

FOR INFORMATION ONLY

This document is not controlled. Before use, verify information with a controlled document.

RECORD REVISION SHEET

ST. LUCIE PLANT-UNIT #1

OFF/NORMAL OPERATING
TYPE OR PROCEDURE

0030131
PROCEDURE NO.

PLANT ANNUNCIATOR
TITLE OF PROCEDURE

SUMMARY

J. H. BROWN
FOR S.M.W.

REVISION NO. 13

DATE SIGNED: FEB 4, 1981

PAGES AFFECTED 1 thru 3 A-6 B-6

REVISION NO. 14

DATE SIGNED: 3-5-81

PAGES AFFECTED H-6

REVISION NO. 15

Date Signed: 4/10/81

PAGES AFFECTED 1 through 3 A-8, B-8, C-1, 7, 9

REVISION NO. 16

DATE SIGNED: 7-14-81

PAGES AFFECTED: ALL

REVISION 17

PAGES AFFECTED H-4 H-5 1-3

add section H.
pages 1-3

REVISION 18

DATE SIGNED: 1-26-82

PAGES AFFECTED M-5 D-8 B-1

EL

REVISION 19

PAGES AFFECTED: D1-D10

DATE SIGNED: 3-23-82 EL

8204280414

SC 1A/SC 1B LEVEL HI-HI TURBINE/FWP 1A-1B TRIP D-1	1. Steam generator level High-High Either S/C 2. (a) Steam generator level indication (b) FWP run indications	1. (a) Turbine trip (b) FWP 1A and 1B trip (c) Feedwater regulator valves close 2. Carryout OP0030130-shutdown resulting from reactor-turbine trip	90%		CMD 709
TURBINE LUBE OIL RESERVOIR VAPOR EXTRACTOR OFF D-11	1. (a) Indicates lube oil reservoir vapor extractor has failed 2. (a) Breaker indication for lube oil reservoir vapor extractor	1. (a) None 2. (a) Restart vapor extractor, if possible (b) Cut in air jet vapor extractor		THERMAL OVERLOAD 49 MCC 1A1	CMD 8770 R-327 Sh 735
TURBINE LUBE OIL CONDITIONER HIGH-LOW LEVEL D-21	1. (a) Indicates a lube oil conditioner high or low level	1. (a) HIGH - Shuts inlet solenoid valve (b) LOW - Stops lube oil filter pump 2. (a) Check actual level in conditioner tank (b) Correct condition or secure oil conditioner	36"± 75"± (above bottom skirt)	HIGH - LS-17-4 LOW - LS-17-5 LUBE OIL CONDITIONER	CMD 734R3
TURBINE BEARING LIFT OIL PUMP OVERLOAD TRIP D-31	1. (a) Indicates motor overload (b) Hi motor temp 2. (a) Pump running light goes out (b) Turning gear engaged light goes out	1. (a) Pump trips (b) If motor trips, turning gear trips (see T.G. disengaged or overload below) 2. (a) Attempt to restart (b) Contact Electrical Department		Thermal overload #49 MCC 1C	CMD 8770-R- 327 Sh 730
TURBINE TURNING GEAR MOTOR OVERLOAD/TURBINE STOPPED D-41	1. Turbine turning gear motor overload or turning gear motor running but not engaged. 2. Turning gear indications	1. No auto action 2. (a) Notify electrical department (b) Reset breaker, attempt to jog turning gear (c) If turbine shaft is hot, refer to turbine technical manual for actions		14ZSX (zero speed relay) 74 Relay	CMD 730
SEAL OIL BACK-UP PUMP OVERLOAD TRIP D-51	1. (a) Indicates motor overload 2. (a) Hydrogen system alarm panel alarm if backup pump is running	1. (a) Pump trips 2. (a) If seal oil pump is available, start immediately (b) If neither pump can be started reduce megawatt load and prepare for unit shutdown		Thermal Overload 491 MCC 1A1	CMD 8770-R- 327 Sh 727

WINDOW TITLE

1. INDICATED CONDITION
2. CONTROL ROOM INDICATION WHICH VERIFIES OR
PINPOINTS TROUBLE

1. AUTO ACTION
2. OPERATOR ACTION - VALID ALARM

SETPT. SENSING ELEMENT
NUMBER & LOCATION

REFERENCE

Turbine Manual Trip D-19	1 Governor and throttle valves closed and simultaneous Rx Trip 2(a) On site power transfer from Aux transformers to S/H transformers (b) Control rods inserted, power decreasing, megawatt output - 0	1. Turbine trip (20/AST 220/ET) 2. Refer to O/R 0030130	N/A	PR/710 RTCB 101	CWB 711 W. Fadden
Turbine Emergency Bearing Oil Pump Locked Out D-20	1. Control Switch for EROP is in "Pull to Lock" Position. 2. Switch verification on RTCB 101.	1. None 2. Return switch to auto if no reason for being in pull to lock		CS/728 RTCB 101	CWB 728 /R19
Hydrogen System Alarm Panel DC Failure D-39	1(a) Indicates DC power to hydrogen system alarm panel has failed. 2	1. None 2(a) Valid alarm, notify elect. dept.	N/A	Hydrogen Panel Annunciator Relay R2	CWB 367 W. Fadden
Seal Oil DC Back-up Pump Running D-40	1(a) Indicates the seal oil DC backup pump is running. Starts when seal oil is 5 psi greater than hydrogen press.	2(a) Attempt starting hydrogen side seal oil pump or seal oil backup pump on reservoir to avoid proflong usage of DC power. (b) Refer to O/P 2100020.			
Seal Oil DC Back-up Pump Overload D-59	1 (a) Indicates seal oil DC backup pump tripped due to overload condition. 2	2(a) Valid alarm, attempt resetting the breaker (b) If unable and DC pump is required for operation, prepare to shutdown unit and purge generator			
Generator Bearing Oil Vapor Extractor Off D-60	1. Indicates failure of vapor extractor 2. Vapor Extractor indicates off - on RTCB 101.	1. None 2(a) Check for cause of trip (b) Restart vapor extractor if possible.			
WINDOW TITLE	1. INDICATED CONDITION 2. CONTROL ROOM INDICATION WHICH VERIFY OR PINPOINT TROUBLE	1. AUTO ACTION 2. OPERATOR ACTION - VALID ALARM	SETPT.	SENSING ELEMENT NUMBER & LOCATION	REFERENCE

DOCUMENT REVISION DISTRIBUTION SHEET - OFF NORMAL & EMERGENCY OPER. PROCEDURE

DOCUMENT TITLE Excessive Reactor Coolant System ActivityDOCUMENT FILE NUMBER 0120032DOCUMENT REVISION NUMBER 3DOCUMENT DISTRIBUTED ON 3-15-82

DATE

DOCUMENT SENT TO:

COPY NO.	DOCUMENT HOLDER	TRANSMITTAL RETURNED	COPY NO.	DOCUMENT HOLDER	TRANSMITTAL RETURNED
1	MASTER			<u>UNCONTROLLED COPIES</u>	
2				NRC-Region II	
3				Attn: EPPS BRANCH CHIEF	
4				H. Paduano - GO	
5	N. G. Roos			A. W. Bailey	
6	TSC			G. Anglenhart - CE	
7				Training	
8				Training	
9	Watch Engineers I			Training	
10	WATCH Engineers II			M. B. Vincent	
11				John Holwell-Backfit	
12					
13					
14					
15	A. T. HALL				

				T. Vogan - GO	
				G. J. Boissy	

				R. R. Jennings	
				H. M. Mercer	

				R. J. Frechette	
				Resident NRC	
				NRC - IE : HQ	
				Attn: Chief, Nuclear Response Branch	

				J. SPODICK	

PROCESSED BY: RLDATE 3-15-82

*Note: New distribution per instructions. Effective 9-12-79.

1

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT NO. 1
EMERGENCY/OFF-NORMAL PROCEDURE 0120032
REVISION 3

1.0 Title

EXCESSIVE REACTOR COOLANT SYSTEM ACTIVITY

2.0 Review and Approval:

Reviewed by Plant Nuclear Safety Committee _____ July 14, 1975

Approved by _____ K N. Harris _____ Plant Manager _____ July 17 1975

Revision 3 Reviewed by Facility Review Group March 12 1982

Approved by C. M. Willey Plant Manager 3-15-1982

3.0 Purpose and Discussion:

3.1 This procedure provides instructions for the action to be taken in the event reactor coolant activity becomes excessive.

3.2 Discussion:

A crud burst, failed fuel element, or demineralizer resin exhaustion may cause reactor coolant activity to increase. An increase to levels requiring the reactor to be shut down, however, can only be caused by the activity release associated with significant fuel element failure.

4.0 Symptoms:

4.1 Reactor coolant letdown monitor R-202 high activity alarm.

4.2 An increase in the fission product inventory as indicated by an increase in one or more of the following radiochemical analyses:

4.2.1 Iodine 131, 133 values

4.2.2 Gross beta-gamma

4.2.3 Tritium

4.2.4 Reactor coolant gamma spectrum

FOR INFORMATION ONLY

This document is not controlled. Before use,
verify information with a controlled document.

EMERGENCY/OFF-NORMAL PROCEDURE 0120032 REVISION 3
EXCESSIVE REACTOR COOLANT SYSTEM ACTIVITY

1

5.0 Instructions

5.1 Immediate Automatic Action:

None

5.2 Immediate Operator Action:

5.2.1 If the reactor coolant letdown monitor high activity alarm has energized or if chemical analysis has indicated high RCS activity, perform the following:

5.2.1.1 Insure that the alarm was caused by a high radiation condition by source checking channel R-202 or run back up radiochemical analysis as applicable.

5.2.1.2 Survey the VCT for any significant increases of radiation levels

5.2.1.3 Increase the letdown flowrate to maximum.

5.2.1.4 Place at least one mixed demineralizer in service.

5.3 Subsequent Action:

5.3.1 Notify Operations Supervisor and Chemistry Supervisor and arrange additional personnel as necessary.

5.3.2 Determine RCS gross activity as soon as possible after verification of alarm

5.3.3 If reactor coolant activity is significantly greater than the previous week's average

5.3.3.1 Perform a radiochemical analysis of the reactor coolant to determine the cause of the increase in activity.

5.3.3.2 Check inservice mixed bed demineralizer D/F, if exhausted, shift to standby demineralizer.

5.3.4 If it is determined that the increase in reactor coolant activity has been caused by a fuel element failure:

5.3.4.1 Perform the $100/\bar{E}$ computation to determine the Technical Specification limits for reactor coolant activity, based on the current inventory of nuclides present in the reactor coolant.

5.3.4.2 Insure dose equivalent Iodine is < 1.0 uci/gram.

5.3.4.3 Increase the frequency of reactor coolant sampling as specified by the Chemistry Department Supervisor.

EMERGENCY/OFF-NORMAL PROCEDURE 0120032, REVISION 3
EXCESSIVE REACTOR COOLANT SYSTEM ACTIVITY

1

5.0 Instructions: (continued)

5.3 (continued)

5.3.5 If reactor coolant activity approaches the Technical Specification limits, perform the following:

5.3.5.1 Reduce power as required by Figure 3.4-1 in Technical Specifications

5.3.5.2 Increase the reactor coolant sampling frequency as necessary based on the rate of change of reactor coolant activity.

5.3.6 If reactor coolant activity reaches the Technical Specification limits below, take action specified:

5.3.6.1 When > 1.0 uci/gm Dose Equivalent I 131 but within limits of graph (Fig. 3.4-1 Technical Specifications) may continue operations up to 100 hrs. if operations do not exceed 10% of yearly operating time.

5.3.6.2 If > 1.0 uci/gm for > 100 hrs. or, greater than limits of Fig. 3.4-1 or, greater than $100/\bar{E}$ uci/gm be in mode 3 with Tave $< 500^\circ\text{F}$ within 6 hours.

5.3.7 Implement the emergency plan as necessary in accordance with EPIP 3100021E, "Duties of the Emergency Coordinator".

/R3

5.3.8 Continue sampling as necessary to determine reactor coolant activity trends.

5.3.9 Health Physics personnel conduct radiation surveys in the auxiliary building and post areas as necessary.

5.3.10 Continue purification as required.

5.3.11 Periodically check the inservice mixed bed demineralizer for resin exhaustion by calculating a decontamination factor.

6.0 References:

6.1 FSAR, Chapter 11, Section 11.4 "Process Radiation Monitor".

6.2 Technical Specifications, App. "A" Section 3.4.8.

6.3 FSAR, Chapter 9, Section 9.3 "CVCS System".

7.0 Records, Reports & Notifications:

7.1 Entry in Plant Log.

7.2 Nuclear Plant Supervisor shall ensure that an evaluation is made to determine if a Licensee Event Report is required per Section 3.4.8 of App. "A" Technical Specifications.