electrical Dept. if necessary (B) Operate valve(s) manually if required	(later)	74/1504, 1506, 1514 (later) ----- (56) 2-41224/2A5 MCC (57) 2-41223/2A5 MCC (17) 2-41225/2A5 MCC	GND 1504
S/D COOLING V-3457/3658/ 3512 OVERLOAD Q-50	1. 2B SDC Heat Exchanger Inlet, Outlet & Temperature Control valves mechanical overload 2. Valve position indication	1. Valves fail as is on overload 2. (A) Have operator check breakers locally, notify Electrical Dept. if necessary (B) Operate valve(s) manually if required	(later)	74/1505, 07, 15 (later) ----- (57) 2-42026/2B5 MCC (58) 2-42130/2B6 MCC (12) 2-42025/2B5 MCC	GND 1505
BLANK Q-60	BLANK			-----	

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL R VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SI TK 2A1 PRESS HI/LO R-1	1. Indicates increase/decrease in level or N ₂ Press. 2.(A) PIA-3321 SIT press. indicator. (B) LIA-3321 SIT W/R level indicator.	1. NONE 2.(A) Loss Press - verify vent closed - Increase N ₂ Press - Check for Local Leak (B) High Press - Verify N ₂ Isolated - Vent excess pressure (C) Verify level in Spec.	HI- 621 PSIG LO- 579 PSIG	PIA-3321 Pressure Indicating Alarm SIGMA Local at Tank 2A1	Q/D-281
SI TK 2A1 PRESS HI-HI R-11	1. Indicates increase in level of N ₂ pressure 2.(A) PIA-3321 SIT press. indicator (B) LIA-3321 SIT W/R level indicator	1. NONE 2.(A) Close N ₂ supply to tank (B) Close vent valve (C) Verify level not increasing	HI-HI 643 PSIG	IS-3323 Pressure Switch Local at Tank 2A1	Q/D-1522
SI TK 2A1 PRESS LO-LO R-21	1. Indicates loss of N ₂ or large level decrease 2.(A) PIA-3321 SIT press. indicator (B) LIA-3321 SIT W/R level indicator	1. NONE 2.(A) Fill with N ₂ to specification press. (B) Close vent valve (C) Verify normal level (D) Check locally for leaks	Lo-Lo 557 PSIG	IS-3322 Pressure Switch Local at Tank 2A1	Q/D-1522
SI TK 2A1 LEVEL HI/LO R-31	1. HI-Indicates in leakage from RCS LO-Indicates leakage from tank 2.(A) LIA-3321 and PIA-3321 (B) Verify no flow/press on SI leakage test line	1. NONE 2.(A) High level - Open fill/drain valve (B) Low level - check drain closed (C) Verify proper valve line-up (D) Verify proper level		LIA-3321 Level Indicating Alarm SIGMA Local at Tank 2A1	Q/D-281
SI TK 2A1 LEVEL HI-HI R-41	1. Indicates leakage from RCS 2. LIA-3322 SIT narrow range level indicator	1. NONE 2.(A) Verify tank level (B) Open drain/fill VLV & restore proper LVL (C) Check SI leakage test line line-up (D) Verify tank line-up	HI-HI 92.5%	LIA-3322 Level Indicating Alarm SIGMA Local at Tank 2A1	Q/D-1521
SI TK 2A1 LEVEL LO-LO R-51	1. Indicates leakage from tank 2. LIA-3322 SIT narrow range level indicator	1. NONE 2.(A) Verify drain valve closed (B) Check tank line-up (C) Restore normal level	Lo-Lo 75.5%	LIA-3322 Local at Tank 2A1	Q/D-1521

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL R VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SI TK 2A2 PRESS HI/LO R-2	1. Indicates increase/decrease in level or N ₂ Press. 2.(A) PIA-3311 SIT press. indicator. (B) LIA-3311 SIT W/R level indicator.	1. NONE 2.(A) Loss Press - verify vent closed - Increase N ₂ Press - Check for Local Leak (B) High Press - Verify N ₂ Isolated - Vent excess pressure (C) Verify level in Spec.	HI- 621 FSIG LO- 579 FSIG	PIA-3311 Pressure Indicating Alarm SIGMA RTGB-206	G/D-280
SI TK 2A2 PRESS HI-HI R-12	1. Indicates increase in level of N ₂ pressure 2.(A) PIA-3311 SIT press. indicator (B) LIA-3311 SIT W/R level indicator	1. NONE 2.(A) Close N ₂ supply to tank (B) Vent excess N ₂ to reduce press. (C) Verify level not increasing	HI-HI 643 FSIG	IS-3313 Pressure Switch Local at Tank 2A2	G/D-1522
SI TK 2A2 PRESS LO-LO R-22	1. Indicates loss of N ₂ or large level decrease 2.(A) PIA-3311 SIT press. indicator (B) LIA-3311 SIT W/R level indicator	1. NONE 2.(A) Fill with N ₂ to specification press. (B) Close vent valve (C) Verify normal level (D) Check locally for leaks	Lo-Lo 557 FSIG	IS-3312 Pressure Switch Local at Tank 2A2	G/D-1522
SI TK 2A2 LEVEL HI/LO R-32	1. HI-Indicates in leakage from RCS LO-Indicates leakage from tank 2.(A) LIA-3311 and PIA-3311 (B) Verify no flow/press on SI leakage test line	1. NONE 2.(A) High level - Open fill/drain valve (B) Low level - check drain closed (C) Verify proper valve line-up (D) Verify proper level		LIA-3311 Level Indicating Alarm SIGMA RTGB-206	G/D-280
SI TK 2A2 LEVEL HI-HI R-42	1. Indicates leakage from RCS 2. LIA-3312 SIT narrow range level indicator	1. NONE 2.(A) Verify tank level (B) Open drain/fill VLV & restore proper LVL (C) Check SI leakage test line line-up (D) Verify tank line-up	HI-HI 92.5%	LIA-3312 Level Indicating Alarm SIGMA RTGB-206	G/D-1521
SI TK 2A2 LEVEL LO-LO R-52	1. Indicates leakage from tank 2. LIA-3312 SIT narrow range level indicator	1. NONE 2.(A) Verify drain valve closed (B) Check tank line-up (C) Restore normal level	Lo-Lo 75.5%	LIA-3312 Level Indicating Alarm SIGMA RTGB-206	G/D-1521

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL R VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SI TK 2F1 PRESS HI/LO R-3	1. Indicates increase/decrease in level or N ₂ Press. 2.(A) PIA-3331 SIT press. indicator. (B) LIA-3331 SIT W/R level indicator.	1. NONE 2.(A) Loss Press - verify vent closed - Increase N ₂ Press - Check for Local Leak (B) High Press - Verify N ₂ Isolated - Vent excess pressure (C) Verify level in Spec.	HI- 621 PSIG LO- 579 PSIG	PIA-3331 Pressure Indicating Alarm SIGMA Local at Tank	GWD-282
SI TK 2P1 PRESS HI-HI R-13	1. Indicates increase in level of N ₂ pressure 2.(A) PIA-3331 SIT press. indicator (B) LIA-3331 SIT W/R level indicator	1. NONE 2.(A) Close N ₂ supply to tank (B) Close vent valve (C) Verify level not increasing	HI-HI - 643 PSIG	PS-3333 Pressure Indicating Alarm SIGMA Local at Tank	GWD-1522
SI TK 2F1 PRESS LO-LO R-23	1. Indicates loss of N ₂ or large level decrease 2.(A) PIA-3331 SIT press. indicator (B) LIA-3331 SIT W/R level indicator	1. NONE 2.(A) Fill with N ₂ to specification press. (B) Close vent valve (C) Verify normal level (D) Check locally for leaks	Lo-Lo 557 PSIG	PS-3332 Pressure Switch Local at Tank	GWD-1522
SI TK 2F1 LEVEL HI/LO R-33	1. HI-Indicates in leakage from RCS LO-Indicates leakage from tank 2.(A) LIA-3331 and PIA-3331 (B) Verify no flow/press on SI leakage test line	1. NONE 2.(A) High level - Open fill/drain valve (B) Low level - check drain closed (C) Verify proper valve line-up (D) Verify proper level	HI - 88% Lo - 80%	LIA-3331 Level Indicating Alarm SIGMA Local at Tank	GWD-282
SI TK 2F1 LEVEL HI-HI R-43	1. Indicates leakage from RCS 2. LIA-3332 SIT narrow range level indicator	1. NONE 2.(A) Verify tank level (B) Open drain/fill VLV & restore proper LVL (C) Check SI leakage test line line-up (D) Verify tank line-up	HI-HI 92.5%	LIA-3332 Level Indicating Alarm SIGMA Local at Tank	GWD-1521
SI TK 2F1 LEVEL LO-LO R-53	1. Indicates leakage from tank 2. LIA-3332 SIT narrow range level indicator	1. NONE 2.(A) Verify drain valve closed (B) Check tank line-up (C) Restore normal level	Lo-Lo 75.5%	LIA-3332 Level Indicating Alarm SIGMA Local at Tank	GWD-1521

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL R VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SI TK 2P2 PRESS HI/LO R-4	1. Indicates increase/decrease in level or N ₂ Press. 2.(A) PIA-3341 SIT press. indicator. (E) LIA-3341 SIT W/R level indicator.	1. NONE 2.(A) Loss Press - verify vent closed - Increase N ₂ Press - Check for Local Leak (B) High Press - Verify N ₂ Isolated - Vent excess pressure (C) Verify level in Spec.	HI- 621 FSIG LO- 579 FSIG	PIA-3341 Pressure Indicating Alarm SIGMA RTGB-206	GND-283
SI TK 2P2 PRESS HI-HI R-14	1. Indicates increase in level of N ₂ pressure 2.(A) PIA-3341 SIT press. indicator (B) LIA-3341 SIT W/R level indicator	1. NONE 2.(A) Close N ₂ supply to tank (B) Vent excess N ₂ to reduce press. (C) Verify level not increasing	HI-HI 643 FSIG	PS-3343 Pressure Switch Local at Tank	GND-1522
SI TK 2P2 PRESS LO-LO R-24	1. Indicates loss of N ₂ or large level decrease 2.(A) PIA-3341 SIT press. indicator (E) LIA-3341 SIT W/R level indicator	1. NONE 2.(A) Fill with N ₂ to specification press. (B) Close vent valve (C) Verify normal level	Lo-Lo 557 FSIG	PS-3342 Pressure Switch Local at Tank	GND-1522
SI TK 2P2 LEVEL HI/LO R-34	1. HI-Indicates in leakage from RCS LO-Indicates leakage from tank 2.(A) LIA-3341 and PIA-3341 (E) Verify no flow/press on SI leakage test line	1. NONE 2.(A) High level - Open fill/drain valve (B) Low level - check drain closed (C) Verify proper valve line-up (D) Verify proper level	HI - 88% Lo - 80%	LIA-3341 Level Indicating Alarm SIGMA RTGB-206	GND-283
SI TK 2P2 LEVEL HI-HI R-44	1. Indicates leakage from RCS 2. LIA-3342 SIT narrow range level indicator	1. NONE 2.(A) Verify tank level (B) Open drain/fill VLV & restore proper LWL (C) Check SI leakage test line line-up (D) Verify tank line-up	HI-HI 92.5%	LIA-3342 Level Indicating Alarm SIGMA RTGB-206	GND-1521
SI TK 2P2 LEVEL LO-LO R-54	1. Indicates leakage from tank 2. LIA-3342 SIT narrow range level indicator	1. NONE 2.(A) Verify drain valve closed (B) Check tank line-up (C) Restore normal level	Lo-Lo 75.5%	LIA-3342 Level Indicating Alarm SIGMA RTGB-206	GND-1521

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL R VERTICAL COLUMN 5

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK R-5	BLANK			-----	
BLANK R-15	BLANK			-----	
BLANK R-25	BLANK			-----	
BLANK R-35	BLANK			-----	
BLANK R-45	BLANK			-----	
BLANK R-55	BLANK			-----	
BLANK R-65	BLANK			-----	



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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL R VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SIAS CHANNEL A/B ACTUATION R-6	1. SIAS A and/or B train actuated 2.(A) Multiple safeguards equip. start and actuation (F) Lo FRZR pressure/high containment press.	1. SIAS components actuate 2.(A) Verify reactor & turbine trip (B) Verify auto actions occur and follow LOCA Emerg. Proc. 2-0120042	5 PSIG HI Cont. Press. 1708 PSIA Low FRZR Pressure	SIAS-A, SIAS-B ESFAS Cabinet Behind RTGB-206	G/D-246
FRZR PRESS LO SIAS MEAS CIRCL TRIP R-16	1. One or more ESFAS FRZR press. Bistables has tripped 2. PIA-1102A, E, C, D FRZR safety channel press. Indicators	1. SIAS if 2/4 channels trip 2.(A) Verify FRZR press (B) If channel failure bypass (C) If valid carry out action per LOCA Emergency Procedure no. 2-0120042.	1708 PSIA LOW	SIAS-MA, ME, MC, MD ESFAS Cabinet Behind RTGB-206	G/D-295
FRZR PRESS LO SIAS CIRCL. H2E-TRIP R-26	1. Low press on one or more FRZR press safety channels 2. PIA-1102A, E, C, D, FRZR safety channel press Indicators	1. NONE 2.(A) Verify FRZR press (B) Energize heaters (C) Start additional charging if low level (D) Isolate spray & PORV's	1808 PSIA LOW	RA-RAE-17 Reflash Panel (LATER)	G/D-1564
FLANK R-36	FLANK			-----	
SI HEADER LOOP 2A1 PRESS HI R-46	1. SI Header 2A1 press above normal 2. PIA-3329 SI Loop press. indicator	1. NONE 2.(A) Verify header pressure (B) Verify SIT 2A1 normal parameters (C) Verify ECCS check valve integrity	HI-1000 PSIG Reset 900 PSIG	PIA-3329 Press Indicating Alarm SIGMA RTGB-206	G/D-281
SI HEADER LOOP 2A2 PRESS HI R-56	1. SI Header 2A2 press above normal 2. PIA-3319 SI Loop press. indicator	1. NONE 2.(A) Verify header pressure (B) Verify SIT 2A2 normal parameters (C) Verify ECCS check valve integrity	HI-1000 PSIG Reset 900 PSIG	PIA-3319 Press Indicating Alarm SIGMA RTGB-203	G/D-280

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ANNUNCIATOR PANEL R VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ENG SFCD CAB DOORS OPEN R-7	1. One or more ESC doors open 2. Visually check cabinet doors	1. NONE 2. Determine which door open & reason. Verify all doors closed except during maintenance or testing	Limit Switch Contact "OPEN"	Door Switches ESFAS Cabinet Behind RTGB-206	OWD-331
BLANK R-17	BLANK			-----	
BLANK R-27	BLANK			-----	
BLANK R-37	BLANK			-----	
SI HEADER LOOP 2B1 PRESS HI R-47	1. SI header 2B1 press above normal 2. PIA-3339 SI loop press indicator	1. NONE 2.(A) Verify header press (B) Verify SIT 2B1 normal parameters (C) Verify EOCs check valve integrity	HI-1000 psig Reset 900 psig	PIA-3339 Pressure Indicating Alarm SIGMA RTGB-206	OWD-282
SI HEADER LOOP 2B2 PRESS HI R-57	1. SI header 2B2 press above normal 2. PIA-3349 SI loop press indicator	1. NONE 2.(A) Verify header press (F) Verify SIT 2B2 normal parameters (C) Verify EOCs check valve integrity	HI-1000 psig Reset 900 psig	PIA-3349 Pressure Indicating Alarm SIGMA RTGB-206	OWD-283

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ANNUNCIATOR PANEL R VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SIAS CHANNEL ACTIVATION BLOCK PERMISS R-8	1. Capability to manually block SIAS 2. PIA-1102 A, B, C, D, PRZR press safety channel indicators	1. NONE 2. Verify 3 of 4 PRZR press indications and block SIAS A & B if shutdown in progress	3/4 1808 ISIA Decreasing	SIAS-A, SIAS-B ESPAS Cabinets Behind RTGE-206	OWD-246 OWD-248
BACKFIT					
LFSI PP 2A OVRD/TRIP R-29	1. LFSI pump 2A thermal overload 2. Ammeter high before trip	1. NONE 2. Stop LFSI PP 2A if LFSI PP 2B running or can be operated	(LATER)	74-1, 74-2 (LATER) (BREAKER)	OWD-251
LFSI PP 2A FAILURE/ SIAS OVRD/ RAS OVRD R-38	1.(A) LFSI pump 2A fail to start (B) LFSI pump 2A control switch in stop (C) LFSI pump 2A started after RAS 2.(A) LFSI pump 2A ammeter	1. NONE 2.(A) Place control switch to auto (B) Start LFSI pump 2A if required	(LATER)	64-2, 74-4, CS Pump Breaker Control Switch/ Contacts	OWD-251
LFSI PP 2A RUNNING/ V-3480/3481 CLOSING R-48	1. LFSI PP 2A running when hot leg suction valves have close signal 2.(A) LFSI PP 2A ammeter (B) Valve position indications	1. NONE (A) Reopen suction valves if possible (E) If (A) not possible STOP LFSI pump 2A (C) Verify RCS press <275 psia	(LATER)	52/251, 42C/249 42C/250 (LATER) Valve limit switches Pump BRK Contacts	OWD-249 OWD-250 OWD-251
LFSI VLV V-3615/3625 OVERLOAD/ SIAS OVRD R-58	1. Either V-3615/3625 LFSI fldr. valves motor overload or control switch(s) in closed position 2.(A) Valve position indications (B) Control switch positions	1. NONE 2.(A) Place control switch(s) to auto (B) Control switch positions (C) Have operator check breaker	(LATER)	(74,3)/257, (74,3)/260, (LATER) Breakers (LATER) C.S. Contacts	OWD-257 OWD-260

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL R VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SIAS CHANNEL A BLOCKED R-9	1. Channel A SIAS manually blocked 2. Channel A blocked indicating light illuminated	1. NONE 2. Verify appropriate RCS pressure	3/4 1808 FSIA Decreasing With Blocked	SIAS-A ESPAS Cabinet	OWD-246
PACKFIT R-19				-----	
LFSI PP 2B OVRD/TRIP R-29	1. LFSI pump 2B thermal overload 2.(A) Ammeter high before trip (E) Breaker position indicate lights-out	1. NONE 2. Stop LFSI pump 2B if LFSI pump 2A running or can be operated	(LATER)	74-1, 74-2 (LATER) Breaker (LATER)	OWD-252
LFSI PP 2B FAILURE/ SIAS OVRD/ RAS OVRD R-39	1.(A) LFSI pump 2B fail to start (E) LFSI pump 2B control switch in stop (C) LFSI pump 2B started after RAS 2.(A) LFSI pump 2B ammeter (E) Manual start after RAS	1. NONE 2.(A) Place control switch to auto (B) Stop 2B LFSI pump if required (C) Start 2B LFSI pump if required	(LATER)	74-3, 74-4, CS Rump Breaker Control Switch (LATER)	OWD-252
LFSI PP 2B RUNNING/ V-3651/3652 CLOSING R-49	1. LFSI pump 2B running when hot leg suction valves have close signal 2.(A) LFSI pump 2B ammeter (E) Valve position indications	1. NONE 2.(A) Reopen suction valves if possible (B) If (A) not possible stop LFSI 2B (C) Verify RCS press <275 psia.	(LATER)	52/252, 42C/253, 42C/254 VLV Limit Switches PP IRK Contacts (LATER)	OWD-252 OWD-253 OWD-254
LFSI VLV V-3635/3645 OVERLOAD/ SIAS OVRD R-59	1. Either V-3635/3645 LFSI HIR VLV motor overload or control switch(s) in closed position 2.(A) Valve position indications (E) Control switch positions	1. NONE 2.(A) Place control switch to Auto (B) Open manually if required	(LATER)	(74,3)/263, (74,3)/266 Local at Breaker (LATER)	OWD-263 OWD-266

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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL, R VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SIAS CHANNEL B BLOCKED R-10	1. Channel B SIAS manually blocked 2. Channel B blocked indicating light illuminated	1. NONE 2. Verify appropriate RCS pressure	3/4 1808 PSIA Desc. when Blocked	SIAS-B ESFAS Cabinet Behind RCB-206	GD-248
BACKFIT R-20				-----	
HPSI PP 2A OVRLD/TRIP R-30	1. HPSI pump 2A thermal overload 2. Ammeter high before trip	1. NONE 2. Stop HPSI PP 2A if HPSI PP 2B operable and in operation	(LATER)	74-1, 74-2 Local at Breaker (LATER)	GD-237
HPSI PP 2A FAILURE/ SIAS/OVRD R-40	1.(A) HPSI pump 2A fail to start (B) HPSI pump 2A control switch in stop 2.(A) HPSI pump 2A Ammeter (B) HPSI pump 2A control switch	1. NONE 2.(A) Place control switch to Auto (B) Start HPSI 2A if required	(LATER)	74-3, 74-3, CS C.S. Contacts Pump TRK Contacts (LATER)	GD-237
HPSI/HPSI PP 2A/2B STRN Δ/P HI R-50				RA-RAB-7 Reflush N/A	GD-1209
AUX HPSI VLV 3617/27/37/47 OVERLOAD/ SIAS OVRD R-60	1.(A) Aux. HPSI valve motors overloaded (B) Aux. HPSI valve control switches in stop 2.(A) Valve position indications (B) Valve control switch positions	1. NONE 2.(A) Place control switch(s) to Auto (B) Open manually if required	(LATER)	(74,3)/259,262,265,268 Control Switch Contacts/Local At Breaker(s)	GD-259

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ANNUNCIATOR PANEL S VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
COH HEADER A FLO HI/LO S-1	1. (A) Indicates excessive or low flow 2. (A) Verify by observing pump amps. (B) Header pressure (C) Isolated components	1. NONE 2. (A) If low, start standby pump and investigate. (B) If HI, check for isolated components (C) Refer to COH Off-Normal #2-0310030	HI - 9500 GRM LO - 4000 GRM	FIS-14-1A ----- (later)	GD 217
COH HEADER A PRESS LO S-11	1. (A) Possible loss of pump (B) Possible excessive flow. 2. (A) Verify by observing pump amps. (B) Header pressure (C) Isolated components	1. NONE 2. (A) If pump failure, line up and start standby pump (B) Refer to COH Off-Normal Proc. 2-0310030	LO - 60 psig	FIS-14-8A ----- (later)	GD 217
COH NORMAL HR ISOL HCV-14-8A/9 SIAS/OVRRO S-21	1. (A) On SIAS valve fails to close (or) valve over- ridden to open. 2. (A) Verify by observing valve position lights (B) Pump amps (C) Header pressure	1. NONE 2. (A) Investigate failure of valve to close. (or) reason valve was overridden open.	(later)	CS-202-1,3 ----- RTGB-206	GD 202
COH PP 2A OVR/LOD/TRIP S-31	1. (A) COH pump has tripped on overcurrent, (B) OR, COH pump has lost control power, (C) OR, COH pump has been racked out 2. (A) Pump amps zero (B) Breaker indicator lights - green or out	1. (A) Pump trips - stops 2. (A) Lineup and start standby pump (B) Refer to COH Off-Normal Proc. 2-0310030 (C) Notify Electrical Department	Thermal Overload or Time Depen- dent Over- current trip	74-1, 74-2 ----- Bkr #2-20206 4160V Bus 2A3 in Cable Spreading Room	GD 201
COH PP 2A MOTOR BRG TEMP HI S-41	1. Indicates motor bearing overheating 2. NONE	1. NONE 2. (A) Have operator locally check brg. lubri- cation, excessive noise. (B) Lineup and start standby pump	HI - 90° F	TIS-14-28-1A1, 1A2 ----- COH Bldg. COH pump 2A	GD 219
COH PP 2A BKR FAILURE / SS ISOL S-51	1. (A) The COH pump has been given a start signal, but the pump has failed to start (B) OR the COH pump has been isolated from the Control Room by RML/ISOL Switch 2. (A) Failure; pump indicate lights - green (B) ISOLATE; pump indicate lights - out.	1. If isolate; loss of control from Control Room 2. (A) Investigate breaker failure locally, contact Electrical Dept. for assistance. (B) Return RML/ISOL switch to "Normal" if applicable.	(later)	74-3, SS/ISOL ----- Bkr #2-20206 4160V-Bus2A3 and RML/ISOL switch in cable spread room	GD 201

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL, S VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CCW HEADER B FLO HI/LO S-2	1. (A) Indicates excessive or low flow 2. (A) Verify by observing pump amps. (B) Header pressure (C) Isolated components	1. NONE 2. (A) If low, start standby pump and investigate (B) If HI, check for isolated components (C) Refer to CCW Off-Normal #2-0310030	HI - 9500 GRM LO - 4000 GRM	FIS-14-1B ----- (Later)	GD 218
CCW HEADER B PRESS LO S-12	1. (A) Possible loss of pump (B) Possible excessive flow 2. (A) Verify by observing pump amps (B) Header pressure (C) Isolated components	1. NONE 2. (A) If pump failure, lineup and start standby pump (B) Refer to CCW Off-Normal Proc #2-0310030	LO - 60 psig	FIS-14-8B ----- (Later)	GD 218
CCW NORMAL HR ISOL HCV-14-8B/10 SIAS/OVRD S-22	1. (A) On SIAS valve fails to close (or) valve overridden to open. 2. (A) Verify by observing valve position lights. (B) Pump amps (C) Header pressure	1. NONE 2. (A) Investigate failure of valve to close. (or) reason valve was overridden open.	(Later)	CS-202-2,4 ----- RTGB-206	GD 202
CCW PP 2B OVRD/TRIP S-32	1. (A) CCW pump has tripped on overcurrent (B) OR, CCW pump has lost control power, (C) OR, CCW pump has been racked out 2. (A) Pump amps zero (B) Breaker indicator lights - green or out	1. (A) Pump trips - stops 2. (A) Lineup and start standby pump (B) Refer to CCW Off-Normal Proc 2-0310030 (C) Notify Electrical Department	Thermal Overload or Time Dependent over-current trip	74-1, 74-2 ----- Bkr #2-20406 4160V-Bus 2B3 in Cable Spreading Room	GD 205
CCW PP 2B MOTOR BRG TEMP HI S-42	1. Indicates motor bearing overheating 2. NONE	1. NONE 2. (A) Have operator locally check brg. lubrication, excessive noise. (B) Lineup and start standby pump	HI -90° F	TIS-14-29-2B1, 2B2 ----- CCW Bldg. CCW pump 2B	GD 219
CCW PP 2B BKR FAILURE/ SS ISOL S-52	1. (A) The CCW pump has been given a start signal, but the pump has failed to start. (B) OR the CCW pump has been isolated from the Control Room by NML/ISOL Switch 2. (A) Failure; pump indicate lights - green (B) ISOLATE; pump indicate lights - out	1. If isolate; loss of control from Control Room 2. (A) Investigate breaker failure locally, contact Electrical Dept. for assistance (B) Return NML/ISOL switch to "Normal" if applicable.	(Later)	74-3, SS/ISOL ----- Bkr #2-20406 4160V - Bus 2B3 and NML/ISOL switch in Cable Spreading Room.	GD 205

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL S VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
OCW IIX 2A ICW FLO IO S-3	1. Low flow of ICW to OCW HT exchange 2A 2. (A) Verify by observing ICW 2A pump amps (E) ICW header A press. (C) Check temperature indicator on OCW outlet on RTCR 206	1. NONE 2. (A) Check 2A ICW pump running, if not start standby pump (B) Check strainer D.P. (C) Check TCV-14-4A for proper operation (D) Refer to ICW Off-Normal Proc #2-0640030	LO - 7500 GPM	FIS-21-9A ----- OCW Eldg; outlet OCW IIX 2A	OWD 217
OCW IIX A/B TEMP HI S-13	1. High temperature in OCW headers 2. Read TR-25-A/2B point 17 on HVAC Control Panel	1. NONE 2. (A) Have N. O. check ICW flow (E) Strainer D.P. (C) Check proper operation of TCV-14-4A/4B (D) Refer to ICW Off-Normal #2-0640030 and OCW Off-Normal #2-0310030	HI - 150° F	TE-14-3A, 3B TR-25-2A Point 17 TR-25-2B Point 17 ----- OCW Eldg. T.R. on HVAC Control Panel	OWD's 478 479
S/D IIX 2A OCW FLO HI/IO S-23	1. Excessive or low flow 2. Check FIS-14-10A on RTCR-206	1. NONE 2. (A) Check OCW for proper operation (E) Check for proper valve lineup (C) Refer to OCW Off-Normal Proc 2-0310030	HI - 5300 GPM LO - 3850 GPM	FIS-14-10A ----- S/D Cooling IIX Room 2A, RAB	OWD 217
OCW PP 2C OVRID/TRIP S-33	1. (A) OCW pump has tripped on overcurrent, (E) OR, OCW pump has lost control power, (C) OR, OCW pump has been racked out 2. (A) Pump amps zero (B) Breaker indicator lights - green or out	1. Pump trips - stops 2. (A) Lineup and start standby pump (E) Refer to OCW Off-Normal Proc 2-0310030 (C) Notify Electrical Department	Thermal Overload or Time Dependent over- current trip	74-1, 74-2 ----- Bkr 2-20502 4160V-Bus 2AB Cable Spreading Rm.	OWD 209
OCW PP 2C MOTOR HRC TEMP HI S-43	1. Indicates motor bearing overheating 2. NONE	1. NONE 2. (A) Have operator locally check brg. lubrication, excessive noise.	90° F	TIS-14-29-1C1, 1C2 ----- OCW Eldg 2C OCW pump	OWD 219
OCW PP 2C HCR FAILURE/ SS ISOL S-53	1. (A) The OCW pump has been given a start signal but the pump has failed to start (E) OR, the OCW pump has been isolated from the Control Room by NML/ISOL switch 2. (A) Failure; pump indicate light - green (E) Isolate; pump indicate lights - out	1. IF ISOLATE; loss of control from Control Room 2. (A) Investigate breaker failure locally, contact Electrical Dept. (E) Return NML/ISOL switch to "NORMAL" if applicable	Fault in Bkr NORM/ISOL switch in Isolate	74-3, SS/ISOL. ----- Bkr 2-20502 4160V-Bus 2AE and NML/ISOL switch in Cable Spreading Rm.	OWD 209

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL S VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FLANK S-4	FLANK			-----	
FLANK S-14	FLANK			-----	
FLANK S-24	FLANK			-----	
FLANK S-34	FLANK			-----	
CONTN SEISMIC TRIGGER ACTUATION S-44	1. Unit 1 Seismic trigger has actuated, also indi- cating a Seismic event has occurred at St. Lucie 2. NOE	1. NOE 2. Refer to Tech Specs, Instrumentation	Alarms at 90% O/E	74-2 ----- Unit 1 Containment	G/D 1209
CONTAINMENT TRIAxIAL ACCLER ACTUATION S-54	1. Unit 1 Triaxial Accelerograph has actuated, also indicating a Seismic event has occurred at St. Lucie Unit 2 2. NOE	1. NOE 2. Refer to Tech Specs, Instrumentation	Alarms at .01G vertical	74-1 ----- Unit 1 Containment	G/D 1209

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL S VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CW IX 2E ICW FLO IO S-5	1. Low flow of ICW to HT Exchanger 2B 2. (A) Verify by observing ICW 2E pump amps (B) ICW header F press. (C) Check temp. indicator on CW outlet on RTGB-206	1. NONE 2. (A) Check 2E ICW pump running, if not start (B) Check strainer D.P. (C) Check TCV-14-4E for proper operation (D) Refer to ICW Off-Normal Proc 2-0640030	IO - 7500 GPM	FIS-21-9E ----- CW Eldg., Outlet IX 2E	CW'D 218
FUEL POOL IX CW FLO HI/LO S-15	1. (A) Excessive or low CW flow in the fuel pool IX. (B) On SIAS CW flow is isolated 2. Check FIS-14-2 on RTGB-206	1. NONE 2. (A) If not SIAS, verify MV-14-17/19 open or open MV-14-18/20. (B) If lined up to E header shift to A header	HI - 3700 GPM LO - 2850 GPM	FIS-14-2 ----- Fuel Handling Eldg. at at HT Exch. indicates on RTGB-206.	CW'D 217
S/D IX 2B CW FLO HI/LO S-25	1. Excessive or low CW flow in the S/D IX 2B. 2. Check FIS-14-10A	1. NONE 2. (A) Check CW for proper operator (B) Check for proper valve lineup (C) Refer to CW Off-Normal #2-0310030	HI - 5300 GPM LO - 3850 GPM	FIS-14-10B ----- S/D cooling IX ROOM 2B RAB indicates on RTGB-206	CW'D 218
LETDOWN IX CW FLO HI/LO S-35	1. Excessive or low CW flow in the letdown IX. 2. (A) Check FIS-14-6 on RTGB-206 (B) Check TIC-2224 on RTGB-205 for increase of temperature.	1. NONE 2. (A) Check for proper operation of TCV-2223 (B) CR, loss of inst. air. (C) Refer to CW Off-Normal #2-0310030	HI - 4100 GPM LO - 3850 GPM	FIS-14-6 ----- Letdown IX Room RAB, Indicates on RTGB-206	CW'D 218
BLANK S-45	BLANK			-----	
CW DISTR IHR MV-14-1/2 OVERLOAD/ SS ISOL S-55	1. (A) Indicates loss of control power (B) CR, breaker trip (C) CR, NML/ISOL switch in isolate 2. (A) Check CW header press/flow indicators (B) Check valve position indicator lights	1. NONE 2. (A) Investigate breaker failure locally, contact Electrical Dept. (B) Return NML/ISOL switch to normal, if applicable	Thermal Overload. (or) NML/ISOL switch in	(74,SS/ISOL) / 204 (74,SS/ISOL) / 208 ----- 480V-MCC2AB Hkr 2-42418 Hkr #2-42419	CW'D's 204 208

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL 5 VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK S-6	BLANK			-----	
EMERG 125 VDC 4160V - 480V AB BUSES MISALIGN S-16	1. All AB buses are not aligned from the same bus (A or B) 2. RTGB-201	1. NONE 2. Align all AB buses to be fed from either A or B BUS	Bus tie Position: 125 VDC AB 4160 V AB 480 V AB	52, 72AX, 72BX ----- Isolation cabinets SA, SB in Cable Spreading Room	GD 978
CCW PP 2C VALVES MISALIGNED S-26	1. Indicates valve misalignment. 2. Check RTGB-206 valve position for: MV-14-2, MV-14-4 -- RED (OR) MV-14-1, MV-14-3 -- GREEN	1. NONE 2. Re-align valves to the B Header as soon as practical.	MV-14-2 or MV-14-4 open (or) MV-14-1 or MV-14-3 Closed	52/MCC, 33 ----- 4.16 KV-Bus 2AB Cub. 4,5. Isolation Cnb. SAB in Cable Spreading Room	GD 204 208
CEM COOLERS COW FLO LO S-36	1.(A) Indicates possible loss of COW flow to coolers (B) OR, N Header isolated 2.(A) Check TR-25-3 points 7,8 for increase in temp. (B) "N" Header valve position indication	1. NONE 2.(A) Check for possible "N" header isolation (B) Check for possible HDR rupture or valve misalignment	LO 450 GHM	FIS-14-13 ----- Rt Containment Bldg. CEM Fan Coolers	GD-218
RCP COW ISOL HCV-14-1/2/6/7 SIAS OVRD S-46	1. Indicates valves not closed w/SIAS signal present 2. Check valve position lights on RTGB-206	1. NONE 2. If SIAS; refer to applicable Off-Normal Emergency Procedure for opening criteria	HCV-14-1 OR HCV-14-2 OR HCV-14-3 OR HCV-14-4 Open w/SIAS Signal	CS-212-1, 2, 3, 4 94-1, 2, 3, 4 (LATER)	GD-212
CCW SUCT HDR MV-14-3/4 OVERLOAD/ SS ISOL S-56	1.(A) Indicates loss of control power (B) OR, Breaker trip (C) OR, NORM/ISOL SW in ISOLATE 2.(A) Check CCW Header Press/Flow Indicators (B) Check valve position indicator lights	1. NONE 2.(A) Investigate ERK failure locally, contact Electrical Dept. (B) Return NORM/ISOL SW to NORM, if applic.	Thermal Overload OR NORM/ISOL SWITCH in ISOLATE	(74,SS/ISOL) / 203 (74,SS/ISOL) / 207 480V-MCC 2AB ERK 2-42423 ERK 2-42424	GD-203 GD-207

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL 5 VERTICAL COLUMN 7

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR FINISH/TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CSAS CHANNEL A/B ACTUATION S-7	1. Containment Spray actuation 2. CSAS channel A/B indicating light indicates actuation	1. 2/4 logic CSAS initiated coincident with SIAS 2. Check auto actions performed. If not check then initiate. Refer to EP 2-010042	10 psig and SIAS Signal present	CSAS-A, CSAS-B ----- (later)	GWD 302 303
CONTAINMENT PRESS HI CSAS HEAS CIN. TRIP S-17	1. High pressure in containment one or more channels 2. Containment pressure indication on RTGB-206 indicates high pressure.	1. 2/4 logic CSAS initiated coincident with SIAS 2. (A) Check redundant channels (B) If channel failed, bypass affected channel.	10 psig and SIAS Signal Present	CSAS-MA, MB, MC, MD ----- (later)	GWD 295
CONT. SPRAY HEATER A PRESS LO S-27	1. Low pressure in CS header A 2. Indicated low press PIS-07-3A on RTGB-206	1. NONE 2. (A) Check status CS pump A (B) Check proper valve lineup on RTGB-206	LO - 100 psig	PIS-07-3A ----- Outside S/D HK A Room, RAE indicates on RTGB- 206	GWD 293
CONT. SPRAY FCV-07-1A FAIL TO OPEN S-37	1. Valve not open within 15 seconds of CS Actuation Signal. 2. (A) FCV-07-1A indicates closed on RTGB-206 (B) No flow in 2A CS header	1. NONE 2. (A) Open FCV-07-1A, if required. (B) If unable to open notify I & C	15 Second time delay after CS Actuation Signal	94-1, 33X1 ----- RTGB-206	GWD 289
CONT. SPRAY FP 2A OVRID/TRIP S-47	1. (A) CS pump has tripped on overcurrent (B) OR, CS pump has lost control power, (C) OR, CS pump has been racked out 2. (A) CS pump amps zero (B) Breaker indicator lights - green or out	1. Rmp Trips - STUIS 2. (A) Start CS pump 2B if applicable (B) Notify Electrical Dept.	Thermal Overload (or) Time Depen- dent over- current trip	74-1, 74-2 ----- 4160V-Bus 2A3 Breaker #-20203 in Cable Spreading Room	GWD 287
CONT. SPRAY FP 2A FAILURE CSAS OVRD S-57	1.(A) CS pump does not start within 5 sec. (B) OR, FRK failure (C) OR, CS pump switch in STOP 2.(A) CS pump amps zero (B) CS HTR press/flow low or zero	1. NONE 2.(A) Investigate FRK failure locally, contact Electrical Dept. for assistance (B) Return CS pump to auto as required	CS Pump Does not Start 5 Sec. after CSAS SIGNAL	74-3, 74-4, CS ----- 4160V-Bus 2A3 FRK 2-20203 in Cable Spreading Room	GWD-287

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL 5 VERTICAL COLUMN 8

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PIRPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK S-8	BLANK			-----	
BLANK S-18	BLANK			-----	
ONMT SPRAY HEALER B PRESS LO S-28	1. low press in CS Hdr F 2. Indicated low press PIS-07-3B on RTCB-206	1. NONE 2.(A) Check status CS pump E (B) Check proper valve lineup on RTCB-206	LO 100 ISIG	PIS-07-3B ----- Outside S/D HX B Rm RAB Indicates on RTCB-206	OWD-294
ONMT SPRAY FCV-07-1B FAIL TO OPEN S-38	1. Valve not open within 15 seconds of CS actuation signal 2. (A) FCV-07-1B indicates closed on RTCB-206 (E) No flow in 2B CS Header	1. NONE 2. (A) Open FCV-07-1B; if required (B) If unable to open notify I & C	15 second Time delay after CS actuation signal	94-2, 33X2 ----- RTCB-206	OWD 289
ONMT SPRAY PP 2P OVRID/TRIP S-48	1. (A) CS pump has tripped on overcurrent, (B) OR, CS pump has lost control power, (C) OR, CS pump has been racked out 2. (A) CS pump amps zero (B) Breaker indicator lights - green or out	1. Pump trips - STOPS 2. (A) Start CS pump 2A, if applicable (B) Notify Electrical Dept	Thermal Overload (or) Time Depen- dent over-	74-1, 74-2 ----- 4160V-Bus 2B3 Breaker #2-20407 in Cable Spreading Room	OWD 290
ONMT SPRAY PP 2P FAILURE/ CSAS OVRD S-58	1. (A) CS pump does not start within 5 sec (B) OR, Breaker Failure, (C) OR, CS pump switch in STOP 2. (A) CS pump amps zero (B) CS header press/flow low or zero	1. NONE 2. (A) Investigate Breaker Failure locally, contact Electrical Dept. for assistance (B) Return CS pump to auto as required	CS pump doesn't start 5 sec after CSAS signal	74-3, 74-4, CS ----- 4160V-Bus 2A3 Breaker #2-20407 in Cable Spreading Room	OWD 290

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL 5 VERTICAL COLUMN 9

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RAS CHANNEL A/P ACTUATION S-9	1. Safety Injection recirculation mode 2. RAS channel A/B indicating light indicates actuation	1. (A) LISI pumps stop (B) Containment sump outlet valves open (C) RWT outlet valve close (D) S.I. pump mini-recirc valves close to RWT. 2. Check auto actuations have taken place IF NOT - INITIATE	5'8" RWT Level	RAS-A, RAS-B ----- (later)	OWD's 302 303
ISWT LVL LO RAS MEAS CML TRIP S-19	1. Low level in RWT one or more channels 2. RWT level indicators on RTCB-206	1. 2/4 Logic RAS initiated 2. (A) Check RWT level (B) Verify RAS actuation	5'8" RWT Level	RAS-1A, MB, MC, MD ----- (later)	OWD 295
RWT LEVEL HI/LO S-29	1. RWT HI or Low level 2. RWT level on RTCB-206	1. NONE 2. (A) High - DRAIN to normal level (E) LO - RAISE level to normal level, Investigate Lo level	Hi - 37'6" Lo - 29'7"	LIS-07-1 ----- at RWT	OWD 296
FLANK S-39	FLANK			-----	
ISWT MV-07-1A OVRD/CLOSE/ RAS FAIL TO CLOSE S-49	1. (A) RWT outlet not fully open (B) RWT outlet not fully closed after 100 seconds on RAS (C) Indicates breaker trip 2. Valve position indication on RTCB-206	1. Valve will fail as is 2. (A) If bkr fault investigate overload (B) Try to close from RTCB-206 or locally if RAS present. (C) If no RAS open	Thermal Overload (or) 100 sec. after RAS	74, 33 RASX ----- 480V-MCC 2A6 Breaker #2-41362 Cable Spreading Room	OWD 297
CONTM SUMP MV-7-2A OPEN/OVRD/RAS FAIL TO OPEN S-59	1. (A) Containment sump outlet not fully closed (E) Containment sump outlet not fully open within 40 seconds on RAS (C) Indicates breaker trip 2. Valve position indication on RTCB-206	1. Valve will fail as is. 2. (A) If bkr fault investigate overload (E) If RAS present, open from RTCB-206 or locally (C) If no RAS, then close	Thermal Overload (or) 40 Sec After RAS	74, 33, RASX ----- 480V-MCC2A6 Breaker 2-41359 Cable Spreading Room	OWD 299

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL S VERTICAL COLUMN 10

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
HYDRAZINE TK LEVEL LO S-10	1. Lo level Hydrazine tank 2. Hydrazine tank level on RTGB-206	1. NONE 2. (A) Notify Chemistry (B) Check for leaks	LO - 25"	LIS-07-9 ----- At Hydrazine tank RAB	OND 306
HYDRAZINE TK LEVEL LO-LO S-20	1. Lo level Hydrazine tank 2. Hydrazine tank level on RTGB-206	1. Hydrazine pumps 2A/2B Stop 2. Notify Chemistry	LO-LO - 4"	LIS-07-9 ----- At Hydrazine tank RAB	OND 306
HYDRAZINE TK PRESS HI/LO S-30	1. HI or Low Hydrazine tank pressure 2. Hydrazine tank level on RTGB-206	1. HI - possible relief action. 2. (A) Check for proper nitrogen reg operation (B) STOP any filling or vent in progress	HI - 15 psig LO - 7 psig	FDIS-07-7 ----- At Hydrazine tank RAB	OND 306
HYDRAZINE PP 2A/2B OVERLOAD S-40	1. 2A or 2B Hydrazine pumps overload 2. NONE	1. Pump Stops 2. (A) Investigate breaker failure - notify Electrical Dept.	Thermal Overload	74 ----- 480V-MCC 2A 5 -MCC 2B 5 Cable Spreading Room	OND 306
RWT-MV-07-1B OVRD/CLOSE/ RAS FAIL TO CLOSE S-50	1. (A) RWT outlet not fully open (B) RST outlet not fully closed after 100 sec on RAS (C) Indicates Bkr trip 2. Valve position indication on RTGB-206	1. Valve will fail as is 2. (A) If bkr fault investigate overload. (B) Try to close from RTGB-206 or locally if RAS present (C) If no RAS, then open	Thermal Overload; (or) 100 sec After RAS	74, 33, RASK ----- 480V-MCC 2B6 Breaker 2-42158 Cable Spreading Room	OND 298
CONDMT SUMP MV-7-2B OPEN/OVRD/RAS FAIL TO OPEN S-60	1. (A) Containment sump outlet not fully closed (B) Containment sump outlet no fully open within 40 sec on RAS (C) Indicates Bkr trip 2. Valve position indication on RTGB-206	1. Valve will fail as is 2. (A) If bkr fault investigate overload (B) If RAS present, open from RTGB-206 or locally (C) If no RAS, then close	Thermal Overload (or) 40 sec after	74, 33, RAS X ----- 480V-MCC 2B6 Breaker 2-42159 Cable Spreading Room	OND 300

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL T VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT VACUUM HI T-1	1. Differential press between Cont. & Shield Bldg. annulus has reached setpoint on PDIS-25-11A, 11B 2.(A) Cont. to annulus D/P at HVCE (PDIS-25-1A, B) (B) Cont. vacuum ERK VLVs (FLV-25-7A, 7B) open	1. Cont. vacuum ERK VLVs should open at (LATER) 2. Secure Cont. purge (if operating) insure Cont. vacuum ERK are open	-11.5" WG (Increasing Vacuum)	63 X A1, 63 X B1 PDIS-25-11A, 11B D/P Ind. Switches (LATER)	OWD-482
CONTM VAC RIF FCV-25-7 ACCUM AIR PRESS LO T-7	1. Air accumulator press for vacuum relief valve FCV-25-7 low 2. NONE	1. NONE 2. Return air press in air accumulator to normal by restoring inst. air system or checking valve lineup	Tb PSIG Decreasing	IS-25-12A Press Switch (LATER)	OWD-529
CONTM PURGE ZINE-8A FLO LO/OVRD T-13	1.(A) Low flow thru "A" Cont. purge fan (B) The "A" Cont. purge fan has tripped (1) The Control power fuse has blown or, (2) ERK opened on thermal ovrld or O.C. trip or (3) ERK is opened at MCC-2A5	1. NONE 2.(A) Start alternate cont. purge fan or verify inlet damper to "A" cont. purge fan open (B) Check ERK locally (C) Call Elec. Dept. for assistance	Therm. OVRD OR Time Dependent O.C. Trip	74, 80XA Thermal OVRD and Time Dependent trip coil Located in ERK No. 2-41272/MCC-2A5	OWD-509 FD & MD Sheet 31
BLANK T-19	BLANK			-----	

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ANNUNCIATOR PANEL T VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK T-2	BLANK			-----	
CNDMT VAC RLF FCV-25-8 ACCUM AIR PRESS LO T-8	1. Air accumulator pressure for vacuum relief valve FCV-25-8 low 2. NONE	1. NONE 2. Return air pressure in air accumulator to normal, by restoring instrument air system or	70 psig decreasing	FS-25-12B Press. Switch (later)	CWD 529
CNDMT PURGE ZINE-8E FID IO/OVRID T-14	1. (A) Low flow through "F" containment purge fan (B) The "F" containment purge fan has tripped due to: (1) The control power fuse has blown or, (2) Trip on overcurrent or thermal overload or, (3) Breaker has been opened at MCC-2B5	1. NONE 2. (A) Start alternate cont. purge fan, or verify inlet damper to "B" cont. purge fan open (B) Call Elect. Dept. for assistance if necessary	Thermal Overloads or time de- pendent O.C. trip	74, 80XB ----- Thermal overloads and time dependent O.C. trips are in breaker #2-42073/MCC-2B5	CWD 510 PD & MD 38
BLANK T-20	BLANK			-----	

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ANNUNCIATOR PANEL T VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT AIR COOLER C/W VLWS SS ISOL T-3	1. Control of MV-14-09 and/or MV-14-13 has been isolated from the control room by NORM/ISOL switch 2. Loss of control switch lights	1. Loss of control from control room 2. Return NORM/ISOL switch to "NORMAL" if applicable, in Cable Spreading Room	NM/ISOL switch in "Isolate" one or both	SS/ISOL Switches #1 and #7 ----- Cable Spreading Room Isolate Panel	OWD 220 224
CONTAINMENT AIR COOLER A/F TEMP HI T-9	1. High temperature on A and/or B containment air cooler(s) either before or after cooling coil(s) 2. (A) Temperature on TR-25-1A on HVCE (pts. 1-4) increasing (P) Loss of C/W flow to coolers	1. NONE 2. Insure sufficient cooling water being supplied to fan cooling coils	110° F (Increasing)	TR-25-1A Points 1, 2, 3, 4 -----	OWD 483
CONTAINMENT AIR COOLER C/D TEMP HI T-15	1. High temperature on C and/or D containment air cooler(s) either before or after cooling coil(s) 2. (A) Temperature on TR-25-1B on HVCB (pts. 1-4) increasing (B) Loss of C/W flow to coolers	1. NONE 2. Insure sufficient cooling water being supplied to fan cooling coils	110° F (Increasing) ⁴	TR-25-1B Points 1, 2, 3, 4 -----	OWD 1137
PLANK T-21	PLANK			-----	

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ANNUNCIATOR PANEL T VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT AIR COOLER A COW FLO LO T-4	1. COW supply flow to "S" containment cooler is low 2. Verify proper COW valve alignment, pump(s) running and T-3 not on.	1. NONE 2. Return normal COW flow to cont. air cooler, otherwise secure (if practical)	(later)	FIS-14-12A Flow ind. switch	CWD 218
CONTAINMENT AIR COOLER A OVRID/TRIP T-10	1. The "A" containment air cooler has tripped due to: (A) Control fuse is blown or, (B) Breaker has tripped on overcurrent (C) Breaker is open at MCC-2A9 2. (A) Air cooler "A" indicating lights are out (B) Increasing air temperature as indicated by recorder TR-25-1A	1. NONE 2. (A) Start non-running containment air cooler (if applicable) (B) Call Electrical Dept. for assistance	Time depen- dent O.C. trip or in- stantaneous trip at 2250 amps	r, t, 74F, 74 ----- Time dependent O.C. trip is in Breaker: #2-42601/MCC-2A9	CWD 285 PD & MJ Sh.102
CONTAINMENT AIR COOLER A AIR FLOW LO/ VIBRATION HI T-16	1.(A) Low air flow through air cooler or, (B) High vibration on fan motor 2.(A) Temp increasing n air cooler outlet (B) Air cooler not running (C) Decreasing vacuum in containment (if applicable)	1. NONE 2. Start non-operating cooler and secure alarming cooler (if practical)	(LATER)	FS-25-2A, VIB. SW, 4X flow switch	CWD-285
CONTAINMENT AIR COOLER A SIAS OVRD CS STOP/SS ISOL T-22	1.(A) Control Room SW for "A" Cont. Cooler in "STOP" position with SIAS signal present OR (B) NORM/ISOL SW in "ISOLATE" position 2. Indicating lights for "A" Cont. Cooler not on	1. NONE 2.(A) Return CS to auto (or start if running of cooler is required). (B) Return NORM/ISOL switch to NORMAL (if applicable)	Control SW in "STOP" or NORM/ISOL SW in ISOLATE	42XS, SIAS Y, CS/285, SS/285	CWD-285

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ANNUNCIATOR PANEL T VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT AIR COOLER B COW FLO LO T-5	1. COW supply flow to "S" containment cooler is low 2. Verify proper COW valve alignment, pump(s) running and T-3 not on.	1. NONE 2. Return normal COW flow to cont. air cooler otherwise secure (if practical)	(later)	FIS-14-12B Flow ind. switch	G/D 218
CONTAINMENT AIR COOLER B OVRD/TRIP T-11	1. The "B" containment air cooler has tripped due to: (A) Control fuse is blown or, (B) Breaker has tripped on overcurrent (C) Breaker is open at MCC-2A9 2. (A) Air cooler "B" indicating lights are out (B) Increasing air temperature as indicated by recorder TR-25-1A	1. NONE 2. (A) Start non-running containment air cooler (if applicable) (B) Call Electrical Dept. for assistance	Time depen- dent O.C. trip or in- stantaneous trip at 2250 amps	r, t, 74F, 74a ----- Time dependent O.C. trip is in Breaker: #2-42602/MCC-2A9	G/D 286 FD & MD Sh.102
CONTAINMENT AIR COOLER B AIR FLOW LO/ VIBRATION HI T-17	1.(A) Low air flow through air cooler or, (B) High vibration on fan motor 2.(A) Temp increasing n air cooler outlet (B) Air cooler not running (C) Decreasing vacuum in containment (if applicable)	1. NONE 2. Start non-operating cooler and secure alarming cooler (if practical)	(LATER)	FS-25-2B, VIB. SH, 4X flow switch -----	G/D-286
CONTAINMENT AIR COOLER B SIAS OVRD/ CS STOP/SS ISOL T-23	1.(A) Control Room SH for "B" Cont. Cooler in "STOP" position with SIAS signal present OR (B) NORM/ISOL SH in "ISOLATE" position 2. Indicating lights for "B" Cont. Cooler not on	1. NONE 2.(A) Return CS to auto (or start if running of cooler is required). (B) Return NORM/ISOL switch to NORMAL (if applicable)	N/A	42SX, SIAS Y, CS/286, SS/286	G/D-286

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ANNUNCIATOR PANEL T VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT AIR COOLER C CCW FLO LO T-6	1. CCW supply flow to "S" containment cooler is low 2. Verify proper CCW valve alignment, pump(s) running and T-3 not on.	1. NONE 2. Return normal CCW flow to cont. air cooler otherwise secure (if practical)	(later)	FIS-14-12C Flow ind. switch	OWD 218
CONTAINMENT AIR COOLER C OVRID/TRIP T-12	1. The "C" containment air cooler has tripped due to: (A) Control fuse is blown or, (B) Breaker has tripped on overcurrent (C) Breaker is open at MCC-2A9 2. (A) Air cooler "C" indicating lights are out (B) Increasing air temperature as indicated by recorder TR-25-1A	1. NONE 2. (A) Start non-running containment air cooler (if applicable) (B) Call Electrical Dept. for assistance	Time dependent O.C. trip or instantaneous trip at 2250 amps	r, t, 74F, 74 ----- Time dependent O.C. trip is in Breaker: #2-42601/MCC-2A9	OWD 304
CONTAINMENT AIR COOLER C AIR FLOW LO/ VIBRATION HI T-18	1.(A) Low air flow through air cooler or, (B) High vibration on fan motor 2.(A) Temp increasing n air cooler outlet (B) Air cooler not running (C) Decreasing vacuum in containment (if applicable)	1. NONE 2. Start non-operating cooler and secure alarming cooler (if practical)	(LATER)	FS-25-2A, VIB. SW, 4X flow switch -----	OWD-304
CONTAINMENT AIR COOLER C SIAS OVRD/ CS STOP/SS ISOL T-26	1.(A) Control Room SW for "C" Cont. Cooler in "STOP" position with SIAS signal present OR (B) NORM/ISOL SW in "ISOLATE" position 2. Indicating lights for "C" Cont. Cooler not on	1. NONE 2.(A) Return CS to auto (or start if running of cooler is required). (B) Return NORM/ISOL switch to NORMAL (if applicable)	N/A	42XS, SIAS Y, CS/285, SS/285	OWD-384

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ANNUNCIATOR PANEL U VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR FURTHER TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTAINMENT AIR CLR D CCW FLO LO U-1	1. Containment cooling water supply flow to "D" containment cooler is low. 2. Verify proper CCW valve alignment, pump(s) running	1. NONE 2. Return normal CCW flow to cont. air cooler otherwise secure if practical.	(later)	FIS-14-12D Flow Inl. switch ----- Pipe Penetration Room	OND 218
CONTAINMENT AIR COOLER D OVRD/TRIP U-7	1. The "D" containment air cooler has tripped on overload 2. (A) "C" cont. air cooler indicating lights out (B) Increasing temp on containment air temp recorder	1. NONE 2. (A) Start non-running containment air cooler if applicable. (B) Investigate cause for fan motor overload	(later)	r, t, 74F, 74S overcurrent trip ----- Breaker 2-42702 259 MCC	OND 305
CONTAINMENT AIR CLR D AIR FLOW LO / VIBRATION HI U-13	1. (A) Low air flow through air cooler, or (B) High vibration on fan motor 2. (A) Temp increasing on air cooler outlet (B) Air cooler not running (C) Decreasing vacuum in containment if applicable	1. NONE 2. Start non-operating cooler and secure alarming cooler if practical.	(later)	FS-25-2D VIB S4, 4X Flow Switch -----	OND 305
CONTAINMENT AIR CLR D SIAS OVRD / SS ISOL U-19	1. (A) Control Room switch for "D" containment cooler in "STOP" position with SIAS signal present or (B) Normal/Isolate switch in Isolate position 2. Indicating lights for "D" containment cooler not on	1. NONE 2. (A) Return CS to auto or start if running of cooler is required (B) Return Norm/Isol switch to Normal if applicable	Not Applicable	42XS SIAS Y, CS/305, SS 305 ----- Breaker 2-42702 2B9 MCC	OND 305

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ANNUNCIATOR PANEL U VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK U-2	BLANK			-----	
BLANK U-8	BLANK			-----	
BLANK U-14	BLANK			-----	
BLANK U-20	BLANK			-----	

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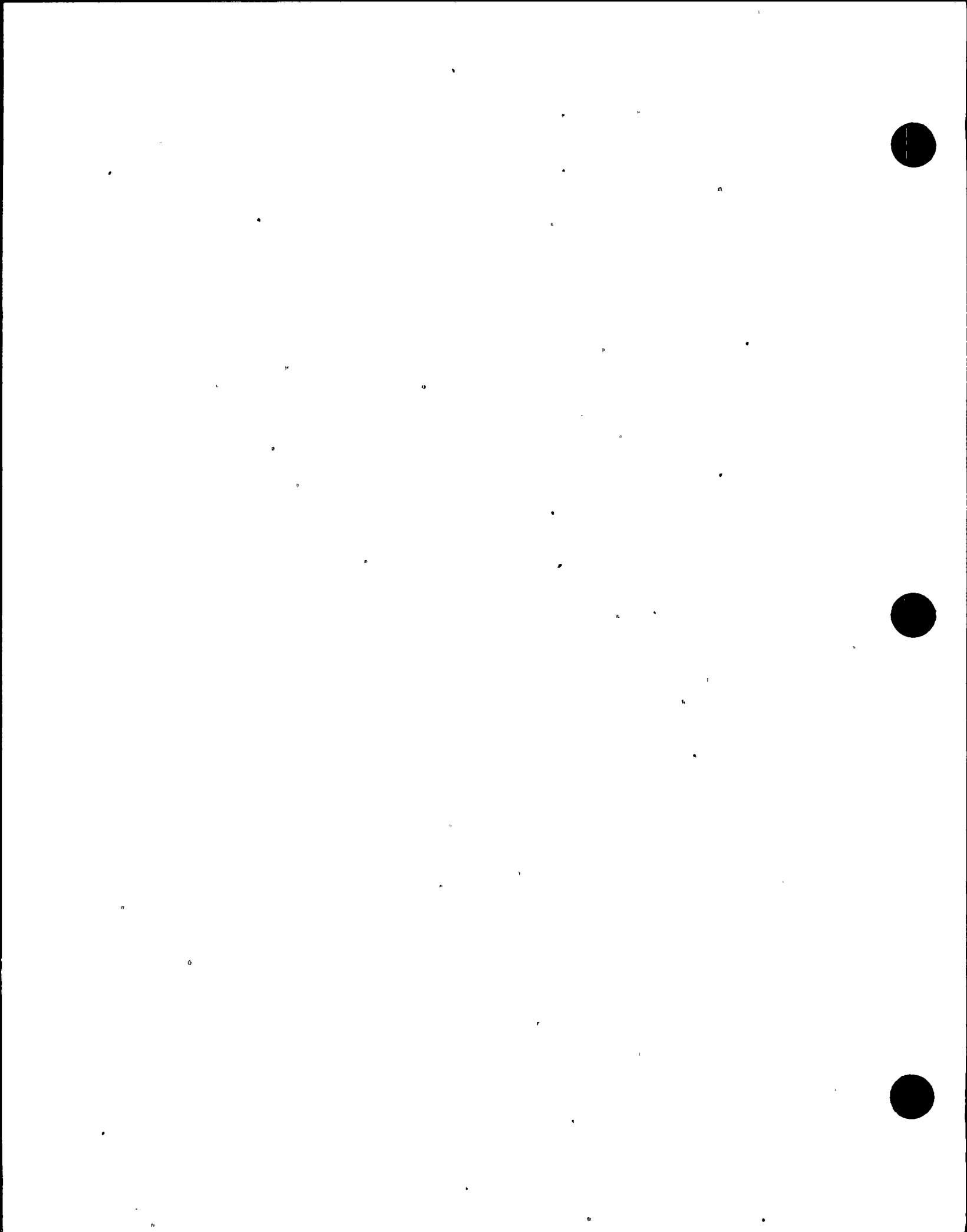


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ANNUNCIATOR PANEL U VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX SUPPORT CHANNEL A TEMP III U-3	1. High temperature in Rx support area 2. (A) Containment temperature increasing (B) Containment cooler(s) off (C) Rx support cooling fan(s) off	1. NONE 2. (A) Start non-operating Rx support cooling fan (B) Start containment cooler(s) - if practical	105° F (increasing)	TR-25-1A Points 6, 7, 8 -----	OWD 483
RX SUPPORT CLG 2INS-3A FLO LD/OVRID U-9	1. (A) Low flow through fan measured at FS-25-5A (B) Fan motor is overloaded 2. (A) Indicating lights out (B) Reactor temperatures increasing	1. NONE 2. (A) Start non-operating Rx support cooling fan (B) Investigate cause for overload (C) Verify dampers in flow pan open	(later)	FS-25-5A, 74, 2 -----	OWD 524
RX CAVITY CHANNEL A TEMP III U-15	1. High temperature in Rx cavity area 2. (A) Containment temperature increasing (B) Containment cooler(s) off (C) Rx cavity cooling fan(s) off	1. NONE 2. (A) Start non-operating Rx cavity cooling fan (B) Start containment cooler(s) if practical	150° F (increasing)	TR-25-1A Point 5 -----	OWD 483
RX CAVITY CLG 2INS-2A FLO LD/OVRID U-21	1. (A) Low flow through fan measured at FS-25-7A (B) Fan motor is overloaded 2. (A) Indicating lights out (B) Reactor cavity temperature increasing	1. NONE 2. (A) Start non-operating Rx cavity cooling fan. (B) Investigate cause for overload (C) Verify dampers in flow path open	(later)	FS-25-7A, 74.2 -----	OWD 522

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ANNUNCIATOR PANEL U VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RX SUPPORT CHANNEL B TEMP HI U-4	1. High temperature in RX support area 2. (A) Containment temperature increasing (B) Containment cooler(s) off (C) Rx support cooling fan(s) off	1. NONE 2. (A) Start non-operating Rx support cooling fan (B) Start containment cooler(s) if practical	150° F (Increasing)	TR-25-1B Points 6, 7, 8	OAD 1137
RX SUPPORT CLG ZINE-3B FLO LO/OVRD U-10	1. (A) Low flow through fan measured at FS-25-5B (B) Fan motor is overloaded 2. (A) Indicating lights out (B) Containment temperatures increasing	1. NONE 2. (A) Start non-operating Rx support cooling fan (B) Investigate cause for overload (C) Verify dampers in flow path open	(later)	FS-25-5B, 74, 2	OAD 525
RX CAVITY CHANNEL B TEMP HI U-16	1. High temperature in Rx cavity area 2. (A) Containment temperature increasing (B) Containment cooler(s) off (C) Rx cavity cooling fan(s) off	1. NONE 2. (A) Start non-operating Rx cavity cooling fan (B) Start containment cooler(s) if practical	150° F (Increasing)	TR-25-1B Point 5	OAD 1137
RX CAVITY CLG ZINS-2B FLO LO/OVRD U-22	1. (A) Low flow through fan measured at FS-25-7B (B) Fan motor is overloaded 2. (A) Indicating lights out (B) Containment temperature increasing	1. NONE 2. (A) Start non-operating Rx cavity cooling fan (B) Investigate cause for overload	(later)	FS-25-7B, 74, 2	OAD 523

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ANNUNCIATOR PANEL U VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SHIELD BUILDING CHARCOAL ABSORBER VENT SYSTEM B HIGH TEMPERATURE U-5	1. High temperature in charcoal absorber for "A" train shield building ventilation system 2. High temp on train down stream of charcoal absorber (TR-25-2A, Pt. 6)	1. NONE 2. Select alternate SBVS train and investigate cause for high temp.	200° F (Increasing)	TR-25-2A Points 2, 3, 4, 5	OWD 478
SHLD BLDG TO OUTSIDE A D/P HI/LO U-11	1. Diff press between shield bldg and atmos. outside control band. 2. (A) PDS-25-7A (B) Outside air intake valve position (FCV-25-11) (C) SBVS fan running ind.	1. NONE 2. Insure proper valve position of outside air intake valves, dampers in SBVS "A" train	+5" WG (HI) -4" WG (LO)	FDIS-25-7A	OWD 482
SHLD BLDG HEPA FLT VENT A D/P HI U-17	1. Diff. pressure across HEPA prefilter in SBVS "A" train is high 2. FDIS-25-8A	1. NONE 2. (A) Inspect HEP prefilter locally and if necessary replace (B) Verify proper damper position in train	(later)	FDIS-25-8A HWAC	OWD 1165
SHLD BLDG VENT-A HUMD HI U-23	1. Moisture content of air in SBVS "A" train is high 2. Investigate humidity sensor locally	1. NONE 2. Verify heaters and filters operating properly in alarming train	(later)	MIS-25-1	OWD 482

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ANNUNCIATOR PANEL U VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PERSISTENT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SHIELD BUILDING CHARCOAL ABSORBER VENT SYSTEM B HIGH TEMPERATURE U-6	1. High temperature in charcoal absorber for "B" train shield building ventilation system. 2. High temp on train downstream if charcoal absorber (TR-25-2B, Pt. 6)	1. NONE 2. Select alternate SBVS train and investigate cause for high temp.	200° F (Increasing)	TR-25-2B Points 2, 3, 4, 5	OND 479
SHLD BLDG TO OUTSIDE B D/P HI/LO U-12	1. Diff press between shield bldg and atmos. outside control band 2. (A) PDS-25-7B (B) Outside air intake valve position (FCV-25-12) (C) SBVS fan running ind.	1. NONE 2. Insure proper valve position of outside air intake valves, dampers in SBVS "B" train	+5" WG (HI) -4" WG (LO)	FOIS-25-7B	OND 482
SHLD BLDG HEPA FLTR VENT B Δ/P HI U-18	1. Diff pressure across HEPA prefilter in SBVS "B" train is high 2. FOIS-25-8B	1. NONE 2. (A) Inspect HEPA prefilter locally and if necessary replace (B) Verify proper damper position in train	(later)	FOIS-25-8B HWAC	OND 1165
SHLD BLDG VENT-B HI/LO HI U-24	1. Moisture content of air in SBVS "B" train is high 2. Investigate humidity sensor locally	1. NONE 2. Verify heaters and filters operating properly in alarming train	(later)	MIS-25-2	OND 482

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ANNUNCIATOR PANEL V VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINGOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SBVS HTG COIL 2 HVE-6A1/6A2 FAILURE V-1	1. Main htr or space htr elements for SBVS "A" train not energized 2. Moisture build-up in "A" train SBVS	1. Heaters de-energize 2. (A) Investigate cause for loss of heater elements (B) Use the other SBVS train	(later)	CR1, CR2, CR3 ----- Htr Control Panel	Q/D 1150
SBVS HTG COIL 2 HVE-6B1/6B2 FAILURE V-7	1. Main htr or space htr elements for SBVS "B" train not energized 2. Moisture build-up in "B" train SBVS	1. Heaters de-energize 2. (A) Investigate cause for loss of heater elements (B) Use the other SBVS train	(later)	CR1, CR2, CR3 ----- Htr Control Panel	Q/D 1152
BLANK V-13	BLANK			-----	
BLANK V-19	BLANK			-----	

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ANNUNCIATOR PANEL V VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SBVS 2 INVE-6A OVERLOAD/ SS ISOL V-2	1. Indicates that SBVS 2INVE-6A cannot be operated from Control Room due to: (A) MI/ISOL switch is in Isolate or (B) The breaker has tripped on overcurrent or overload, (C) Control fuse blown or brkr open at MCC-2A6 2. (A) Run status indicating lights are out (B) Exhaust flow on indicator FIS-25-20A1 drops to zero if fan tripped	1. SBVS-6B will auto start if exhaust fan 6A trips on fault, and fan 6B control switch is in AUTO 2. Verify fan 7B running, if necessary place its control switch in "Start"	Thermal Overload or O.C. Trip at 804 amps	74, SS/ISOL Isolation Switch on MCC-2A6 ----- Thermal overloads and O.C. trip coils are in Brkr: 2-41343/MCC-2A6	GD 513 FD & MD Sh. 36
SBVS 2INVE-6A FLO LO/ CIS OVRD V-8	1. Indicates the following: (A) Low flow as measured by FS-25-20A1 (B) With CIS signal present, fan is secured 2. (A) Low flow as indicated on FIC-25-20A1 SBVS exhaust flow or, (B) Fan running indicator light is on with CIS signal present..	1. NONE 2. (A) Take switch back to start (if applicable) or investigate cause for low flow condition (B) If necessary, start fan 6B	LO flow - (later)	FIS-25-20A1, 42X,3X Flow indicator switch ----- (later)	GD 513
SHLD BLDG CLG AIR A FCV-25-11 OVERLOAD V-14	1. FCV-25-11 2. (A) FCV-25-11 indication lights (B) SBVS "A" train temperatures, D/P	1. NONE 2. (A) Investigate cause for motor overload (B) Place other SBVS train in service if applicable	(later)	74 (later) ----- 2-41354/MCC-2A6	GD 1176 FD & MD Sh.37A
SHLD BLDG ISOL FCV-25-32 OVERLOAD / VALVE CLOSED V-20	1. SBVS cont. iso. valve is closed and/or motor operator is overloaded. 2. (A) FCV-25-32 indication lights (B) FDIS-25-7A	1. NONE 2. (A) Place other SBVS train in service if applicable (B) Investigate cause for valve closure	Valve 95% shut	74.33 Valve limit sw. ----- 2-41349/MCC-2A6	GD 1156 FD & MD Sh 36

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ANNUNCIATOR PANEL V VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SBVS 2 LIVE-6B OVERLOAD / SS ISM. V-3	1. Indicates that SBVS ZIVE-6A cannot be operated from Control Room due to: (A) RMI/ISOL switch is in Isolate or (B) The breaker has tripped on overcurrent or overload (C) Control fuse blown or brkr open at MCC-2A6 2. (A) Run status indicating lights are out (B) Exhaust flow on indicator FIS-25-20B1 drops to zero if fan tripped	1. SBVS-6A will auto start if exhaust fan 6B trips on fault and fan 6A control switch is in auto 2. Verify fan 6A running, if necessary place its control switch in "Start"	Thermal Overload or O.C. trip at 804 amps	74, SS/ISOL Isolation Switch MCC 2B6 ----- Thermal Overloads and O.C. trip coils are in brkr: 2-42169/MCC 2B6	OWD 516
SBVS 2 LIVE-6B FLO LO/ CIS OVRD V-9	1. Indicates the following: (A) Low flow as measured by FS-25-20B1 (B) With CIS signal present, fan is secured 2. Indicating lights out, or fan is secured	1. NONE 2. Take switch back to start if applicable or investigate cause low flow condition	(later)	FIS-25-20B1, 42X, 3X Flow indicator switch ----- (later)	OWD 516
SHLD BLDG CLG AIR B FCV-25-12 OVERLOAD V-15	1. FCV-25-12 motor operator is overloaded 2. (A) FCV-25-11 indication lights (B) SBVS "B" train temperatures D/P	1. NONE 2. (A) Investigate cause for motor overload	(later)	74 (later) ----- Brkr: 2-4217/2B6 MCC	OWD 1177 ED & MD Sh 41
SHLD BLDG ISOL FCV-25-33 OVERLOAD / VALVE CLOSED V-21	1. SBVS cont. iso. valve is closed and/or motor operator is overloaded 2. (A) FCV-25-32 indication lights (B) FDIS-25-70	1. NONE 2. (A) Place other SBVS train in service if applicable (B) Investigate cause for valve closure	Valve ≥ 95% shut	74, 33 Valve Limit Switch -----	OWD 1157

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ANNUNCIATOR PANEL V VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK V-4	BLANK			-----	
BLANK V-10	BLANK			-----	
CONT RM ISOL FCV-25-15/17 OVERLOAD / CIS OVRD V-16	1. (A) Either or both Control Rm. south outside air iso. valve motor operator is overloaded (B) Either or both valves is open 2. (A) Control Room flow (B) Vlv. Ind. lights	1. NONE 2. (A) Determine cause for overload or insure other train is functional (B) Restore valve operability or shut if CIS present, if applicable	(later)	3X.74 -----	GD 1171 1173
CONT RM ISOL FCV-25-14/16 OVERLOAD/ VALVE CLOSED V-22	1. (A) Either or both Control Rm. north outside air iso. valve motor operator is overloaded (B) Either or both valves are open 2. (A) Control Room flow (B) Vlv. Ind. lights	1. NONE 2. (A) Determine cause for overload or insure other train is functional (B) Restore valve operability or shut if CIS present, if applicable		3X.74 -----	GD 1170 1172

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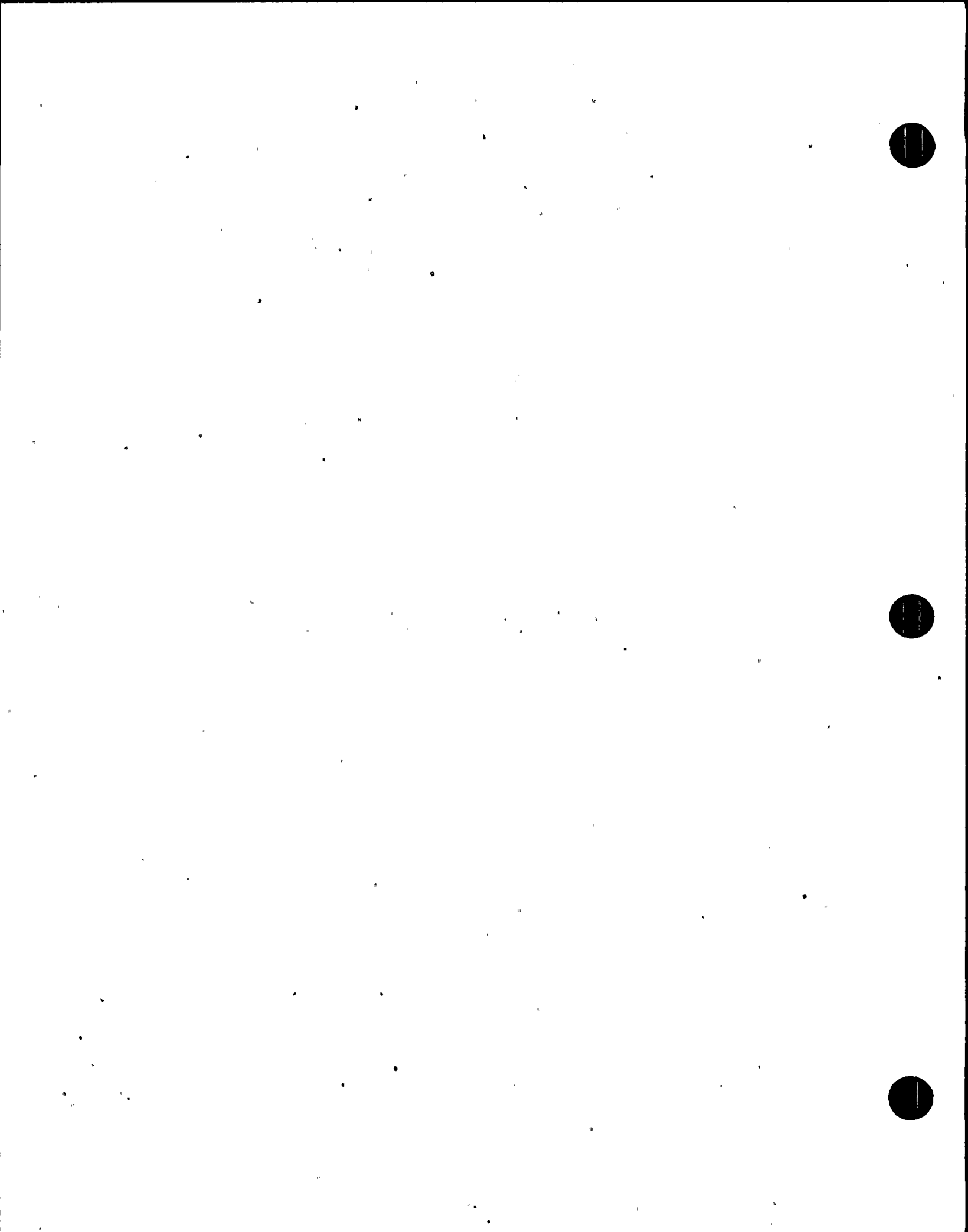


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ANNUNCIATOR PANEL V VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTROL ROOM PRESS LO V-5	1. Diff press between Cont. Rm. & atmosphere is low 2. PDIC-25-23A, 23B	1. NONE 2. (A) Insure outside air intake valves open (B) Verify proper ventilation path in Control Room	(later)	FDIS-25-23A, 23B Pressure differential	O/D 1166
CONT RM EMERG FLTR 21VE-13A OVERLOAD/ SS ISOL V-11	1. Indicates the Control Room emerg. filter fan 13A cannot be operated from Control Room due to: (A) NML/ISOL switch in Isolate or (B) The brkr has tripped on overcurrent or (C) Control fuse blown or brk open at MCC-2A6 2. (A) Fan indicating lights are out (B) Flow indication on FI-25-19A1 drops to zero	1. NONE 2. Start non-operating fan, if applicable	(later)	74, SS/ISOL Isolation Switch ----- Later / MCC 2A6	O/D 490
CONT RM EMERG FLTR FAN 13B OVERLOAD / SS ISOL V-17	1. Indicates the Control Room emerg. filter fan 13B cannot be operated from Control Room due to: (A) NML/ISOL switch in Isolate or (B) The breaker has tripped on overcurrent or overload (C) Control fuse blown or brk open at MCC-2A6 2. (A) Fan indicatin lights are out (B) Flow indication on FI-25-19B1 drops to zero	1. NONE 2. Start non-operating fan, if applicable	(later)	74, SS/ISOL Isolation Switch ----- (later)	O/D 491
CONTROL ROOM EMERG FLTR FANS 13A/13B FLO LO V-23	1. Indicates low flow condition in either/or A & B Emerg. filter fan trains 2. (A) Fan running indications (B) FI-25-19A1, FI25-19B1	1. NONE 2. Investigate cause for low flow cond.	< 130 CFM	2/490, 2/491, FS-25-9A, 9B Flow Switch ----- (later)	O/D 490 491

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ANNUNCIATOR PANEL V VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONT RM ISOL FCV-25-18/19 FCV-25-24/25 OVERLOAD V-6	1. Indicates blown fuse or motor operator overload conditions on either kitchen edh. fan iso. valve or toilet edh. fan iso. valve. 2. Valve pos. ind. (A) Blown fuse - out (B) Overload - as is	1. NONE 2. (A) Investigate cause for overload (B) Notify Electrical Dept.	(later)	Thermal overloads and O.C. trip coils in ltr FCV-25-18/2-41341/ MCC-2A6 FCV-25-19/later/MCC-1tr FCV-25-24/later/MCC-1tr FCV-25-25/later/MCC-1tr	OND 1190, 1174 1191, 1175 FD & MD Sigs
CONTROL ROOM A/C 3A FAN/COMP SS ISOL V-12	1. Indicates A/C 3A cannot be operated from Cont. Rm. due to: (A) IML/ISOL switch in Isolate (B) Fan/Compr motor overload 2. Loss of running/indication lights	1. NONE 2. Return IML/ISOL switch to Normal	N/A	CR5, 22/ISOL CR6 CR5 fan overload CR6 compr. overload Isolation Switch ----- Local at compressor	OND 492
CONTROL ROOM A/C 3A/3B/3C FLOW LOW R V-18	1. Indicates low flow through either 3A, 3B or 3C Control Room air conditioning units. 2. FR-25-1A, 1B	1. NONE 2. Start standby A/C unit, if applicable	(later)	RA-RAB 36/V18/1574. Reflash Panel ----- (later)	OND 1574
CONTROL ROOM A/C COMP 3A FAILURE V-24	1. Indicates 3A A/C compressor failure due to: (A) High compressor discharge pressure or, (B) Low compressor suction pressure or,	1. NONE 2. (A) Start standby A/C unit (B) Notify Electrical Dept.	a) 290 PSIG b) 55 PSIG c) 25 PSIG	CR5, CR3, CR4 -----	OND 492

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ANNUNCIATOR PANEL W VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONTROL ROOM EMERG FLTR ADSORBER TEMP HI W-1	1. HI temp in charcoal absorbers on suction of emerg. filtration fans 2. TR-26-2B Points 13,14,15,16, INVCB Panel	1. NONE 2. Start other emerg. filtration fan stop alarmlng filter fan	(1acr)	TR-25-2A, 2B Pts. 14, 15 Temperature Recorder ----- HVAC Control Panel	QAD 478 479
CONTROL ROOM A/C 3B FAN/COMP SS ISOL W-7	1. 3B A/C unit's control has been taken away from the Control Room 2. Loss of status lights	1. NONE 2. Return Normal/Isolate switch to Normal if applicable	N/A	CR5, SS ISOL. CR6 CR5 Fan Ovrld CR6 Compressor ovrld Isolation Switch ----- Local at Compressor	QAD 494
BLANK W-13	BLANK			-----	
CONTROL ROOM A/C COMP 3B FAILURE W-19	1. Indicates 3B A/C compressor failure (A) High compressor discharge pressure (B) Low compressor suction pressure (C) Low compressor oil pressure 2. No status lights	1. NONE 2. (A) Start standby A/C unit (B) Notify Electrical Department	a) 290 PSIG b) 55 PSIG c) 25 PSIG	CR2/Discharge press CR3/Suction Press CR4/Oil Press ----- INVCB/Breaker: 2-42111/MCC 286	QAD 494 Tech. Manual 2998-14183 Print lb. B772-1200

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ANNUNCIATOR PANEL W VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONT RM EMERG HEPA FLTR Δ/P HI W-2	1. High differential pressure on emergency filter train 13A/13B 2. (A) Damper position indication (B) HVCS panel indication	1. NONE 2. Investigate for clogged filter/closed damper	3" WG D/P	FDIS-25-9A, 9B Pressure differential indicator switch ----- C.R. HVAC Room HVCS Panel	OWD 1167
CONTROL ROOM A/C 3C FAN/COMPR SS ISOL W-8	1. 3C A/C control switch isolated 2. Loss of status lights	1. NONE 2. Return Normal/Isolate switch to Normal if applicable	IML/ISOL Switch In Isol	CR5, SS ISOL, CR6 Isolation Switch ----- Local Control Panel	OWD 496
BATT RM 2A/2B ROOF VENTS 2-RV-1/2 OVERLOAD W-14	1. Bkr. overload on roof vents for 2A/2B battery rooms 2. NONE	1. Vents fail as is on overload 2. Have operator check breaker/dampers	Thermal Overloads or O.C. trip at 18 amps	74 ----- Thermal overloads and O.C. trip coil located in: 2A-Bkr #2-41322 MCC2A6 2B-BKR #2-42128 MCC2B6	OWD 1219 1220
CONTROL ROOM A/C COMPR 3C FAILURE W-20	1. Indicates 3C A/C compressor failure (A) High discharge pressure (B) Low suction pressure (C) Low oil pressure 2. No status lights	1. NONE 2. (A) Start standby A/C unit (B) Notify Electrical Department	a) 290 PSIG b) 55 PSIG c) 25 PSIG	CR2 Disch press CR3 Suction press CR4 Oil press ----- Breaker No. - 2-42420/MCC 2AB/ compressor	OWD 496 Tech Manual 2998-14183 Print No. E772-1200

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ANNUNCIATOR PANEL W VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RAB CHARCOAL ABSORBER 2IVE-9A/9B TEMP HI W-3	1. High Temp on charcoal absorbers train 9A/9B 2. Temp. recorder on HVCB Panel	1. NONE 2. (A) Determine which train has HI Temp (B) Start opposite train as required & remove HI temp train from service (C) Notify Chemistry	(later)	TR-25-2A/2B Points 8, 9, 10, 11 Temp Recorder ----- Inlet/Outlet of Charcoal Absorbers	OND 478 479
RAB HEPA FLTR 2 IVE-9A/9B Δ/P HI W-9	1. High diff. press on 9A/9B EDCS exhaust fans 2. P indication HVCB panel	1. NONE 2. (A) Verify flow path (B) Remove filter train from service as soon as possible (C) Notify Chemistry	HI D/P alarm 5" WG	PDIS-25-5A, 5B Pressure Differential Indicator Switch ----- HVCB	OND 481
EG SFGD PP R1 2A/2B PRESS HI W-15	1. High press 2A/2B safeguards pump room 2. Pump room press indication HVCB PDIS-25-16A/16B	1. NONE 2. (A) Verify HVS-4A/4B in operation (B) Verify flow path (C) Start standby fan as required	Sheet 443	PDIS-25-16A, 16B Pressure Differential Indicator Switch ----- HVCB	OND 487
EG SFGD PP R1 2A/2B TEMP HI W-21	1. High temp. 2A/2B safeguards pump room 2. Pump room temp. indication HVCB	1. NONE 2. (A) Verify HVS-4A/4B in operation (B) Start standby fan as required	(later)	TR-25-1A, 1B Point 9 ----- HVAC Control Panel	OND 483 1137

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ANNUNCIATOR PANEL W VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PLAINTEXT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETHPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RAB IN EXH 2 HVE-10A FLO LO/ OVRD/TRIP W-4	1. Low flow/bkr. overload on RAB Main Exhaust Fan 2IVE-10A 2. (A) Fan indicating lights (B) FR-25-1A/1B	1. NONE 2. (A) Start 2IVE-10B (B) Have operator check fan locally (C) Stop fan & investigate	LO Flow .03 in wg	FS-25-13A, r, 4y, t Flow switch at dis- charge of fan in HVAC Room ----- HVCB Panel Breaker #2-40211/ MCC 2A2	OND 501
RAB EMERG EXH 2IVE-9A FLO LO/OVRD/ SIAS OVRD W-10	1. (A) Low flow on EXCS exhaust 2IVE-9A (B) C. S. in Stop, (C) Fan tripped on overload 2. (A) C. S. position (B) Fan indicating lights	1. NONE 2. (A) Start 2IVE-9B (B) Verify C. S. in Auto (C) Have operator check fan locally (D) Stop fan & investigate	LO Flow .08" wg	FS-25-12A, 74, 2, 3 Flow switch at dis- charge of fan in HVAC Room ----- HVCB Panel Breaker #2-41348/ MCC 2A6	OND 503
RAB SUPPLY 2 HVS-4A FLO LO/OVRD/ SIAS OVRD W-16	1. (A) Low flow on RAB supply 2 HVS-4A (B) C. S. in Stop (C) Fan tripped on overload 2. (A) C. S. position (B) Fan indicating lights	1. NONE 2. (A) Start 2 HVS-4B (B) Verify C. S. in Auto (C) Have operator check fan locally (D) Stop fan & investigate	LO Flow .08" wg	FS-25-11A, 2, 3, r, t Flow switch at dis- charge of fan in HVAC Room ----- HVCB Panel Breaker #2-40358/ MCC 2A5	OND 505
BLANK W-22	BLANK			-----	

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ANNUNCIATOR PANEL W VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
RAB MN EXH 2HVE-10B FLO LO/ OVRD/TRIP W-5	1. Low flow/bkr overload on RAB main exhaust fan. 2HVE-10B 2. (A) Fan indicating lights (B) FR-25-1A/1B	1. NONE 2. (A) Start 2HVE-10A (B) Have operator check fan locally (C) Stop fan & investigate	LO Flow .08" wg	FS-25-138, r, t, 4y Flow Switch ----- HVCB Panel Bkr #2-40510/MCC 282	GD 502
RAB EMERG EXH 2HVE-9B FLO LO/OVRD/ SIAS OVRD W-11	1. (A) Low flow on ECCS exhaust 2HVE-9B (B) C. S. in stop (C) Fan tripped on overload 2. (A) C. S. Position (B) Fan indicating lights	1. NONE 2. (A) Start 2 HVE-9A (B) Verify C. S. in Auto (C) Have operator check fan locally (D) Stop fan & investigate	LO Flow .08" wg	FS-25-128, 74, 2, 3 Flow Switch ----- HVCB Panel Bkr #2-42172 MCC 286	GD 504
RAB SUPPLY 2HVS-4B FLO LO/OVRD/ SIAS OVRD W-17	1. (A) Low flow on RAB supply 2HVS-4B (B) C. S. in stop (C) Fan tripped on overload 2. (A) C. S. Position (B) Fan indicating lights	1. NONE 2. (A) Start 2HVS-4A (B) Verify C. S. in Auto (C) Have operator check fan locally (D) Stop fan & investigate	LO Flow .08" wg	FS-25-118, 2, 3, r,t Flow Switch ----- HVCB Panel Bkr #2-40657/LC2B5	GD 506
RAB MN EXH HEPA FILTER Δ/PRESS HI W-23	1. High diff. prss on 2HVE-4A/4B RAB exhaust fan(s) 2. P indication(s) on HVCB panel	1. NONE 2. (A) Verify flow path (B) Remove fan from service as soon as possible (C) Notify Chemistry	HI-3" wg D/P	FDIS-25-6 Pressure Differential Indicator Switch ----- HVCB Panel Local Indicators	GD 501

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ANNUNCIATOR PANEL W VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK W-6	BLANK				
BLANK W-12	BLANK				
BATTERY RM A VENT AIR SPLY FLOW LO W-18	1. Low flow to 2A Battery Room (10 second time delay) 2. HVCS indication	1. NONE 2. (A) Verify 2HVS-5A/5B running (B) Verify Flow Path	LO Flow .08" wg	FS-25-25 Flow switch on dis- charger header in 2A Battery Room ----- HVCS Panel	GD 476
BATTERY RM B VENT AIR SPLY FLOW LO W-24	1. Low Flow to 2B Battery Room (10 sec time delay) 2. HVCS Indication	1. NONE 2. (A) Verify 2HVS-5A/B running (B) Verify flow path	LO Flow .08" wg	FS-25-26 Flow switch on dis- charge header in 2B Battery Room ----- HVCS Panel	GD 477

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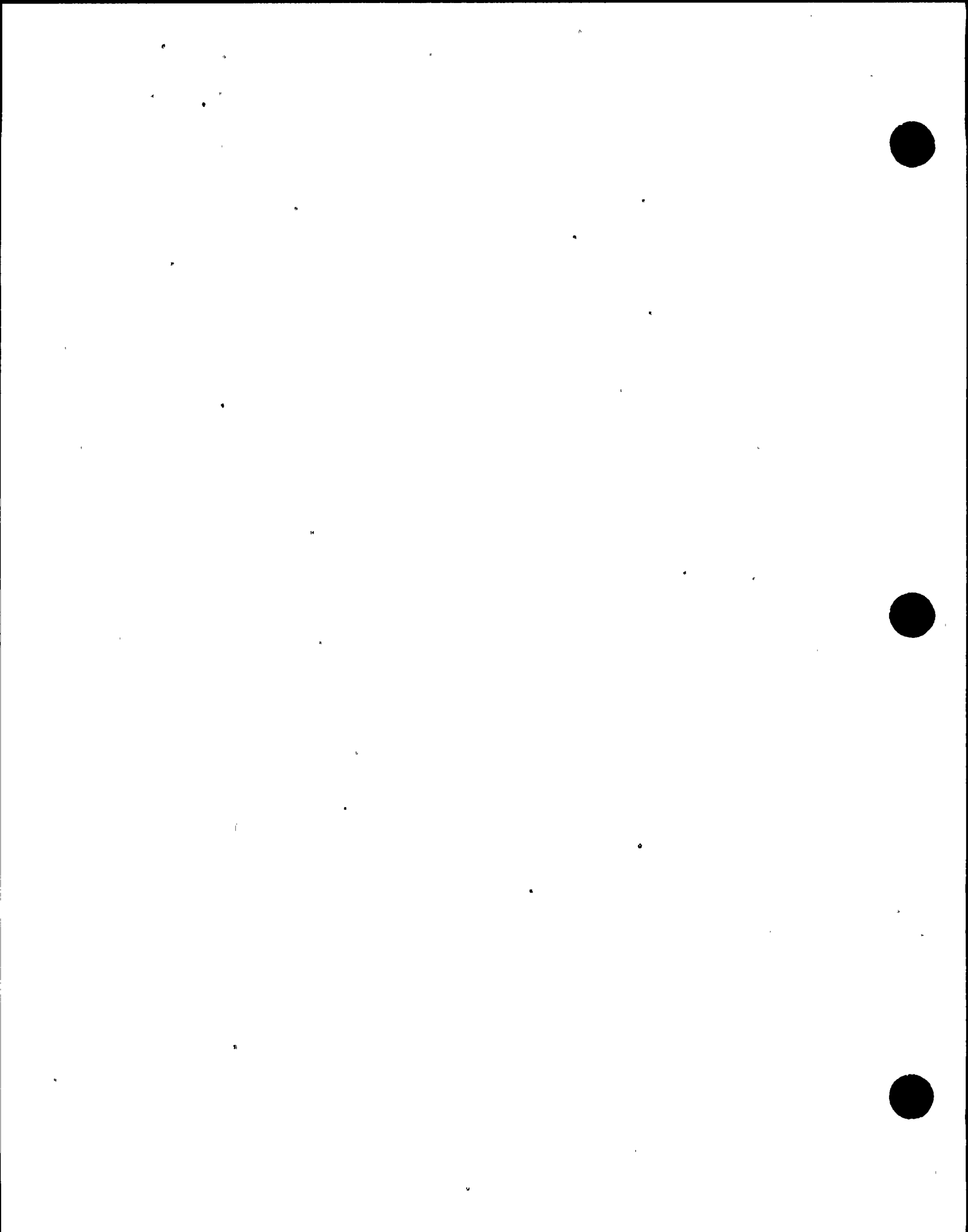


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ANNUNCIATOR PANEL X VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPoint	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CONNS CNMT / H2 PURGE AIR TEMP HI X-1	1. High temperature in charcoal absorber for continuous cont. purge/H2 Purge Filter Train. 2. TR 25-3 Points 2, 3, 4, 5	1. NONE 2. (A) Compare temperatures of all detectors for failed detector. (B) Remove train from service ASAP (C) Notify Chemistry	HI - 200°F	TR-25-3 Points, 1, 2, 3, 4, 5 ----- HVCB	OND 480
CONNS CNMT / H2 PURGE DEPA FILTER Δ/P HI X-7	1. Dirty filter or blocked flowpath on Filter Train 2. FR 25-2/FDIS 25-26 on HVCB.	1. NONE 2. (A) Verify System Alignment (B) Remove train from service ASAP (C) Notify Chemistry	(later)	FDIS 25-26 ----- HVCB	OND 1246
CONNS CNMT / PURGE EXH FCV-25-35 OVERLOAD X-13	1. Motor overload on exhaust damper to plant vent 2. Position indicating lights on HVCB	1. NONE 2. Have operator check breaker	(later)	74 ----- Local At Breaker	OND 1245
CONNS CNMT / H2 PURGE HUMIDITY HI X-19	1. High moisture content in filter train 2. Local indication only	1. NONE 2. (A) Have operator check local indicator (B) Notify Chemistry	70% R.H.	MIS 25-3 ----- HVAC Room	OND 1243 Inst. List

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ANNUNCIATOR PANEL X VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
CEM COOLING AIR TEMP HI X-2	1. High temperature air out of cooling coils 2. Temperature recorder TR-25-3 on HVCB	1. NONE 2. (A) Verify CCM to coils - increase flow if necessary (B) Verify CCM containment isolation valves open	HI-106° F	TR-25-3 Points 7, 8 ----- HVCB	OWD 480
CEM COOLING ZIVE-21A FLO LO / OVRD/TRIP X-8	1. Low flow or motor overload trip on ZIVE-21A CEM fan cooler 2. Fan indicating lights on HVCB	1. NONE 2. (A) Start standby fan (B) Have operator check breaker (C) Notify Electrical Dept.	(later)	63X,74-1,74-2,74-3 ----- 4160V-2A3	OWD 507
CEM COOLING ZIVE-21B FLO LO/ OVRD/TRIP X-14	1. Low flow or motor overload trip on ZIVE-21B CEM fan cooler 2. Fan indicating lights on HVCB	1. NONE 2. (A) Start standby fan (B) Have operator check breaker (C) Notify Electrical Dept.	(later)	63X,74-1,74-2,74-3 ----- 4160V-2B3	OWD 508
STATIC INVR ROOM TEMP HI X-20	1. HI temperature in Inverter Room 2. NONE	1. NONE 2. Check operation of ZIVS-SA/58 and ZIVE-11/12	>105° F	TS-25-24 ----- Later	OWD 476

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ANNUNCIATOR PANEL X VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FUEL POOL RM TEMP HI X-3	1. HI temperature in fuel pool area 2. NONE	1. NONE 2. Verify operation of FIBVS	110° F	TS-25-7 ----- (later)	OD 469
FUEL POOL EXH ZINE-16A/16B FLO LO/OVRLO X-9	1. Flow low or motor overload on FIBVS Fuel Pool Exhaust Fans	1. NONE 2. (A) Verify flowpath and filter D/P (B) Have operator check breaker (C) Notify Electrical Dept.	0.08" wg 1130 SCFM	FS-25-8A,B,74,2 ----- Exhaust Ducts MCC 2A8/2B8	OD 526 527 Inst. List
FUEL BLDG BERG VENT FCV-25-30 OVERLOAD X-15	1. Motor overload on FIBVS to SVS FCV-25-30 2. Position indicating lights on HVCB	1. NONE 2. (A) Have operator check breaker (B) Notify Electrical Dept.	N/A	74 ----- MCC-2A6 Motor Torque Switches	OD 1154
FUEL BLDG VENT ZINS-7 / ZINE-15 FLO LO/OVRLO X-21	1. Flow low or motor overload on FIBVS supply or exhaust fans 2. Fan indicating lights	1. NONE 2. (A) Verify flowpath and filter D/P (B) Have operator check breaker (C) Notify Electrical Dept	0.08" wg 1130 SCFM	FS-25-24A,B,74,2 ----- OAI Duct/Exhaust Ducts MCC-2A8	OD 469 470 Inst. List

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ANNUNCIATOR PANEL X VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FUEL POOL RM TO OUTSIDE Δ/P HI-LO X-4	1. (A) HI inside to outside diff. press possibly door open (B) LO inside to outside diff. press excess fans operating or OAI closed 2. FDIS-25-17A/17B on IMCB	1. Opens/Closes OAI FCV-25-11/12 to maintain negative pressure 2. (A) HI-verify FBVS in operation with operable flow path (B) LO-verify only one train of FBVS operating and flowpath	HI - 0" wg LO - neg. 2.25" wg	FDIS-25-17A, 17B ----- IMCB	O/D 517 Inst. List
BLANK X-10	BLANK			----- -----	
FUEL BLDG EMERG VENT FCV-25-31 OVERLOAD X-16	1. MOTOR OVERLOAD ON flvbs TO sbvs FCV-25-31 2. Position indicating lights on IMCB	1. NONE 2. (A) Have operator check bkr. (B) Notify Electrical Dept.	N/A	74 ----- MCC-286 Motor Torque Switches	O/D 1155
CONDNS COND H2 PURGE HTG COIL OVRHT/ POWER LOSS X-22	1. HI-HI temp in filter train/loss of power to heater control panel 2. (A) TR-25-1B IMCB	1. De-energizes heater on HI-HI temp 2. (A) Have operator reset at local control panel (B) Notify Electrical	HI-HI 220°F	CR-2, TD ----- Local Heater Control Panel	O/D 1222

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ANNUNCIATOR PANEL X VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
H2 PURGE FCV-25-29 OVERLOAD / VLV OPEN X-5	1. (A) Motor overload on SBVS to H2 Purge FCV-25-29 (B) FCV-25-29 in open position 2. Valve position indicating lights	1. NONE 2. (A) Have operator check breaker (B) Close valve unless H2 purging	N/A	74, 33 ----- MCC 2A6 Valve limit switches	O/D 1158
H2 PURGE FCV-25-34 OVERLOAD/ VLV OPEN X-11	1. (A) Motor overload on SBVS to H2 purge FCV-25-34 (B) FCV-25-34 in open position 2. Valve position indicating lights	1. NONE 2. (A) Have operator check breaker (B) Close valve unless H2 purging	N/A	74, 33 ----- MCC 2B6 Valve limit switches	O/D 1159
H2 PURGE FANS FLD LO/OVRD X-17	1. LO flow or motor overload on H2 purge fans HVE-71/7B 2. (A) FI-25-2 on HVCB (B) Fan indicating lights	1. NONE 2. (A) Verify proper flow and flowpath (B) Have operator check breaker	0.08" wg 1130 SCFM	FS-25-17A,B,74,42X ----- HVCB, MCC 2A6, 2B6	O/D 485 486 Inst. List
OWINS OVRD / H2 PURGE ISOL VLV CIS OVRD X-23	1. Valve control switch in override/open position 2. Control switch position on HVCB	1. NONE 2. Place C.S. to close unless H2 purge in progress	N/A	20K ----- HVCB	O/D 1160 1161

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL X VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ELEC EQUIP RM 21VS-5A/ 21VE-11 FLO LO/OVRD X-6	1. Low flow or motor overload on Elec. Equip. Room supply/exhaust fans 2. NONE	1. NONE 2. Have operator check flowpath and breaker	0.08" wg 1130 SCFM	74, FS-25-23A, 22A, 2 ----- MCC 2A5 MCC 2A6	Q/D 468 478 Inst. List
ELEC EQUIP ROOM A TEMP HI X-12	1. HI temperature in "A" Electrical Equipment Room 2. NONE	1. NONE 2. Check operation of 21VS-5A/5B and 21VE-11/12	110°F	TS-25-8 -----	Q/D 476 Inst. List
ELEC EQUIP RM 21VS-5B / 21VE-12 FLO LO / OVRD X-18	1. Low flow or motor overload on Elec. Equip. Room supply/exhaust fans 2. NONE	1. NONE 2. Have operator check flowpath and breaker	0.08" wg 1130 SCFM	74, FS-25-22B, 23B, 2 ----- MCC 2B5 MCC 2B6	Q/D 468 477 Inst. List
ELEC EQUIP ROOM B TEMP HI X-24	1. HI temperature in "B" Electrical Equipment Room 2. NONE	1. NONE 2. Check Operation of 21VS-5A/5B and 21VE-11/12	110°F	TS-25-9 -----	Q/D 477 Inst. List

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LA VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
INDAKE STRUCTURE WATER LEVEL LOW IA-1	Later	1. NONE Later	EL-2'1"	LS-21-5A ----- Intake structure Upstream of Travelling Screens	OD 1007 ----- P & ID 2998-G-088
CONDENSATE STORAGE TANK LOW-LOW LEVEL IA-7	1. Level inadequate to provide sufficient aux. feed- water pump suction pressure. 2. (A) Level indicators on RTG9-202 (LIS12-11 and LIS-12-11B) (B) Level recorder on plant aux. control board No. 2, (LR-12-11B)	1. NONE 2. Stop auxiliary feedwater pumps (pump protection setpoint)	2' 6"	LIS-12-11(A) ----- RTG9-202	OD 744 ----- P & ID
CONDENSATE STORAGE TANK LOW LEVEL IA-13	1. CST level below 33 ft. approaching tech. spec. limit 2. (A) Level indicators on RTG9-202, (LIS-12-11 and LIS-12-11B)	1. NONE 2. Have water treatment plant started and fill CST, use manual bypass around auto. Make- up level control valve if required.	33 ft (309,652 gallons)	LIS-12-11(A) ----- RTG9-202	OD 744 ----- P & ID 2998-G-080

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ST. LUCIE UNIT NO. 2'
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL IA VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SAFEGUARD PUMP ROOM B SUMP HI-HI LEVEL IA-2	1. Failure of sump pumps to start or leak into sump exceeding sump pump capacity. 2. Alarm only	1. NONE 2. Dispatch operator to insure sump pumps are running and to identify source of Inleakage	HI-HI 10'3"	LS-06-41 Ultrasonic sensor 2B HPSI Pump Room	OWD 533 P & ID 2998-G-088
SAFEGUARD PUMP ROOM A SUMP HI/HI-HI LEVEL IA-8	1. Safeguards sump Inleakage 2. Alarm only	1. (A) Sump pump 2A1 start on HI level (B) Sump pump 2A2 starts on HI HI level 2. Dispatch operator to insure sump pumps have started and to identify source of Inleakage	HI-HI: 10'3" HI: 11' 3"	LS-06-1A 2A LPSI Pump Room	OWD 532 P & ID 2998-G-088
FUEL POOL HIGH/LOW LEVEL HIGH TEMP IA-14	1. (A) Fuel pool cooling system cooling capacity is lost or restricted. (B) Abnormal water level. 2. Alarm only	1. NONE 2. Refer to fuel pool cooling Off-Normal Procedure 2-0350030	Temp. 150°F Level — HI: +2 LO: -2	LS-4420 TA-4420 Fuel Pool	OWD 182 P & ID E-13172-310-140

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL IA VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
DIESEL OIL STORAGE TANK 2A LOW LEVEL IA-3	1. Approaching diesel oil storage tank 2A Tech. Spec. Level. 2. Alarm only	1. NONE 2. Notify Chemistry to have tank filled immediately.	27' 0" above tank Base (40,729 gal)	LS-17-10A ----- 2A diesel oil storage tank	OWD 1119 ----- P & ID 2998-G-086
DIESEL OIL DAY TANKS 2A1, 2A2 LOW-LOW LEVEL IA-9	1. Diesel oil day tank 2A1 or 2A2 volume is at or below 90 gallons. 2. None - alarm only	1. NONE 2. Dispatch operator to lineup fuel transfer system and fill day tank manually.	11.5 inches from tank bottom ----- 27% indicated on local level gage	LS-17-552A/553A ----- at 2A1 and 2A2 D.O. Day tanks	OWD 1126 ----- P & ID 2998-G-086
VALVES I-SE-07-5A I-SE-07-5C I-SE-07-5E CLOSED IA-15	1. Containment pressure transmitters (PT-07-2A, PT-07-2C or PT-07-4A1) containment isolation closed. 2. Solenoid valves I-SE-07-5A, C and E position indicating lights on PAC B No. 2	1. NONE 2. These valves are required to be locked open they are closed <u>only</u> to isolate their respective instrument line in the event of an instrument line break.	Valves Closed	CLS I-SE-07-5A I-SE-07-5C I-SE-07-5E ----- 5A-Plenum Room 5C,5E-Pipe Penetration Room	OWD 321 ----- P & ID 2998-G-088

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LA VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LUBE WATER SUPPLY STRAINERS HIGH DIFFERENTIAL PRESSURE IA-4	1. (A) Lube water strainer A1 or A2 HI diff. pressure (B) Possible failure of strainers to auto. back- wash at 2 PSID. 2. NONE alarm only	1. NONE 2. Dispatch operator to manually backwash strainers	3 PSIG	FDIS-21-25-1A1,1A2 ----- Intake structure	OWD 839 ----- P & ID 2998-G-082
COMPONENT COOLING WTR SURGE TANK COMPARTMENT A LOW LEVEL IA-10	1. (A) Failure of auto. make up to COW surge tk. (B) Leak out of the COW system. 2. (A) Abnormal flows in headers as indicated by FIS-14-1A and FIS-14-1B. (B) Low header pressures as indicated by FIS-14-8A and FIS-14-8B.	1. (A) HCV-14-8A and HCV-14-9 will auto. close on low level (2'5") in the COW surge tank as sensed by IS-14-6A. This will isolate th "A" header from the "N" header. (B) HCV-14-8B and HCV-14-10 will auto. close on low level (2'5") in the COW surge tk. as sensed by IS-14-6B. This will isolate the "B" header from the "N" header 2. Refer to COW Off-Normal Proc #2-0310030	2'5" From Bottom	IS-14-1A ----- COW Surge Tk. Room	OWD 211 ----- P & ID 2998-G-083
BLANK IA-16	BLANK			-----	

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL IA VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PRESSURIZER HI-LEVEL CHANNEL X IA-5	1. Indicates PZR level has risen above normal control range. 2. (A) Compare all channels of PZR level indications (B) Check changing/letdown flow.	1. NONE 2. Refer to PZR Press. and Level Off-Normal Procedure #2-0120035.	>60% actual pressurizer level	LA-1110X-1 ----- Inside RIGB-203	OND 90 ----- 13172-310-109
PRESSURIZER LO-LO LEVEL CHANNEL X IA-11	1. Indicates PZR level has fallen to well below normal control range and heater damage could result if level continues to fall. 2. Compare all channels of PZR level ind.	1. (A) Trips PZR heater transformer 2A3 4160V feeder breaker. (B) LO-LO level of 27% as sensed by Channel X Bi-stable (LC-1110XL) will initiate heater cut off opening 480V feeds to heater distribution banks P-2, B-4, B-5 and B-6. 2. Refer to PZR Press and Level Off-Normal Procedure #2-0120035.	<27% actual pressurizer level	LC-1110X ----- Inside RIGB-203	OND 90 ----- 13172-310-109
BLANK IA-17	BLANK			-----	

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LA VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ATMOS STR DUMP ISOL VALVES MV-08-15 MV-08-17 MOTOR OVERLOAD VALVES CLOSED LA-6	1. (A) Atm Str Dump Isolation valve MV-08-15 or MV-08-17 closed. (B) MV-08-15 or 17 has tripped on overload (C) Feeder bkr. open to MV-08-15 or 16 2. Valve position indicating lights on RTGB-202 for MV-08-17 and PAC B for MV-08-15.	1. NONE 2. (A) Use other atmospheric dump valve if required. (B) Check bkr. locally (C) Contact Electrical Department	Overload (later)	(74,33) 1621 (74,33) 1623 ----- 125V DC PP-254 Bkr #2-60957 Bkr #2-06958	OWD 1621 OWD 1623 ----- P & ID 2998-G-079 Sh.2 of 2
ADM STR DUMP MV-08-18A/18B OVERLOAD / CS MAN/SS ISOL LA-12	1. Indicates Atmospheric Str. Dumps MV-08-18A/18B cannot be operated from control room due to: (A) NML/ISOL switch is in the Isolate position (B)		(later)	(74,83,SS-1626-3)1626 (74,83,SS-1628-3)1628 (later) ----- NML/ISOL Switch	OWD 1626 OWD 1628 ----- P & ID 2998-G-079 Sh 2 of 2
BLANK LA-18	BLANK				

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LB VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
INTAKE STRUCTURE WATER LEVEL LOW LB-1	Later	1. NONE 2. Later	EL-2'1"	IS-21-5B Level Switch ----- Intake structure up- stream of traveling screens.	Q/D 1007
CONDENSATE STORAGE TANK LOW-LOW LEVEL LB-7	1. Level inadequate to provide sufficient aux. feed- water pump suction pressure. 2. (A) Level indicators on RTCB-202 (LIS-12-11 and LIS-12-11B) (B) Level recorder on plant aux. control board No. 2 (LR-12-11B)	1. NONE 2. STOP auxiliary feedwater pumps. (pump protection setpoint)	2'6"	IS-12-8 Level Switch -----	Q/D 743
CONDENSATE STORAGE TANK LOW-LOW LEVEL LB-13	1. Level inadequate to provide sufficient aux. feed- water pump suction pressure. 2. (A) Level indicators on RTCB-202, (LIS-12-11 and LIS-12-11B) (B) Level recorder on plant aux. control board No. 2, (LR-12-11B)	1. NONE 2. STOP auxiliary feedwater pumps. (pump protection setpoint)	2'6"	LIS-12-11B Level Indicating Switch RTCB-202	Q/D 744

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LB VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
SAFEGUARD PUMP ROOM A SUMP HI-HI LEVEL LB-2	1. Failure of sump pumps to start or leak into sump exceeding sump pump capacity 2. Alarm only	1. NONE 2. Dispatch operator to insure sump pumps are running & to identify source of Inleakage	10'3"	LS-06-40 Level Switch ----- 2A LPSI Room	GD 532
SAFEGUARD PUMP ROOM B SUMP HI/HI-HI LEVEL LB-8	1. Safeguards Sump Inleakage 2. Alarm only	1. (A) Sump pump 2B1 starts on HI level (B) Sump pump 2B2 starts on HI-HI level 2. Dispatch operator to insure sump pumps have started and to identify source of Inleakage	HI - 10'3" HI-HI 11'3"	LS-06-1B Level Switch ----- 2B HPSI Room	GD 533
FUEL POOL HIGH/LOW LEVEL HIGH TEMP LB-14	1. (A) Fuel Pool Cooling system cooling capacity is lost or restricted. (B) Abnormal water level 2. Alarm only	1. NONE 2. Refer to Fuel Pool Cooling Off-Normal Procedure 2-0350030	TEMP HI 150 DEG F Lev HI +2" Lev LO -2"	LS-4421 Level Switch Temp Alarm -----	GD 181

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LB VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
DIESEL OIL STORAGE TANK 2B LOW LEVEL LB-3	1. Approaching diesel oil storage tank 2B Tech. Spec. level 2. Alarm only	1. NONE 2. Notify Chemistry to have tank filled immediately	27' above tank base (40,726 gal)	IS-17-10B Level Switch ----- at 2B Diesel oil storage tank	GD 1129
DIESEL OIL DAY TANKS 2B1, 2B2 LOW-LOW LEVEL LB-9	1. Diesel oil Day Tank 2B1 or 2B2 volume is at or below 88 gallons 2. Alarm only	1. NONE 2. Dispatch operator to line up fuel transfer system and fill tank manually	11.5 inches from tank bottom ----- 26% Indicated on local level gage	IS-17-552B/553B Level Switches ----- At 2B1/2B2 diesel oil Day Tanks	GD 1136
VALVES I-SE-07-5B I-SE-07-5D I-SE-07-5F CLOSED LB-15	1. Containment Pressure transmitters (PT-07-2B, PT-07-2D or PT-07-4B1) containment isolation valves closed. 2. Solenoid valves I-SE-07-5B, 5D and 5F position indicating lights on PACE No. 2.	1. NONE 2. These valves are required to be locked open, they are closed <u>only</u> to isolate their respective instrument line in the event of an instrument line break	Valve(s) Closed Position - from Limit Sw.	GIS-I-SE-07-5B, I-SE-07-5D I-SE-07-5F Control Lev. Switch ----- Pipe Penetration Room	GD 322

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL LB VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
LUBE WATER SUPPLY STRAINERS HIGH DIFFERENTIAL PRESSURE LB-4	1. (A) Lube water strainer B1 or B2 HI diff. pressure (B) Possible failure of strainers to auto. back- 2. None alarm only	1. NONE 2. Dispatch operator to manually backwash strainers	3 PSIG	PDIS-21-25-1B1, 1B2 Press. Diff. Indicating Switch ----- at intake structure.	OND 839
COMPONENT COOLING WTR SURGE TANK HIGH LEVEL COMPARTMENT B LOW LEVEL LB-10	1. (A) HI level - failure of auto. makeup to CCW surge tank or leakage into CCW system from loads it serves. (B) LO Level - failure of Auto. makeup to CCW surge tank or leak out of CCW system. 2. (A) Abnormal header flows as indicated by FIS- 14-1A and FIS-14-1B. (B) Low header pressures as indicated by PIS-14-8A and FIS-14-8B. (C) Increasing CCW temps.	1. (A) HI Level - NONE (B) LO-Level - (1) HCV-14-8A and HCV-14-9 will auto. close on low level (2'5") in the CCW surge tk. as sensed by LS-14-6A. This will isolate the "A" header from the "N" header (2) HCV-14-8B and HCV-14-10 will auto. close on low level (2'5") in the CCW surge tk. as sensed by LS-14-6B. This will isolate the "B" header from the "N" header. 2. Refer to CCW Off-normal Proc. 2-0310030	HI 4'6" From Bottom ----- LO 2'5" From Bottom	LS-14-1B, LS-14-5 Level Switches ----- In CCW surge tank room	OND 211 P & ID 2998-G-083

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LB VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PRESSURIZER HI-LEVEL CHANNEL Y LB-5	1. Indicates pressurizer level has risen above normal control range. 2. (A) Compare all channels of PZR level indications (B) Check Charging/Letdown Flow	1. NONE 2. Refer to PZR Press. & Level Off-Normal Procedure #2-0120035	> 60% Actual PZR Level	IA-1110Y-1 Level Alana ----- Inside RIGB-203	OWD 90 ----- P & ID 13172-310-109
PRESSURIZER LO-LO LEVEL CHANNEL Y LB-11	1. Indicates PZR level has fallen to well below normal control Range, and heater damage could result if level continues to fall. 2. Compare all channels of PZR Level Ind.	1. (A) Trips pressurizer heater transformer 2B3 4160V feeder breaker (B) LO-LO level of 27% as sensed by channel Y Bi-stable (LC-1110YL) will initiate heater cut off opening 480V feeds to heater distribution tanks P-1,B-1,B-2 and B-3. 2. Refer to PZR Press and Level Off-Normal Procedure #2-0120035.	27% actual PZR Level	LC-1110Y Level Controller ----- Inside RIGB-203	OWD 90 ----- P & ID 13172-310-109

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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LB VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
ATMOS STM LUMP ISOL VALVES MV-08-14, MV-08-16 MOTOR OVERLOAD VALVES CLOSED LB-6	1. (A) ATM STM LUMP Isolation valve MV-08-14 or MV-08-16 closed. (B) MV-08-14 or 16 has tripped on overload. (C) FDRBKR. open to MV-08-14 or 16 2. Valve position indicating lights on RIGB-202 for MV-08-14 and PACB for MV-08-16	1. NONE 2. (A) Use other atmospheric dump valve if (B) Check bkr. locally, (C) Contact Electrical Department	Overload Later	74, 33/1622,1624 Overload contact/Limit switch ----- 125VDC PP-255 MV-08-14 BKR #2-60979 MV-08-16 BKR #2-60981	CHD's 1622 1624
ATM STM LUMP MV-08-19A/19B OVERLOAD / CS MAN/SS ISOL LB-12			Overload Later	74,83,SS-1625-3 74,83,SS-1627-3 -----	CHD's 1625 1627

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ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0030131, REVISION 1
PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL IC VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY, OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
PRESSURIZER FORV & SRV VALVES OPEN IC-1	1. One or more FORV or Safety valve relieving or leaking by 2. Verify flow on FI-01-1,2,3,4 or 5 on PAB 2 check FORV positions on RIGB-203	1. Rx trip at 2375 psia in conjunction with FORV lifting 2. Refer to PZR Relief/Safety Valve Off-Normal #2-0120036.	Later	FE-01-1,2,3,4,5	GD 84
REACTOR COOLANT VENT SYSTEM HIGH PRESSURE IC-7	1. Vent valves from pressurizer (V-1460 & V-1461)/or vent valves from reactor head (V-1462 & V-1463) are leaking by or open with no downstream valve open 2. PIA-1140 on PAB 2 Rx Head Vent sys valve status	1. NONE 2. Later	Later	PIA-1140 Pressure Indicator Annunciator PAB 2	GD 1672
ESF LEAKAGE COLL RETURN TO CONTAINMENT IC-13	1. ECCS sump pumps realigned to disch to Rx Cavity & Rx Cavity Pumps Realigned so will disch. back to cavity. (Valves 2-SE-07-4 & 2-SE-06-1 are open) 2. Valve status lights	1. NONE 2. Shut valves if not LOCA condition	NONE	33X PAB 2	GD 301

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LC VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK LC-2	BLANK			-----	
BLANK LC-8	BLANK			-----	
FEEDWATER FILTER HIGH DIFF PRESS LC-14	1. Filter is clogged 2. NONE	1. NONE 2. Call operator - have cleaned	later	FDIS-09-10 Pressure Differential Indicator Switch ----- Turbine Deck East Side	ODD 1696

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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LC VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK LC-3	BLANK			-----	
BLANK LC-9	BLANK			-----	
LETDOWN RELIEF VA DISOL. LINE HIGH TEMP LC-15	1. Relief valve V-2345 (on letdown line downstream of LCV's) is open or leaking by 2. Letdown pressure (PIC-2201) > 650 psig.	1. NONE 2. Lower letdown press and have maintenance check relief setpoint if relieving early	Later	TIA-6660 Temperature Indicator Annunciator ----- PAB "B"	QAD 325

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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LC VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
FIRE DAMPERS EL 43' & 62' CLOSED LC-4	1. One or more ventilation internal barrier wall fire dampers have shut due to high temp or failure of fusible link. 2. NONE	1. NONE 2. (A) Check 43' and 62' levels for fire or smoke. (B) Notify Maintenance to locate and reset damper.	Damper Trip Shut Limit Switch	RA-FE-1 Reflash Panel ----- (later)	GD 1841 1842
FIRE DAMPERS EL 19.5' CLOSED LC-10	1. One or more ventilation internal barrier wall fire dampers have shut due to high temp or failure of fusible link. 2. NONE	1. NONE 2. (A) Check 19.5' level for fire or smoke (B) Notify maintenance to locate and reset damper.	Damper Trip Shut Limit Switch	RA-FD-2 Reflash Panel ----- (later)	GD 1843 1844
FIRE DAMPERS EL -5' CLOSED LC-16	1. One or more ventilation internal barrier wall fire dampers have shut due to high temp or failure of fusible link. 2. NONE	1. NONE 2. (A) Check 0.5' level for fire or smoke (B) Notify Maintenance to locate and reset damper.	Damper Trip Shut Limit Switch	RA-FD-3 Reflash Panel ----- (later)	GD 1845

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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LC VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PERIODIC TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK LC-5	BLANK			-----	
BLANK LC-11	BLANK			-----	
BLANK SP	BLANK			-----	

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ANNUNCIATOR PANEL IC VERTICAL COLUMN 6

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WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETRPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK IC-6	BLANK			-----	
BLANK IC-12	BLANK			-----	
BLANK SP	BLANK			-----	



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ANNUNCIATOR PANEL LR VERTICAL COLUMN 1

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR FINDOUT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
DIFFERENTIAL "fw"/"rw" TRIP LR-1	1. Trouble on West 240 KV switchyard bus 2. OCB's 1W, 2W, 3W, 4W should indicate open	1. OCB's 1W, 2W, 3W, 4W trip open 2. Notify Division Dispatcher and/or system protection			GD 1108
DIFFERENTIAL "fe"/"re" TRIP LR-7	1. Trouble on East 240 KV switchyard bus 2. OCB's 1E, 2E, 3E, 4E should indicate open	1. OCB's 1E, 2E, 3E, 4E trip open 2. Notify Division Dispatchere and/or system protection			GD 1108
DIFFERENTIAL "r1"/"m1" TRIP LR-13	1. Trouble on Line feed "A" startup transformers 2. OCB 2E, 2CB 2M and associated 4160V and 6900V startup breakers should indicate open	1. OCB 2E, OCB 2M, 4160, 6900 breakers tripped open. 2. Notify Division Dispatcher and/or system protection			GD 1108
DIFFERENTIAL "r2"/"m2" TRIP LR-19	1. Trouble on Line feeding "B" startup transformers 2. OCB 4M and associated 4160 and 6900 startup breaker should indicate open	1. OCB 4E, OCB 4M, 4160, 6900 breakers tripped open. 2. Notify Division Dispatcher and/or system protection			GD 1108

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL IR VERTICAL COLUMN 2

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
DIFFERENTIAL "I"/"P" TRIP IR-2	1. Trouble on line feeding Hutchinson Island substation 2. OCB 4W and 4M should indicate open	1. OCB 4W and 4M trip open 2. Notify Division Dispatcher and/or System Protection			O/D 1108
LOCAL BACKUP TRIP IR-8	1. A switchyard OCB has failed to operate to properly clear a fault 2. Line repeat panel breaker indications	1. Back OCB's trip to clear fault. 2. (A) Check entire line repeat panel for status of switchyard (B) Report to Division Dispatcher/System Protection			O/D 1108
240 KV OCB AIR PRESS LO IR-14	1. Low operating air pressure on a 240 KV OCB 2. NONE	1. NONE 2. (A) Check air compressor breakers for trippol indication, reset if necessary (B) If alarm does not clear in ten (10) minutes notify Division Dispatcher and/or Walton Service Center.	<200 psi		O/D 1108
SWITCHYARD BATT CHG TROUBLE IR-20	1. Switchyard "A" or "B" train electrical malfunction (later) 2. NONE	1. NONE 2. (A) Check 480V 1C breaker to switchyard closed (B) Check battery charges for proper operation (C) Notify Division Dispatcher and/or System Protection			O/D 1108

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL IR VERTICAL COLUMN 3

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR POINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
OCB 1W 8733 TRIP IR-3	1. OCB 1W is open 2. If Midway #1 has a fault OCB 1W should also indicate open	1. OCB 1W trips open 2. Notify Division Dispatcher and/or System Protection			OD 1108
OCB 2W 8743 TRIP IR-9	1. OCB 2W is open 2. If Midway #2 has a fault OCB 2W should also indicate open	1. OCB 2W trips open 2. Notify Division Dispatcher and/or System Protection			OD 1108
OCB 2M 8740 TRIP IR-15	1. OCB 2M is open signifies trouble on Midway #2 or startup transformer 2. NONE	1. OCB 2M trips open 2. Notify Division Dispatcher and/or System Protection			OD 1108
OCB 2E 8723 TRIP IR-21	1. OCB 2E is open 2. If "A" startup transformers have a fault OCB 2M and associated 4160V and 6900V startup breakers should indicate open	1. OCB 2E trips open 2. Notify Division Dispatcher and/or System Protection			OD 1108

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ST. LUCIE UNIT NO. 2
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ANNUNCIATOR PANEL LR VERTICAL COLUMN 4

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETTING	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
OCB 3W 8455 TRIP LR-4	1. OCB 3W is open 2. If Midway Fe has a fault OCB 3W should also indicate open	1. OCB 3W trips open 2. Notify Division Dispatcher and/or System Protection			OD 1108
OCB 4W 8467 TRIP LR-10	1. OCB 4W is open 2. If Hutchinson Island Substation has a fault OCB 4W should also indicate open	1. OCB 4W trips open 2. Notify Division Dispatcher and/or System Protection			OD 1108
OCB 4M 8464 TRIP LR-16	1. OCB 4M is open signifies trouble on "B" startup transformers or transformer trouble in Hutchinson Island Substation 2. NONE	1. OCB 4M trips open 2. Notify Division Dispatcher and/or System Protection			OD 1109
OCB 4E 8461 TRIP LR-22	1. OCB 4E is open 2. If "B" startup transformers have a fault OCB 4M and associated 4160V and 6900V startup breakers should also indicate open	1. OCB 4E trips open 2. Notify Division Dispatcher and/or System Protection			OD 1109

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ST. LUCIE UNIT NO. 2
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PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL IR VERTICAL COLUMN 5

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
TRIP CIRCUIT FAILURE IR-5	1. A trip circuit in switchyard has lost its DC power supply or has lost continuity 2. NONE	1. NONE 2. (A) Check switchyard DC power systems (B) Notify Division Dispatcher and System Protection			OWD 1109
SWITCHYARD STATION SERV FAIL IR-11	1. Loss of AC supply to one or more of the AC feeds into the switchyard 2. NONE	1. No auto action 2. Notify Division Dispatcher and substation Maint. Dept. at Walton Service Center			OWD 1109
XFER TRIP / MID LINE NO. 2 TRIP IR-17	1. Line has been transfer tripped from Midway switching station 2. OCB 24, OCB 24 should indicate open	1. OCB 24, OCB 24 trip open 2. Notify Division Dispatcher and/or System Protection			OWD 1109
XFER TRIP / MID LINE NO. 2 OVL. OUT IR-23	1. Trouble on the transfer trip carrier channel 2. NONE	1. No auto action 2. Notify Division Dispatcher and/or System Protection			OWD 1109

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ST. LUCIE UNIT NO. 2
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 PLANT ANNUNCIATOR SUMMARY

ANNUNCIATOR PANEL LR VERTICAL COLUMN 6

WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPOINT	SENSING ELEMENT NUMBER & LOCATION	REFERENCE
BLANK IR-6	BLANK			-----	OLD 1109
BLANK IR-12	BLANK			-----	1109
BLANK IR-18	BLANK			-----	1109
BLANK IR-24	BLANK			-----	1109

2



EMERGENCY PROCEDURE
2-0030132 Rev 1
ATWS

2

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 2
EMERGENCY PROCEDURE NUMBER 2-0030132
REVISION 1

ANTICIPATED TRANSIENT WITHOUT SCRAM
(ATWS)
OCTOBER 25, 1982

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FLORIDA POWER & LIGHT COMPANY
 ST. LUCIE PLANT UNIT 2
 EMERGENCY PROCEDURE NUMBER 2-0030132
 (ATWS) REVISION 1

2

1.0 SCOPE

This procedure provides instructions to be used in the event of an ATWS. The transients which produce most limiting ATWS consequences are covered by this procedure.

2.0 SYMPTOMS

The following are symptoms related to the three transients; Loss of Feedwater (LOF), Loss of Offsite Power (LOOP), and stuck open Relief Valve, which would cause a reactor trip. Any of these symptoms, not accompanied by insertion of all CEA's, as indicated by the ADS, Core Mimic, Digital Position Readout, Backup readout and core power indication are an indication of ATWS:

<u>SYMPTOM</u>	<u>TRIP SIGNAL GENERATED BY:</u>			<u>INDICATION/ALARM</u>
	<u>LOF</u>	<u>LOOP</u>	<u>STUCK OPEN PORV</u>	
2.1 High Przr Pressure	Yes	Yes	No	2.1 <u>Indications</u> PI-1102A, PI-1102B, PI-1102C, PI-1102D PR-1100 PIC-1100X, PIC-1100Y RPS - Channel 5 2.1 <u>Alarms</u> L-20, L-28
2.2 TM/LP	No	No	Yes	2.2 <u>Indications</u> PIA-1102A, PIA-1102B, PIA-1102C, PIA-1102D RPS - Channel 4 2.2 <u>Alarms</u> L-36, L-41



EMERGENCY PROCEDURE NUMBER 2-0030132, REVISION 1
(ATWS)

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2.0 SYMPTOMS: (Cont.)

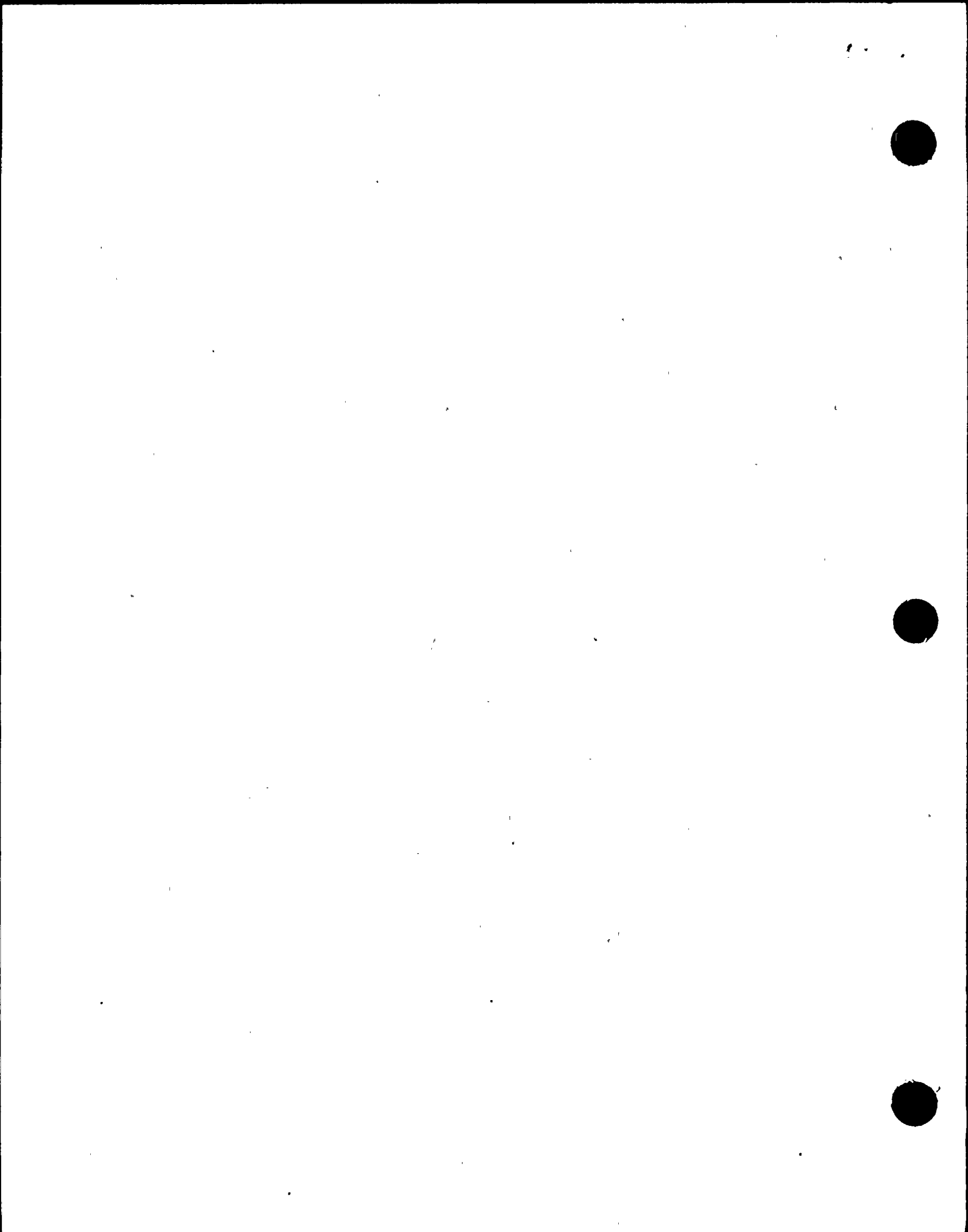
<u>SYMPTOM</u>	<u>LOF</u>	<u>LOOP</u>	<u>TRIP SIGNAL GENERATED BY:</u>		<u>INDICATION/ALARM</u>
			<u>STUCK</u>	<u>OPEN PORV</u>	
2.3 Low RCS Flow	Yes	Yes	No	No	2.3 <u>Indications</u> PDI-1101A, PDI-1101B, PDI-1101C, PDI-1101D RPS - Channel 6
					2.3 <u>Alarms</u> L-10, L-18
2.4 Low S/G Level	Yes	No	No	No	2.4 <u>Indications</u> LIC-9013A, LIC-9013B, LIC-9013C, LIC-9013D LIC-9023A, LIC-9023B, LIC-9023C, LIC-9023D LR-9011, LR-9021 RPS - Channel 7
					2.4 <u>Alarms</u> L-3, L-11

3.0 AUTOMATIC ACTIONS:

Some of the following Automatic Actions will occur during the various transients with the absence of a reactor trip:

NOTE: Any Automatic Actions that should occur and do not, must be manually initiated.

<u>AUTOMATIC ACTION</u>	<u>INITIATING EVENT</u>
3.1 Turbine Trip	3.1 If reactor trip <u>SHOULD HAVE</u> occurred
3.2 AFW Auto Start	3.2 39% narrow range inst.'s (2 out of 4 channels) R1
3.3 PORV Actuation	3.3 RCS pressure @ 2375 PSIA R1
3.4 Main Steam Safety Valves Open	3.4 S/G pressure \geq 985 PSIG R1
3.5 SBCS Actuation	3.5 Turbine Trip or High S/G pressure
3.6 Generator OCB's Open	3.6 Turbine Trip



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3.0 AUTOMATIC ACTIONS: (Cont.)

<u>AUTOMATIC ACTION</u>	<u>INITIATING EVENT</u>
3.7 SIAS and CIAS	3.7 RCS pressure 1600 PSIA Containment pressure 5 PSIG
3.8 CSAS	3.8 Containment pressure 10 PSIG

4.0 IMMEDIATE OPERATOR ACTIONS

	<u>LOCATION</u>
4.1 Verify required Auto Actions have occurred or manually initiate.	
4.2 Trip Turbine	4.2 RTGB 201
4.3 Ensure AFW Flow	4.3 RTGB 202
4.4 Trip Reactor	4.4 RTGB 201 or 204
4.5 Emergency Borate	4.5 RTGB 205
<u>AND IF CEA'S DON'T DROP</u>	
4.6 Open RTB's locally	4.6 Cable spreading room
4.7 Stop both M-G sets at the M-G sets or by opening Breakers 2-40212 and 2-40511	4.7 RAB 19.5' Elev. (M-G sets) RAB 43' Elev. L.C. 2A2/2B2 (Breakers to M-G sets)

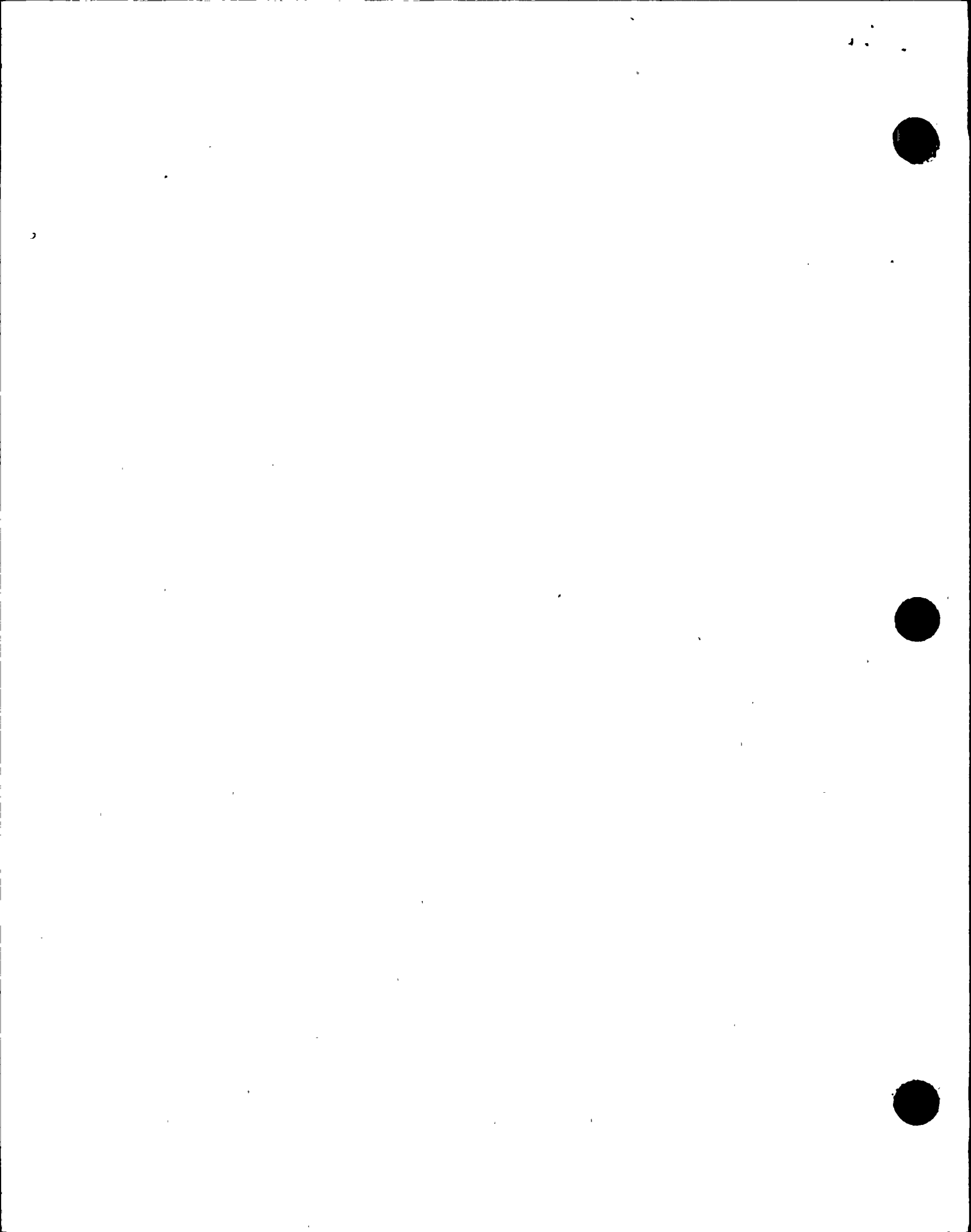
AND IF CEA'S DON'T DROP

4.8 Re-energize CEA bus with either M-6 set.	
4.9 Manually Insert CEA's	4.9 RTGB 204

AND

4.10 Emergency Borate by opening MV-2514 and starting BA pumps 2A and 2B	4.10 RTGB 205
4.11 Stop M-G sets either at M-G set or at breaker 2-40212 and 2-40511	4.11 Locally in RAB
4.12 Return to 2-0030130, Reactor Trip/ Turbine Trip, Immediate Operator Actions to determine type of transient and further action required.	

5.0 SUBSEQUENT ACTIONS:



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None

6.0 DISCUSSION:

This procedure starts and ends during a transient. For this reason, there is no subsequent action. The last immediate action is to refer to the Reactor Trip/Turbine Trip procedure and from there determine the course of action to take.

7.0 REFERENCES:

- 7.1 Memorandum from Frank Schroeder to Robert L. Tedesco, dated June 23, 1980
- 7.2 CE Emergency Procedure Guidelines, CEN-152
- 7.3 St. Lucie #1 Off-Normal Operating Procedures

8.0 RECORDS REQUIRED:

- 8.1 Normal Log Entries

9.0 APPROVAL:

Reviewed by the Facility Review Group October 12, 1982
Approved by J.H. Bauer Plant Manager Oct 26 1982
Rev. reviewed by Facility Review Group 19
Approved by Plant Manager 19

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