

Emergency Procedure

2-0120042 Rev 0

LOCA

REV (inf) 2001

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT 2
EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0
October 29, 1981

LOSS OF COOLANT ACCIDENT
(LOCA)

REV.	FRG.	DATE
APPROVAL	PLT MGR	DATE

TOTAL NO. OF PAGES 21

8111050502 811029
PDR ADDCK 05000389
A PDR

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 2
EMERGENCY PROCEDURE NUMBER 2-0120042
(LOCA)
REVISION 0

1.0 SCOPE

This procedure provides instructions to the operator in the event of a small or large break loss of coolant condition.

2.0 SYMPTOMS:

2.1 Decreasing przr press

2.1 Indications

PI-1102 A, PI-1102 B,
PI-1102 C, PI-1102 D
PR-1100

2.1 Alarms

H-9, H-10, H-1, H-2, H-3, H-14

NOTE: Pressurization level may not always be a true indication of RCS fluid inventory. Pressurizer steam space ruptures, void formation elsewhere in the RCS, reference leg flashing and/or failure may cause indications which are contrary to the true RCS fluid inventory condition.

2.2 Decreasing przr level

2.2 Indications

Leakage greater than charging pump capacity.
LI-1110X, LI-1110Y,
LIC-1110X, LIC-1110Y,
LR-1110X, LR-1110

2.2 Alarms

H-17, H-18, H-25, H-26, H-29,
H-30

2.3 REACTOR TRIP/TURBINE TRIP

2.3 Indications

CEA's inserted (ADS) Core Mimic
RPS-Ch.1, RPS-Ch.4, RPS-Ch.7,
RPS-Ch.9,
RPS-Reactor Trip Breakers OPEN

2.3 Alarms

L-3, L-9, L-11, L-17,
L-36, L-44, L-5, L-13, D-8
L-10, L-18



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

2.0 SYMPTOMS: (Cont.)

2.4 SIAS/CIS Actuation

2.4 Indications
Przr press < 1600 PSIA
Equipment starts/isolates per
Tables I and ~~Table~~ II

2.4 Alarms
R-6, R-16, R-26, R-3, P-3,
P-13, P-23.

2.5 CSAS Signal

2.5 Indications
(Later)

2.5 Alarms
(Later)

2.6 Increasing Containment Pressure,
Temperature and Humidity

2.6 Indications
PIS-07-2A, PIS-07-2B,
PIS-07-2C, PIS-07-2D
PR-07-4B, PR-07-5B, TR-07-3B,
TR-07-5B,
TI-07-3A, TI-07-5A,
PI-07-4A, PI-07-5A

2.6 Alarms
P-13, P-23

2.7 Increasing Reactor Cavity
Sump Level

2.7 Indications
LIS-07-6, FR-07-3

2.7 Alarms
N-21, H-29

2.8 Hi containment radiation

2.8 Indications
Later

2.8 Alarms
Later

2.9 Quench tank high
level, temperature, press

2.9 Indications
LIA-1116, TIA-1116,
PIA-1116

2.9 Alarms
H-16, H-24, H-32



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

2.0 SYMPTOMS: (Cont.)

- | | | | |
|------|---|------|--|
| 2.10 | Decreasing VCT level | 2.10 | <u>Indications</u>
LIC-2226 |
| | | 2.10 | <u>Alarms</u>
M-3, M-11 |
| 2.11 | Unbalanced charging and
letdown flow | 2.11 | <u>Indications</u>
FIA-2202, HIC-1110
FIA-2212 |
| | | 2.11 | <u>Alarms</u>
M-5, M-13, M-15 |
| 2.12 | Pressurizer safety valves
open | 2.12 | <u>Indications</u>
(Later) |
| | | 2.12 | <u>Alarms</u>
(Later) |
| 2.13 | RCS subcooling margin
decrease | 2.13 | <u>Indications</u>
(Later) |
| | | 2.13 | <u>Alarms</u>
(Later) |
| 2.14 | Reactor Coolant Pumps
motor ^{amps} pumps decreasing
and/or erratic RCP pressure
differential | 2.14 | <u>Indications</u>
(Later) |
| | | 2.14 | <u>Alarms</u>
(Later) |



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

3.0 AUTOMATIC ACTIONS:

3.1 Reactor Trip

3.2 Turbine Trip

3.3 CIAS

3.4 SIAS

3.5 CSAS

3.6 RAS

3.1 TM/LP or Low Przr Pressure

3.2 Reactor trips turbine

3.3 SIAS initiates

3.4 RCS press \leq 1600 PSIA

3.5 High containment pressure

3.6 RWT levels 3 feet measured

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

4.0 IMMEDIATE OPERATOR ACTION

NOTES
3/1

4.1 Ensure Immediate Operator Actions for a reactor trip have

4.1.1 Any auto functions required have operated properly

4.2 If SIAS was caused by low RCS pressure

- 4.2 a) Verify CEA's inserted >5 sec.
- 4.2 b) Stop the operating RCP's

IMPORTANT: After RCP's are stopped, immediately refer to EP 2-0120043 Inadequate Core Cooling

NOTE: Observe all available indications to determine conditions within RCS: SMM display, RCS-T_h, RCS-T_c, incore thermocouple, RCS press. Determine if RCS is subcooled or saturated. Figure 2 will assist in this determination.

4.3 Check the ESFAS Bypass Status board

4.3 Reason: To ensure availability of equipment for auto functions.

4.4 Ensure SIAS, CIS are functioning properly

4.4 Refer to Table I Table II

~~CAUTION:~~

CAUTION Overfeeding the S/G's may cause excessive cooldown Do not exceed 75°/HR cooldown rate

4.5 Establish and maintain S/G levels @ 65%

4.5 Use main or AFW

4.6 If containment pressure approaches 10 PSIG, initiate CSAS.

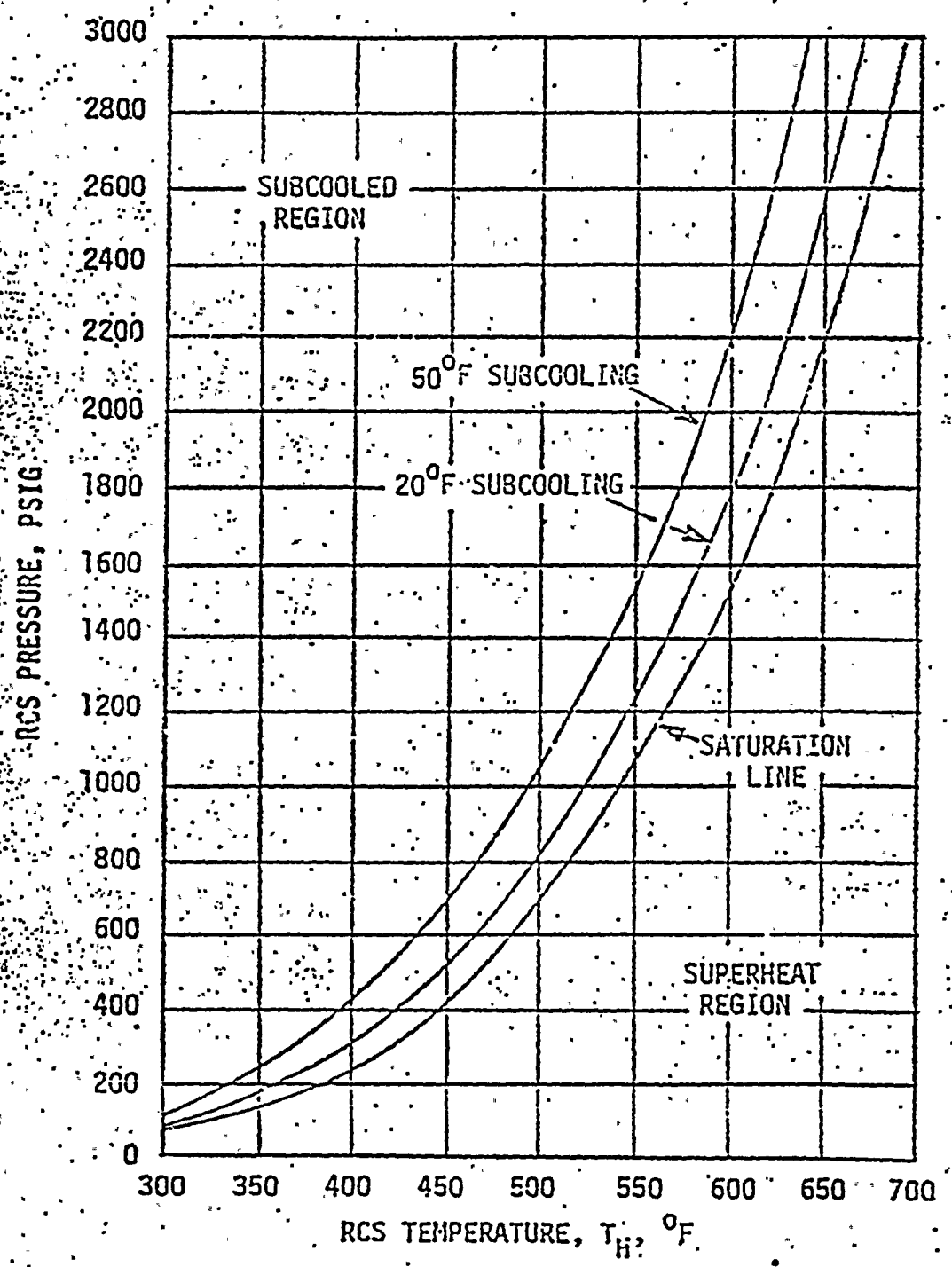
4.6 Ensure CSAS components function. Refer to Table III

4.7 Classify the event as conditions dictate, according to the emergency plan

4.7 Implement the emergency plan as necessary

NOTE: When establishing Auxiliary FW flow to the Steam Generator, use steam generator levels as well as header flow rates to ensure each steam generator is receiving Auxiliary Feedwater.

Figure 2
SATURATION/SUBCOOLING



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

TABLE I

SAFETY INJECTION ACTUATION SIGNAL (SIAS)

	<u>Condition</u>	<u>Check</u>
<u>RTGB 206, Left to Right</u>		
Two (2) CCW PPS 2A, 2B, or 2C.	<u>ON</u>	<u> </u>
Two (2) CCW to Fuel Pool HX Isolation Valves MV-14-17, MV-14-18	<u>Closed</u>	<u> </u>
Four (4) CCW HDR Non-essential Isolation Valves HCV-14-8A, HCV-14-8B, HCV-14-9, HVC-14-10	<u>Closed</u>	<u> </u>
Two (2) CCW Outlet from shutdown HX 2A, 2B, Valves, HCV-14-3A, HCV-14-3B	<u>Open</u>	<u> </u>
Two (2) LPSI PPS	<u>On</u>	<u> </u>
Two (2) HPSI PPS	<u>On</u>	<u> </u>
Four (4) LPSI Disch to Loops HCV-3615, HCV-3625, HCV-3635, HCV-3645	<u>Open</u>	<u> </u>
Eight (8) HPSI Disch to Loops HCV-3617, HCV-3627, HCV-3637, HCV-3647 - Header A HCV-3616, HCV-3626, HCV-3636, HCV-3646 - Header B	<u>Open</u>	<u> </u>
Two (2) HPSI PP Fill to SIT's V3572, V3571	<u>Closed</u>	<u> </u>
Two (2) SI Test to RWT I-SE-03-2A, I-SE-03-2B	<u>Closed</u>	<u> </u>
Four (4) SI Tank Isolation Valves V3614, V3624, V3634, V3644	<u>Open</u>	<u> </u>
Four (4) SI Tank Fill/Drain Valves I-SE-03-1A, I-SE-03-1B, I-SE-03-1C, I-SE-03-1D	<u>Closed</u>	<u> </u>
Four (4) SI Check Leakage Test HCV-3618, HCV-3628, HCV-3638, HCV-3648	<u>Closed</u>	<u> </u>
Four (4) FWP Discharge Isolation Valves HCV-09-1A, HCV-09-2A, HCV-09-1B, HCV-09-2B	<u>Closed</u>	<u> </u>
Four (4) CCW To/From RCP's HCV-14-1, HCV-14-2, HCV-14-7, HCV-14-6	<u>Closed</u>	<u> </u>

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

TABLE I (Cont.)

SAFETY INJECTION ACTUATION SIGNAL

	<u>CONDITION</u>	<u>CHECK</u>
TWO (2) Containment Sump Isolation LCV-07-11A, LCV-07-11B	<u>Closed</u>	_____
<u>RTGB 205, Left to Right</u> One (1) BA Makeup Valve V2512	<u>Closed</u>	_____
Two (2) BA Gravity Feed V2509, V2508	<u>Open</u>	_____
One (1) VCT Discharge V2501	<u>Closed</u>	_____
Two (2) Letdown Isolation V2516, V2515	<u>Closed</u>	_____
<u>RTGB 202</u> Two (2) Intake Cool Wtr PP's 2A, 2B	<u>On</u>	_____
Three (3) Intake Cool Wtr Isolation Valves MV-21-3, MV-21-4, MV-21-2	<u>Closed</u>	_____
<u>RTGB 201</u> Two (2) Diesel Gen 2A, 2B	<u>On</u>	_____
<u>HVAV Panel Left to Right</u> Four (4) RAB Main Supply and ECCS Exhaust Fans 2-HVS-4A, 2-HVE-9A, 2-HVS-4B, 2-HVE-9B	<u>On</u>	_____
Four (4) Containment Fan Cooler 2-HVS-1A, 2-HVS-1B, 2-HVS-1C, 2-HVS-1D	<u>On</u>	_____
Eight (8) ECCS Isolation Dampers D5A, D6A, D9A, D12A, D5B, D6B, D9B, D12B	<u>Closed</u>	_____
Two (2) Rx Support & Cavity-Cool. Fans 2-HVS-2A, 2-HVS-2B, 2-HVE-3A, 2-HVE-3B	<u>Off</u>	_____

NOTE: Any spare equipment that is running, and not needed for controlling this incident should be STOPPED.

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0TABLE IICONTAINMENT ISOLATION ACTUATION SIGNAL (CIAS)

	<u>CONDITION</u>	<u>CHECK</u>
<u>RTGB 206, Left to Right</u>		
TWO (2) SI Tank, to RWT I-SE-03-2A, I-SE-03-2B	<u>Closed</u>	<u> </u>
Five (5) SI Tank Sample Isolation Valves FCV-03-1A, FCV-03-1B, FCV-03-1C, FCV-03-1D & FCV-03-1E	<u>Closed</u>	<u> </u>
Four (4) S/G Blowdown Isolation Valves FCV-23-3, FCV-23-5, FCV-23-4, & FCV-23-6 Sample FCV-23-7, FCV-23-9.	<u>Closed</u>	<u> </u>
Two (2) Contain Sump Isolation Valves LCV-07-11A, LCV-07-11B	<u>Closed</u>	<u> </u>
Six (6) RCS & PRZR Sample Isolation Valves V5200, V5201, V5202, V5203, V5204, V5205	<u>Closed</u>	<u> </u>
One (1) Primary Water Isolation HCV-15-1	<u>Closed</u>	<u> </u>
One (1) Instrument Air Isolation HCV-18-1	<u>Closed</u>	<u> </u>
One (1) N ² Supply Isolation V6741	<u>Closed</u>	<u> </u>
Two (2) Waste Gas Isolation V6750, V6718	<u>Closed</u>	<u> </u>
Two (2) RCP Bleed-off Isolation V2505, V2524	<u>Closed</u>	<u> </u>
Two (2) RDT Isolation V6341, V6342	<u>Closed</u>	<u> </u>
<u>RTGB 205</u>		
Three (3) Letdown Isolation Valves V2516, V2522, V2515	<u>Closed</u>	<u> </u>
<u>RTGB 201</u>		
Two (2) Diesel Gen. 2A, 2B	<u>On</u>	<u> </u>
<u>HVAC Panel, Left to Right</u>		
Two (2) Shield Bldg. Vent. & Control Room Filter Fans 2-HVS-13A, 2-HVE-6A	<u>On</u>	<u> </u>
Four (4) Control Room. Isolation Valves FCV-25-24, FCV-25-17, FCV-25-18, FCV-25-16	<u>Closed</u>	<u> </u>
Two (2) Shield Bldg. Vent & Control Room Filter Fans 2-HVS-13B, 2HVE 6B	<u>On</u>	<u> </u>
Four (4) Control Room. Isolation Valves FCV-25-25, FCV-25-14, FCV-25-15, FCV-25-19	<u>Closed</u>	<u> </u>



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

TABLE II (CONT.)

CONTAINMENT ISOLATION ACTUATION SIGNAL (CIAS)

	<u>CONDITION</u>	<u>CHECK</u>
Two (2) Containment Purge Exhaust Fan 2-HVE-8A, 2-HVE-8B	<u>Off</u>	<u> </u>
Six (6) Containment Purge Isolation Valves FCV-25-1, FCV-25-3, FCV-25-5, FCV-25-6, FCV-25-4, FCV-25-2	<u>Closed</u>	<u> </u>
Three (3) Continuous Containment H ₂ Purge Isolation FCV-25-20, FCV-25-26, FCV-25-21	<u>Closed</u>	<u> </u>
Two (2) Shield Bldg. Vent. Isolation Valves FCV-25-32, FCV-25-33	<u>Open</u>	<u> </u>
Two (2) Fuel Bldg. Emerg. Vent. Isolation Valves FCV-25-30, FCV-25-31	<u>Closed</u>	<u> </u>
Six (6) Containment Sample Isolation Valves FCV-26-2, FCV-26-4, FCV-26-6, FCV-26-1, FCV-26-3, FCV-26-5 (RTGB 206)	<u>Closed</u>	<u> </u>

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

TABLE III

CONTAINMENT SPRAY ACTUATION SIGNAL

	<u>CONDITION</u>	<u>CHECK</u>
Two (2) Containment Spray Pumps 2A, 2B	<u>On</u>	<u> </u>
Two (2) Containment Spray HDR Isolation Valves FCV-07-1A, FCV-07-1B	<u>Open</u>	<u> </u>
Two (2) Iodine Removal System Pumps 2A, 2B	<u>On</u>	<u> </u>
Two (2) Iodine Removal System Isolation Valves I-SE-07-3A, I-SE-07-3B	<u>Open</u>	<u> </u>

NOTE: Verify Flow
on FI-07-1A, and FI-07-1B

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

5.0 SUBSEQUENT ACTIONS

CHECK

- 5.1 Refer to Reactor Trip/Turbine Trip, 2-0030130 and ensure that all subsequent actions (section 5) have been or are being performed. _____
- 5.2 When containment pressure decreases to < 10 psig,
Stop IA and 1B CS. pps.
Close FCV-07-1A, FCV-07-1B
Stop Iodine Removal PPs 2A, 2B
Close Iodine Removal System Isolation.
valves I-SE-07-3A, 3B _____
- 5.3 Within one (1) hour, but without exception no later than one (1) hour, stop RCS/BAMT boration via the charging pumps. _____
- 5.4 Conduct area radiation surveys as soon as possible to determine extent of damage. _____
- 5.5 Implement the Emergency Plan as necessary in accordance with EP 3100021E. _____
- 5.6 Commence RCS cooldown as soon as possible and in any case within one (1) hour. _____

CAUTION: Ensure RCS is maintained in a subcooled condition. After any SIAS, operate the SIS until RCS hot and cold leg temperatures are at least 50°F below saturation temperature for the RCS pressure.

- 5.7 Ensure proper operation of the safety injection system by checking flow rates and SIT levels. _____
- 5.8. If steam dump to condenser is available close the atmospheric steam dump and begin dumping steam to the condenser. _____
- 5.9 If offsite power is lost, steam dump to the atmosphere must be used for cooldown. _____

CAUTION: Do not exceed 75° F/Hour cooldown rate.

- 5.10 Continue auxiliary feedwater flow to the steam generators during cooldown. _____
- 5.11 Reduce steam generator pressure to less than 985 psig. (Safety setting) Refer to OP 2-0030127, Reactor Plant Cooldown. _____

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

5.0 SUBSEQUENT ACTIONS: (Cont.)

CHECK

- 5.12 Immediately prior to RAS ensure power is available to V3659, V3660, V3495, V3496. _____
- 5.13 Ensure RAS occurs when the RWT level decreases to 3 ft indicated - (4 ft. from bottom of the tank). Table IV page 16 may be used as a check list. _____
- 5.14 If all HPSI pumps and charging pumps are operating and the HPSI pumps are delivering less than 75 GPM per pump, stop the charging pumps one at a time, then HPSI pumps one at a time until only one HPSI pump remains operating. _____
- 5.15 Check RAB radiation levels and sump levels after RAS to detect SIS leakage. Even if leaks are detected, at least one HPSI pump must remain in operation to provide flow to the core. _____
- 5.16 Establish radiation areas and warnings where necessary _____
- 5.17 Without exception and within ten (10) hours of the incident occurrence, initiate hot leg injection. This will be in conjunction with the existing cold leg injection. _____
- 5.18 If the pressure and inventory control with the SIS cannot be established after eight hours and RCS press is less than 300 PSIG, continue hot and cold leg injection. _____

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

TABLE IV

RECIRCULATION ACTUATION SIGNAL

CONDITION CHECK

Two (2) LPSI PPS 2A, 2B
Off

Two (2) SI PP Recirc. to RWT
Isolation Valves V3659, V3660
Closed

Two (2) Minimum Flow Isolation Valves
V-3495, V3496
Closed

Two (2) Containment Sump Outlet
Valves MV-07-2A, MV-07-2B
Open

Two (2) RWT Outlet Valves
MV-07-1A, MV-07-1B
Closed

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

5.0 SUBSEQUENT ACTIONS: (Cont.)

5.19 If pressure and inventory control with the SIS are established after eight (8) hours and RCS pressure is greater than 300 PSIG, conduct one of the following activities, (in order of decreasing preference.) This condition indicates the system is refilled and subcooling has occurred.

- 5.19.1 1.) Verify subcooling by checking the saturation pressure for the existing temperature.
2.) Realign the SIS for cold leg injection.
3.) Continue to maintain subcooling and reduce RCS pressure to <268 PSIA for shutdown cooling by reducing the flow delivered by the high pressure injection and charging pumps.
4.) While reducing pressure and after shutdown cooling is initiated, maintain RCS pressure with the charging pumps and /or the HPSI pumps to maintain at least 50⁰ subcooling.

OR

- 5.19.2 Continue to remove decay heat using auxiliary feedwater and steam dumps if adequate condensate is available and (5.19.1) cannot be implemented.

OR

- 5.19.3 If 5.19.1 or 5.19.2 above, cannot be implemented, Open przr power operated relief valves and align the safety injection system for cold leg injection.

To open the PORV's, pull two RPS przr high pressure trip unit bistables.

5.20 Place both hydrogen recombiners in service. (See Appendix "A")

5.21 If containment hydrogen concentration cannot be maintained below 3.5% as indicated on the containment hydrogen sample system, then place the containment hydrogen purge system in operation. (See Appendix "B")

EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

6.0 PURPOSE AND DISCUSSION:

This procedure provides instructions to be followed in the event that leakage from the Reactor Coolant System exceeds the capacity of the operable charging pumps. When conditions in the Reactor Coolant System degrade to the point that a Limiting Safety System Setting is approached the Reactor Protective System will initiate a reactor trip, making the reactor subcritical. This will stop the production of power in the core. Cooling of the core, however, must continue to remove the considerable decay heat that remains. The Safety Injection System automatically provides a flow of subcooled water to the core for decay heat removal. Failure to keep the core covered will result in overheating of the fuel, failure of the cladding, and a release of gross amounts of fission products to the containment atmosphere.

The spectrum of breaks which would cause a LOCA is from approximately at .2 inch diameter break up to a double-ended hot leg rupture. For an example: Analysis show that the flow from an unrestricted .3 inch diameter break is approximately 180 GPM at 2250 PSIA. A major concern for these small breaks is that the flow through the break may not be sufficient for decay heat removal. In those circumstances it is imperative that a secondary heat sink be available. This in turn dictates the use of the Auxiliary Feedwater System as the main feed-water system is disabled due to an SIAS.

Operator actions should be directed toward ensuring proper operation of the Safety Injection and Containment Isolation Systems, ensuring all automatic functions have initiated properly, and taking action to protect plant personnel. Long term action is directed toward placing the plant in a cold shutdown condition. For small breaks where the ECCS will maintain RCS volume and pressure, operator action must be directed toward establishing and maintaining subcooled conditions in the RCS during the cooldown to prevent void formation. Fig. 4.4 is a quick reference for operators actions.



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

6.0 PURPOSE AND DISCUSSION: (Cont.)

Some instruments (valve position, temperature, pressure, level indications, etc.) specified for use in this procedure have not been designed for long term post LOCA conditions inside containment. Therefore, the operator should be especially alert that the potential exists for erroneous indication after >15 minutes have elapsed following a LOCA event.

If there is a high radioactivity level in the reactor coolant system, circulation of this fluid in SDC may result in high area radioactivity readings in the RAB. The activity level of the RCS should be determined prior to initiating SDC flow.

It may be necessary to fill the przr solid to regain pressure control and to achieve 50⁰ F subcooling. If this is the case, HPSI discharge valves will have to be carefully throttled during the cooldown to reduce system pressure.

Ensure HPSI flow to the core continues after RAS. Do not allow the HPSI pumps to operate "dead-headed". HPSI shutoff head (no flow) 1250 PSIG.

Do not exceed 75⁰ F/hour cooldown rate.

If conditions permit, attempt to locate and isolate the source of the leak. Possible leak locations include but are not limited to the PORV's, the letdown line and the sample lines.

Przr level may not always be a true indicator of RCS fluid inventory. Przr. steam space ruptures, reference leg failures, and reference leg flashing may cause indications which are contrary to true conditions.

All available indications should be used to aid in diagnosing the event since the accident may cause irregularities in a particular instrument reading. Critical parameters must be verified when one or more confirmatory indications are available. With the Subcooling Margin Monitor (SMM) operating normally, use the nomograph on RTGB 104 in conjunction with the SMM to eliminate dependence on a single instrument. With the SMM inoperable, refer to the nomograph utilizing control room indicators such as THOT, przr pressure, and incore thermocouples to determine the T_h margin to saturation. Subcooling margin can also be determined by subtracting hot leg temperature from przr temperature (TE-1101).

Take appropriate action to keep core covered or reflood if it becomes partially uncovered. Maintain or re-establish a heat removal path. Regain RCS pressure and level control. Follow long term shut down procedures in order to assure that boron precipitation does not occur.



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

7.0 REFERENCES:

- 7.1 St. Lucie Unit #1 Emergency Procedures Unit #2 FSAR SECT. 1.0, 6.0, 9.0.
- 7.2 C. E. generic LOCA guidelines
- 7.3 Songs OI S023-3-5-6
- 7.4 Lund Consulting report to C. E. (Feb. 6, 1981)
- 7.5 Draft of NUREG - 0799

8.0 RECORDS REQUIRED:

- 8.1 Normal Log Entries
- 8.2 L E R
- 8.3 Transient indicators and recorder charts.

9.0 APPROVAL:

Reviewed by Plant Nuclear Safety Committee	_____	19
Approved by _____	/Plant Manager	_____ 19
Revision _____	Reviewed by Facility Review Group	_____ 19
Approved by _____	/Plant Manager	_____ 19



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

APPENDIX "A"
PLACING H₂ RECOMBINERS IN SERVICE

I. Place recombiners in service as follows:

1A 1B

- | | | |
|-------|-------|--|
| _____ | _____ | 1. Ensure breakers #41262 in 480V MCC 2A5 (2A) and #42103 and in 480V MCC 2B6 (2B) are closed. |
| _____ | _____ | 2. Set the power adjust potentiometer at zero (000). |
| _____ | _____ | 3. Check that power is available to the power supply panel by observing the "power available" white light on the control panel is illuminated. |
| _____ | _____ | 4. Set the Power Out Switch on the control panel to the "ON" position. The red light on the switch will illuminate. |
| _____ | _____ | 5. Gradually turn the Power Adjust potentiometer to 70 KW as indicated on the Power Out Wattmeter. |

CAUTION: There is a lag in the meter reading, so turn the potentiometer knob slowly. Do not exceed 75 KW.

- | | | |
|-------|-------|--|
| _____ | _____ | 6. Periodically check the temperature of the three thermocouples using the temperature channel selector switch. And, when the temperature reaches 1250°F, adjust the power adjust potentiometer to maintain temperature between 1250°F and 1400°F. |
|-------|-------|--|

CAUTION: Do not let the temperature exceed 1400°F as indicated by the thermocouple readout.



EMERGENCY PROCEDURE NUMBER 2-0120042
REVISION 0

APPENDIX "B"
PLACING CONTAINMENT H₂ PURGE IN SERVICE

II. Place containment H₂ purge in service as follows:

- ___ 1. Verify closed V-2538 filter bypass valves.
- ___ 2. Unlock and open V-25-20 and 21 suction isolation valves.
- ___ 3. Open V-25-35 hydrogen purge discharge to vent stack.
- ___ 4. Start 2HVE 7A or 7B.
- ___ 5. Unlock and open V-25-25 and V-25-26 makeup air for ^{H₂}~~AZ~~ purge.
- ___ 6. Modulate FCV-25-9 open as needed to maintain charcoal absorber temperature below alarm point.

CAUTION: Ensure that either 2HVE 10A or 2HVE 10B is running.

- ___ 7. Periodically check the stack radiation monitoring system for increasing gaseous and particulate levels.

"L A S T P A G E"

Emergency Procedure
2-0120042 Rev 0