FPL

ST. LUCIE PLANT CHEMISTRY OPERATING PROCEDURE

SAFETY RELATED

Procedure No.	Current Rev. No.	Effective Date:
COP-06.06	1	07/13/99

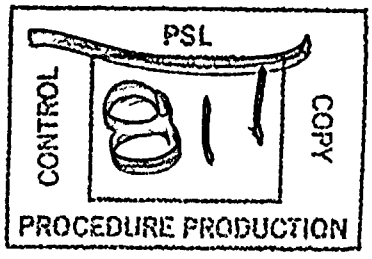
Title:

GUIDELINES FOR COLLECTING POST ACCIDENT SAMPLES

Responsible Department: CHEMISTRY

Revision Summary

Revision 1 - Added limit in Step 3.1 to be more specific on high radiation samples and changed statement in 3.1 by removing "rates" so information says "dose to personnel will not exceed NRC limits." (J. H. Burgess, 06/17/99)



Revision	FRG Review Date	Approved By	Approval Date
0	10/13/98	R. G. West Plant General Manager	10/13/98
1	06/17/99	R. G. West Plant General Manager	06/17/99
		N/A Designated Approver	

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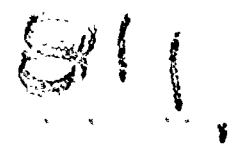

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1.0 PURPOSE

1.1 To provide guidelines for the OSC Chemistry Supervisor to use for sample collection and operational concerns in the OSC.

1.2 To provide guidelines that identify possible areas of concerns for a long term surveillance program following a plant incident.

2.0 REFERENCES

2.1 Technical Specifications, Section 3.4.8

2.2 EPIP-05, Activation and Operation of the Operational Support Center

2.3 ADM-17.09, Invoking 10 CFR 50.54 (X)

3.0 PREREQUISITES

3.1 Post Accident Sampling System must be operational when collecting high radiation samples (>10 r/hr contact). The normal sampling system may be used to collect post accident samples only if dose to personnel will NOT exceed NRC limits. /R1

3.2 Counting Room detectors must be operational for sample isotopic analysis. It may be necessary to move the counting equipment to an area suitable for operation (low background).

3.3 All Chemistry personnel that work from the OSC for sampling during reentry to the plant shall be respirator and SCBA qualified.

4.0 PRECAUTIONS/LIMITATIONS

4.1 NO samples will be taken for outside agencies without the concurrence of both the Emergency Coordinator and the Chemistry Supervisor.

4.2 The number of samples collected may vary from those described in this procedure based on manpower support from the OSC.

4.3 High Radiation Areas will be present when obtaining liquid or gaseous samples. Radiation survey instruments should be monitored frequently while purging and drawing samples.

4.0 PRECAUTIONS/LIMITATIONS (continued)

4.4 Health Physics shall brief all teams making re-entry into the plant from the OSC. Dose extensions may be necessary prior to entry.

4.5 All samples shall be labeled with proper identification and results entered into the LIMS system.

4.6 If a Containment Isolation Signal (CIS) has actuated, Then sample valves must be reset and CIS override provided in order to obtain sample flow from the RCS or containment.

4.7 The containment radiation monitors sample line will be isolated following a CIS. The sample pump on the monitor should be stopped from the Control Room.

4.8 Steam Generator Blowdown sample valves will close after a CIS actuation. The sample valves may be reopened if necessary and samples collected inside the RAB at the blowdown sample panel to prevent the spread of contamination to the Cold Lab.

4.9 The flowpath of LPSI should be verified with the Control Room prior to sampling shutdown cooling.

4.10 It may be necessary to leave the area while a sample is purging in order to reduce exposure.

4.11 Containment air samples may be collected from the Post LOCA Hydrogen analyzers if a CIS has isolated the radiation monitor. The Unit 2 PASS system is also capable of drawing a containment air sample.

4.12 The Steam Generator Blowdown Building should be kept uncontaminated if possible after a tube rupture by leaving blowdown isolated or by blowing down to the discharge canal if release permit limits (ECL) are NOT exceeded.

5.0 RECORDS REQUIRED

5.1 Normal entries on the Chemistry LIMS system. Results shall be maintained in the plant files in accordance with QI-17-PSL-1.

6.0 INSTRUCTIONS

6.1 The following considerations should be made based on the accident situation:

1. REFER to EPIP-05, Activation and Operation of the Operational Support Center, for checklist items to establish the OSC as operational.

2. ESTABLISH the plant status and ASSESS the operability of the process monitors.

3. CHECK **ALL** of the following effluent flowpaths to ascertain if an abnormal release is in progress:

   A. Plant Vent

   B. Fuel Handling Building

   C. ECCS Vent

   D. Air Ejector Exhaust

   E. Steam Line

   F. S/G Blowdown Building Vent

   G. S/G Liquid Blowdown

   H. Containment

3. If a CIS has occurred, Then STOP the sample pumps on the containment process monitor.

4. The TSC Chemistry Supervisor should determine if it is necessary to establish a remote counting lab or analysis lab.

5. DETERMINE which lab can be used for sample analysis.

6. MONITOR for noble gas concentration and radiation level in any lab area that is in use. Health Physics can provide friskers or air sampling equipment.

6.0 INSTRUCTIONS (continued)

6.1 The following considerations should be made based on the accident situation: (continued)

7. OBTAIN a reactor coolant sample if necessary.

   A. PERFORM a boron analysis on the reactor coolant sample.

   B. PERFORM a gamma spectrum analysis on the reactor coolant sample. Primary concerns are the levels of fission product iodines and cesiums.

   C. NOTIFY the TSC Chemistry Supervisor of the reactor coolant gamma spectrum analysis results.

8. The TSC Chemistry Supervisor may waiver the Tech. Spec. requirement for sampling of the RCS when the RCS DEQ is greater than 1.0 μCi/ml during accident conditions to limit personnel exposure if the requirements of ADM-17.09, Invoking 10 CFR 50.54 (X) are met.

9. If the Plant Vent effluent monitor is reading upscale, OBTAIN a Plant Vent effluent sample for particulate, iodine and gas. (SAMPLE the Fuel Handling Building effluent if there is a fuel handling accident).

10. If the steam line monitor, air ejector monitor or steam generator blowdown monitors are reading upscale, the steam generators should be SAMPLED for primary to secondary leakage.

11. When conditions permit, CONSIDER sampling the following tanks for gross activity:

    Chemical Drain Tank

    Equipment Drain Tank

    Aerated Waste Storage Tank

    Spent Fuel Pool, if there is a fuel handling accident

    Main Condenser Hotwell, if primary to secondary leak has occurred

6.0 INSTRUCTIONS (continued)

6.1 The following considerations should be made based on the accident situation: (continued)

12. The Component Cooling Water System should be SAMPLED for isotopic analysis if the process monitors show an increase in count rate.

13. AVOID getting sodium molybdate (CCW) in the waste ion exchangers to prevent depletion.

14. Post LOCA hydrogen analyzers can be grab sampled if necessary for containment hydrogen analysis.

15. REFER to Appendix A for areas of concern for long term Post Accident surveillance.

END OF SECTION 6.1

APPENDIX A
GUIDELINES FOR AREAS OF CONCERN FOR LONG TERM POST ACCIDENT SURVEILLANCE
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The TSC Chemistry Supervisor will determine what tests and scheduling frequency will apply to each area of concern. The areas of concern are as follows:

- Containment Building
- Reactor Coolant (on Shutdown Cooling)
- Reactor Auxiliary Building CVCS Letdown System
- Gaseous Waste System
- Liquid Waste Systems
- Secondary Systems

1. Containment Building

   Major concerns are:

   A. Estimating the initial inventory of water injected, total inventory in the core and cavity sump including the chemical and nuclide composition.

   B. Tracking additions to the containment water volume.

   C. Tracking changes in the nuclide mixture of the water.

   D. Tracking atmospheric composition for percent gases and nuclide concentrations.

   E. Containment Sump, Quench Tank, Reactor Drain Tank composition.

   F. Containment purge or Hydrogen purge that could release hot gases.

   G. Containment penetrations that could allow water out or into containment.

APPENDIX A
GUIDELINES FOR AREAS OF CONCERN FOR LONG TERM POST ACCIDENT SURVEILLANCE
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1. Containment Building (continued)

   Actions to Consider:

   A. REVIEW the data from the initial post accident samples for tank levels. COMPARE this data to the logs prior to the incident.

   B. CALCULATE probable containment sump volume and boron concentration.

   C. COMPARE calculated data to actual grab sample results.

   D. CHANGES in valve lineups on lines that exit the containment building must be reviewed for dose concerns.

2. Reactor Coolant (on Shutdown Cooling)

   Major Concerns:

   A. Spread of contamination to associated systems.

   B. Any source of dilution water into shutdown cooling.

   C. Leaks in the shutdown cooling heat exchanger to Component Cooling Water system.

   D. An adequate makeup supply to shutdown cooling.

   E. Contents of the safeguard sumps.

   F. RAB liquid radwaste systems containing highly contaminated water.

APPENDIX A
GUIDELINES FOR AREAS OF CONCERN FOR LONG TERM POST ACCIDENT SURVEILLANCE
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2. Reactor Coolant (on Shutdown Cooling) (continued)

   Actions to Consider:

   A. VERIFY there is NO boron dilution to the shutdown cooling system by grab sampling SDC and the makeup supply.

   B. VERIFY operation of the Component Cooling Water process monitors for SDC leak detection. USE grab samples to monitor the CCW activity, if necessary.

3. Reactor Auxiliary Building CVCS Letdown System

   Major concerns are:

   A. Water with high levels of contamination may be in the RAB.

   B. The VCT may have a hydrogen cover gas with high noble gas activity.

   C. Water in the letdown system may be at a lower boron concentration than the SDC system and act as a source of dilution water.

   D. The CVCS ion exchangers may NOT be borated to the same concentration as the SDC system and will remove boron until an equilibrium is reached.

   E. The gaseous waste system may contain high gas activity from tank vents or VCT purges.

   Actions to Consider:

   A. DETERMINE the isotopic content of the VCT gas by grab sampling.

   B. CVCS ion exchangers may contain dose rates higher than shielding design.

APPENDIX A
GUIDELINES FOR AREAS OF CONCERN FOR LONG TERM POST ACCIDENT SURVEILLANCE
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3. Reactor Auxiliary Building CVCS Letdown System (continued)

   Actions to Consider: (continued)

   C. MONITOR the Plant Vent process monitor for abnormal gaseous releases.

   D. MONITOR any water movements through the RAB for high activity.

   E. Holdup tanks should be sampled for high activity. The preconcentrator ion exchanger can be used for cleanup of HUTS prior to waste processing.

4. Gaseous Waste System

   Major concerns are:

   A. Gas decay tanks may be filled faster than usual. There may be less time available for decay of high activity.

   B. Oxygen may be introduced into the gas decay tanks from improper valve lineups. Tanks should be monitored for explosive gas mixtures.

   C. Nitrogen supply aligned to non-essential equipment may fill GDTs.

   D. Improper valve lineups may release high activity gas or explosive gas mixtures into the RAB.

   Actions to consider:

   A. The Gas Analyzer should NOT be aligned to a highly radioactive GDT.

   B. The Gas Analyzer should be operated on the Gas Surge Header.

   C. The GDT pressures should be monitored closely.

   D. VERIFY there are NO explosive gas mixtures formed by routine grab sampling.

APPENDIX A
GUIDELINES FOR AREAS OF CONCERN FOR LONG TERM POST ACCIDENT SURVEILLANCE
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5. Liquid Waste Systems

Major concerns are:

A. CONTROL the spread of highly contaminated water in the RAB.

B. MONITOR tank levels and sump levels that have auto starting pumps to control the spread of contamination.

C. MONITOR tank levels to avoid overflow of the system.

D. Chemical contaminants (i.e., sodium hydroxide, hydrazine or trisodium phosphate) will rapidly deplete the ion exchangers.

E. Avoid draining sections of piping that contain highly radioactive water.

Actions to consider:

A. ISOLATE, if possible, any source of highly radioactive water in the RAB waste system.

B. ESTABLISH controls of RAB water movements.

C. MONITOR tank levels on a more frequent basis.

D. VERIFY the waste ion exchangers are performing proper cleanup of waste water.

E. REQUEST that circulating water pumps be left in operation for adequate dilution flow for liquid releases.

F. CONSIDER having to process very large volumes of waste water (from S/G tube rupture).

APPENDIX A
GUIDELINES FOR AREAS OF CONCERN FOR LONG TERM POST ACCIDENT SURVEILLANCE
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6. Secondary Systems

Major concerns are:

A. Containing the spread of contamination.

B. Treatment of large volumes of contaminated water.

C. Restricted use of chemicals in the systems.

D. Blowdown system is a direct release path to the discharge canal.

E. Control of contaminated water in the condenser hotwell.

Actions to consider:

A. MONITOR the ponds by grab sampling for contamination.

B. Vacuum drag should be secured after a S/G tube rupture to avoid contamination of the other Unit.

C. The blowdown building resin trains may become contaminated and require proper handling for resin discharge.

D. RESTRICT the use of amerzine and hydrazine on the secondary side to avoid depletion of the ion exchangers used for waste processing of contaminated water.

END OF APPENDIX A

FPL

ST. LUCIE PLANT

HEALTH PHYSICS PROCEDURE

SAFETY RELATED

Procedure No.
HP-201
Current Revision No.
9
Effective Date
06/15/01

Title:

EMERGENCY PERSONNEL EXPOSURE CONTROL

Responsible Department: **HEALTH PHYSICS**

REVISION SUMMARY:

Revision 9 – THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Deleted exposure guideline basis, added TMI shielding study and made editorial and administrative changes. (J. R. Walker, 06/11/01)

Revision	FRG Review Date	Approved By	Approval Date
0	02/01/82	J. H. Barrow (for) Plant General Manager	02/02/82
9	06/07/01	R. G. West Plant General Manager	06/11/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

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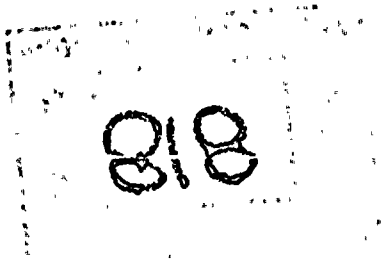
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1.0 PURPOSE

1.1 This procedure provides the methods to be followed to control radiological exposure of personnel during emergencies.

2.0 REFERENCES

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on an attachment.

2.1 10 CFR 20, Standards for Protection Against Radiation.

2.2 St. Lucie Plant Radiological Emergency Plan (E-Plan)

2.3 E-Plan Implementing Procedures (EPIP 00 – 13)

2.4 HP-2, "FPL Health Physics Manual."

2.5 Nuclear Energy Policy on Exposure Limits for Emergency Response Personnel, Revision to Policy Statement, Ltr. No. JNO-HP-94-056, October 26, 1994.

2.6 HPP-30, "Personnel Monitoring."

2.7 HP-33, "Pocket Dosimeters."

2.8 HPP-60, "Respiratory Protection Manual."

2.9 HPP-61, "Use of Respiratory Protective Equipment."

2.10 HPP-63, "DAC-Hour Assessment."

2.11 HP-203, "Personnel Access Control During Emergencies."

2.12 EPA-400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents.

2.13 FPL TMI Plant Shielding Study

3.0 RELATED SYSTEM STATUS

NONE

4.0 PRECAUTIONS / LIMITATIONS

4.1 All personnel exposures will be maintained As Low As Reasonably Achievable (ALARA).

4.2 When Health Physics normal operating procedures and emergency procedures differ, the emergency procedures take precedence.

4.3 Entries into radiation areas exceeding 10R/hr should not be made without EC or TSCHPS authorization.

4.4 Emergency response personnel should have their exposures limited to the following doses.

1. 5 rem deep dose equivalent (external exposure) as measured by self-reading dosimeter, or
2. 50 rem to the thyroid from inhalation of iodines.

5.0 RECORDS

5.1 When completed, the forms listed below shall be maintained in the plant files in accordance with QI-17-PSL-1, "Quality Assurance Records."

1. Form HP 203.1, Evacuated Area Re-entry Authorization.
2. Form HP 203.2, Emergency Access Control Log Sheet.

6.0 INSTRUCTIONS

6.1 Guidance for controlling exposures under emergency conditions is provided in:

1. Attachment 1, Exposure Limits for Emergency Response Personnel.
2. Attachment 2, FPL TMI Plant Shielding Study – Unit 1.
3. Attachment 3, FPL TMI Plant Shielding Study – Unit 2.

END OF SECTION 6.1

6.2 Initial Re-Entry Team

1. The initial Re-entry Team shall consist of at least two persons one of whom shall be a Health Physics Technician (HPT).

2. The initial Re-entry Team shall use the protective measures and monitoring equipment as directed by the TSCHPS as indicated on the Evacuated Area Re-entry Authorization, form HP 203.1 (see HP-203, "Personnel Access Control During Emergencies").

3. The initial Re-entry Team members shall carry dosimetry equipment as directed by the TSCHPS as indicated on the Evacuated Area Re-entry Authorization, form HP 203.1 (see HP-203).

4. The Re-entry Team shall be logged in on the Emergency Access Control Log Sheet, HP 203.2 (see HP-203) prior to entering the evacuated area. The TSCHPS and HPOSC Supervisor shall collaborate on assigned initial stay-times based on available dose rate information. The Re-entry Team will frequently check their dosimeters and withdraw to a safe area before exceeding the assigned limits.

END OF SECTION 6.2

6.3 Subsequent Entries

1. The TSCHPS and HPOSC (HP Supervisor in the Operational Support Center) shall analyze the data obtained from the initial entry and shall set requirements for subsequent entries based on this data. Form HP 203.1 (see HP-203) shall be used for all entries unless otherwise directed by the TSCHPS.

2. All subsequent entries shall be made with health physics coverage until the areas entered are declared open for limited access by the TSCHPS. No areas previously unsurveyed shall be entered without health physics coverage.

3. The Evacuated Area Re-entry Authorization form HP 203.1 (see HP-203) should be completed and doses recorded on an individual before that individual is allowed to enter the area a second time to ensure he does not exceed emergency exposure guidelines.

NOTE

The attachments (2 for Unit 1 and 3 for Unit 2) contain area dose rates of the Reactor Auxiliary Buildings (RABs) based on a Three Mile Island Unit 2 (TMI – 2) type accident. These attachments should be referred to prior to entry into an area where dose rates are unknown. The dose rates may be verified by Area Radiation Monitors (ARMs).

END OF SECTION 6.3

ATTACHMENT 1
EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
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NOTE

1. Both Total Dose (TEDE) and Thyroid Dose (CDE) should be used for purposes of controlling exposure.

2. Protective clothing, including respirators, should be used where appropriate.

For the following missions, the exposure limit is[1]:	Total Dose[2] (TEDE)	THYROID[3] (CDE)
Performance of actions that would not directly mitigate the event, minimize escalation, or minimize effluent releases.	5 REM	50 REM
Performance of actions that mitigate the escalation to the event, rescue persons from a non-life threatening situation, minimize exposures or minimize effluent releases.	10 REM	100 REM
Performance of actions that decrease the severity of the event or terminate the processes causing the event in an attempt to control effluent releases to avoid extensive exposure of large populations. Also, rescue of persons from a life-threatening situation.	25 REM	250 REM
Rescue of person from a life-threatening situation. (Volunteers[4] should be above the age of 45.)	(5)	(5)

(1) Exposure limits to the lens of the eye are 3 times the Total Dose (TEDE) values listed.

(2) Total Dose (TEDE) is the total whole body exposure from both external and internal (weighted) sources - Total Effective Dose Equivalent.

(3) Thyroid Dose (CDE) commitment from internal sources - Committed Dose Equivalent. The same dose limits also apply to other organs (CDE), skin (Shallow Dose Equivalent) and extremities (Extremity Dose Equivalent).

(4) Volunteers with full awareness of risks involved including numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects.

(5) No upper limit for Total Dose (TEDE) and/or Thyroid Dose (CDE) exposure has been established because it is not possible to prejudge the risks that one person should be allowed to take to save the life of another. Also, no specific limit is given for thyroid exposure since in the extreme case, complete thyroid loss might be an acceptable sacrifice for a life saved. This should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning.

END OF ATTACHMENT 1

ATTACHMENT 2
FPL TMI PLANT SHIELDING STUDY – UNIT 1
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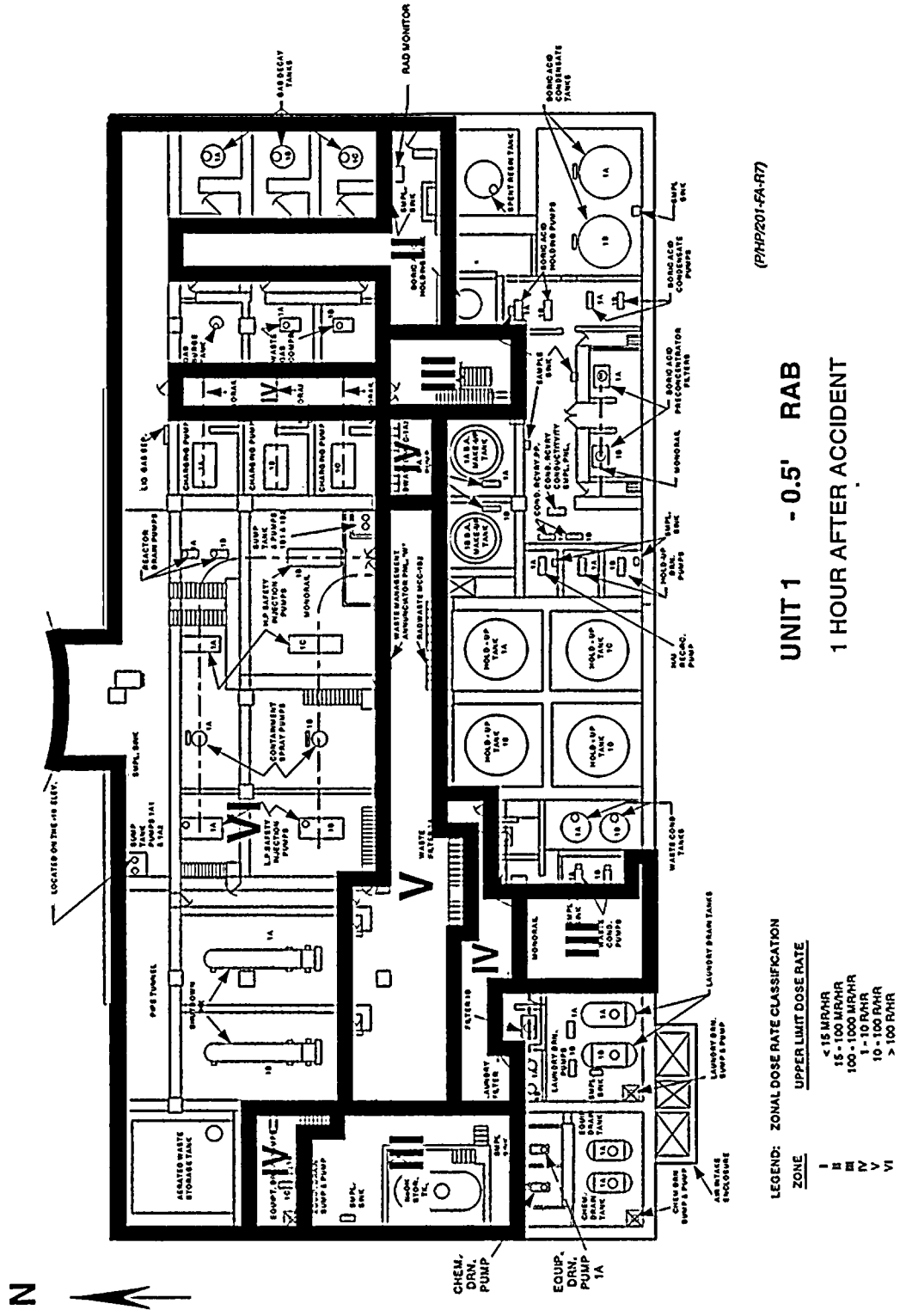

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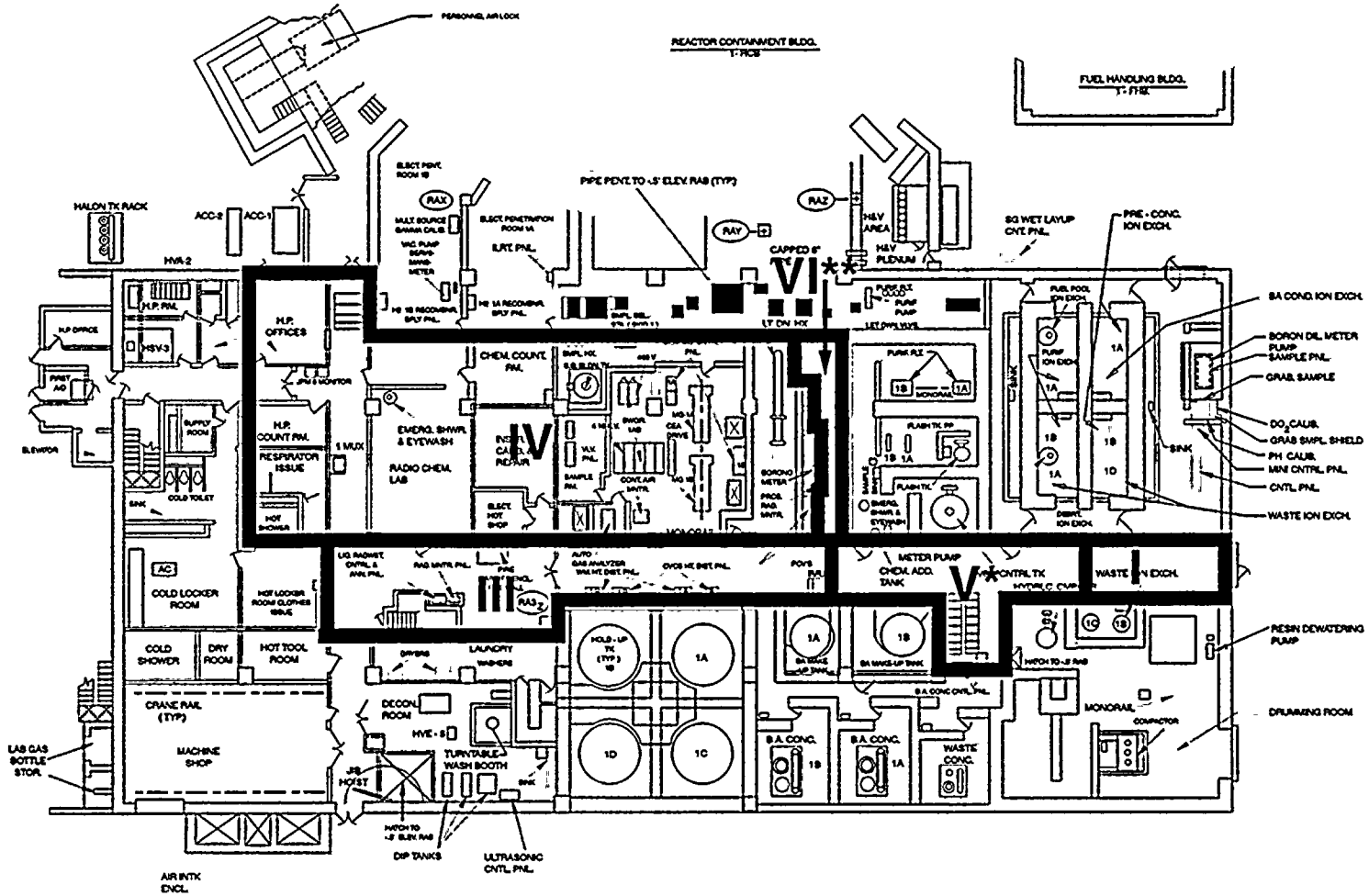

(P/HP/201-FB-R7)

UNIT 1 19.5' RAB

1 HOUR AFTER ACCIDENT

LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

* LESS IF VCT NOT USED
** VI ABOVE 3 FEET, V BELOW 3 FEET

ATTACHMENT 2
FPL TMI PLANT SHIELDING STUDY – UNIT 1
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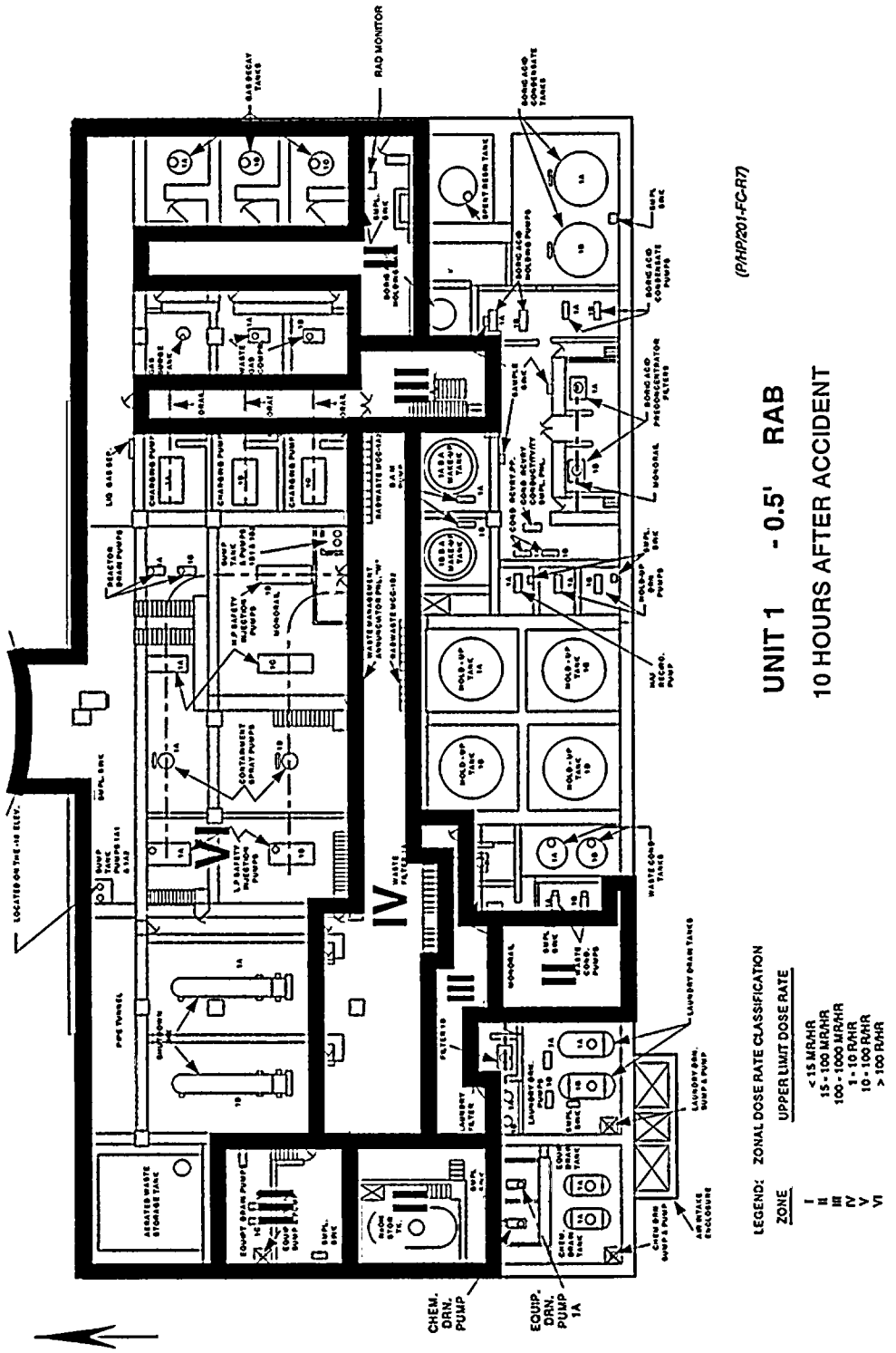

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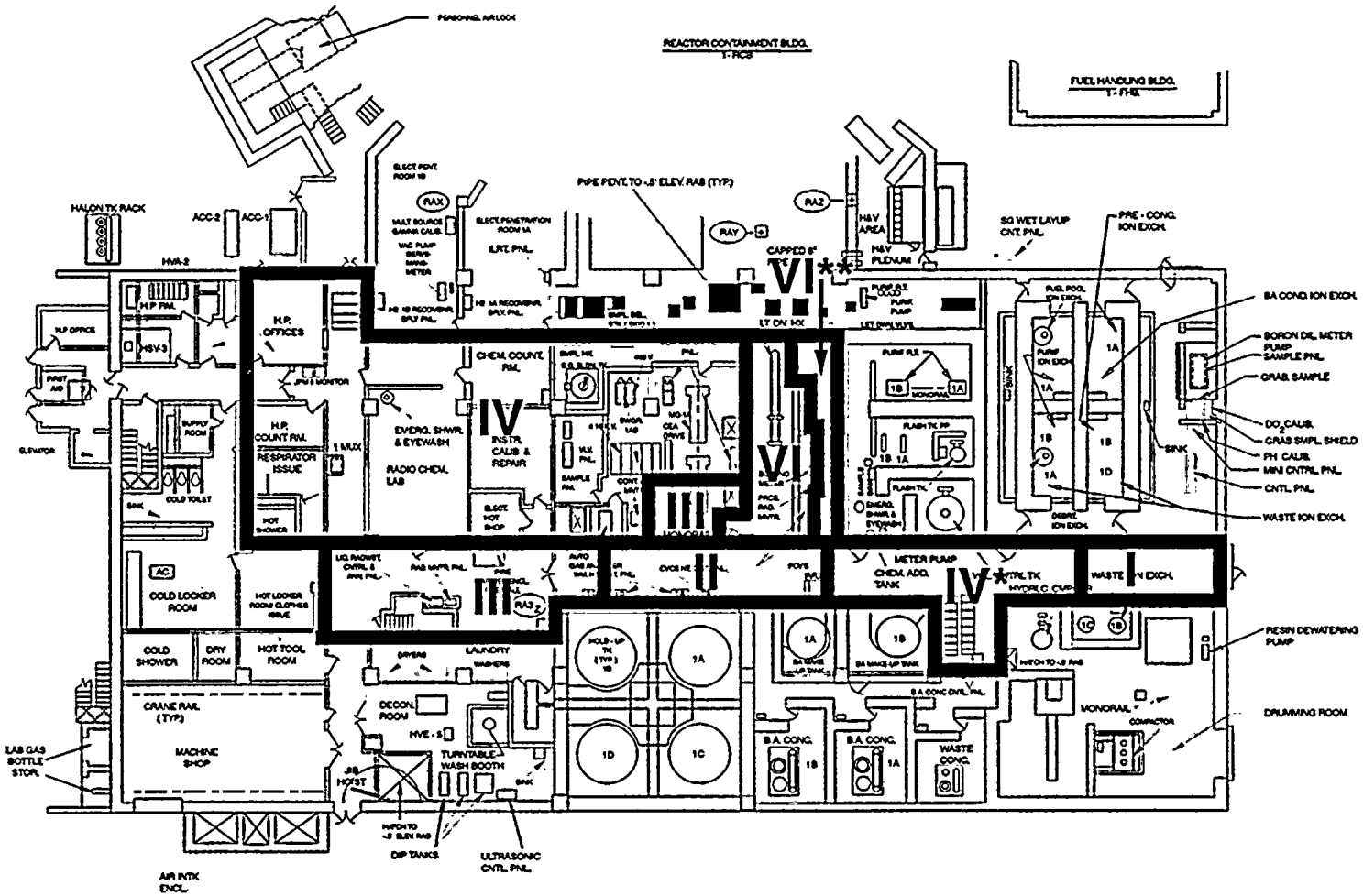

(P/HP/201-FD-R7)

UNIT 1 19.5' RAB

10 HOURS AFTER ACCIDENT

LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

* LESS IF VCT NOT USED
** IV BELOW 3 FEET

ATTACHMENT 2
FPL TMI PLANT SHIELDING STUDY – UNIT 1
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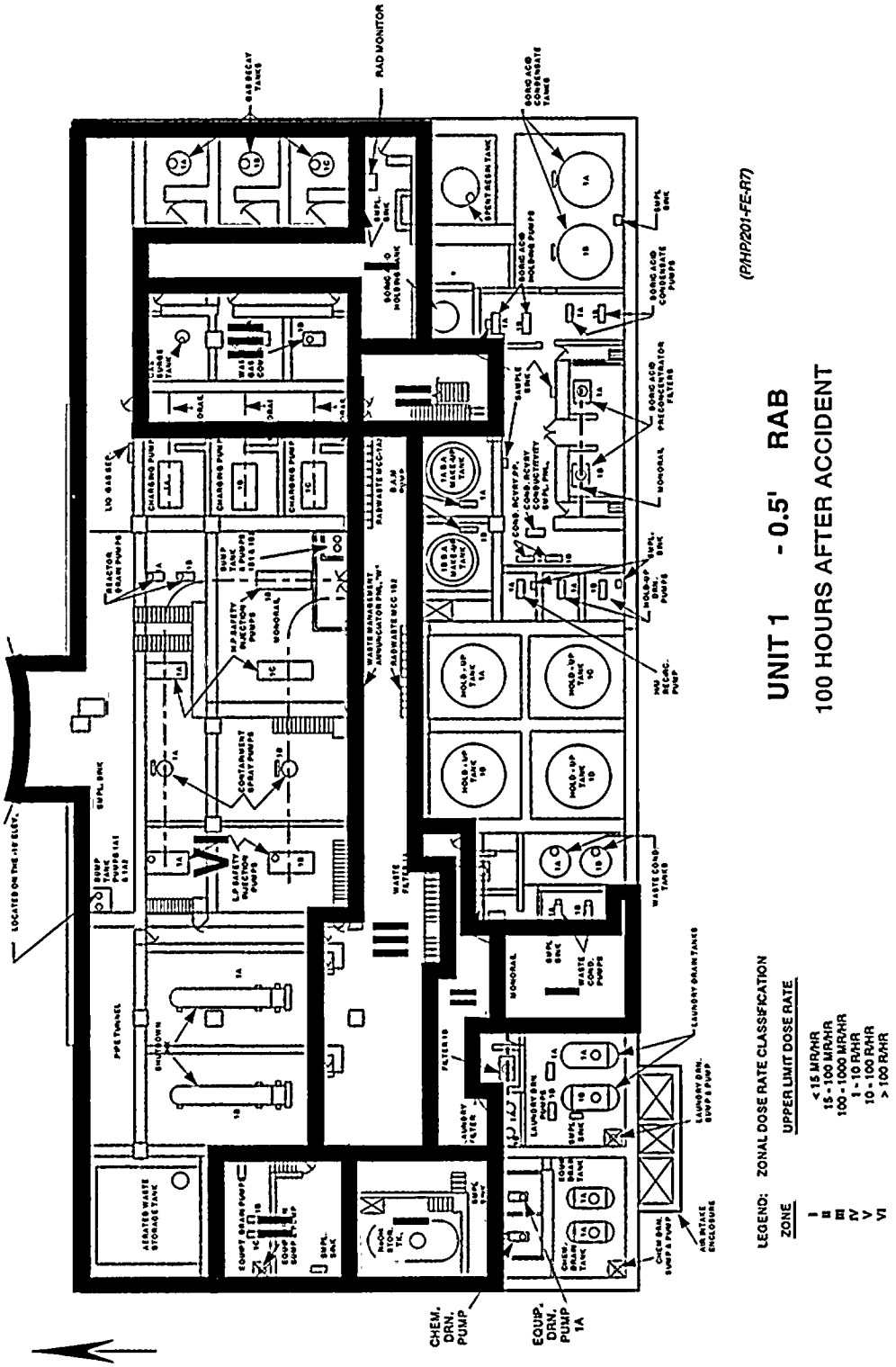

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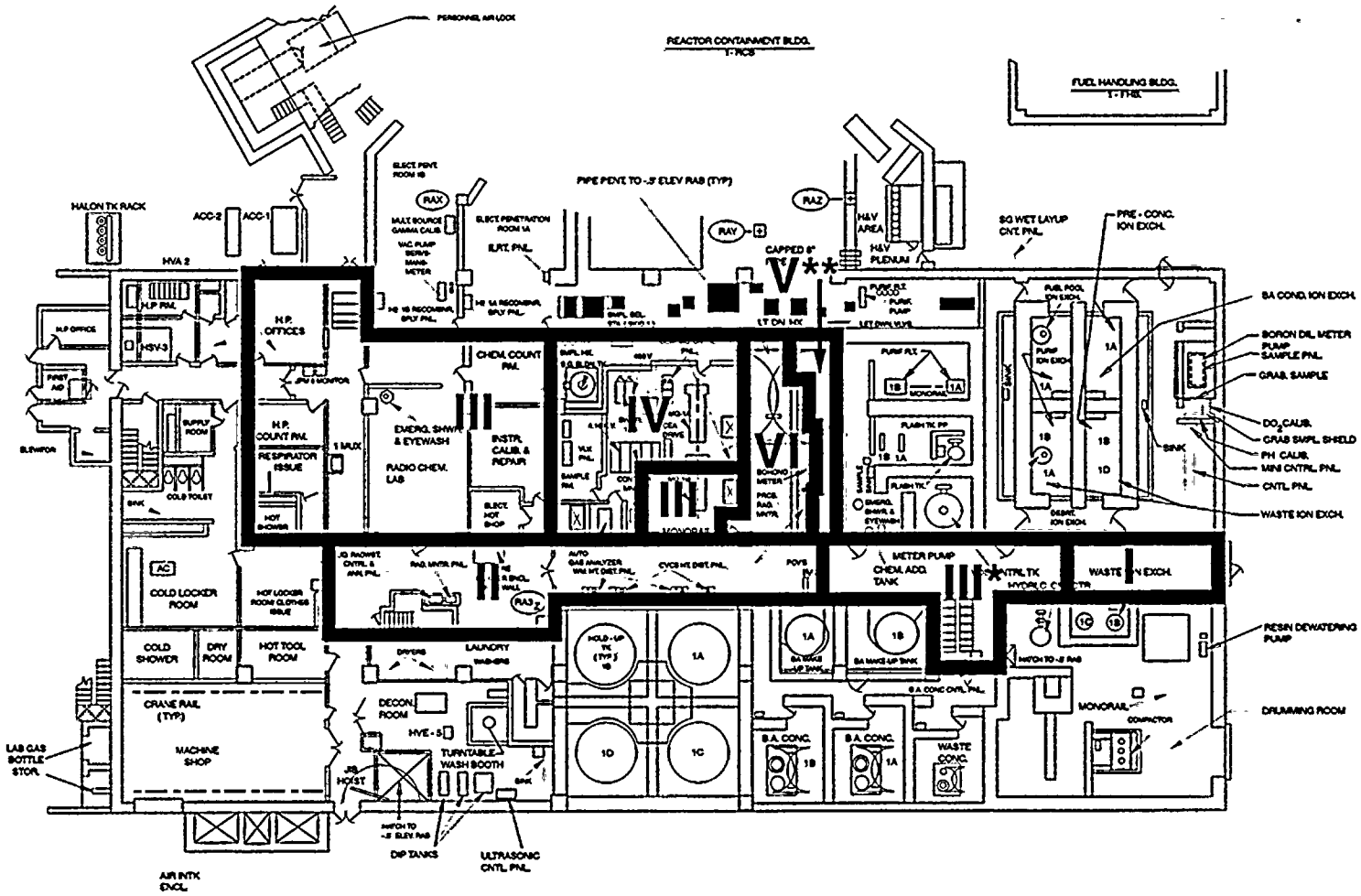

(P/HP/201-FF-R7)

UNIT 1 19.5' RAB

100 HOURS AFTER ACCIDENT

LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

* LESS IF VCT NOT USED
** IV BELOW 3 FEET

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FPL TMI PLANT SHIELDING STUDY – UNIT 1
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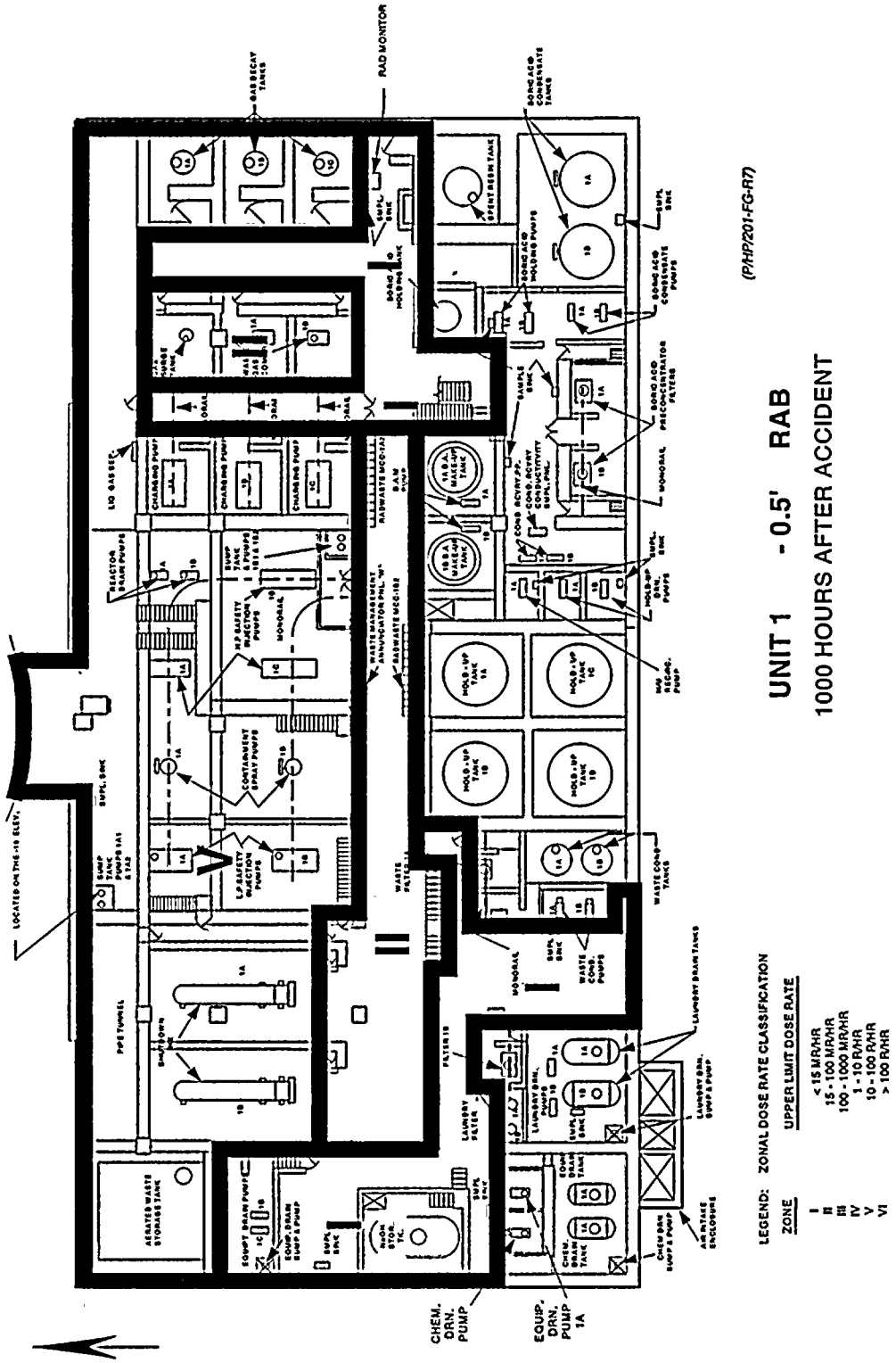

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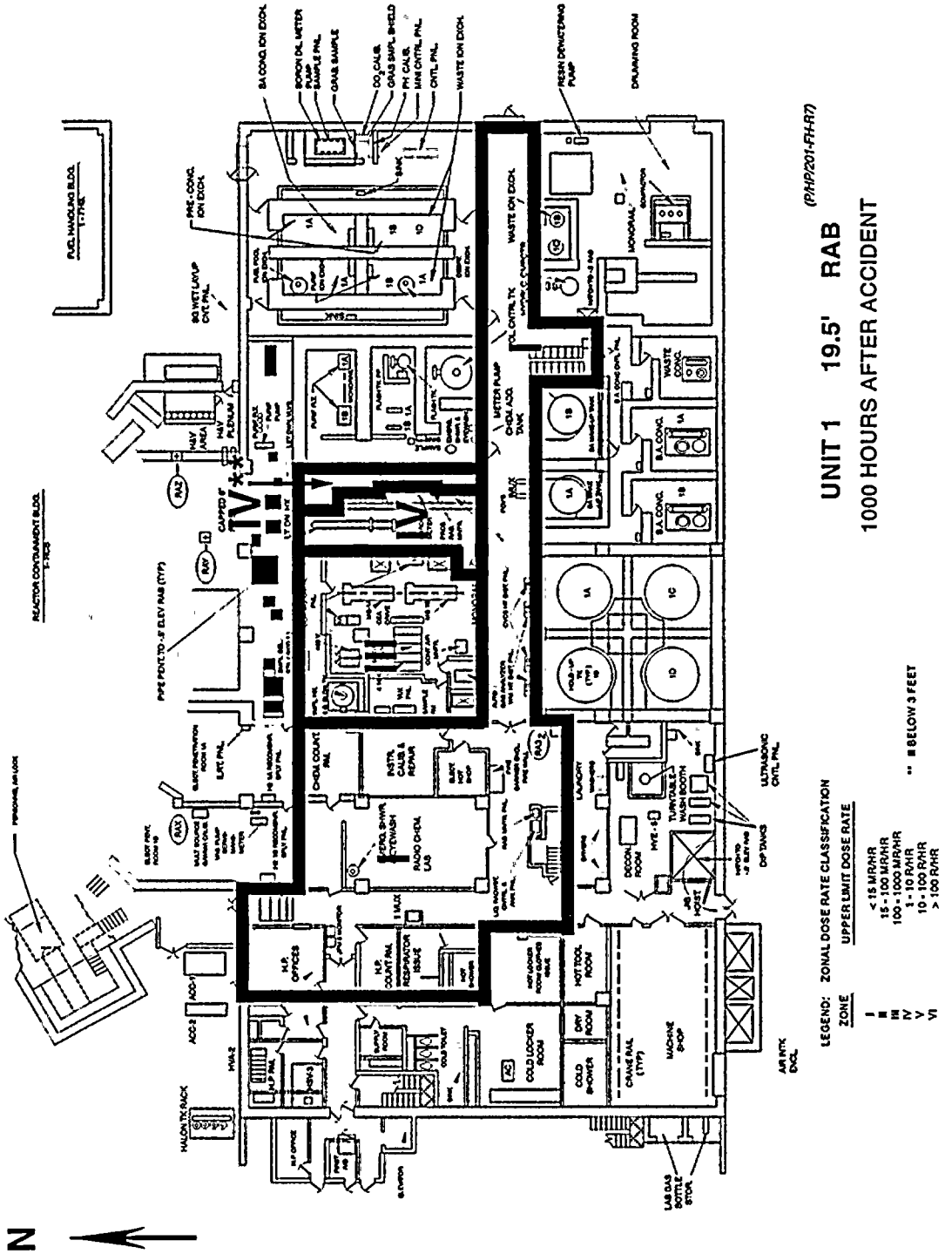

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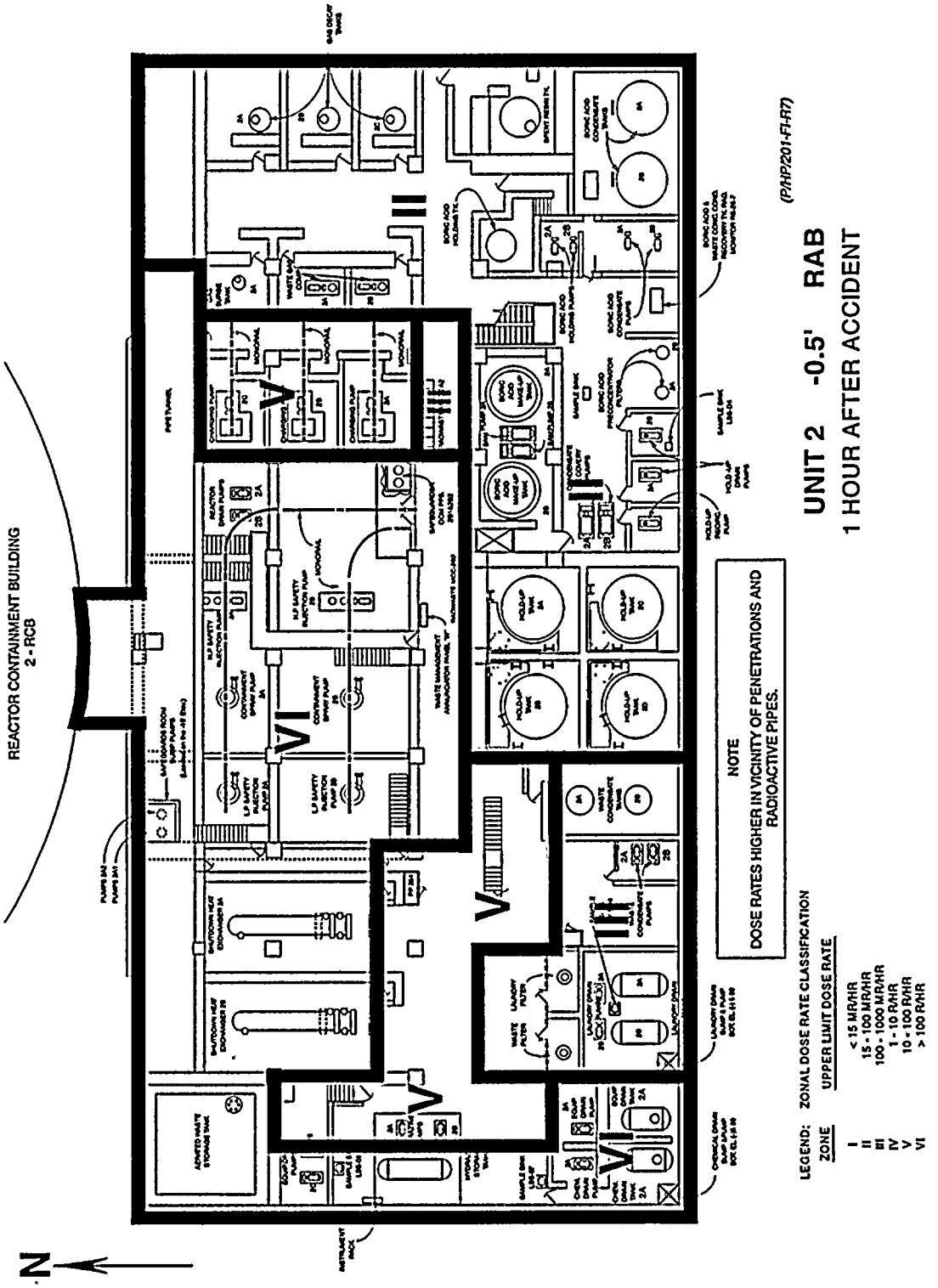

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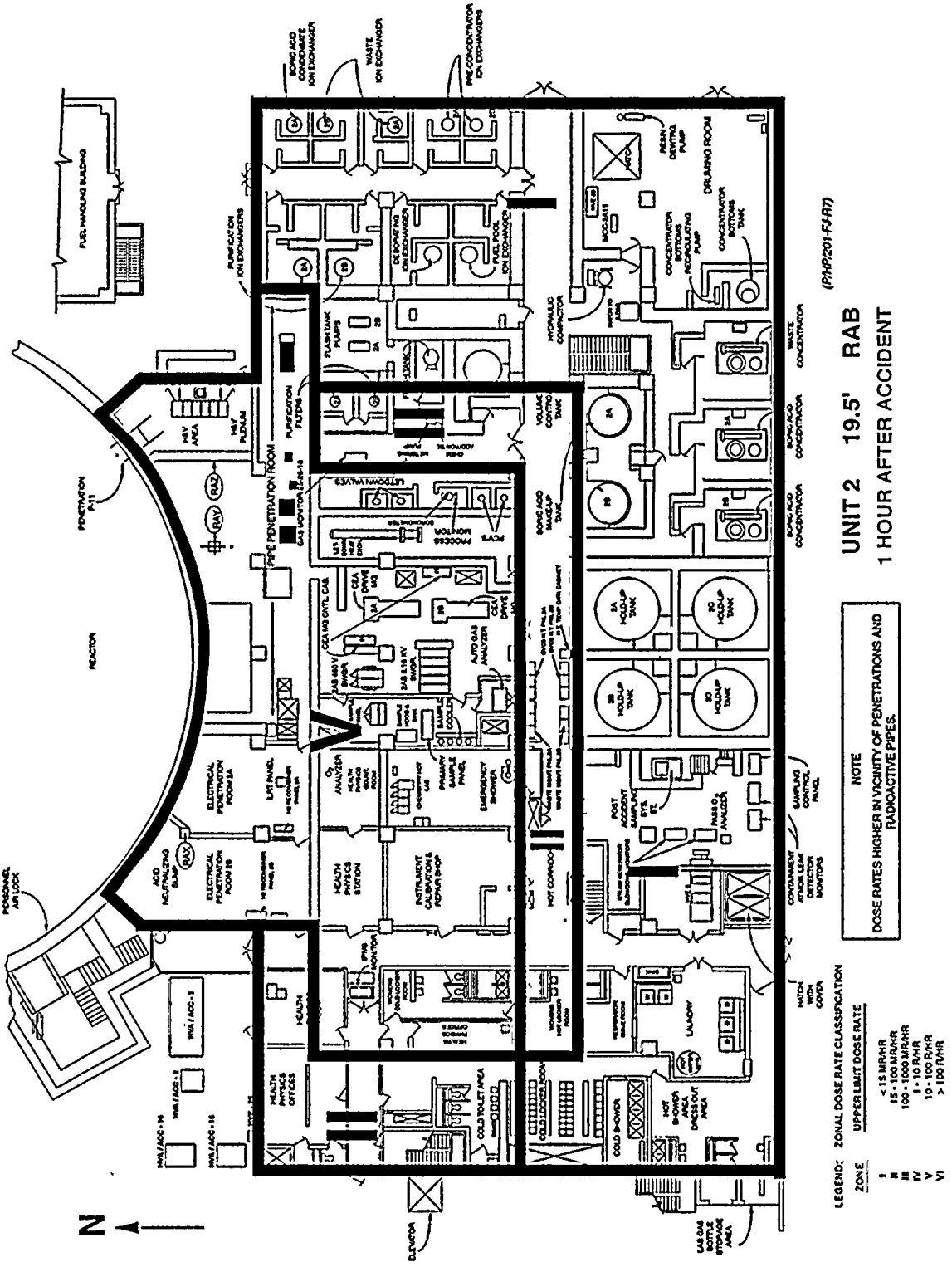

ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
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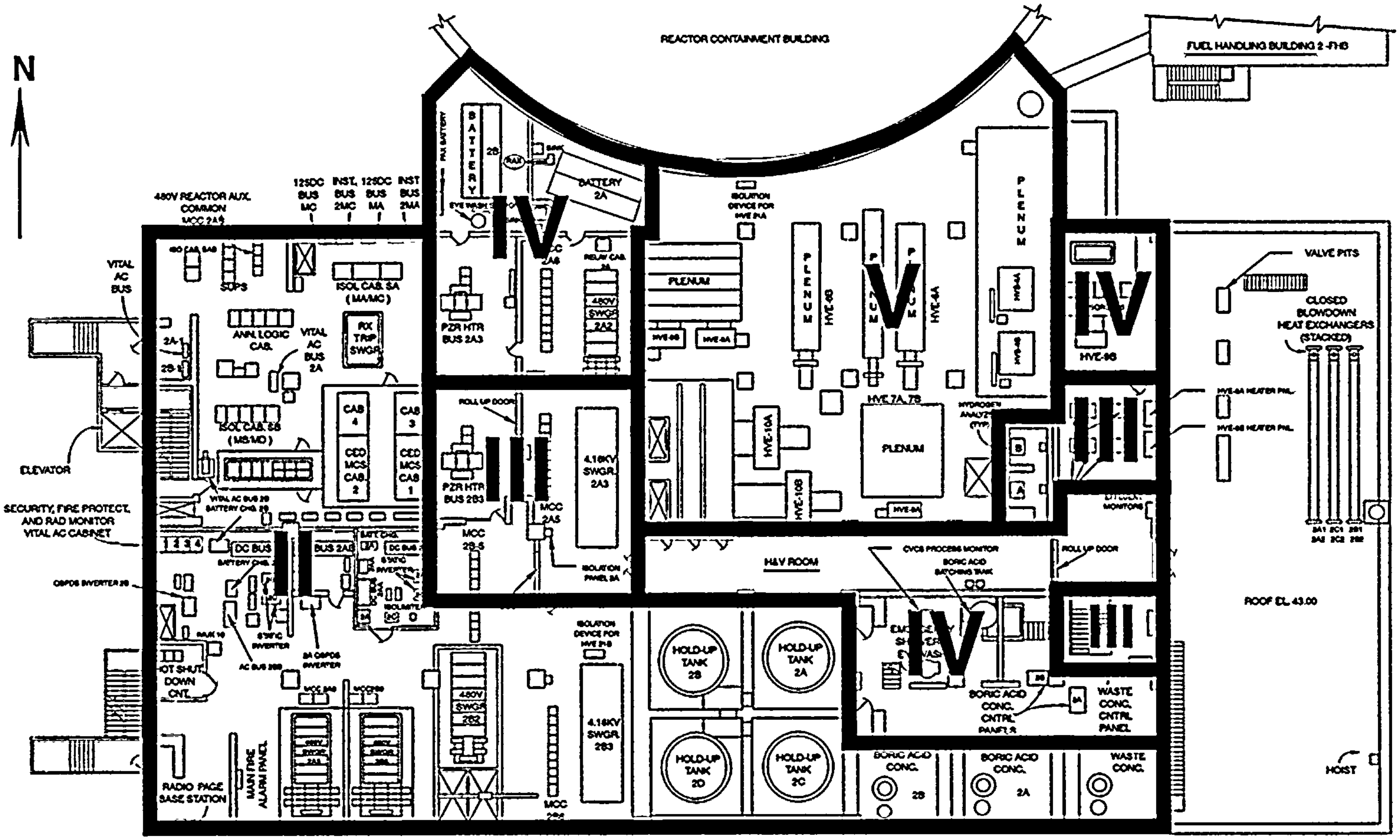


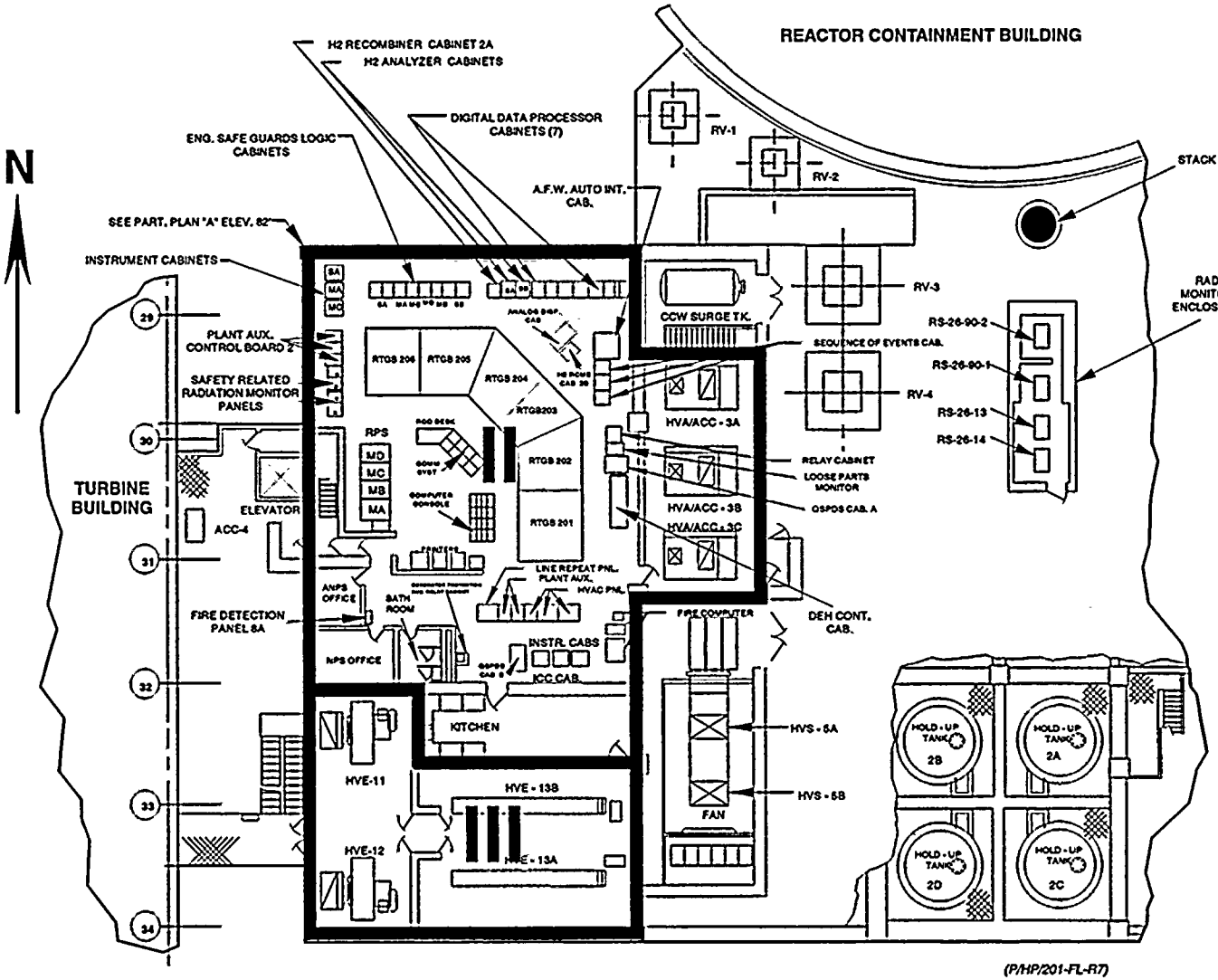
(P/HP/201-FK-R7)

LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

UNIT 2 43' RAB
1 HOUR AFTER ACCIDENT

ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 4 of 16)



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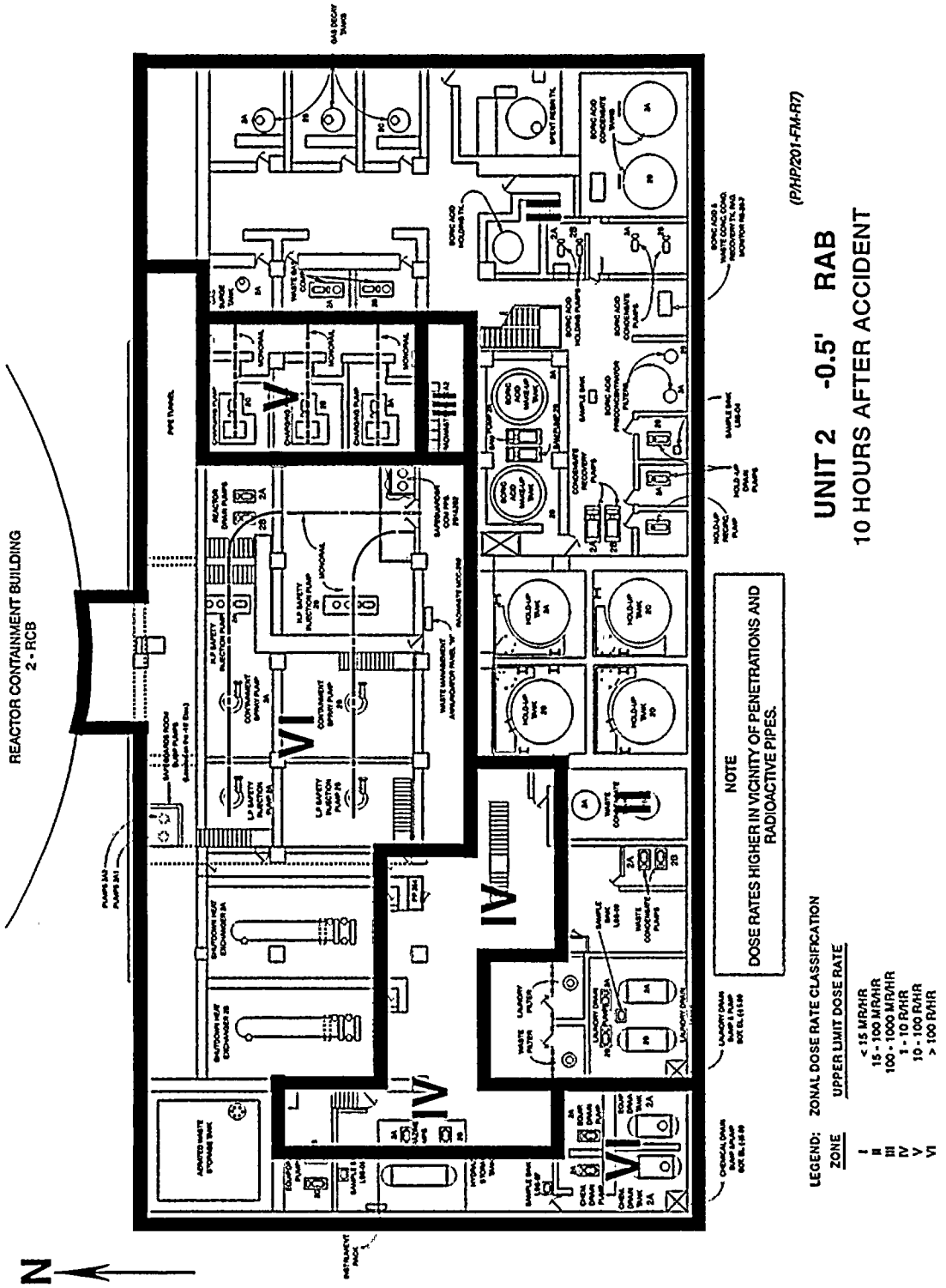
LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

UNIT 2 62' RAB
1 HOUR AFTER ACCIDENT

ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 5 of 16)



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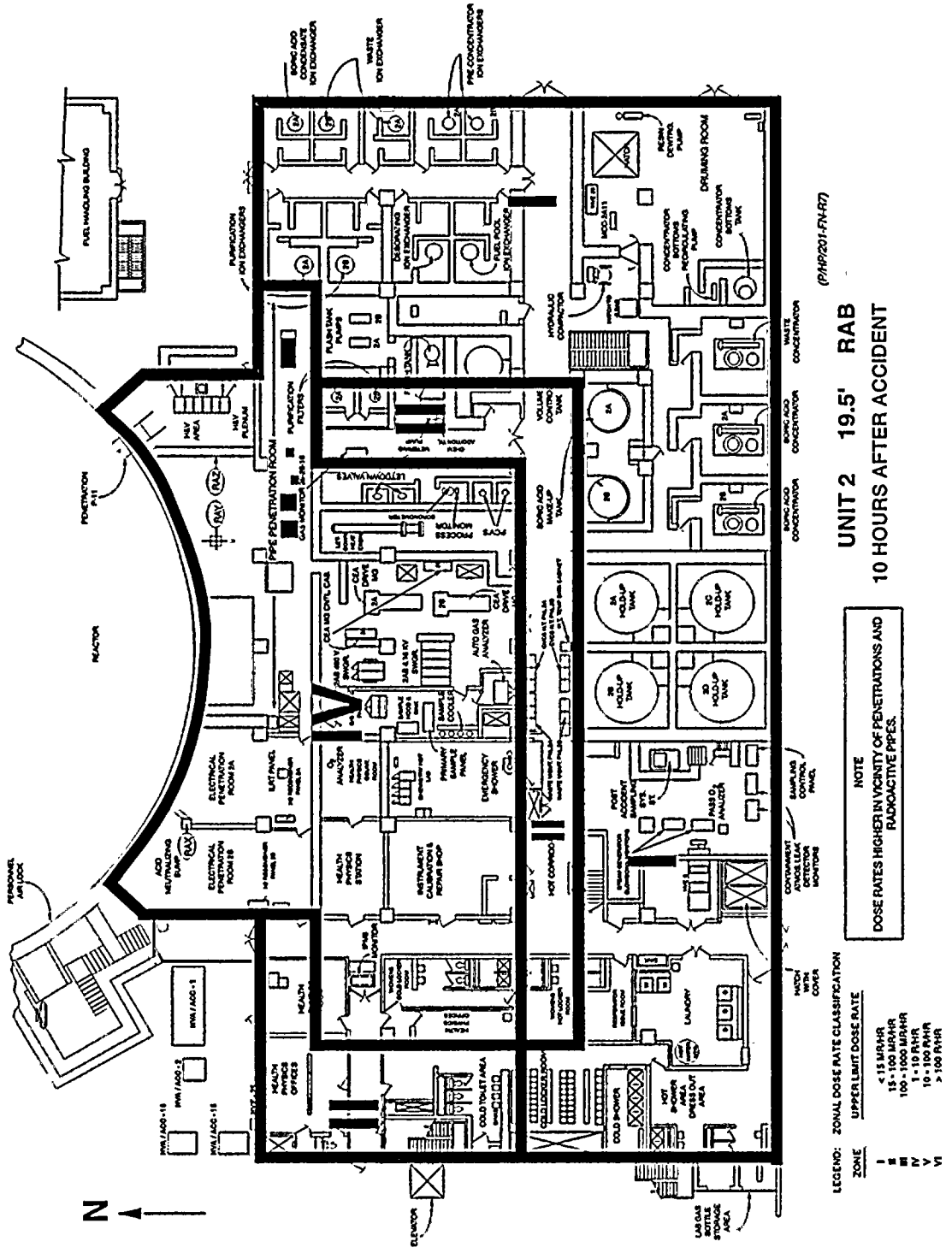
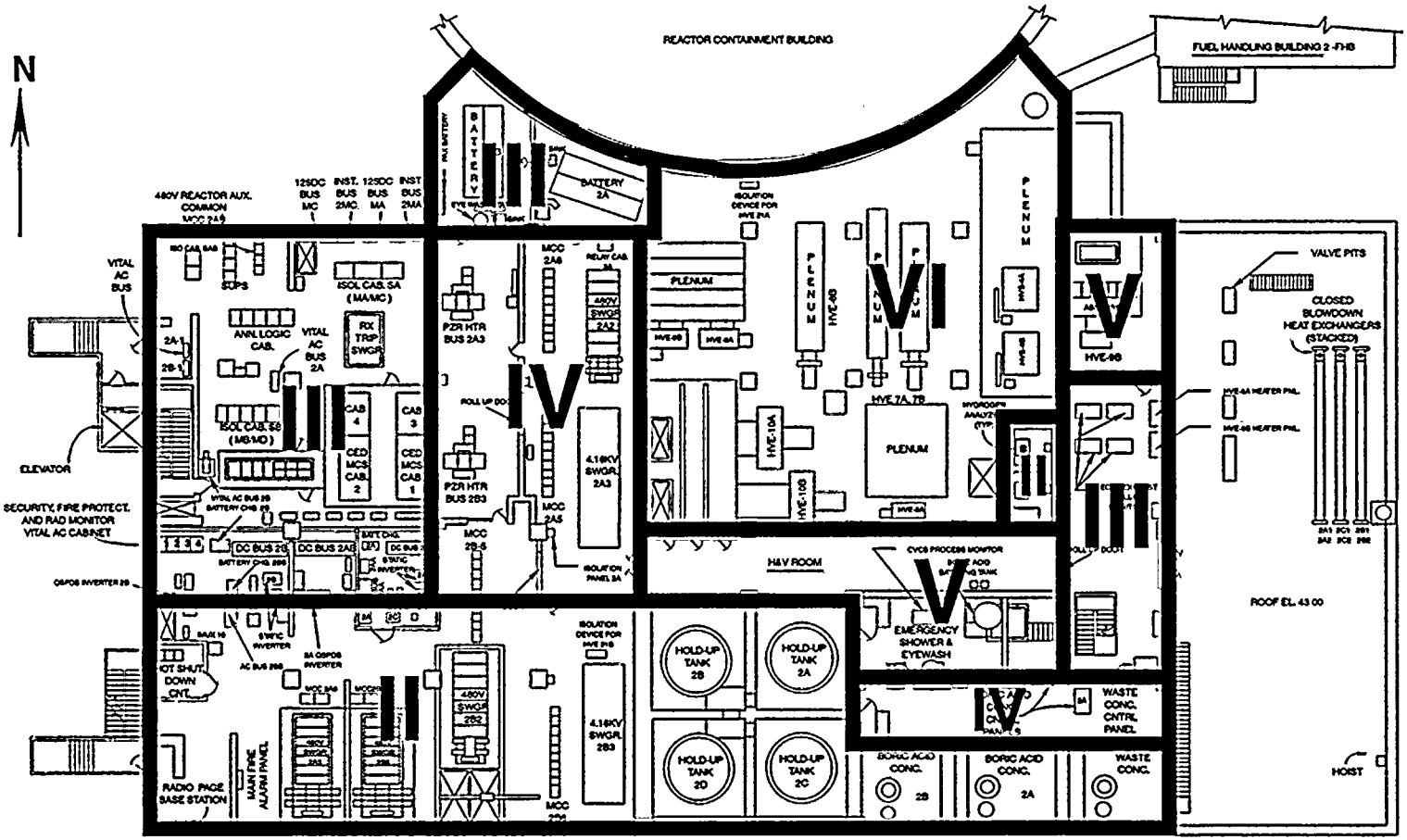
(Page 6 of 16)



ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 7 of 16)



(P/HP/201-FO-R7)

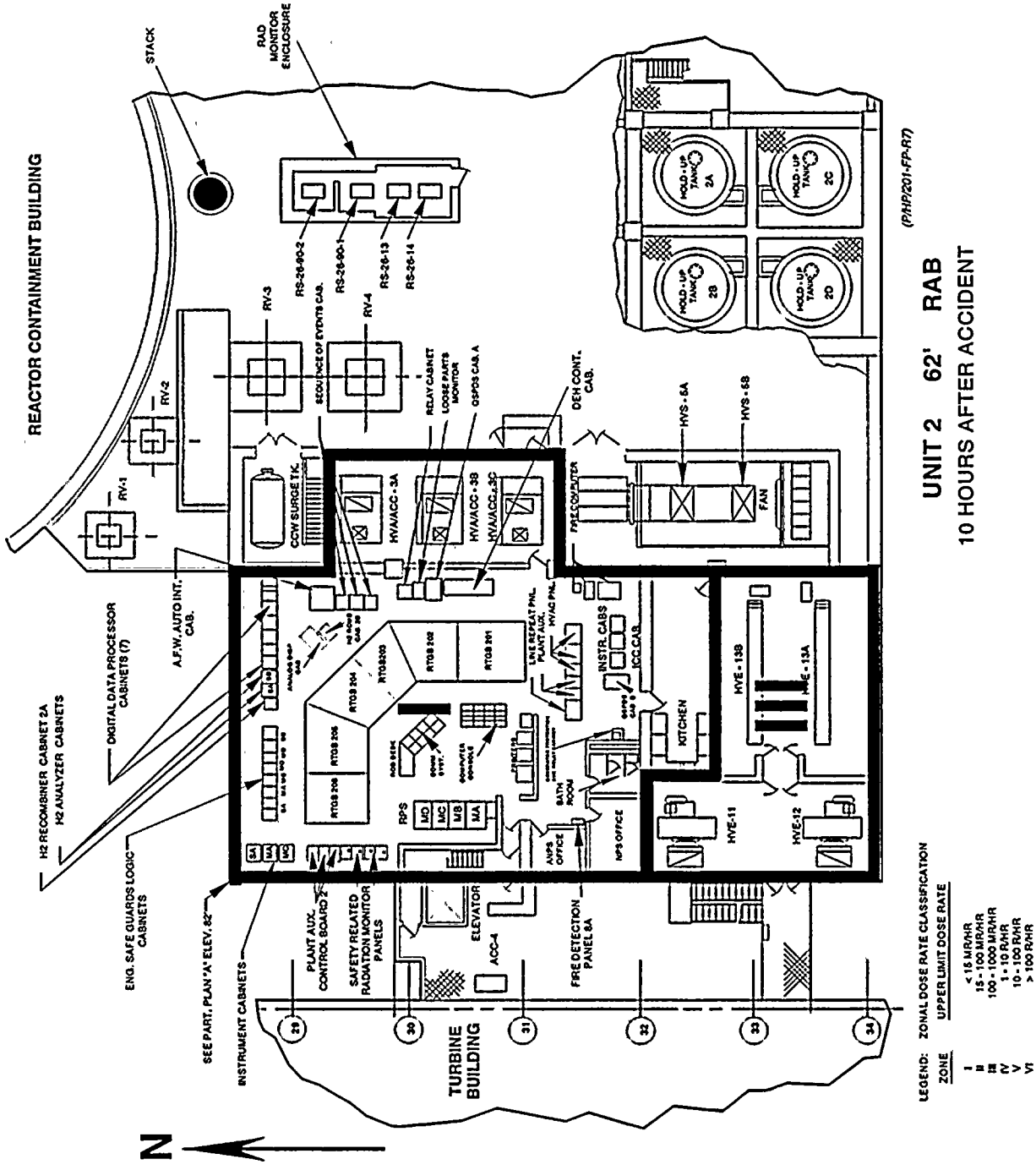
LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

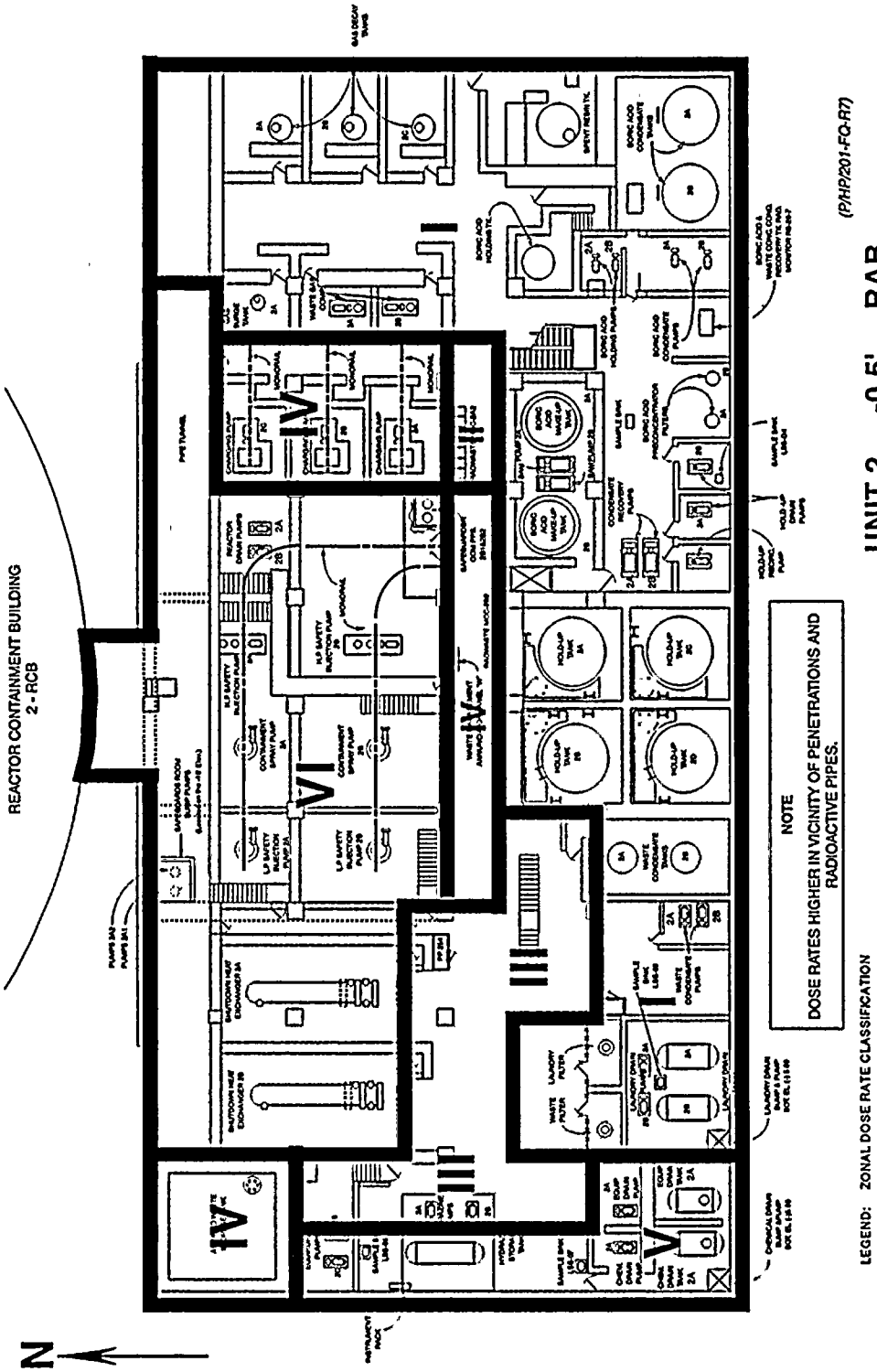
UNIT 2 43' RAB

10 HOURS AFTER ACCIDENT

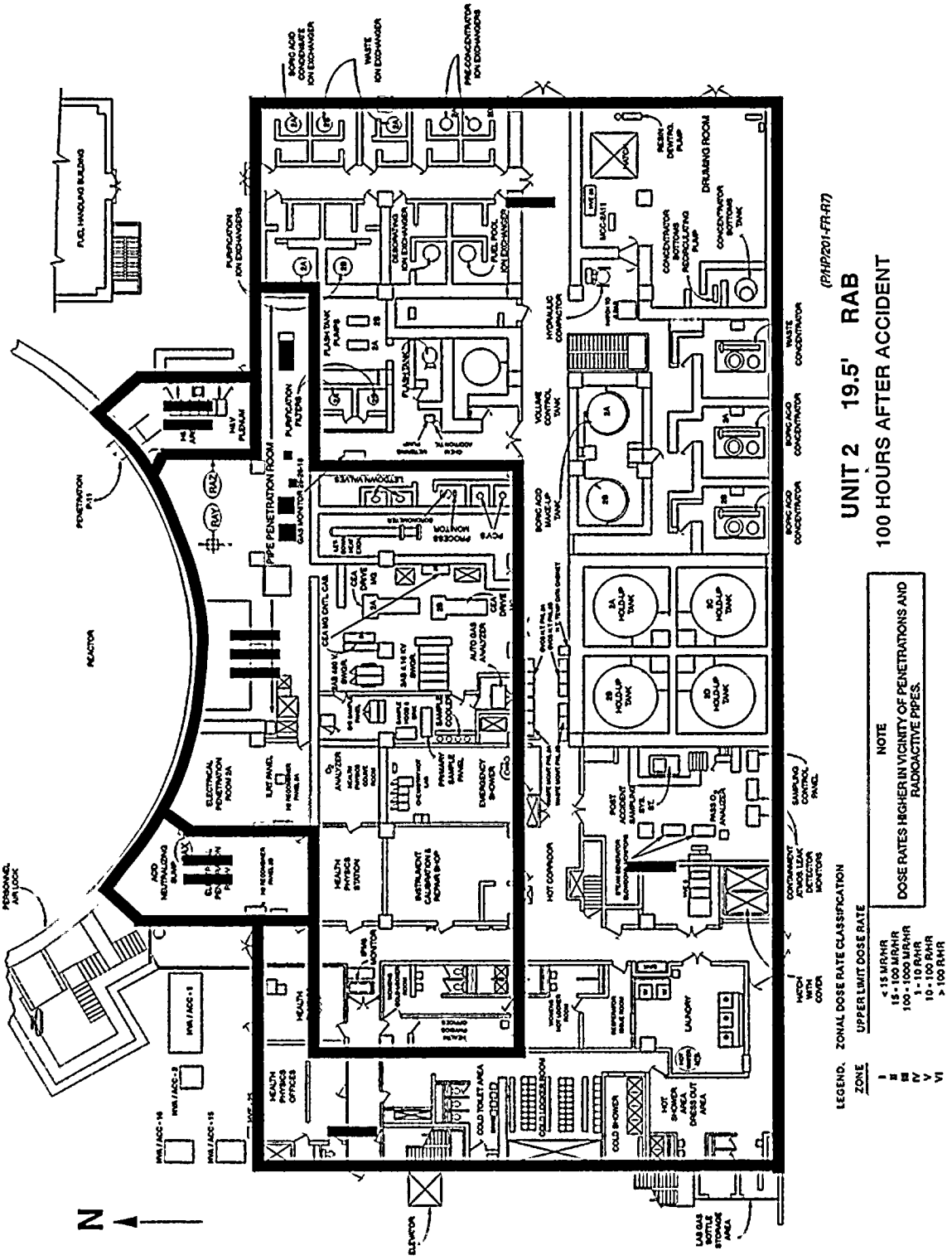
ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 8 of 16)



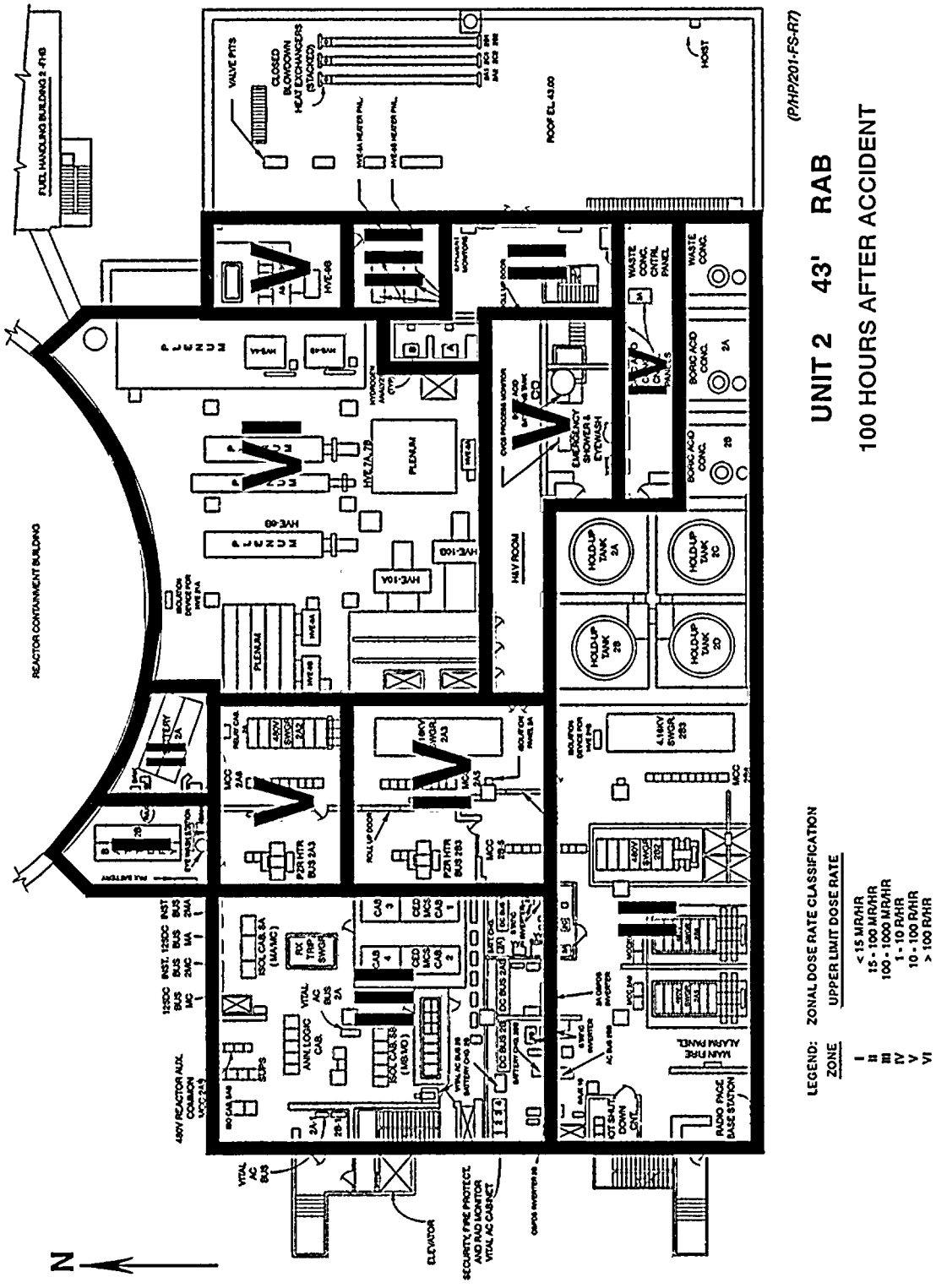
ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 9 of 16)



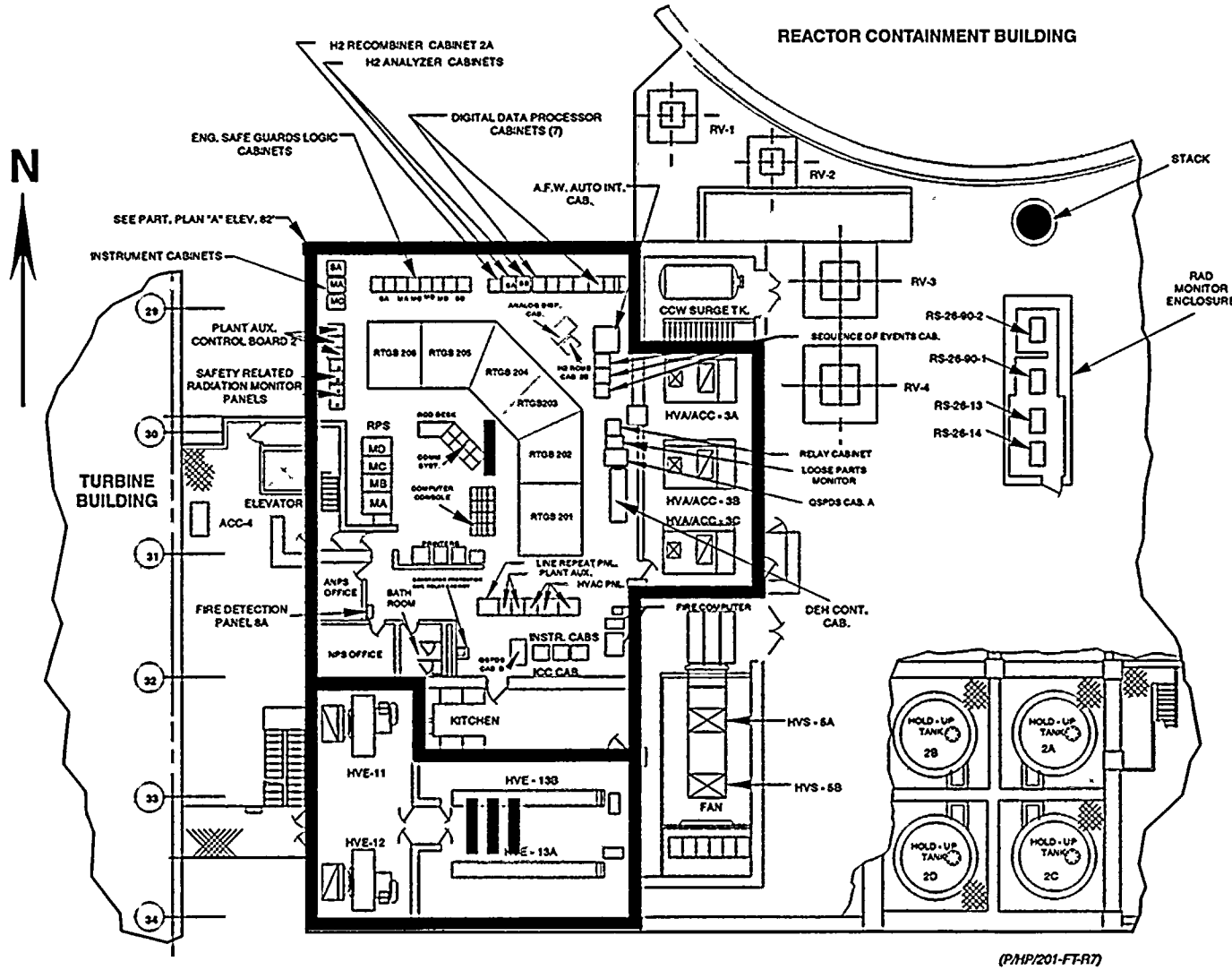
ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 10 of 16)



ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 11 of 16)



ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 12 of 16)



(P/HP/201-FT-R7)

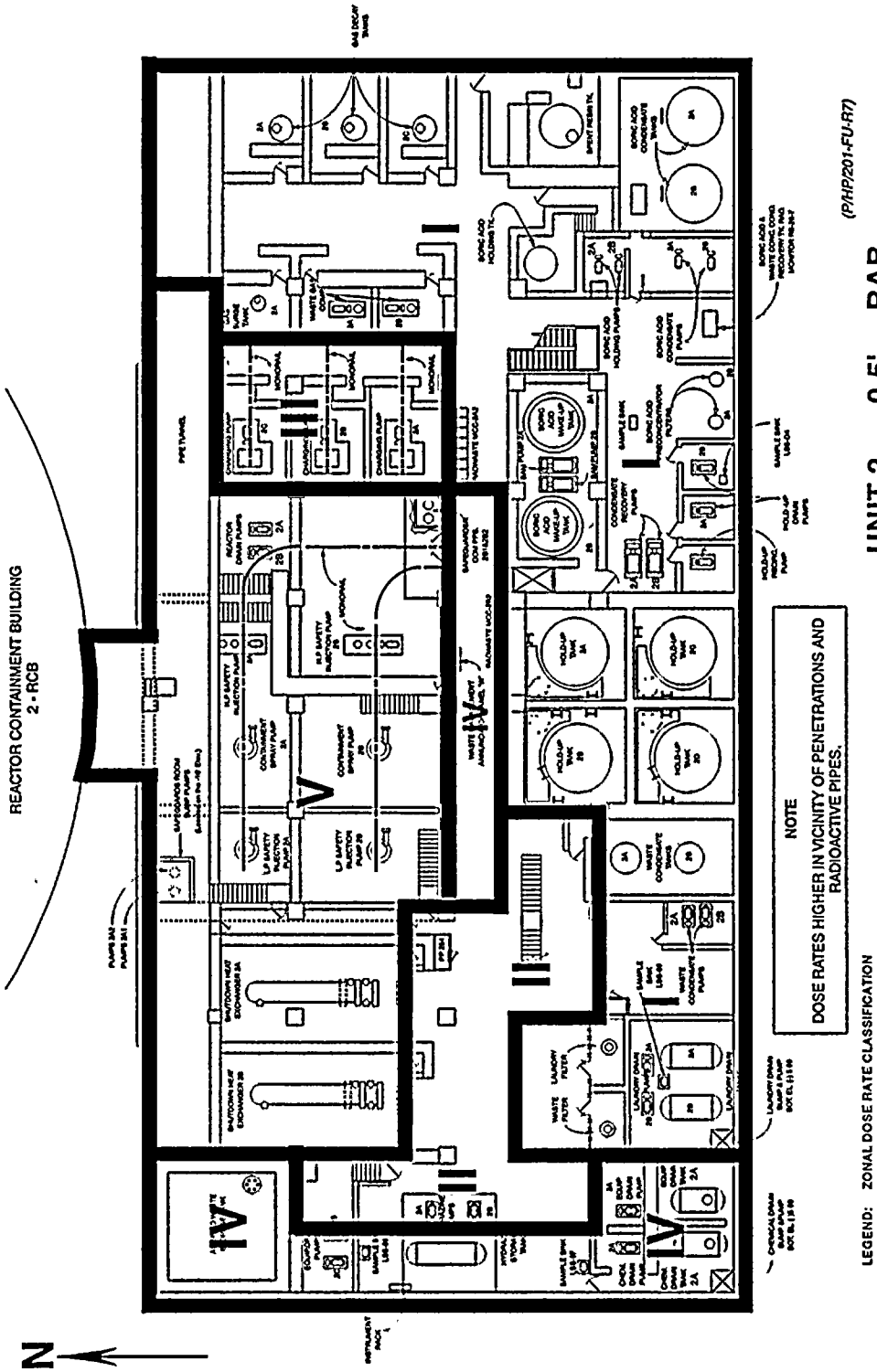
LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

UNIT 2 62' RAB

100 HOURS AFTER ACCIDENT

ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 13 of 16)



ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
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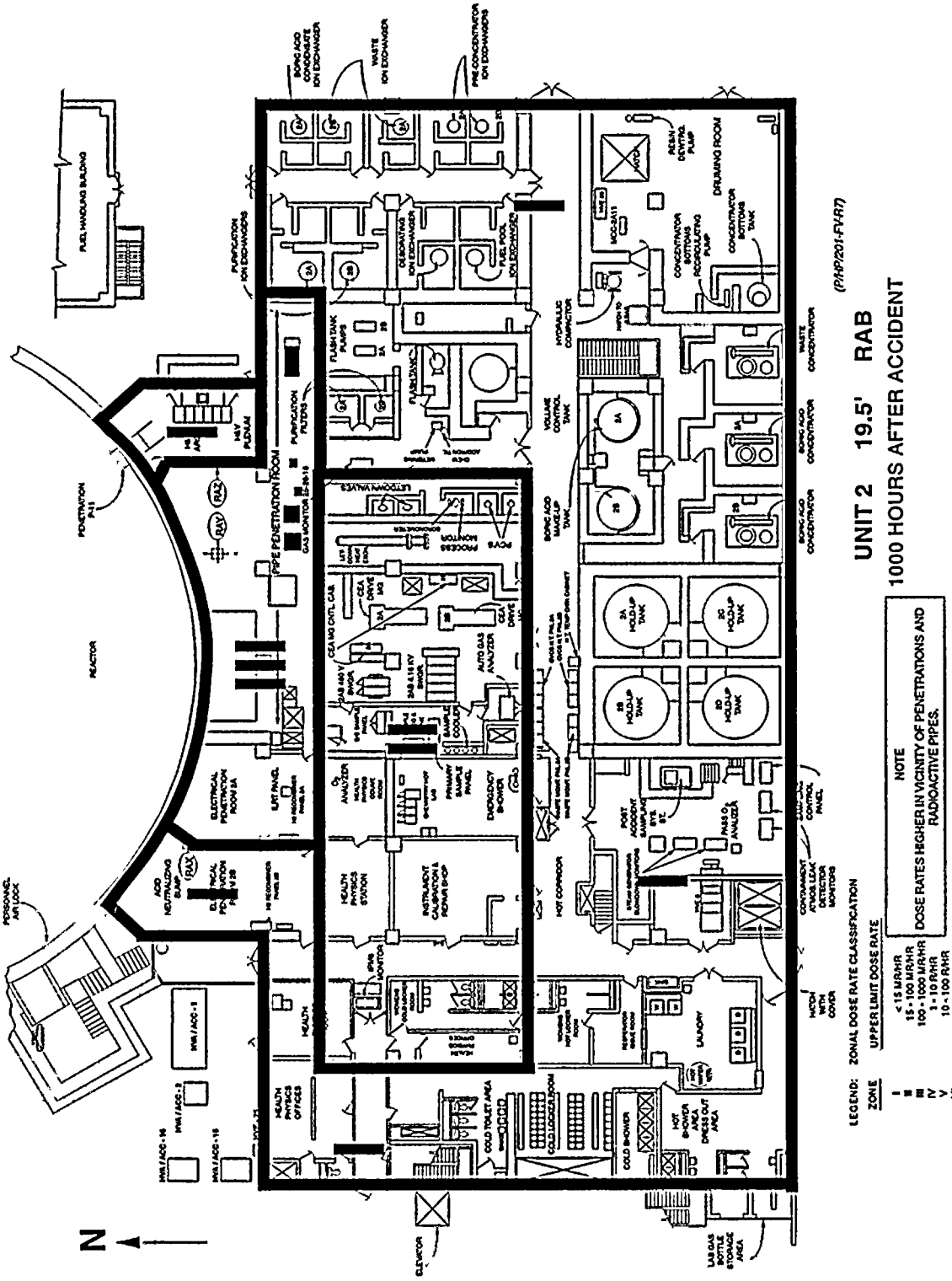
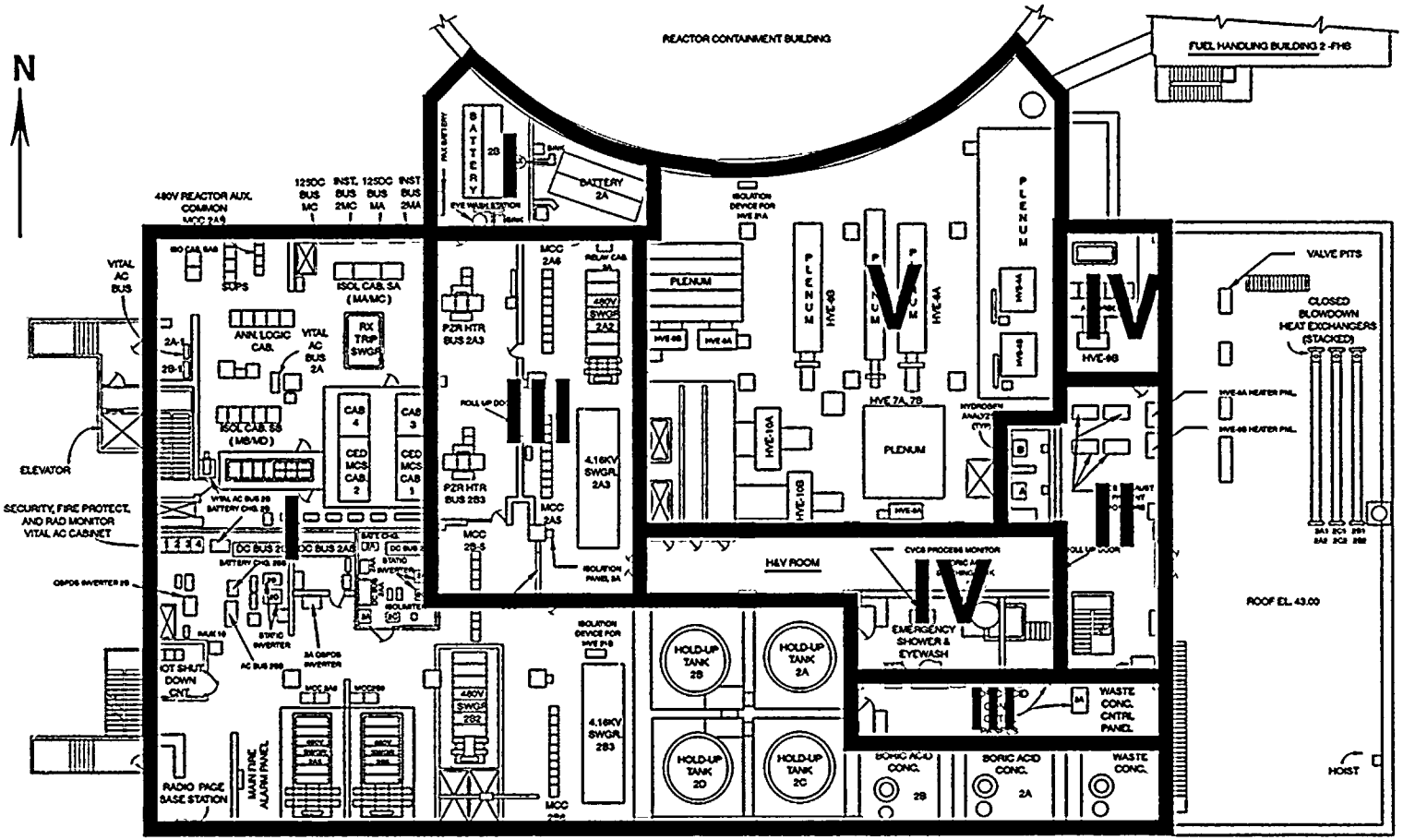


ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 15 of 16)



(P/HP/201-FW-R7)

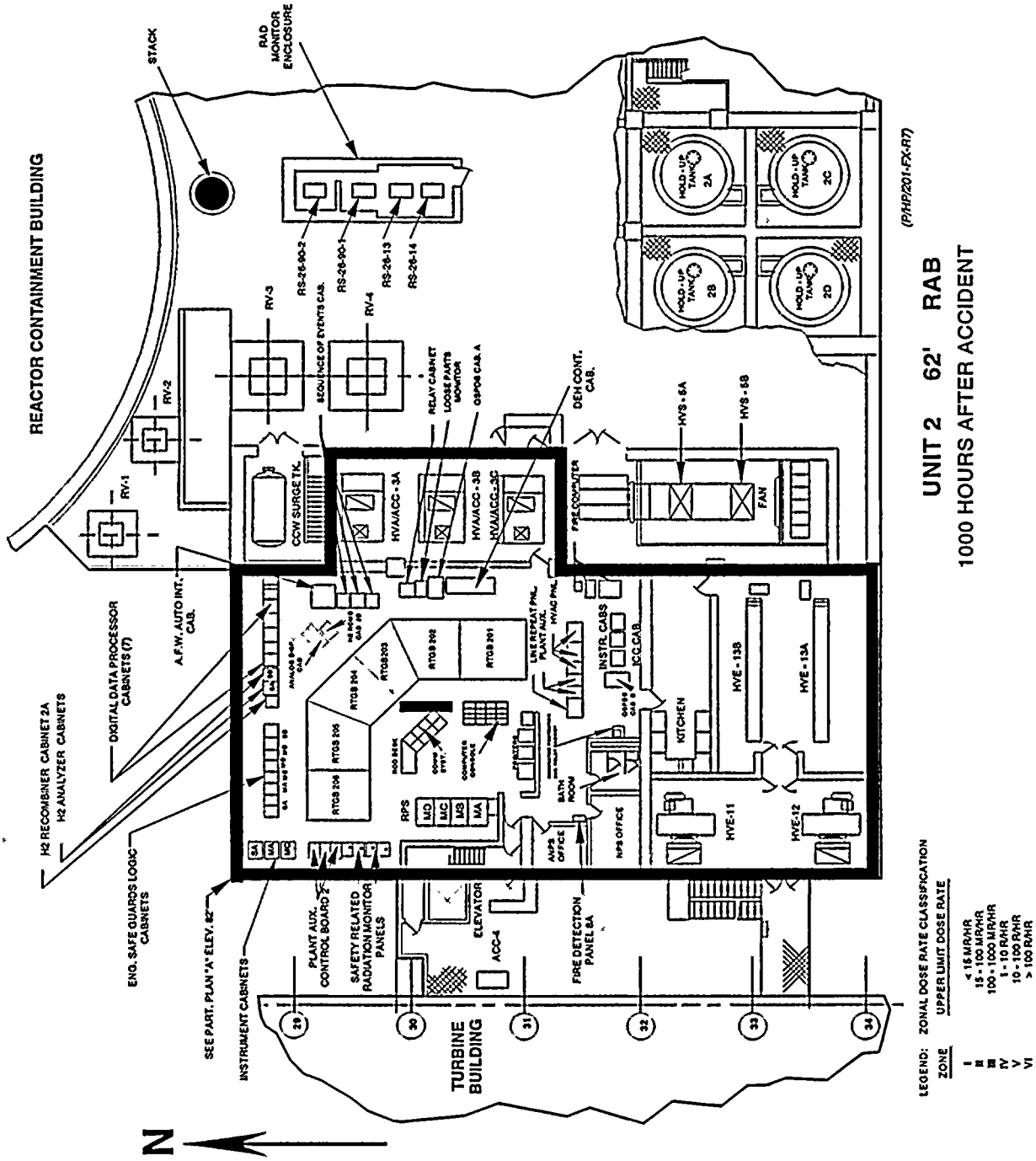
LEGEND: ZONAL DOSE RATE CLASSIFICATION

ZONE	UPPER LIMIT DOSE RATE
I	< 15 MR/HR
II	15 - 100 MR/HR
III	100 - 1000 MR/HR
IV	1 - 10 R/HR
V	10 - 100 R/HR
VI	> 100 R/HR

UNIT 2 43' RAB

1000 HOURS AFTER ACCIDENT

ATTACHMENT 3
FPL TMI PLANT SHIELDING STUDY – UNIT 2
(Page 16 of 16)



END OF ATTACHMENT 3

50-335 Superseded per Rev Rev's to EPIP's
10/8/01 # ML012220444

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-11

Current Rev. No.
2

Effective Date:
03/27/01

Title:

CORE DAMAGE ASSESSMENT

Responsible Department: **EMERGENCY PLANNING**

Revision Summary

Revision 2 - Removed Y2K caution statements. Made editorial/administrative changes. (J.R. Walker, 03/22/01)

Revision 1 - Added caution statement to ensure proper use of the core damage assessment program, cord and make it Y2K ready. (R. Walker, 06/30/99)

PSL CONTROL 18 COPY
PROCEDURE PRODUCTION

Revision	FRG Review Date	Approved By	Approval Date
0	12/17/97	J. Scarola Plant General Manager	12/17/97
2	03/22/01	R. G. West Plant General Manager	03/22/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS
DATE___
DOCT PROCEDURE
DOCN EPIP-11
SYS___
COMP COMPLETED
ITM 2

818

TABLE OF CONTENTS

1.0 PURPOSE

1.1 This procedure identifies the responsibility and methodology to perform core damage assessment for St. Lucie Units 1 and 2. Methods for estimating core damage assessment are based upon post-accident radionuclide concentrations within the Reactor Coolant System (RCS) and containment, and other plant indicators, including core exit thermocouple temperatures, hydrogen in the RCS and in containment, and Containment High Range Radiation Monitor (CHRRM) readings.

1.2 An estimate of core damage may be used to assist in validating Protective Action Recommendations (PARs), severity of plant conditions, and/or recovery operations.

1.3 This procedure incorporates instructions for hand calculations and/or for the use of computer software in the analysis of relevant plant data following an accident.

1.4 This procedure is only used to obtain an estimate of core damage within a major fuel damage category as identified by the NRC in NUREG-0737. The categories are defined in Attachment 1 to this procedure.

1.5 A detailed discussion of the basis for the core damage assessment methodology is included in reference 2.1.2.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 References

1. St. Lucie Plant Radiological Emergency Plan.

2. Development of the comprehensive procedure guideline for core damage assessment. CE Owners Group Task 467, July 1983. (Included in Reference 2.1.5).

3. "CORD Version 1A - Core Damage Assessment Computer Program for St. Lucie Units 1 and 2," IMPELL/FPL-85-116, June 3, 1985.

4. JPN Calculation No. PSL-BFJF-91-008, "Determination of Fission Product Source Inventories for PSL for Core Damage Assessment," Rev. 0, Approved 3/11/91.

5. FPL Letter, M. Jimenez to R.D. Mothena, "Core Damage Assessment Procedure, EPIP-1302, Revision 3 Documentation," May 17, 1995, NF-95-330.

6. US-NRC NUREG/BR-0150, Vol. 1, Rev. 3, "Response Technical Manual, RTM-93," November 1993, Page B-16 (included in Reference 2.1.5).

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.2 Records Required

1. During an actual emergency, information used to estimate core damage, including appropriate worksheets, will be maintained by the Emergency Technical Manager or his staff designee at the Emergency Operations Facility (EOF), or by the Reactor Engineer in the Technical Support Center (TSC).

2. All written information will be forwarded to the Emergency Preparedness representative at the TSC or EOF.

2.3 Commitment Documents

1. Clarification of TMI Action Plan Requirements. NUREG 0737, Item II.B.3.

3.0 RESPONSIBILITIES

3.1 The Emergency Technical Manager ensures the performance of core damage assessment using the methodology in this procedure.

3.2 The EOF Nuclear Fuels Engineer performs core damage assessment using the guidelines in this procedure and engineering judgement.

4.0 DEFINITIONS

4.1 No Core Damage refers to a core state in which the integrity of the fuel rod cladding is intact and the only release of fission products to the Reactor Coolant System is that due to pre-existing fuel rod defects and iodine spiking.

Fuel Rod Cladding Failure refers to a core state in which the fuel rod cladding of some fraction of the fuel rods in the core has failed, resulting in the release of the fission products in the fuel rod gap space of the failed fuel rods to the Reactor Coolant System.

Fuel Overtemperature Damage refers to a core state in which the fuel pellets have reached a temperature where there is a rapid movement of fission products from the fuel pellet matrix to the Reactor Coolant System.

100% Fuel Rod Clad Damage refers to the rupture of the fuel rod cladding in 100% of the fuel rods in the core and the resultant release to the Reactor Coolant System of all fission products contained in the fuel rod gap space.

100% Fuel Overtemperature Damage refers to high temperatures in the fuel pellets in 100% of the fuel rods in the core and the resultant release to the Reactor Coolant System of fission products contained in the fuel pellet matrix.

Emergency Response Data Acquisition and Display System (ERDADS) also known as the Safety Assessment System (SAS) and includes the Safety Parameter Display System (SPDS) serves as a concentrated data source that permits EOF personnel to obtain desired information (plant parameter, radiological, meteorological, etc.) in a rapid, accurate, and convenient manner.

5.0 INSTRUCTIONS

NOTE

Available pertinent plant data needed to perform the core damage assessment should be provided through the ERDADS and/or communications with the TSC.

5.1 The EOF Nuclear Fuels Engineer will perform the core damage estimate using the methodology described in this procedure.

NOTE

- Computer generated estimate is the preferred option for assessing core damage, since the hand calculations are lengthy and complex.
- The hand calculation methods, Attachments 4, 5, 6, 7 and 8, are provided for backup purposes.

5.2 Core damage assessment will be performed using Attachment 2.

1. Attachment 2 provides instructions for the execution of computer programs to determine assessment of core damage.
2. The computer software test case is provided in Attachment 3.
3. When needed, the TSC staff may perform a core damage estimate using the indicators discussed in Attachments 4, 5, 6 and 7.

5.3 All pertinent data available should be used in estimating core damage, including the following:

1. Radionuclide data
2. Auxiliary indicators
   - **A.** Core Exit Thermocouple (CET) temperature
   - **B.** Hydrogen in the RCS and containment
   - **C.** Containment High Range Radiation Monitor (CHRRM) readings

5.0 INSTRUCTIONS (continued)

CAUTION

- The assessment of core damage obtained by using the attached methodology is only an estimate. The techniques employed are only accurate to locate the core condition within one or more of the 10 categories of core damage described in Table 1 in Attachment 1.
- Core damage assessment using indicators that are readily available (e.g., CHRRM) represents only preliminary estimates. Other plant indicators (e.g., radionuclide concentrations) should be obtained to improve upon estimation of core damage.
- Measurements obtained during rapidly changing plant conditions should not be weighed heavily into the assessment of core damage. If deemed necessary, these pertinent indicators should be measured within a minimum time period, particularly during rapidly changing conditions. It is recommended that measurements be made, if possible, when plant conditions stabilize.

5.4 Results in terms of fuel condition should be provided to the Emergency Technical Manager (ETM), the Recovery Manager (RM), and the Emergency Coordinator (EC) as timely as possible.

1. The type of core damage is described in terms of the 10 NRC categories defined in Table 1 in Attachment 1.

2. In the case of radionuclide analysis, the degree of core damage is described as the percent of the fission products in the source inventory at the time of the accident which is now in the sampled fluid and therefore available for release to the environment.

5.0 INSTRUCTIONS (continued)

5.5 Updated estimates of core damage may be requested periodically by the ETM, the RM or the EC as plant conditions change and/or stabilize.

1. These updates should be performed using the most recent available data.

2. Results shall continue to be reported to the ETM, the RM and EC.

END OF SECTION 5.0

ATTACHMENT 1
CHARACTERISTICS OF NRC CATEGORIES OF FUEL DAMAGE
TABLE 1. CHARACTERISTIC ISOTOPES

GENERAL CATEGORY	NRC CATEGORY OF FUEL DAMAGE	MECHANISM OF RELEASE	SOURCE OF RELEASE	CHARACTERISTIC ISOTOPE	RELEASE OF CHARACTERISTIC ISOTOPE EXPRESSED AS PERCENT OF SOURCE INVENTORY
Normal Operation	1. No Fuel Damage	Halogen Spiking Tramp Uranium	Gas Gap	I-131, Cs-137 Rb 88	Less than 1
Core Damage	2. Initial Cladding Failure	Clad Burst and Gas Gap Diffusion Release	Gas Gap	Xe-131m, Xe-133, I-131, I-133	Less than 10
	3. Intermediate Cladding Failure		Gas Gap		10 to 50
	4. Major Cladding Failure		Gas Gap		Greater than 50
Severe Core Damage	5. Initial Fuel Pellet Overheating	Grain Boundary Diffusion	Fuel Pellet	Cs-134, Rb-88, Te-129, Te-132	Less than 10
	6. Intermediate Fuel Pellet Overheating		Fuel Pellet		10 to 50
	7. Major Fuel Pellet Overheating	Diffusional Release Fuel UO_2 Grains	Fuel Pellet		Greater than 50
	8. Fuel Pellet Melt	Escape from Molten Fuel	Fuel Pellet	Ba-140, La-140, La-142, Pr-144	Less than 10
	9. Intermediate Fuel Pellet Melt		Fuel Pellet		10 to 50
	10. Major Fuel Pellet Melt		Fuel Pellet		Greater than 50

ATTACHMENT 1
CHARACTERISTICS OF NRC CATEGORIES OF FUEL DAMAGE
TABLE 2. CLADDING DAMAGE CHARACTERISTICS

NRC Category of Fuel Damage	Temperature Range (F)	Mechanism of Damage	Characteristic Measurement	Measurement Range	Percent of Damage Rods
1. No Fuel Damage	approximately 750	None	N/A	N/A	less than 1
2. Initial Cladding Failure	1200 to 1800	Rupture Due to Gas Gap Over-pressurization	Maximum Core Exit Thermocouple Temperature	less than 1550 F *	less than 10
3. Intermediate Cladding Failure				less than 1700 F *	10 to 50
4. Major Cladding Failure				less than 2300 F less than 2 percent Oxidation	greater than 50
5. Initial Fuel Pellet Overheating	1800 to 3350	Loss of Structural Integrity Due to Fuel Clad Oxidation	Amount of Hydrogen Gas Produced (Equivalent to Percent Oxidation of Core)	Equivalent Core Oxidation less than 3 percent	less than 10
6. Intermediate Fuel Pellet Overheating				less than 18 percent	10 to 50
7. Major Fuel Pellet Overheating				less than 65 percent	greater than 50

* Depends on Reactor Pressure and Fuel Burnup Values Given for Pressure less than or equal to 1200 psia and Burnup greater than or equal to 0.

ATTACHMENT 1

CHARACTERISTICS OF NRC CATEGORIES OF FUEL DAMAGE

TABLE 3. PERCENT OF SOURCE INVENTORY RELEASED TO CONTAINMENT

NRC CATEGORY OF FUEL DAMAGE	MECHANISM OF RELEASE FROM CORE	SOURCE OF RELEASE	PERCENT OF SOURCE INVENTORY RELEASED TO CONTAINMENT	DISTRIBUTION OF FISSION PRODUCTS IN CONTAINMENT
1. No Fuel Damage	Halogen Spiking Tramp Uranium	Gas Gap	Less than 1	Airborne
2. Initial Cladding Failure	Clad Burst and Gas Gap Diffusion Release	Gas Gap	Less than 10	Airborne
3. Intermediate Cladding Failure		Gas Gap	10 to 50	Airborne
4. Major Cladding Failure		Gas Gap	Greater than 50	Airborne
5. Initial Fuel Pellet Overheating	Grain Boundary Diffusion	Fuel Pellet	Less than 10	Airborne: 100 percent Noble Gas 25 percent Halogen
6. Intermediate Fuel Pellet Overheating		Fuel Pellet	10 to 50	
7. Major Fuel Pellet Overheating	Diffusional Release From UO_2 Grains	Fuel Pellet	Greater than 50	Plated Out: 25 percent Halogen 1 percent Solids

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 1 of 10)

1. Purpose

   This section provides the instructions for the use of the computer code CORD in performing core damage assessment (Reference 2.1.3). This code automates the functions described in Attachments 4 through 8.

2. Precautions and Limitations

   A. Assigned engineers are responsible to follow the instructions of this procedure whenever performing core damage assessment for St. Lucie Units 1 and 2.

   B. Prior to use of the code, validation must be performed by running the benchmark cases provided in Attachment 3.

/R2

3. Specific Instructions

   Read and become familiar with the detailed user instructions provided in paragraph 1.D of this attachment. These user instructions are generic in nature and will provide the user with a general understanding of how CORD works and description of the input types and editing keys. The instructions are designed to complement the user instructions and minimize the need for familiarity in the event of an actual emergency. Consequently, these instructions are more specific to the hardware equipment designated for core damage assessment use.

   A. Set up the computer and printer.

   B. Execute the computer program CORD (or later revision name).

   C. Perform program validation by running the benchmark cases provided in Attachment 3.

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 2 of 10)

3. Specific Instructions (continued)

   D. Obtain from ERDADS and/or other available data source the following information:

      1. Unit, date and time of reactor shutdown
      2. Power history prior to accident
      3. Core exit temperatures
      4. Containment radiation dose rates, and
      5. PASS (Post-Accident Sampling System) sample and whether it is corrected to standard temperature and pressure (STP).

   E. Begin core damage assessment by choosing Option 7 to select the appropriate unit. Proceed to execute Options 1 through 4 as data becomes available. Based on typical accessibility of data, the most likely sequence is as follows:

      1. Option 3 - "Core Exit Temperature"
      2. Option 4 - "Radiation Dose Rate"
      3. Option 1 - "Radiological Analysis"
      4. Option 2 - "Hydrogen"

ATTACHMENT 2

CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD

(Page 3 of 10)

3. Specific Instructions (continued)

F. Running Option 3 (Core Damage Assessment Using Core Exit Temperatures)

1. Enter maximum core thermocouple temperature (°F). Note that if this temperature is significantly higher than the average, it may indicate a faulty thermocouple. In this case, disregard the abnormally high reading and use the average of the rest of core exit thermocouple temperatures.

2. Enter RCS pressure (psia) corresponding to the time of the temperature reading.

3. Review the calculated percent of ruptured clad against those included on Table 1 in Attachment 1 to determine the appropriate NRC damage category. Note the caution and note included in the CORD output page for this option.

G. Running Option 4 (Core Damage Assessment Using Radiation Dose Rate)

/R2

1. Choose "1" to retrieve previous input data. Revise the input data with new information. Enter date of reactor shutdown (mm-dd-yr) and time in military time (00:00).

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 4 of 10)

3. Specific Instructions (continued)

G. Running Option 4 (Core Damage Assessment Using Radiation Dose Rate)

2. Enter representative power level in percent using engineering judgement. Note that the most recent power levels should be weighted more than the past levels.

3. Enter the higher of the two measured containment dose rates (Rad/Hr) with corresponding dates and times.

4. Print screen and review the calculated results against the correlations included on Figure 5-1, Containment High Range Monitor Dose Rate vs. Time After Trip, to confirm the appropriate NRC damage category.

5. Continue to execute this option as more data becomes available by adding new sets of data as in Step 3.G.2.

H. Running Option 1 (Radiological Analysis of Samples)

/R2

1. Choose "1" to retrieve previous input data. Revise the input data with new information. Enter date of reactor shutdown (mm-dd-yr) and time in military time (00:00).

2. Enter power history, including power level in percent and number of days at each level, ending with the most recent power level.

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 5 of 10)

3. Specific Instructions (continued)

H. Running Option 1 (Radiological Analysis of Samples) (continued)

3. Enter PASS sample data as available for: RCS Hot Leg, Containment Atmosphere or Containment Sump. This data consists of measured activity in microCuries per gram (μCi/g).

4. Enter proper response for correction to STP in accordance with information provided with the PASS sample data.

5. Perform decay correction as appropriate by entering "yes."

6. Press the F1 key to continue through the "RECORD OF DECAY CORRECTION ACTIVITY RATIOS."

7. Print screen the "RECORD OF FISSION PRODUCT RELEASE SOURCE IDENTIFICATION" and determine the appropriate source (gas gap or fuel pellet) by comparing the calculated ratios to those in Data Sheet 8-3, Record of Fission Product Release Source Identification.

8. Press the F1 to continue and enter the following information as prompted by the program:

- reactor water level (full, void, or below recorder)

- Safety Injection Tank (SIT) volume injected (gallons)

- Boric Acid Make-up Tank (BAMT) volume injected (gallons)

- change in Refueling Water Tank (RWT) volume (gallons)

This information is obtained from Mechanical Engineering at the EOF.

9. Press return to obtain the "RECORD OF RELEASE QUANTITY." Print screen and press F1 to obtain the "RELEASE (percent) OF GAS GAP AND FUEL PELLET INVENTORY."

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 6 of 10)

3. Specific Instructions (continued)

H. Running Option 1 (Radiological Analysis of Samples) (continued)

10. Print screen and use these results in conjunction with the isotope ratio evaluation of Step 3.H.7 to determine the category of core damage in accordance with Table 1, Characteristic Isotopes, in Attachment 1.

I. Running Option 2 (Core Damage Assessment Using Hydrogen)

1. Choose "1" to retrieve previous input data. Revise the input data with new information. Enter percent volume of Hydrogen in containment and temperature and pressure at sampling.

2. Enter post-accident containment temperature history as available.

3. Enter RCS sample information as prompted. Note that the input requires an estimate of core damage based on the evaluation of other parameters (Options 1, 3 and 4).

4. Enter data on reactor vessel head void, including estimate of void volume.

5. Continue by pressing the F1 key to obtain a summary of the Hydrogen analysis. Use these results along with Table 2, Cladding Damage Characteristics, in Attachment 1 to determine the category of core damage.

4. Generic CORD User Instructions

A. Introduction

CORD is a computer program which performs the calculations for the St. Lucie Units 1 and 2 in accordance with this procedure. The program is compiled using IBM compiler BASIC and can be run using the IBM BASIC interpreter. The CORD diskette contains the following files:

CORD.BAS	The CORD program source BASIC source code
CORD.EXE	The CORD executable file
CORDPSL1.DAT	The St. Lucie Unit 1 data file
CORDPSL2.DAT	The St. Lucie Unit 2 data file

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 7 of 10)

4. Generic CORD User Instructions (continued)

B. Getting Started

To use the CORD program, take the following steps:

1. Boot up the computer using DOS 2.0 or higher version.
2. Insert the CORD diskette in a PC drive.
3. Proceed to load the program by typing CORD, the main menu should appear.

C. Program Options

The main menu for CORD contains the following options:

1. RADIOLOGICAL ANALYSIS OF SAMPLES
2. CORE DAMAGE ASSESSMENT USING HYDROGEN
3. CORE DAMAGE ASSESSMENT USING CORE EXIT TEMPERATURES
4. CORE DAMAGE ASSESSMENT USING RADIATION DOSE RATE
5. UPDATE EQUILIBRIUM SOURCE INVENTORY
6. EXIT PROGRAM
7. TOGGLE FOR APPLICABLE UNIT

The first four options correspond to the four types of core damage assessment calculations outlined in this procedure. The inputs and calculations will not be discussed here, but are described elsewhere in this procedure.

The fifth option allows the user to change the equilibrium RCS sources used by Option 1. Once changed, the old data is discarded and all future execution of the program will use the latest equilibrium source data entered. Note that the old data can be preserved by copying the data file to another file name before executing the program.

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 8 of 10)

4. Generic CORD User Instructions (continued)

C. Program Options (continued)

The user selects Option 6 to exit the program and return to the DOS operating system.

The calculations are identical for St. Lucie Units 1 and 2, but each unit will have different input data. The user selects Option 7 to specify the unit for the current run.

D. Data Files

The two data files "CORDPSL1.DAT" and "CORDPSL2.DAT" store the most recently entered equilibrium source data and program input data for Units 1 and 2, respectively. Most Options of the program will ask the user if the calculations are to use the last data set or whether a new data set is to be entered. If the last data set option is selected, the data is recalled from the appropriate data file for the selected unit and is used as the default entry for all inputs. When a new data set is entered, it will be written over the data currently in the data file.

E. Input Types

The CORD program inputs are of four basic types: numeric, data, time, and yes/no responses.

numeric data	Numbers can be entered as integers, floating point numbers or in scientific notation. Examples of acceptable formats for numeric entries are: -123, 1.23, .123, 1.2E-4, and -1.23E-4. The letter "E" means "times 10 to the power of." Numbers will be right justified in the input field if accepted by the program.

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 9 of 10)

4. Generic CORD User Instructions (continued)

E. Input Types (continued)

/R2

dates — All date entries in CORD are in the MM-DD-YY format, where MM = two digit month, DD = two digit day, and YY = two digit year.

The "-" are optional and can be replaced by a "/" or a space. Examples of acceptable date inputs using April 2, 1985 are: 4/02/85, 40285, 4-02-85, and 4 2 85.

times — Time entries are assumed to be military time ranging from 0:00 to 23:59. Acceptable entries are: 100, 1:00, 14:23 and 1630.

yes/no — Answers to "yes / no" questions are either "Y" or "y" for "yes," or "N" or "n" for "no."

ATTACHMENT 2
CORE DAMAGE ASSESSMENT USING THE COMPUTER CODE CORD
(Page 10 of 10)

4. Generic CORD User Instructions (continued)

F. Editing Keys

Most entries to the CORD program are made on input screens filled with data entry fields. These fields are the white background areas of the screen. The program limits the user to typing within the field areas, but also provides special editing keys for the user to move from field to field.

Key	Function
ESC	Clears the input field and places the cursor in the left most location within the field
BACKSPACE	Deletes the character to the left of the cursor
DEL	Deletes the character at the current cursor location
RETURN	Concludes the current entry and moves the cursor to the next field
HOME	Moves the cursor to the first field on the screen
END	Moves the cursor to the last field on the screen
UP ARROW	Moves the cursor to the previous field
DOWN ARROW	Moves the cursor to the next field (performs the same as a RETURN)
LEFT ARROW	Moves the cursor one space left
RIGHT ARROW	Moves the cursor one space right
FUNCTION KEYS	The function keys (F1 through F10) have special uses identified at the bottom of the input screen

ATTACHMENT 3
SOFTWARE TEST CASE
FOR
ST. LUCIE UNITS 1 & 2

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 1 of 14)

PROGRAM INPUT FOR OPTION 1
(Page 1 of 2)
GENERAL INFORMATION

ENTER DATE AND TIME OF REACTOR SHUTDOWN

DATE: 7/18/84
TIME: 1:00

% POWER	NO. OF DAYS
75	22
50	17
100	2

These entries should be in chronological order. The last entry is the interval prior to reactor shutdown.

RECORD OF SAMPLE SPECIFIC ACTIVITY

		RCS HOT LEG	CONT. ATMOS.	CONT. SUMP
Sample Number:		001	002	003
Date of Analysis:		7/18/84	7/18/84	7/18/84
Time of Analysis:		4:00	4:00	4:00
Temperature, Deg F:		300	150	150
Pressure, PSIG:		1600	.5	.5
SAMPLE ACTIVITIES (Ci/cc)	KR87	1	.01	.1
	XE131M	1	.01	.1
	XE133	100	.1	.00001
	I131	10000	.1	100
	I132	1	.01	.1
	I133	100	.001	.1
	I135	1	.01	.1
	CS134	1	.01	.1
	RB88	1	.01	.1
	TE129	1000	.01	10
	TE132	1	.01	.1
	SR89	1	.01	.1
	BA140	1	.01	.1
	LA140	1	.01	.1
	LA142	10	.01	.1
	PR144	1	.01	.1

F1 = DONE F3 = PREV SCREEN F10 = QUIT

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 2 of 14)

PROGRAM INPUT FOR OPTION 1
(Page 2 of 2)
GENERAL INFORMATION

ENTER REACTOR LEVEL CONDITION:

1. FULL
2. VOID
3. BELOW RECORDER

ENTER 1, 2, OR 3) 1

ENTER SAFETY INJECTION TANK VOLUME INJECTED IN GALLONS) 0

ENTER BORIC ACID MAKEUP TANK VOLUME INJECTED IN GALLONS) 0

ENTER CHANGE IN VOLUME OF THE REFUELING WATER TANK IN GALLONS) 0

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 3 of 14)

OPTION 1 (OUTPUT)
(Page 1 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM
VERSION 1A (5/31/85)

RUNTIME: 01-29-1993
13:09:20

ENCLOSURE A4 - UNIT: PSL1
RECORD OF DECAY CORRECTION

TIME OF REACTOR SHUTDOWN: 7/18/84 1:00
(*) - indicates that decay time is too long to back calculate concentration

Isotope	Decay Const (1/SEC)	RCS		CONT ATMOS		CONT SUMP	
		@STP (µCi/cc)	CORRECTED (µCi/cc)	@STP (µCi/cc)	CORRECTED (µCi/cc)	@STP (µCi/cc)	CORRECTED (µCi/cc)
KR87	1.5E-04	1.04E+00	5.24E+00	1.20E-02	6.06E-02	1.00E-01	5.05E-01
XE131M	6.7E-07	1.04E+00	1.04E+00	1.20E-02	1.21E-02	1.00E-01	1.01E-01
XE133	1.5E-06	1.04E+02	1.05E+02	1.20E-01	1.22E-01	1.00E-05	1.02E-05
I131	9.9E-07	1.04E+04	1.05E+04	1.20E-01	1.21E-01	1.00E+02	1.01E+02
I132	8.4E-05	1.04E+00	2.57E+00	1.20E-02	2.97E-02	1.00E-01	2.48E-01
I133	9.3E-06	1.04E+02	1.15E+02	1.20E-03	1.33E-03	1.00E-01	1.11E-01
I135	2.9E-05	1.04E+00	1.42E+00	1.20E-02	1.64E-02	1.00E-01	1.37E-01
CS134	1.1E-08	1.04E+00	1.04E+00	1.20E-02	1.20E-02	1.00E-01	1.00E-01
RB88	6.5E-04	1.04E+00	1.16E+03	1.20E-02	1.34E-01	1.00E-01	1.12E+02
TE129	1.7E-04	1.04E+03	6.51E+03	1.20E-02	7.52E-02	1.00E+01	6.27E+01
TE132	2.5E-06	1.04E+00	1.07E+00	1.20E-02	1.23E-02	1.00E-01	1.03E-01
SR89	1.6E-07	1.04E+00	1.04E+00	1.20E-02	1.20E-02	1.00E-01	1.00E-01
BA140	6.3E-07	1.04E+00	1.04E+00	1.20E-02	1.21E-02	1.00E-01	1.01E-01
LA140	4.8E-06	1.04E+00	1.09E+00	1.20E-02	1.26E-02	1.00E-01	1.05E-01
LA142	1.2E-04	1.04E+01	3.79E+01	1.20E-02	4.38E-02	1.00E-01	3.65E-01
PR144	6.7E-04	1.04E+00	1.44E+03	1.20E-02	1.66E-01	1.00E-01	1.39E+02

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 4 of 14)

OPTION 1 (OUTPUT)
(Page 2 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM RUNTIME: 01-29-1993
VERSION 1A (5/31/85) 13:09:24

UNIT: PSL1
USE THESE RATIOS TO DETERMINE SOURCE OF RELEASE BY COMPARING THE RESULTS TO THE PREDICTED RATIOS IN ENCLOSURE A5.

NOBLE GAS RATIOS:

	RCS SAMPLE	CONT ATMOS	SUMP
KR87	0.0497	0.4972	%49718.9020
XE131M	0.0099	0.0991	%9910.7617
XE133	1.0000	1.0000	1.0000

IODINES:

I131	1.0000	1.0000	1.000
I132	0.0002	0.2451	0.0025
I133	0.0109	0.0109	0.0011
I135	0.0001	0.1353	0.0014

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 5 of 14)

OPTION 1 (OUTPUT)
(Page 3 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM RUNTIME: 01-29-1993
VERSION 1A (5/31/85) 13:09:28

ENCLOSURE A5 - UNIT: PSL1
RECORD OF FISSION PRODUCT RELEASE SOURCE IDENTIFICATION

SAMPLE NUMBER: 001
LOCATION: RCS HOT LEG

Isotope	Decay Corr Spec Activity (Encl A4) µCi/cc	Calculated Isot Ratio	Fuel Pellet Inventory	ACT Ratio in Gas Gap	Identified Source
KR87	5.24E+00	4.97E-02	0.2	0.001	
XE131M	1.04E+00	9.91E-03	0.003	0.001 - 0.003	
XE133	1.05E+02	1.00E+00	1.0	1.0	
I131	1.05E+04	1.00E+00	1.0	1.0	
I132	2.57E+00	2.45E-04	1.4	0.01 - 0.05	
I133	1.15E+02	1.09E-02	2.0	0.5 - 1.0	
I135	1.42E+00	1.35E-04	1.8	0.1 - 0.5	

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 6 of 14)

OPTION 1 (OUTPUT)
(Page 4 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM RUNTIME: 01-29-1993
VERSION 1A (5/31/85) 13:09:32

ENCLOSURE A5 - UNIT: PSL1
RECORD OF FISSION PRODUCT RELEASE SOURCE IDENTIFICATION

SAMPLE NUMBER: 002
LOCATION: CONTAINMENT ATMOSPHERE

Isotope	Decay Corr Spec Activity (Encl A4) µCi/cc	Calculated Isot Ratio	Fuel Pellet Inventory	ACT Ratio in Gas Gap	Identified Source
KR87	6.06E-02	4.97E-01	0.2	0.001	
XE131M	1.21E-02	9.91E-02	0.003	0.001 - 0.003	
XE133	1.22E-01	1.00E+00	1.0	1.0	
I131	1.21E-01	1.00E+00	1.0	1.0	
I132	2.97E-02	2.45E-01	1.4	0.01 - 0.05	
I133	1.33E-03	1.09E-02	2.0	0.5 - 1.0	
I135	1.64E-02	1.35E-01	1.8	0.1 - 0.5	

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 7 of 14)

OPTION 1 (OUTPUT)
(Page 5 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM RUNTIME: 01-29-1993
VERSION 1A (5/31/85) 13:09:35

ENCLOSURE A5 - UNIT: PSL1
RECORD OF FISSION PRODUCT RELEASE SOURCE IDENTIFICATION

SAMPLE NUMBER: 003
LOCATION: CONTAINMENT SUMP

Isotope	Decay Corr Spec Activity (Encl A4) µCi/cc	Calculated Isot Ratio	Fuel Pellet Inventory	ACT Ratio in Gas Gap	Identified Source
KR87	5.05E-01	4.97E+04	0.2	0.001	
XE131M	1.01E-01	9.91E+03	0.003	0.001 - 0.003	
XE133	1.02E-05	1.00E+00	1.0	1.0	
I131	1.01E+02	1.00E+00	1.0	1.0	
I132	2.48E-01	2.45E-03	1.4	0.01 - 0.05	
I133	1.11E-01	1.09E-03	2.0	0.5 - 1.0	
I135	1.37E-01	1.35E-03	1.8	0.1 - 0.5	

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 8 of 14)

OPTION 1 (OUTPUT)
(Page 6 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM
VERSION 1A (5/31/85)

RUNTIME: 01-29-1993
13:09:46

ENCLOSURE A7 - UNIT: PSL1
RECORD OF RELEASE QUANTITY

Isotope	Reactor Coolant Sample Number, 1	Containment Sump Sample Number, 2	Contain Atmosphere Sample Number, 3	Total Quantity
KR87	1.49E+03	1.43E+02	3.58E+03	5.21E+03
XE131M	2.97E+02	2.86E+01	7.13E+02	1.04E+03
XE133	2.99E+04	2.89E-03	7.19E+03	3.71E+04
I131	2.98E+06	2.87E+04	7.16E+03	3.01E+06
I132	7.30E+02	7.03E+01	1.75E+03	2.55E+03
I133	3.26E+04	3.14E+01	7.83E+01	3.27E+04
I135	4.03E+02	3.88E+01	9.68E+02	1.41E+03
CS134	2.95E+02	2.84E+01	7.08E+02	1.03E+03
RB88	3.29E+05	3.18E+04	7.92E+05	1.15E+06
TE129	1.85E+06	1.78E+04	4.44E+03	1.87E+06
TE132	3.03E+02	2.92E+01	7.27E+02	1.06E+03
SR89	2.95E+02	2.84E+01	7.09E+02	1.03E+03
BA140	2.97E+02	2.86E+01	7.13E+02	1.04E+03
LA140	3.10E+02	2.99E+01	7.46E+02	1.09E+03
LA142	1.08E+04	1.04E+02	2.59E+03	1.35E+04
PR144	4.09E+05	3.94E+04	9.83E+05	1.43E+06

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 9 of 14)

OPTION 1 (OUTPUT)
(Page 7 of 7)

CORD - CORE DAMAGE ASSESSMENT PROGRAM
VERSION 1A (5/31/85)

RUNTIME: 01-29-1993
13:09:50

UNIT: PSL1
RELEASE OF GAS GAP AND FUEL PELLET INVENTORY

Isotope	GAS GAP		FUEL PELLET	
	Corrected Source Inv	% Rel	Corrected Source Inv	% Rel
KR87	1.48E+05	3.52	3.67E+07	0.01
XE131M	2.35E+04	4.43	4.03E+05	0.26
XE133	3.20E+06	1.16	8.09E+07	0.05
I131	4.23E+06	71.30	3.64E+07	8.28
I132	1.36E+06	0.19	9.61E+07	0.00
I133	5.02E+06	0.65	1.21E+08	0.03
I135	3.12E+06	0.05	1.27E+08	0.00
CS134			1.94E+05	0.53
RB88			5.28E+07	2.18
TE129			2.09E+07	8.94
TE132			6.52E+07	0.00
SR89			1.96E+07	0.01
BA140			6.78E+07	0.00
LA140			1.01E+08	0.00
LA142			1.11E+08	0.01
PR144			8.46E+07	1.69

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 10 of 14)

OPTION 2 (INPUT)
(Page 1 of 1)

CONTAINMENT SAMPLE INFORMATION

PERCENT VOLUME OF H2:	.424 %
CONTAINMENT TEMP AT SAMPLING:	220 F
CONTAINMENT PRES AT SAMPLING:	.5 PSIG
IS SAMPLE CORRECTED TO STP?:	Y (Y=YES/N=NO)

TIME (HR)	TEMP (DEG F)
1:00	250
1:30	350
2:00	260
3:00	240
4:00	220

F1=DONE F10=QUIT

RCS SAMPLE INFORMATION

QUANTITY OF HYDROGEN:	1200 cc/kg
RCS TEMP AT SAMPLING:	300 F
RCS PRES AT SAMPLING:	1600 PSIG
IS SAMPLE CORRECTED TO STP:	Y (Y=YES/N=NO)
REPRESENTATIVE POWER LEVEL:	50%
RCS PRES DURING UNCOVERY:	1000 PSIA
ESTIMATE OF FUEL OVERHEAT:	1 (1=INITIAL, 2=INTERMEDIATE, 3=MAJOR)

HYDROGEN IN REACTOR VOID

ESTIMATE OF VOID VOLUME:	0 cuft
TEMPERATURE OF LIQUID AT COOLANT SURFACES:	0 deg F
RCS PRESSURE:	0 psia
IS SAMPLE CORRECTED TO STP?:	N (Y=YES/N=NO)

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 11 of 14)

OPTION 2 (OUTPUT)
(Page 1 of 1)

CORD - CORE DAMAGE ASSESSMENT PROGRAM RUNTIME: 02-10-1993
VERSION 1A (5/31/85) 14:09:59

SUMMARY OF HYDROGEN ANALYSIS - UNIT: PSL1

HYDROGEN IN CONTAINMENT ATMOSPHERE = 10599 cuft H2
HYDROGEN IN REACTOR COOLANT = 12480 cuft H2
HYDROGEN IN REACTOR VOID SPACE = 0 cuft H2
TOTAL HYDROGEN RELEASED = 23079 cuft H2

TOTAL H2 BY CONTAINMENT MATERIAL OXIDATION = 12520 cuft H2
UPPER LIMIT BY HYDROGEN MAJOR OVERHEAT = 1952 cuft H2
LOWER LIMIT BY H2 INITIAL OVERHEAT = 732 cuft H2
VALUE USED FOR RADIOLYSIS OF WATER = 732 cuft H2

TOTAL ESTIMATE OF CORE CLAD OXIDATION = 9826.803 cuft H2 2.33%

EST PERCENT OF FUEL WITH RUPTURED CLAD = 100.00%

UPPER EST % FUEL WITH EMBRITTLED CLAD = 21.05%
LOWER EST % FUEL WITH EMBRITTLED CLAD = 9.05%

USE THESE RESULTS FOR % RUPTURED CLAD AND % EMBRITTLED CLAD ALONG WITH ATTACHMENT 1 TO DETERMINE EXTENT OF CLAD DAMAGE.

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 12 of 14)

OPTION 3 (INPUT AND OUTPUT)

CORD - CORE DAMAGE ASSESSMENT PROGRAM
VERSION 1A (5/31/85)

RUNTIME: 02-10-1993
14:13:43

UNIT: PSL1

Input Parameters:
Temperature (max) = 2000 deg F
Pressure @ T-max = 900 psia
ESTIMATE OF PERCENT RUPTURED CLADDING BASED ON CETs = 95.68%

CAUTION
Estimates predicted by the methodology in this procedure are good if T-max remains below 1800°F during core uncovery and if the core remains uncovered for 20 minutes or longer. Estimates could be LOW if pressure during period of T-max drops to less than 100 psia within less than 2 minutes of accident initiation, a large break is indicated.

NOTE
This procedure yields damage estimates in NRC Categories 2, 3 and 4.

Prepared by: _____ Date: ____/____/____

Checked by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 13 of 14)

OPTION 4 (INPUT)

DOSE RATE INFORMATION

ENTER DATE AND TIME OF REACTOR SHUTDOWN:

DATE: 7/18/84
TIME: 1:00

ENTER REPRESENTATIVE POWER LEVEL: 50%

Measured Dose Rate RAD/HR	Time of Measurement	
	Date	Time
100000	7/18/84	3:00
50000	7/18/84	6:00
15000	7/19/84	1:00
4000	7/24/84	1:00

ATTACHMENT 3
CORD BENCHMARK RUNS
(Page 14 of 14)

OPTION 4 (OUTPUT)

CORD - CORE DAMAGE ASSESSMENT PROGRAM
VERSION 1A (5/31/85)

RUNTIME: 02-10-1993
14:14:13

#	EDR (R/HR)	TPA (HRS)	CURVE A	CURVE B	CURVE C	CURVE D	
1	0.20E+06	2.0	5.9E+03	6.1E+04	1.6E+05	1.0E+06	CATEGORY 6
2	0.10E+06	5.0	2.5E+03	2.2E+04	7.6E+04	4.4E+05	CATEGORY 6
3	0.30E+05	24.0	5.6E+02	4.1E+03	2.0E+04	1.1E+05	CATEGORY 6
4	0.80E+04	144.0	1.0E+02	6.0E+02	4.5E+03	2.1E+04	CATEGORY 6

NRC CATEGORY DEFINITIONS:

1 - NO FUEL DAMAGE

2 - INITIAL CLADDING FAILURE

3 - INTERMEDIATE CLADDING FAILURE

4 - MAJOR CLADDING FAILURE

5 - INITIAL FUEL PELLET OVERHEATING

6 - INTERMEDIATE FUEL PELLET OVERHEATING

7 - MAJOR FUEL PELLET OVERHEATING

ATTACHMENT 4
PRELIMINARY ESTIMATE OF CORE DAMAGE USING CORE EXIT THERMOCOUPLE (CET) TEMPERATURES
(Page 1 of 5)

1. Purpose

   The purpose of this section is to estimate core damage based on core exit thermocouple temperatures up to about the time when the peak core temperature reaches about 2300°F. Core damage using this indicator is described by categories 2 through 4 of the seven NRC categories in Table 2, Cladding Damage Characteristics, in Attachment 1.

2. Definitions

   A. Cladding Failure

      Cladding failure is defined as a break in the fuel rod clad at least sufficient to release the internal gas pressure.

3. Precautions and Limitations

   A. The assessment of core damage obtained by using this method is only an estimate. The techniques employed in this section are only accurate to locate the core condition within the first four of the seven categories of core damage described in Table 2, Cladding Damage Characteristics, in Attachment 1. The methodology is based on core exit temperature data. Other plant indications may be available which can improve upon the estimation of core damage.

   B. The relationship between the core exit thermocouple temperature and the clad temperature varies with the core uncovery scenario. This procedure applies to slow core uncovery by boiloff of the coolant. For other more rapid uncovery scenarios, this procedure could yield a very low estimate of the number of ruptured rods. In general, for core uncovery at pressures below about 1200 psia, there is high confidence that at least the predicted estimate of rods are actually ruptured.

ATTACHMENT 4
PRELIMINARY ESTIMATE OF CORE DAMAGE USING CORE EXIT THERMOCOUPLE (CET) TEMPERATURES
(Page 2 of 5)

4. Instructions

   A. Obtain the following from the instrument recordings:

      From the recording of maximum core exit thermocouple temperature as a function of time, obtain and record on Data Sheet 4-1, Record of Temperature, Pressure and Damage Estimate, the maximum temperature and the time it occurs. As many thermocouples as possible should be used, in this way equipment malfunction may be detected if a thermocouple reads greater than 1650°F or varies considerably from its neighboring thermocouples.

      From the recording of Reactor Coolant System pressure as a function of time, obtain and record on Data Sheet 4-1, Record of Temperature, Pressure and Damage Estimate the pressure during the period of maximum thermocouple temperature.

   B. Select the temperature labeled curve on Figure 4-1, Percent of Fuel Rads with Ruptured Clad vs. Max Core Exit Thermocouple Temperature, which corresponds to a pressure approximately equal to or greater than the RCS pressure. Enter the abscissa (x-value) at the maximum CET temperature and read on the ordinate (y-value) the percent of the fuel rods which have ruptured clad. Record on Data Sheet 4-1, Record of Temperature, Pressure and Damage Estimate.

   C. This is probably a lower limit estimate of damage. Some judgement on the bias is available in Reference 2.1.2.

5. Conclusions

   Use the percent of rods ruptured from Data Sheet 4-1, Record of Temperature, Pressure and Damage Estimate, and the clad damage characteristics of Table 2 in Attachment 1 to determine the NRC category of cladding failure. This procedure yields damage estimates in NRC Categories 2, 3 and 4.

ATTACHMENT 4
PRELIMINARY ESTIMATE OF CORE DAMAGE USING CORE EXIT THERMOCOUPLE (CET) TEMPERATURES

(Page 3 of 5)

DATA SHEET 1. RECORD OF TEMPERATURE PRESSURE AND DAMAGE ESTIMATE

(Page 1 of 2)

Step 1 Record the following data:

NOTE

As many thermocouple readings as possible should be recorded. In this way, equipment malfunction may be detected if a thermocouple reads greater than 1650°F or varies considerably from its neighboring thermocouples.

Maximum Core Exit Thermocouple Temperature _____°F
(See Instruction 4.A in the text for guidelines)

Time of Maximum Temperature _____

Reactor Coolant System Pressure at Above Time _____ psia

Step 2 From Figure 4-1, Percent of Fuel Rods with Ruptured Clad vs. Max Core Exit Thermocouple Temperature, at maximum thermocouple temperature and at appropriate temperature based on pressure, read percent of ruptured rods. _____ %

Step 3 Comment on probable bias of results in Step 2. (Reference 2.1.2, Page E-5). For example:

a) A smooth core exit thermocouple recording and an uncovery duration of 20 minutes or longer are indicators for a good prediction.

b) For a large break LOCA, the thermocouple temperature may rise rapidly then quench when the core is covered. This procedure could yield a low estimate for that situation.

ATTACHMENT 4
PRELIMINARY ESTIMATE OF CORE DAMAGE USING CORE EXIT THERMOCOUPLE (CET) TEMPERATURES
(Page 4 of 5)

DATA SHEET 1. RECORD OF TEMPERATURE PRESSURE AND DAMAGE ESTIMATE
(Page 2 of 2)

Step 4 NRC Category of cladding failure from Table 2, Cladding Damage Characteristics, in Attachment 1. _____

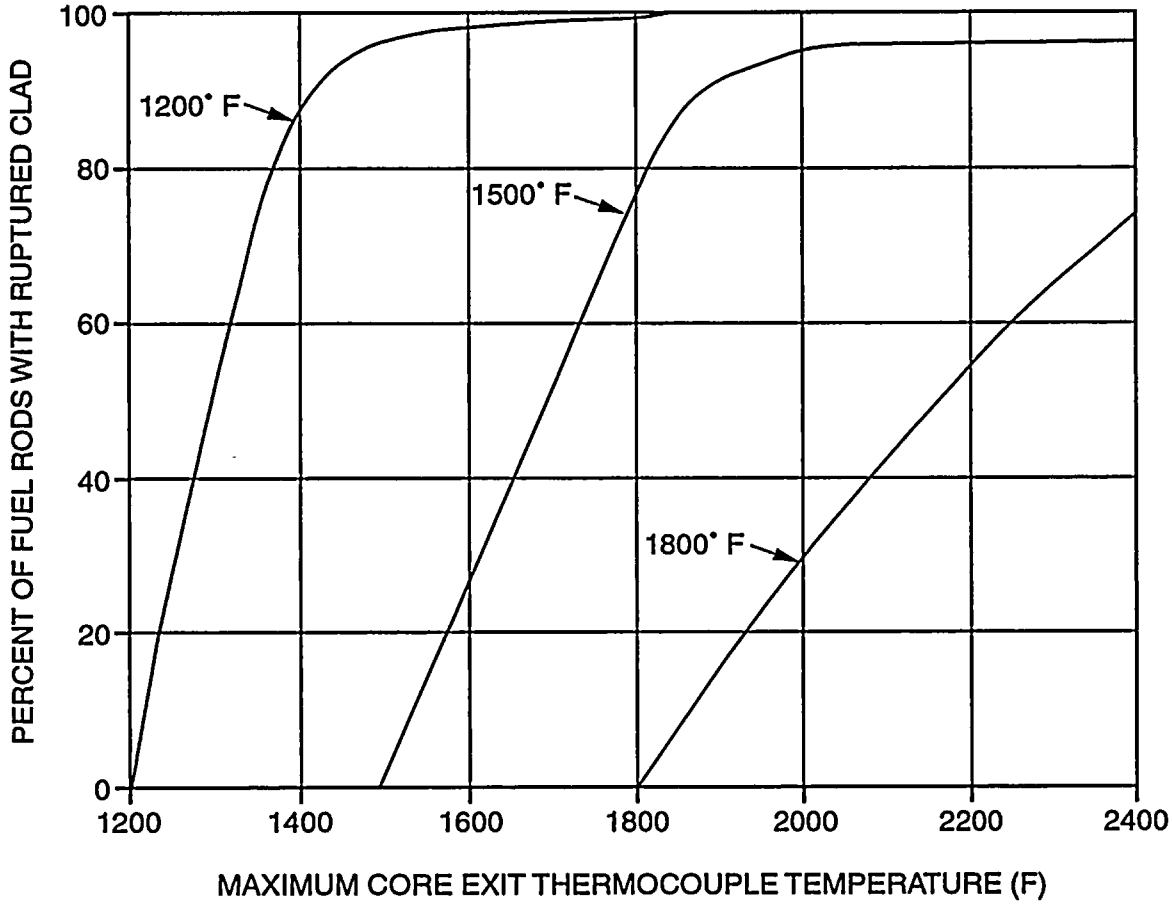
Step 5 Enter summary information into Data Sheet 6-2, Summary Worksheet.

Maximum Core Exit Thermocouple Temperature

_____°F
_____°F
_____°F
_____°F
_____°F

ATTACHMENT 4
PRELIMINARY ESTIMATE OF CORE DAMAGE USING CORE EXIT THERMOCOUPLE (CET) TEMPERATURES
(Page 5 of 5)
FIGURE 4-1. PERCENT OF FUEL RODS WITH RUPTURED CLAD VS MAX CORE EXIT THERMOCOUPLE TEMPERATURE

When The Pressure Is:	Use The Curves Labeled:
P less than or equal to 100 psia	1200° F
P is between 100 and 1200 psia	1500° F
P is between 1200 and 1650 psia	1800° F



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ATTACHMENT 5
PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES
(Page 1 of 7)

1. Purpose

This section provides the methodology for use under post-accident plant conditions to determine the type and degree of core damage which may have occurred by using radiation dose rates measured inside the containment building using the Containment High Range Radiation Monitor (CHRRM). The radiation dose rate is related to the quantitative release of fission products from the core expressed as the percent of the source inventory at the time of the accident. The resulting observation of core damage is described by one or more of the seven categories of core damage in Table 3 in Attachment 1.

2. Definitions

A. Fuel Damage

For the purpose of this section, fuel damage is defined as a progressive failure of the material boundary to prevent the release of radioactive fission products into the Reactor Coolant, starting with a penetration in the zircaloy cladding.

B. Source Inventory

The source inventory is the total quantity of fission products expressed in Curies of each isotope present in either source; the fuel pellets or the fuel rod gas gap.

ATTACHMENT 5

PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES

(Page 2 of 7)

3. Precautions and Limitations

   A. The assessment of core damage obtained by using the methodology in this section is only an estimate. The techniques employed in this section are only accurate to locate the core condition within one or more of the seven categories of core damage described in Table 3 in Attachment 1. The procedure is based on radiation dose rate. Other plant indications may be available which can improve upon the estimation of core damage. These include sample radiological analysis, incore temperature indicators, and the total quantity of hydrogen released from zirconium degradation. Whenever possible, these additional indicators should be factored into the assessment.

   B. This section relies upon radiation dose rate measurements taken from the highest readings of two high range radiation monitors located inside the containment building to determine the total quantity of fission products released from the core and therefore available for release to the environment. The amount of fission products present at the location of the monitors may be changing rapidly due to transient plant conditions. Therefore, multiple measurements should be obtained within a minimum time period and when possible, under stabilized plant conditions. Samples obtained during rapidly changing plant conditions should not be weighed heavily into the assessment of core damage.

   C. The methodology in this section is limited to the upper bound condition of fission product release from the core due to fuel overheat. Simultaneous with fuel overheat, there may be localized fuel pellet melting within the core. The transport of the non-volatile fission products released due to melting is not known. The dose rates measured under conditions of fuel pellet melting are anticipated to exceed those shown in Figure 5-1, Containment High Radiation Monitor Dose Rate vs. Time After Trip, for major fuel overheat. However, this procedure does not attempt to identify the extent of any potential fuel melting.

ATTACHMENT 5

PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES

(Page 3 of 7)

3. Precautions and Limitations (continued)

   D. This section is limited to the interpretation of the dose rate measurement resulting from a mix of fission products. The methodology cannot accurately distinguish between the conditions of fuel cladding failure and fuel overheat when the resulting dose rates are the same. The methodology does provide an upper limit estimate of the progressive core damage. Concurrent conditions of cladding failure and overheat should be anticipated due to the radial distribution of heat generation within the core. Distinction between the type of core damage requires the identification of the characteristic fission products. The procedure for core damage assessment using radiological analysis of fluid samples is required to explicitly distinguish between the categories.

   E. This methodology is limited in applicability to those conditions in which the fission product inventory in the core has had sufficient time to reach equilibrium. Equilibrium fission product inventory is a function of reactor power and burnup. Based upon the fission products of concern, equilibrium conditions are achieved after thirty days of operation at constant power. Constant power is considered to include changes of no greater than ± 10 percent. The methodology may be used following non-constant periods of operation by using engineering judgement to select the most representative power level during the period. This method may also be used if the reactor has produced power for less than thirty days, however, the resulting assessment of core damage would be an under-prediction of the actual conditions.

ATTACHMENT 5

PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES

(Page 4 of 7)

4. Instructions

   A. Record the plant indications required in Data Sheet 5-1, Containment High Radiation Monitor vs. Time After Trip.

   B. Plant Power Correction

      The measured radiation dose rate inside the containment building is to be corrected for the plant power history. A correction factor is used to adjust the measured dose rate to the corresponding value had the plant been operating at 100 percent power.

      To correct the radiation dose rate for the case in which plant power level has remained constant for a period greater than 30 days, a simple ratio of the power may be employed. The reactor power is considered to be constant if it has not changed by ± 10 percent within the last thirty days prior to the reactor trip.

      To correct the radiation dose rate for the case in which reactor power level has not remained constant during the 30 days prior to the reactor shutdown, engineering judgement is used to determine the most representative power level. The following guidelines should be considered in the determination.

      The average power during the 30 day time period is not necessarily the most representative value for correction to equilibrium conditions.

      The last power levels at which the reactor operated should weigh more heavily in the judgement than the earlier levels.

      Continued operation for an extended period should weigh more heavily in the judgement than brief transient levels.

      In the case in which reactor has produced power for less than 30 days, this procedure may be employed. However, the estimate of core damage obtained under this condition may be an under-prediction of the actual condition.

ATTACHMENT 5
PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES
(Page 5 of 7)

4. Instructions (continued)

   C. The decay correction for the radiation dose rate requires the determination of the time duration between the reactor trip and the measurement of the dose rate. This is done simply using the time of reactor shutdown (trip) recorded in Data Sheet 5-1, Containment High Radiation Monitor vs. Time After Trip.

5. Conclusions

   The conclusion on the extent of core damage is made using the equilibrium dose rate, the duration of reactor shutdown (hours since reactor trip), and the analytically determined dose rates provided in Figure 5-1, Containment High Radiation Monitor vs. Time After Trip. The equilibrium dose rate is plotted as a function of time following reactor shutdown. Engineering judgement is used to determine which category of core damage shown on Figure 5-1, Containment High Radiation Monitor vs. Time After Trip, is most representative of the particular value that has been plotted. The following criteria should be considered in the determination.

   A. Dose rate measurements may have been recorded during periods of transient conditions within the plant. Measurements made during stable plant conditions should weigh more heavily in the assessment of core damage.

   B. Dose rates significantly above the lower bound for the category of major fuel overheat may indicate concurrent fuel pellet melting. The methodology in this section may not be employed to estimate the degree of fuel pellet melting.

   C. Dose rates within any category of fuel overheating may be anticipated to include concurrent fuel cladding failure. The methodology in this section may not be used to distinguish the relative contributions of the two categories to the total dose rate. The methodology does give the estimate of the highest category of damage.

   D. Dose rates corresponding to the two categories of major cladding failure and initial fuel overheat are observed to overlap on Figure 5-1, Containment High Radiation Monitor vs. Time After Trip. The evaluation of other plant parameters may be required to distinguish between them. However, concurrent conditions may be anticipated.

ATTACHMENT 5
PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES
(Page 6 of 7)
DATA SHEET 5-1. CONTAINMENT HIGH RANGE RADIATION MONITOR (CORE DAMAGE ASSESSMENT) WORKSHEET

Highest Radiation Dose Rate (CHRRM) _____ Rad/Hr

Time of Measurement: Date: ____/____/____ Time: _____

Prior 30 Days Power History:

Power, Percent	Duration, Days
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Time of Reactor Trip: Date: ____/____/____ Time: _____

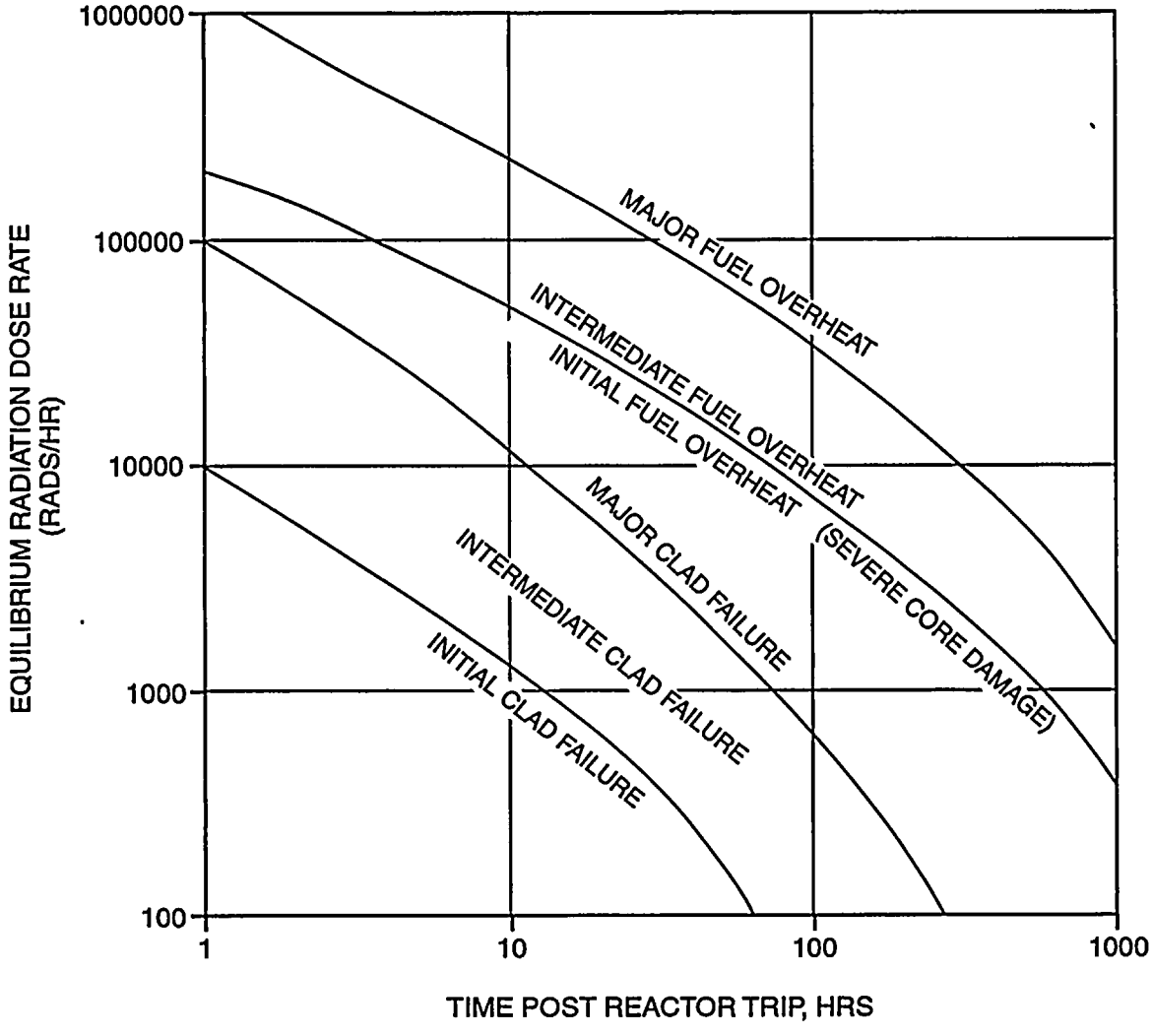
Equilibrium Dose Rate (Rad/Hr) = Measured Dose Rate (Rad/Hr) x $\frac{100}{\textit{Reactor Power Level (\%)}}$ = ____ *(Rad/Hr)*

Refer to Table 3, Percent of Source Inventory Released to Containment, in Attachment 1 and Figure 5-1, Containment High Radiation Monitor Dose Rate vs. Time After Trip, to obtain category of core damage.

See Step 5 for guidance in formulating conclusions.

ATTACHMENT 5
PRELIMINARY ESTIMATE OF CORE DAMAGE USING RADIATION DOSE RATES
(Page 7 of 7)

FIGURE 5-1. CONTAINMENT HIGH RADIATION MONITOR DOSE RATE VS TIME AFTER TRIP



(P/EP/EPIP-11/Fg-R0)

NOTE

Categories of core damage are indicated in Attachment I, Tables 1, 2, and 3. Determination of core damage should not be based solely from this graph.

ATTACHMENT 6
PRELIMINARY ESTIMATE OF CORE DAMAGE USING PRELIMINARY RADIOISOTOPIC DATA
(Page 1 of 3)

CAUTION

Core damage assessment using the readily available radioisotopic information should be used only to obtain a general estimate of the extent of core degradation. Analysis of radionuclide samples is needed to improve upon estimate of core damage.

1. Obtain available plant radioisotopic data and complete Data Sheet 6-1, Preliminary Radioisotopic data.

ATTACHMENT 6
PRELIMINARY ESTIMATE OF CORE DAMAGE USING PRELIMINARY RADIOISOTOPIC DATA
(Page 2 of 3)
DATA SHEET 6-1. PRELIMINARY RADIOISOTOPIC DATA

CAUTION

The concentrations assume uniform mix, no dilution due to injection, and 1/2 hour after shutdown. In the presence of dilution, this assessment will underestimate core damage.

STEP 1: Obtain preliminary radioisotopic data for the following isotopes as available:

	Activity (µCi/gm)
I-131	_____
I-133	_____
I-135	_____
Cs-134	_____
Cs-137	_____
Sr-90	_____

STEP 2: Determine the crude core damage category from the Table below.

Core Damage Category _____
[Core Damage (Gap Release) or Severe Core Damage (Fuel Pellet Release)]

PWR Baseline Coolant Concentrations Vs. Core Damage (from Reference 2.1.6)

Nuclide	Normal Concentration (µCi/gm)	Concentration After Gap Release (µCi/gm)	Concentration After Melt Release (µCi/gm)
I-131	4.5 E-02	6.8 E+03	3.4 E+05
I-133	1.4 E-01	1.4 E+04	6.8 E+05
I-135	2.6 E-01	1.2 E+04	6.0 E+05
Cs-134	7.1 E-03	1.5 E+03	3.0 E+04
Cs-137	9.4 E-03	9.4 E+02	1.9 E+04
Sr-90	1.2 E-05	Not Avail.	1.0 E+03

ATTACHMENT 6
PRELIMINARY ESTIMATE OF CORE DAMAGE USING PRELIMINARY RADIOISOTOPIC DATA
(Page 3 of 3)
DATA SHEET 6-2. SUMMARY WORKSHEET

RESULTS OF DETAILED RADIOISOTOPIC ANALYSIS (if available) FROM ATTACHMENT 8:

_____ Percent Cladding Failure _____ Percent Fuel Overheat _____ Percent Fuel Melt

RESULTS OF AUXILIARY INDICATORS (Attachments 4, 5, 6, 7):

	METHOD	NRC CATEGORY
CHRRM	_____ (R/Hr)	
ELAPSED TIME	_____ (Hrs)	_____
H_2 Analysis	_____ (Percent Embrittled)	_____
CET (Maximum)	_____ (°F)	_____
Characteristic Fission Product Concentration	I-131 _____ (µCi/gm) Cs-134 _____ (µCi/gm)	_____

IS RX VESSEL LEVEL BELOW ZERO? ____ YES ____ NO

HAS LEVEL DROPPED BELOW ZERO? ____ YES ____ NO

SUMMARY OF RESULTS: _____

_____

_____

NOTE

Compare percent cladding failure, percent fuel overheat, and percent fuel melt results obtained from the radionuclide analysis to those obtained from the auxiliary indicators analyses.

If results are in agreement, the core damage assessment is complete. If the results are not in agreement, a recheck of both analyses may be performed or certain indications may be discounted based on engineering judgement.

Prepared by: _____ Date: ____/____/____

Reviewed by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 1 of 14)

1. Purpose

This section provides the methodology for use under post-accident plant conditions to determine the extent of fuel clad damage which may have occurred. It utilizes hydrogen measured in samples obtained with the Post-Accident Sampling System (PASS) and containment hydrogen analyzers. The measured hydrogen is related to the amount of fuel clad oxidation. Clad oxidation is in turn related to cladding failure which is expressed in terms of the percent of fuel rods which are ruptured and the percent which are embrittled. The resulting observation of damage is described by one or more of the seven categories of core damage in Table 2, Cladding Damage Characteristics, in Attachment 1.

2. Definitions

A. Clad Rupture

Clad rupture is defined as a break in the fuel rod clad at least sufficient to release the internal gas pressure.

B. Clad Embrittlement

At temperatures above the rupture temperature, significant oxidation of the clad occurs. If the oxidation exceeds the embrittlement threshold, fragmentation of embrittled clad may subsequently occur from thermal shock or hydraulic pressure forces such that the structure of the fuel assembly is destroyed and substantial fuel pellet fragments are released to the coolant.

3. Precautions and Limitations

A. The assessment of core damage obtained by using this methodology is only an estimate. The techniques employed in this section are only accurate to locate the core condition within one or more of the seven categories of core damage in Table 2, Cladding Damage Characteristics, in Attachment 1.

B. The methodology in this section is applicable under conditions for which there are no voids measurable by the Reactor Vessel Level Monitoring System (RVLMS).

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 2 of 14)

4. Instructions

A. Core Uncovery Conditions: Record the core conditions over the time period of core uncovery on Data Sheet 7-1, Core Uncovery Conditions.

B. Sampling Conditions and Measured Hydrogen

1. Record the conditions in containment and the RCS at the time the hydrogen samples are obtained.

2. Enter on the worksheet of Data Sheet 7-2, Sampling Conditions and Measured Hydrogen.

3. Record the results of hydrogen sampling and analysis on the worksheet of Data Sheet 7-2, Sampling Conditions and Measured Hydrogen.

4. Follow the instructions to obtain the total amount of hydrogen measured in units of cubic feet of hydrogen at standard temperature and pressure.

C. Hydrogen Generated in Containment

NOTE
Data Sheet 7-3, Hydrogen Generated in Containment, utilizes measured data for the containment temperature as a function of time up to the sampling time and a plant specific curve of the rate of production as a function of containment temperature in Figure 7-2, Hydrogen Production Rate from Aluminum and Zinc vs. Temperature.

1. Data Sheet 7-3, Hydrogen Generated in Containment, is a worksheet for calculating the amount of hydrogen generated by oxidation of materials within the containment.

2. Record the data required on Data Sheet 7-3, Hydrogen Generated in Containment.

3. Complete the indicated calculations to obtain the cubic feet of hydrogen at STP generated by containment materials oxidation.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 3 of 14)

4. Instructions (continued)

D. Hydrogen Generated by Radiolysis

NOTE
1. The hydrogen generated by radiolysis is a function of operating power and decay time.
2. For the case in which the operating power is constant or has not changed by more than ±10 percent for a period greater than 30 days, that power is used.
3. For the case in which the power has not remained constant during the 30 days prior to the reactor trip, Engineering judgement is used to determine the most representative power level.

1. The following guidelines should be considered in the determination:

   a. The average power during the 30 day time period is NOT necessarily the most representative value for determining radiolysis by fission products.

   b. The last power levels at which the reactor operated should weigh more heavily in the judgement than the earlier levels.

   c. Continued operation for an extended period should weigh more heavily in the judgement than brief transient levels.

   d. For the case in which the reactor has produced power for less than 30 days, this methodology may be employed. However, the estimate of hydrogen from radiolysis will be too high and the calculated hydrogen by core oxidation will be too low. Hence, an under-prediction of core damage may result.

2. Record the data required on the worksheet of Data Sheet 7-4, Hydrogen Generated by Radiolysis.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 4 of 14)

4. Instructions (continued)

E. Core Damage Assessment, Hydrogen

1. Enter the amounts of hydrogen from Steps 4.B, C and D on the worksheet of Data Sheet 7-5, Core Damage Assessment from Hydrogen Measurement.

2. Subtract the amounts in Steps 4.C and D from 4.B as indicated on the worksheet to yield the cubic feet of hydrogen generated by core clad oxidation.

3. Complete the instructions of Data Sheet 7-5, Core Damage Assessment from Hydrogen Measurement, to determine the percentage of fuel rods with ruptured clad and the percentage of fuel rods with embrittled clad.

F. Conclusion

1. The conclusion on core damage is made using the two results from above. These are:

   a. Percentage of fuel rods with ruptured clad.

   b. Percentage of fuel rods with embrittled or structurally failed cladding.

2. Knowledgeable judgement is used to compare the above two results to the definitions of the seven NRC categories of fuel damage found in Table 2, Cladding Damage Characteristics, in Attachment 1. Core damage does NOT take place uniformly. Therefore, when evaluating damage using these results, Table 2, Cladding Damage Characteristics, in Attachment 1 may yield a combination of categories of damage which exist simultaneously.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 5 of 14)
DATA SHEET 7-1. CORE UNCOVERY CONDITIONS

Time period of core uncovery. Complete the following table using recorded instrument data.

Instrument	Estimated Core Uncovery Time	Estimated Core Recovery Time
Reactor Vessel Level Monitoring System	Lower Limit Elevation Uncovers (core uncovery) Time _____	Lower Limit Elevation Recovers Time _____
Core Exit Thermocouple Temperature	Start of Continuous Rise or Exceed 660°F Time _____ Temperature _____	Rapid Temperature Drop to Saturation Time _____ Temperature _____
Core Exit Thermocouple Saturation Margin	Start of Superheat Time _____	Return to Saturation Time _____

Interpret above data to obtain best estimate for time period of core uncovery and obtain pressurizer pressure range during that period. The superheat derived from the thermocouple temperature and corresponding system pressure is considered as the best indicator for core uncovery during boiloff and should be used, but should be compared with the other indicators to help identify possible anomalies.

	Core Uncovery	Core Recovery
Time	_____	_____
Pressure	_____	_____

Estimate vessel inlet flow rates during core uncovery heatup period, up to approximately the time of peak core exit thermocouple temperature. Net inlet flow indicates that the methodology may have additional bias which under-predicts clad damage.

Charging Flow Rate _____
Letdown Flow Rate _____
HPSI Flow Rate _____
LPSI Flow Rate _____
Other Inlet Flows _____

Net inlet flow = Charging Flow + High Pressure Safety Injection (HPSI) and Low Pressure Safety Injection (LPSI) flow + other inlet flow - Letdown Flow.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 6 of 14)
DATA SHEET 7-2. SAMPLING CONDITIONS AND MEASURED HYDROGEN

Obtain the RCS and containment conditions at the time of sampling for hydrogen.

Reactor Coolant System		Containment	
Sampling Time	_____	Sampling Time	_____
Pressure	_____psig	Atmospheric Pressure	_____psig
Temperature, T_{avg}	_____°F	Atmospheric Temperature	_____°F
Reactor Vessel Coolant Level	_____percent	Has Hydrogen Recombiner Operated?	Yes / No
Pressurizer Level	_____percent	Does Pressure or Temperature History Indicate a Hydrogen Burn?	Yes / No

Hydrogen Sample Data Reduction

Cont. Sample (Vol. percent/100) x Cont. Vol. ($ft.^3$) x (32 + 460) / (Normal Temp. + 460) = ft^3 H_2 at STP

_____ x 2.5 E6 x 492 / _____ = _____ft^3

RCS Sample (cc/kg at STP) x RCS Vol.* (ft^3) x Density Ratio ρ_{act}/ρ_{stp} (Figure C-2.A.1) / 1000 = ft^3 H_2 at STP

_____ x _____ x _____ / 1000 = _____ ft^3

Total = Cont. Sample (ft^3) + RCS Sample = _____ + _____ = _____ ft^3

Also record total on Data Sheet 7-5, Core Assessment from Hydrogen Measurement.

* RCS volume is: PSL1 = 10,401 ft^3
PSL2 = 10,198 ft^3

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 7 of 14)
DATA SHEET 7-3. HYDROGEN GENERATED IN CONTAINMENT
STEP 2.A.4.C

Record the containment temperature at selected time intervals and calculate the hydrogen generated by oxidation of containment materials utilizing the plant-specific production rates from Figure 7-2.

1 Time at Start of Intervals	2 Containment Temperature (°F)	3 Interval Duration (Hr)	4 Avg. Containment Temp. During Interval (°F)	5 H_2 Prod. Rate (ft^3/hr) Fig. 7-2	6 H_2 Produced (Col. 3) X (Col. 5)
Accident Starts					
Sample Time					

Long Term Hydrogen Production in Containment
Total (Summation of Column 6) _____ SCF

Short term rapid hydrogen production by containment aluminum,
2.277 ft^3 for PSL1 and 5,235 ft^3 for PSL2 (Reference 2.1.2, Table 4.3) +_____ SCF

Total Hydrogen Production in Containment = _____ SCF

Record total on Data Sheet 7-5, Core Damage Assessment from Hydrogen Measurement, also.

Items in Columns 1 and 2 are input plant data.
Interval Duration is the line difference between consecutive temperature readings.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 8 of 14)
DATA SHEET 7-4. HYDROGEN GENERATED BY RADIOLYSIS

Record the following data and utilize the curves of Figure 7-3, Specific Radiolytic Hydrogen Production vs. Decay Time, to determine the hydrogen generated by radiolysis.

Prior 30 days power history	Power, Percent	Duration, Days
Note: No calculation is required to determine power level, guidance on judgement is provided in Step 4.D.	_____	_____
	_____	_____
	_____	_____

Estimated Power Level based on a power history: _____

Operating Power (Mwt):

Power to use in evaluating long term hydrogen production by radiolysis =

$$(\textit{Full Power, Mwt}) \times \frac{\textit{Power Level}}{100}$$

(Full Power: PSL1, PSL2 = 2700 Mwt)

T_o = Time of Reactor Trip Time _____

T_I = Time Sample Taken _____

Decay Time (Time Interval, $T_I - T_o$) _____ Hours

Enter abscissa (x-value) on Figure 7-3, Specific Radiolytic Hydrogen Production vs. Decay Time, with above decay and read two values of hydrogen produced by radiolysis, one from each curve, in cubic feet of hydrogen at STP per Mwt operating power. Multiply by above power and record as follows:

Limit Curve	Hydrogen Produced (SCF/Mwt. Figure 7-3)	x	Operating Power (Mwt.)	=	Total Hydrogen Produced (SCF)
Upper	_____	x	_____	=	_____
Lower	_____	x	_____	=	_____

Using results from Radiological Analysis of Samples, estimate which results should be used; upper limit for major fuel overheat, lower limit for initial fuel overheat, or appropriate estimate between the two curves for intermediate fuel overheat. Circle corresponding value of hydrogen above and also record on Data Sheet 7-5, Core Damage Assessment from Hydrogen Measurement.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 9 of 14)
DATA SHEET 7-5. CORE DAMAGE ASSESSMENT FROM HYDROGEN MEASUREMENT (SUMMARY)

A. Hydrogen Measured, from Data Sheet 7-2, Sampling Conditions and Measured Hydrogen. _____ SCF

B. Hydrogen Produced in Containment, from Data Sheet 7-3, Hydrogen Generated in Containment. _____ SCF

C. Hydrogen Produced by Radiolysis, from Data Sheet 7-4, Hydrogen Generated by Radiolysis. _____ SCF

Subtract B and C from A to get Hydrogen Produced by Core Clad Oxidation _____ SCF

Divide by (4210 for PSL1) or (4640 for PSL2). These values represent the quantity in SCF of hydrogen produced per percent of Zirconium oxidized for St. Lucie Unit 1 and Unit 2, respectively. (Reference 2.1.2, Table 4.2). = _____ %

= % Core Clad Oxidized

Enter abscissa (x-value) on Figure 7-4, Percent of Fuel Rods with Ruptured Clad vs. Percentage of Core Clad Oxidation, with "Percent Oxidation of Core Clad" and read ordinate from temperature labeled curve corresponding to the pressure during core uncovery as given on Data Sheet 7-1, Core Uncovery Conditions. Record here Percent of Fuel Rods with Ruptured Clad.

_____%.

Enter abscissa (x-value) on Figure 7-5, Oxidation Embrittlement vs. Total Core Oxidation, with above "Percent Oxidation of Core Clad" and read range of values on ordinate (y-value). Record here.

Percent of Fuel Rods Embrittled:

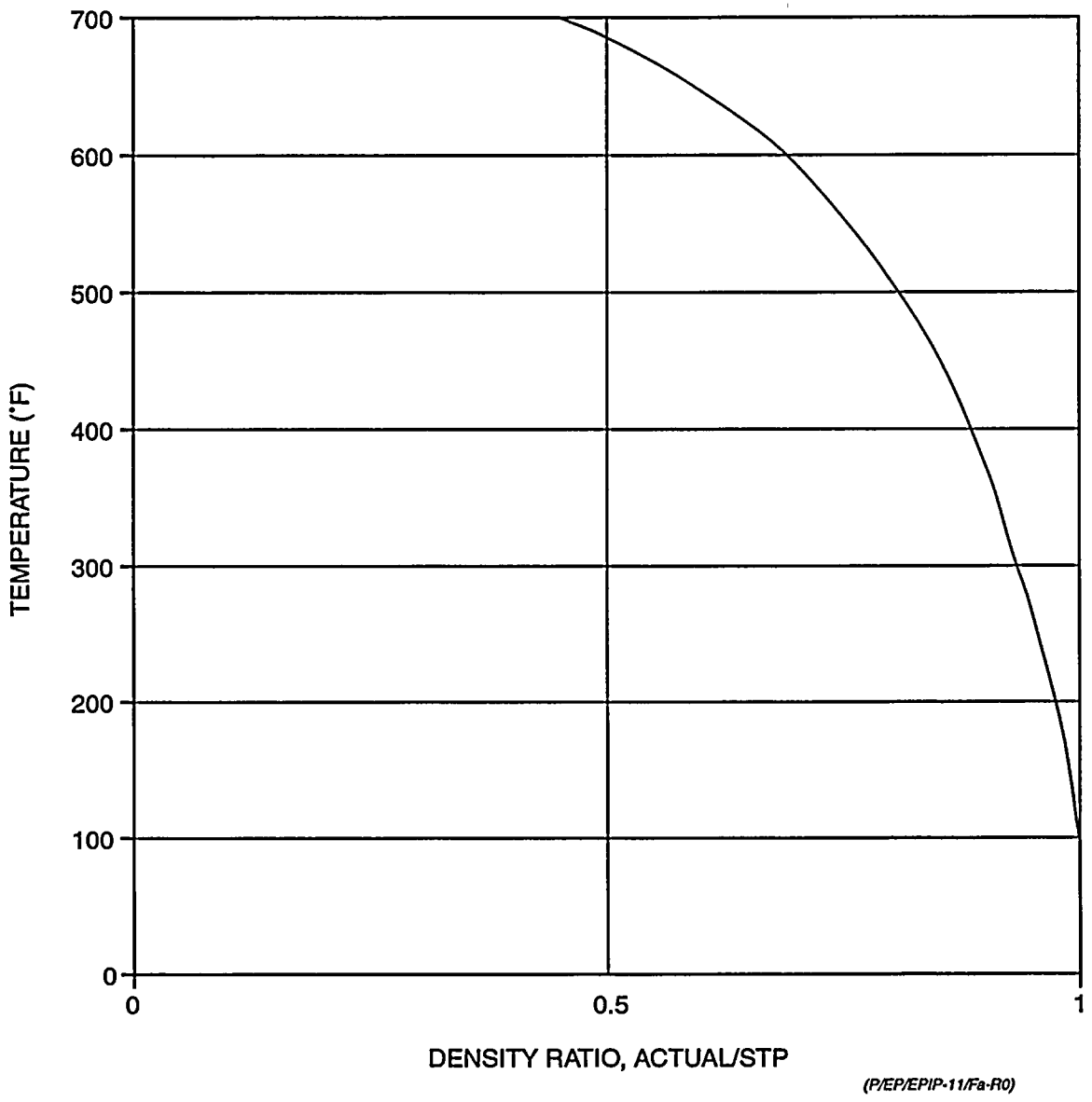
Range - Upper _____ %

- Lower _____ %

From Table 2, Cladding Damage Characteristics, in Attachment 1, select the core clad damage categories based on the above percentages of rods embrittled (damaged) and enter in Data Sheet 6-2, Summary Worksheet. Note that this assessment will under-predict fuel damage if hydrogen recombiners have operated or Hydrogen burn has occurred.

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 10 of 14)

FIGURE 7-1. RATIO OF H2O DENSITY TO H2O DENSITY AT STP vs TEMPERATURE



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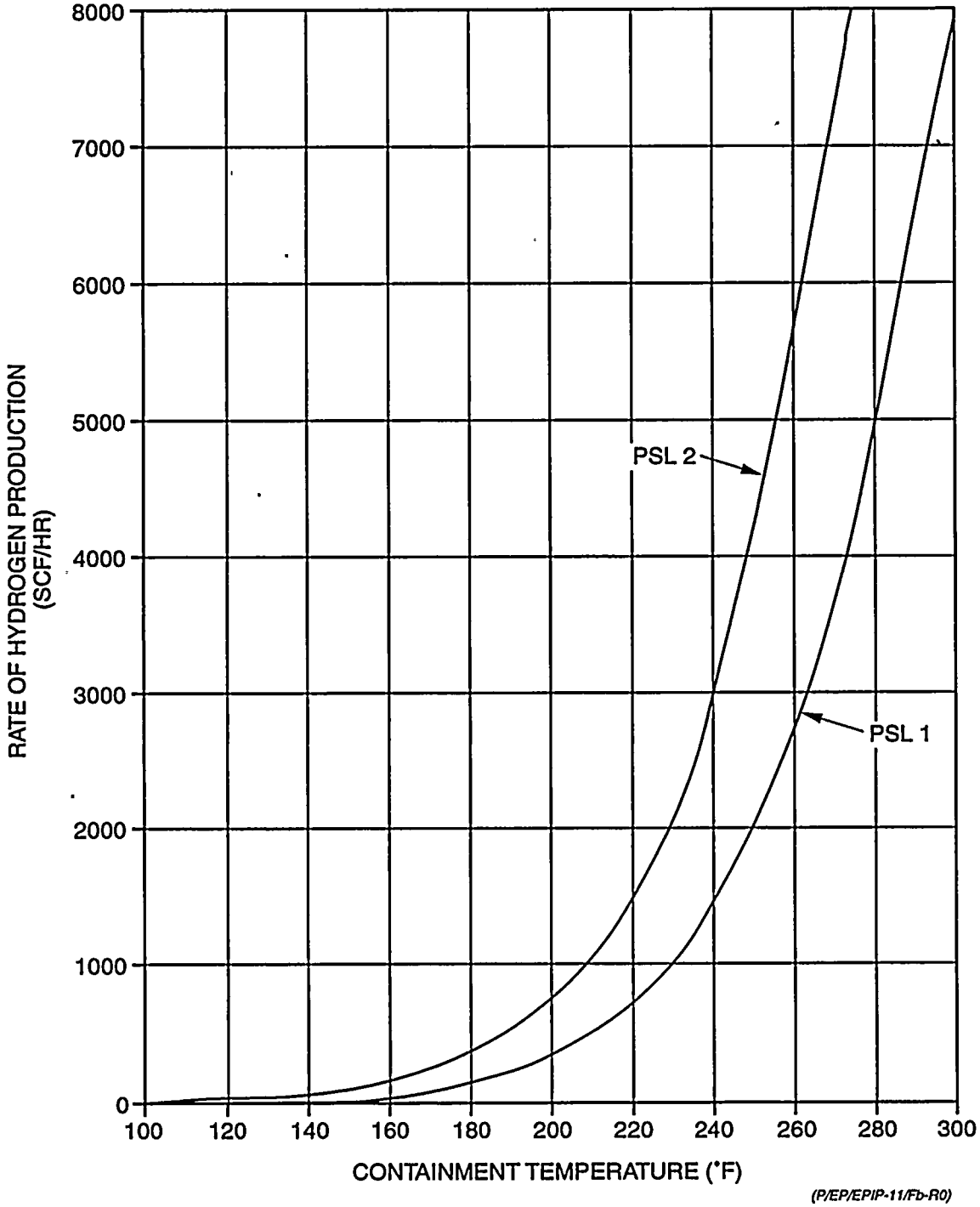
ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
(Page 11 of 14)

FIGURE 7-2. HYDROGEN PRODUCTION RATE FROM ALUMINUM AND ZINC vs TEMPERATURE



(P/EP/EPIP-11/Fb-R0)

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
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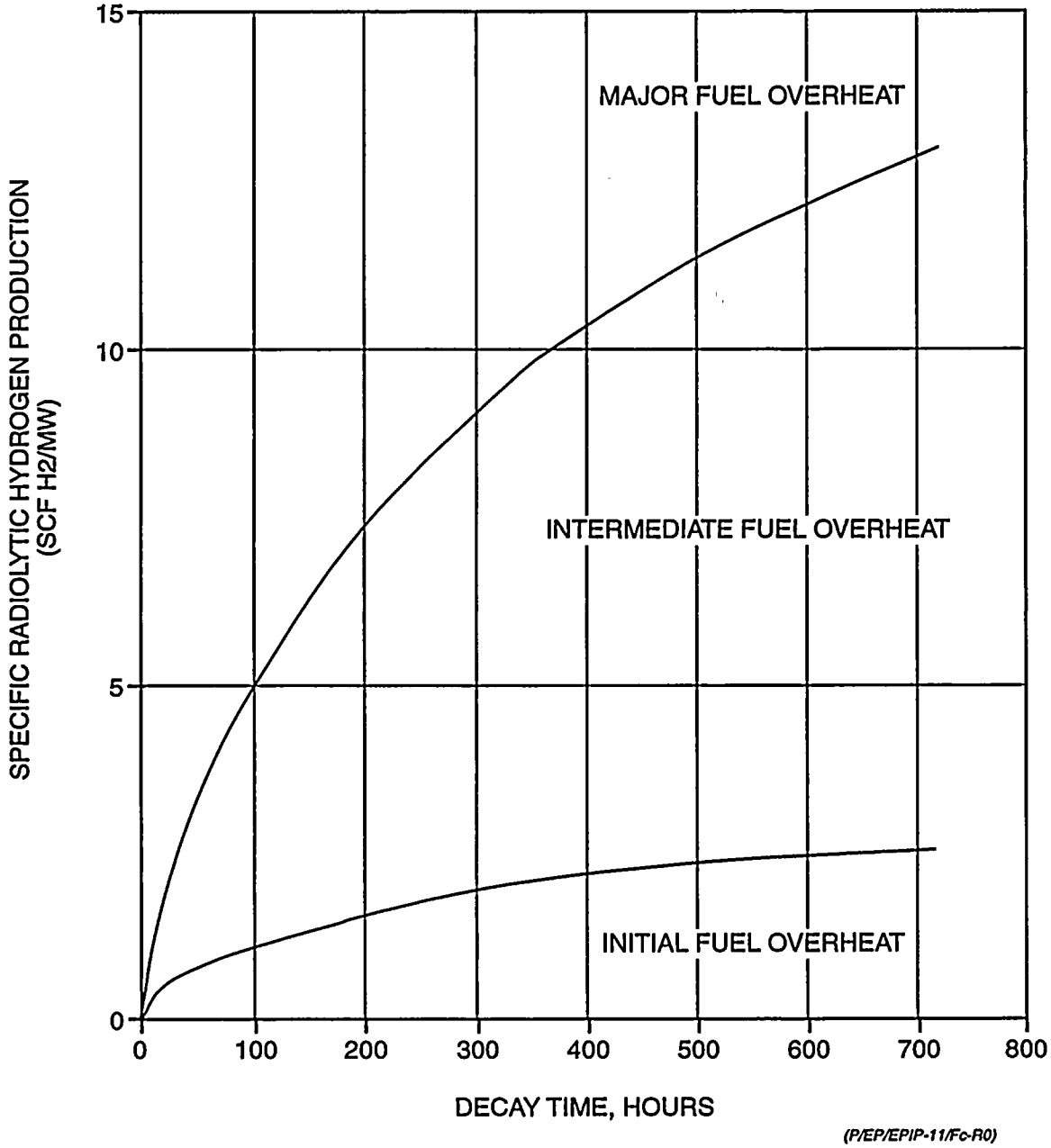
FIGURE 7-3. SPECIFIC RADIOLYTIC HYDROGEN PRODUCTION VS DECAY TIME



(P/EP/EPIP-11/Fc-R0)

ATTACHMENT 7
PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN
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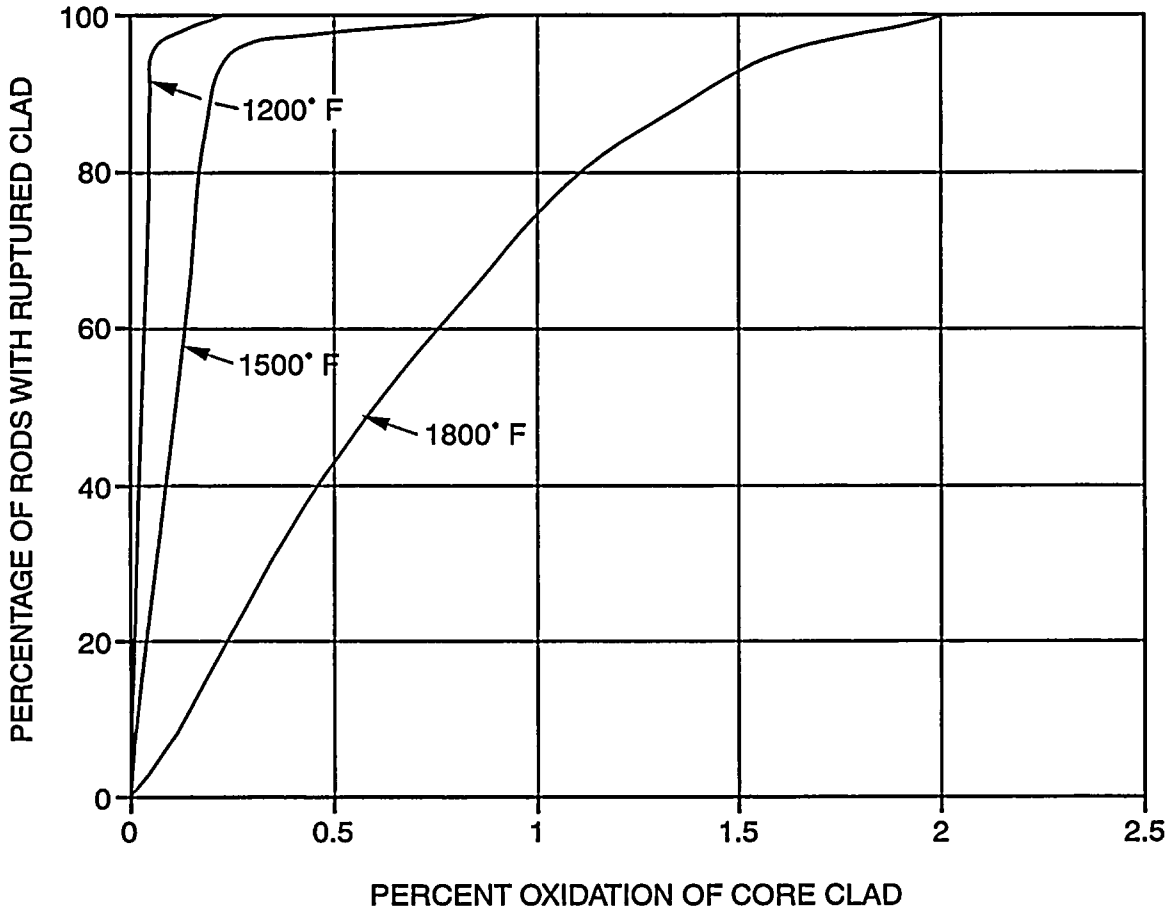
FIGURE 7-4. PERCENT OF FUEL RODS WITH RUPTURED CLAD VS. PERCENTAGE OF CORE CLAD OXIDATION

When The Pressure Is:	Use The Curves Labeled:
P less than or equal to 100 psia	1200° F
P is between 100 and 1200 psia	1500° F
P is between 1200 and 1650 psia	1800° F



ATTACHMENT 7

PRELIMINARY ESTIMATE OF CORE DAMAGE USING HYDROGEN

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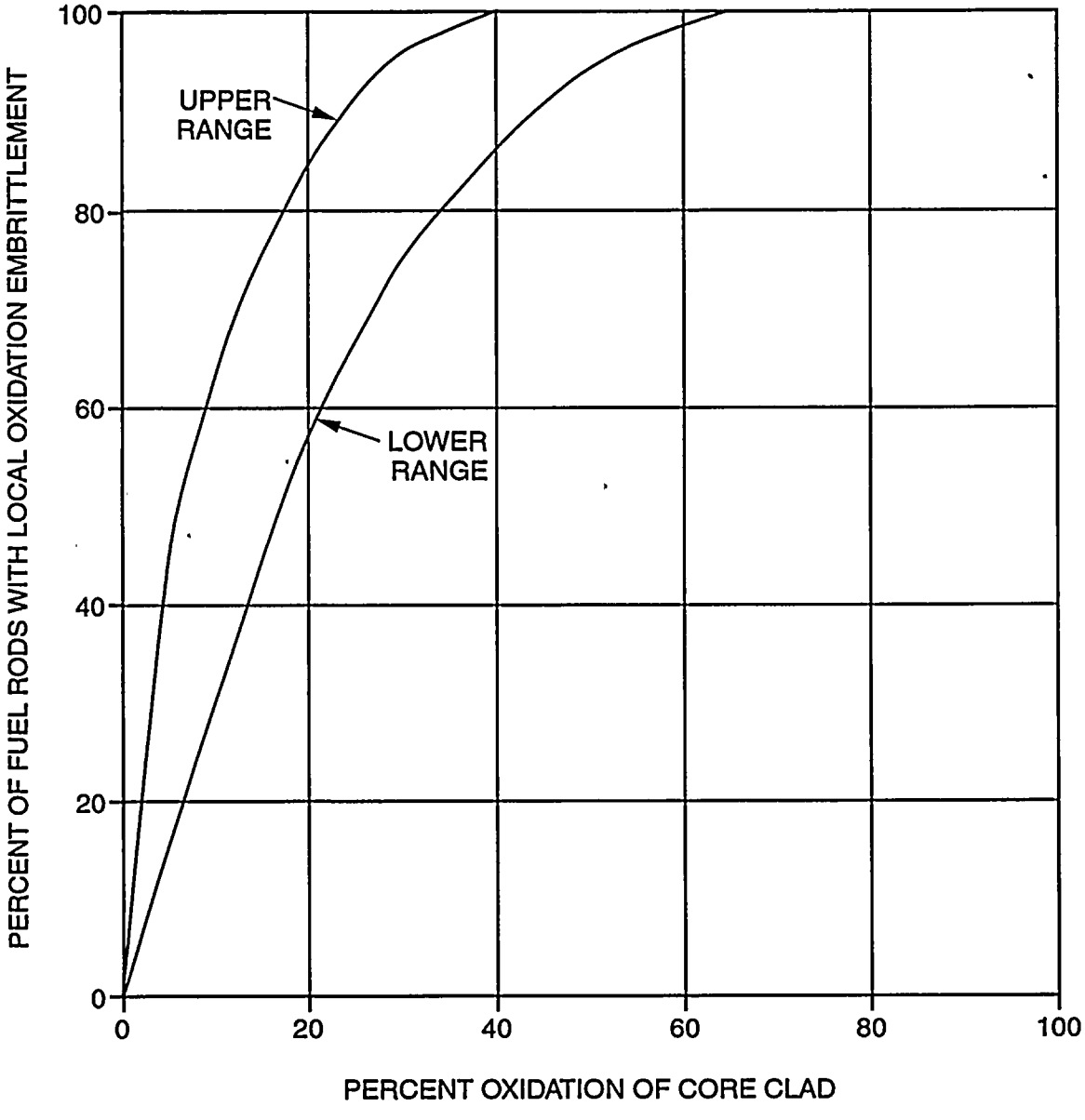
FIGURE 7-5. OXIDATION EMBRITTLEMENT VS TOTAL CORE OXIDATION

ST. LUCIE UNITS 1 & 2



(P/EP/EPIP-11/Fo-R0)

/R2

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 1 of 17)

1. Purpose

This section provides a method under post-accident plant conditions to determine the type and degree of reactor core damage which may have occurred by using fission product isotopes measured in samples obtained from the Post-Accident Sampling System (PASS). There are three factors considered in this section which are related to the specific activity of the samples. These are (1) the identity of those isotopes which are released from the core, (2) the respective ratios of the specific activity of those isotopes, and (3) the percent of the source inventory at the time of the accident which is observed to be present in the samples. The resulting observation of core damage is described by one or more of the ten categories of fuel damage in Table 1 in Attachment 1.

2. Definitions

A. Fuel Damage

For the purpose of this methodology, fuel damage is defined as a progressive failure of the material boundary to prevent the release of radioactive fission products into the Reactor Coolant, starting with a penetration in the zircaloy cladding.

B. Source Inventory

The source inventory is the total quantity of fission products expressed in Curies of each isotope present in either source, the fuel pellets or the fuel rod gas gap.

3. Precautions and Limitations

A. The methodology in this section relies upon samples taken from multiple locations inside the containment building to determine the total quantity of fission products available for release to the environment. The amount of fission products present at each sample location may be changing rapidly due to transient plant conditions. Therefore, it is recommended that the samples should be obtained within a minimum time period and if possible, under stabilized plant conditions. Samples obtained during rapidly changing plant conditions should not be weighed heavily into the assessment of core damage.

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 2 of 17)

3. Precautions and Limitations (continued)

   B. A number of factors influence the reliability of the chemistry samples upon which this section is based. Reliability is influenced by the ability to obtain representative samples due to incomplete mixing of the fluids, and equipment limitations.

      The accuracy achieved in the radiological analyses are also influenced by a number of factors. The equipment employed in the analysis may be subjected to high levels of radiation exposure over extended periods of time. Chemists are recommended to exercise considerable caution to minimize the spread of radioactive materials. Samples have the potential of being contaminated by numerous sources. Cooling or reactions may take place in the long sample lines. Therefore, the results obtained may not be representative of plant conditions. To minimize these effects, multiple samples should be obtained over an extended time period from each location.

4. Instructions

   A. Obtain and record the plant indications and source of indication requested on Data Sheet 8-1, Input Parameters. Because of transient conditions, the values should be recorded as close as possible to the time at which the radiological samples are obtained.

      1. Request sampling at the locations recommended for core damage assessment using the guidelines provided in Table 8-1, Sample Locations Recommended for Core Damage Assessment.

      2. Obtain results of sampling and analysis and record the required sample data, corrected to Standard Temperature and Pressure (STP), and time of sample collection on Data Sheet 8-1, Input Parameters. All of the isotopes listed in Data Sheet 8-1, Input Parameters, may not be observed in the sample.

   B. Correct the sample specific activity at STP for decay back to the time of reactor trip following the instruction on Data Sheet 8-2, Record of Measured Specific Activity (Decay Corrected).

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 3 of 17)

4. Instructions (continued)

C. Identification of the Fission Product Release Source

1. Calculate the ratios for each noble gas and iodine isotope using the specific activities obtained in Step 4. Record these ratios on Data Sheet 8-3, Record of Fission Product Release Source Identification.

2. Determine the source of release (gas gap or fuel pellet) by comparing the results obtained in Step 4.C.1 to the predicted ratios provided in Data Sheet 8-3, Record of Fission Product Release Source Identification. An accurate comparison is not anticipated. Within the accuracy of this methodology, it is appropriate to select as the source of release, that ratio which is closest to the value obtained in Step 4.C.1.

D. Quantitative Release Assessment

1. Calculate the total quantity of fission products found in the RCS per the instructions on Data Sheet 8-4, Quantitative Release Assessment Worksheet.

2. Calculate the quantity of fission products found in the containment building sump per the instructions on Data Sheet 8-4, Quantitative Release Assessment Worksheet.

3. Calculate the quantity of fission products found in the containment building atmosphere per the instructions on Data Sheet 8-4, Quantitative Release Assessment Worksheet.

4. The total quantity of fission products available for release to the environment is equal to the sum of the values obtained from each sample location (liquid and gas) as recorded on Data Sheet 8-5, Record of Core Release Inventory.

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 4 of 17)

4. Instructions (continued)

E. Plant Power Correction

The quantitative release of the fission products is expressed as the percent of the source inventory at the time of the accident. The equilibrium source inventories are to be corrected for plant power history.

1. Steady State Power Correction

To correct the source inventory for the case in which plant power level has remained constant for a period greater than four radioactive half-lives, complete Data Sheet 8-6, Record of Transient Power Correction. Half-lives are included in Data Sheet 8-2, Record of Measured Specific Activity (Decay Corrected).

2. Transient Power Correction

To correct the source inventory for the case in which plant power level has not remained constant prior to reactor trip, follow the instructions of Data Sheet 8-7, Record of Transient Power Correction, where the transient Power Correction Factor is defined as:

$$PCF = \frac{1}{100} \sum P_j \ (1-e^{-\lambda t_j}) \ e^{-\lambda t_j^{\circ}}$$

Where P_j = Steady reactor power in time period j

t_j = duration of time period j (sec)

t_j° = time from reactor trip to end of time period j (sec)

λ = isotope decay constant from Data Sheet 8-2, Record of Measured Specific Activity (Decay Corrected)

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 5 of 17)

4. Instructions (continued)

F. Comparison of Measured Data with Source Inventory

The total quantity of fission products available for release to the environment obtained in Step 4.D.4, Data Sheet 8-5, Record of Core Release Inventory, is compared to the source inventory corrected for plant power history obtained in Step 4.E, Data Sheet 8-6, Record of Steady State Power Correction, or 8-7, Record of Transient Power Correction. This comparison is made by dividing the total quantity available for release by the power corrected source inventory. Record this percentage on Data Sheet 8-8, Record of Percent Release.

G. Conclusion

The conclusion on core damage is made using the three parameters developed above. These are:

1. Identification of the fission product isotopes which most characterize a given sample, Step 4.A, Data Sheet 8-1, Input Parameters.

2. Identification of the source of the release, Step 4.C, Data Sheet 8-3, Record of Fission Product Release Source Identification.

3. Quantity of fission product available for release to the environment expressed as a percent of source inventory, Step 4.F, Data Sheet 8-8, Record of Percent Release.

Knowledgeable judgement is used to compare the above three parameters to the definitions of the ten NRC Categories of Fuel Damage found in Table 1, Characteristic Isotopes, in Attachment 1. Core damage is not anticipated to take place uniformly. Therefore, when evaluating the three parameters listed above, the methodology in this section is anticipated to yield a combination of one or more of the ten categories defined in Table 1, Characteristic Isotopes, in Attachment 1. These categories will exist simultaneously.

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 6 of 17)
TABLE 8-1. SAMPLE LOCATIONS RECOMMENDED FOR CORE DAMAGE ASSESSMENT
(Reference Step 4.1.A)

Accident Scenario Known	RCS Hot Leg	RCS Pressurizer	Containment Sump (*)	Containment Atmosphere	Shutdown Cooling System	Steam Generator Secondary
Small Break LOCA, Reactor Power greater than 1 percent	Yes	Yes	---	Yes	Yes	---
Small Break LOCA, Reactor Power less than 1 percent	Yes	Yes	---	---	Yes	---
Small Steam Line Break	Yes	Yes	---	---	---	---
Large Break LOCA, Reactor Power greater than 1 percent	Yes	---	Yes	Yes	Yes	---
Large Break LOCA, Reactor Power less than 1 percent	---	---	Yes	Yes	Yes	---
Large Steam Line Break	Yes	---	---	Yes	---	---
Steam Generator Tube Rupture	Yes	---	---	---	---	Yes

* Available only on recirculation

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 7 of 17)
DATA SHEET 8-1. INPUT PARAMETERS
(Page 1 of 2)

Unit: _____

Reactor Coolant System:

Pressure _____ PSIG

Temperature (T_{avg}) _____ °F

Reactor Vessel Level Shows: Full Void Below Recorder
(Circle One)

Pressurizer Level _____Percent _____

Containment Building:

Atmosphere Pressure _____ PSIG _____

Atmosphere Temperature _____ °F _____

Prior 30 Days Power History:

Power, Percent	Duration, Days
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Estimated Average Power Level During Last 30 Days _____ Percent

Estimated Average Power Level During Last 4 Days _____ Percent

Time of Reactor Trip: Date: ____/____/____ Time: _____

Change in volume of RWT: _____ gal. Time: _____

Change in volume of BAMT: _____ gal. Time: _____

SIT injected (yes / no): _____

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 8 of 17)
DATA SHEET 8-1. INPUT PARAMETERS
(Page 2 of 2)

RADIONUCLIDE DATA
(Reference Step 4)

Unit: _____ Sample Number: _____

Sample Location (RCS, Sump, Containment): _____

Time of Sample Collection: _____

Isotope	Measured Specific Activity at STP A(μCi/cc)
Kr 87	
Xe-131m	
Xe-133	
I-131	
I-132	
I-133	
I-135	
Cs-134	
Rb-88	
Te-129	
Te-132	
Sr-89	
Ba-140	
La-140	
La-142	
Pr-144	

NOTE: N/I if not identified.

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-2. RECORD OF MEASURED SPECIFIC ACTIVITY (DECAY CORRECTED)
(Reference Step 4.B)

Unit: _____ Time of Reactor (Rx) Trip, Data Sheet 8-1, Input Parameters (Page 1 of 2): .

Sample Number: _____

Sample Location (RCS, Sump, Containment): _____

Time of Sample Collection: _____

Elapsed Time, t (Rx Trip to Sample): _____ sec.

Isotope	Half Life	Decay Constant λ (1/sec)	Measured Specific Activity @ STP A (μCi/cc)	Decay Corrected Specific Activity, Ao (μCi/cc)
Kr 87	76m	1.5 E-4		
Xe-131m	12d	6.7 E-7		
Xe 133	5.4d	1.5 E-6		
I-131	8d	9.9 E-7		
I-132	2h	8.4 E-5		
I-133	21h	9.3 E-6		
I-135	6.8h	2.9 E-5		
Cs-134	2yr	1.1 E-8		
Rb-88	2m	6.5 E-4		
Te-129	70m	1.7 E-4		
Te-132	78h	2.5 E-6		
Sr-89	52.7d	1.6 E-7		
Ba-140	12.8d	6.3 E-7		
La-140	40h	4.8 E-6		
La-142	90m	1.2 E-4		
Pr-144	17.4m	6.7 E-4		

$$A_o = \frac{A}{e^{-\lambda t}}$$

Where: A and λ are as above, and t = time period in seconds from reactor trip to sample collected.

NOTE: N/I if not identified.

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
(Page 10 of 17)
DATA SHEET 8-3. RECORD OF FISSION PRODUCT RELEASE SOURCE IDENTIFICATION
(Reference Step 4.C.1)

Unit: _____ Sample Number: _____

Location: _____

Isotope	Decay Corrected Specific Activity Data Sheet 8-2, µCi/cc	Calculated Isotope Ratio*	Activity Ratio in Fuel Pellet Inventory**	Activity Ratio in Gas Gap Inventory**	Identified Source (Gas Gap or Fuel Pellet)
Kr 87			0.2	less than 0.001	
Xe 131m			0.003	0.001 - 0.003	
Xe 133		1.0	1.0	1.0	N/A
I 131		1.0	1.0	1.0	N/A
I 132			1.4	0.01 - 0.05	
I 133			2.0	0.5 - 1.0	
I 135			1.8	0.1 - 0.5	

* *Noble Gas Ratio* - $\frac{\textit{Decay Corrected Noble Gas Specific Activity}}{\textit{Decay Corrected Xe-133 Specific Activity}}$

Iodine Ratio - $\frac{\textit{Decay Corrected Iodine Isotope Specific Activity}}{\textit{Decay Corrected I-131 Specific Activity}}$

** Table 3.3 of Reference 2.1.2

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-4. QUANTITATIVE RELEASE ASSESSMENT WORKSHEET
(Reference Step 4.D)
(Page 1 of 2)

RCS ACTIVITY ($A_{T,RCS}$)

RCS T_{avg} _____°F (At or Near Time of Sample)

Vessel Level Indication (Full, Void, Below Recorder): _____

IF FULL OR VOID, perform the following calculation for each isotope measured. IF BELOW RECORDER, use the Containment Sump calculation below instead.

($A_{T,RCS}$) (C_i) = Ao (µCi/cc) x RCS Volume x 1.0 E-06 (Ci/µCi)

Where: Ao = decay corrected specific activity of RCS sample (Data Sheet 8-2, Record of Measured Specific Activity (Decay Corrected))

RCS volume = Water Volume x Density Ratio at RCS Tavg (Figure 7-1, Ratio of H_2O Density at STP vs. Temperature). PSL1 water volume is 2.945 E+08 cc and PSL2 water volume is 2.889 E+08 cc.

Enter results in Data Sheet 8-5, Record of Core Release Inventory ($A_{T, RCS}$)

SUMP ACTIVITY ($A_{T,sump}$)

Determine sump water volume by adding the following:

			PSL 1	PSL 2
RCS Volume	=	_____ gal	58,300	57,400
SIT Injected Volume	= +	_____ gal	34,049	46,564
BAMT Injected Volume	= +	_____ gal	(Data Sheet C-3.A)	
RWT Volume Change	= +	_____ gal	(Data Sheet C-3.A)	

V_s = Total Sump Volume = _____ gal x 3785 cc/gal = _____ cc

($A_{T,sump}$) = A_o (µCi/cc) x V_s x 1.0 E-06 (Ci/µCi)

Where A_o = decay corrected specific activity of SUMP sample (Data Sheet 8-2, Record of Measured Specific Activity (Decay Corrected))

Enter results in Data Sheet 8-5, Record of Core Release Inventory ($A_{T,sump}$).

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DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-4. QUANTITATIVE RELEASE ASSESSMENT WORKSHEET
(Reference Step 3.D.4)
(Page 2 of 2)

CONTAINMENT ACTIVITY ($A_{T,cont}$)

Calculate Containment Volume in cc, including pressure and temperature corrections.

$$V_c = \textit{Containment Volume (cc)} = 7.096\ E10 \times \frac{14.7}{(P1 + 14.7)} \times \frac{(T1 + 460)}{(32 + 460)}$$

Where: P1 = Containment pressure in psig (Data Sheet 8-1, Input Parameters)
T1 = Containment temperature in °F (Data Sheet 8-1, Input Parameters)

$(A_{T,cont})$ = Ao (µCi/cc) x V_c x 1.0 E-6 (Ci/µCi)

Where: Ao = Decay corrected specific activity for containment sample (Data Sheet 8-2, Record of Measured Specific Activity (Decay Corrected))

Enter results in Data Sheet 8-5, Record of Core Release Inventory ($A_{T,cont}$).

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-5. RECORD OF CORE RELEASE INVENTORY
(Reference Step 4.D.4)

Unit: _____

Isotope	Reactor Coolant Sample $A_{T,RCS}$ (Ci)	Containment Sump Sample + $A_{T,sump}$ (Ci)	Containment Atmosphere Sample + $A_{T,cont}$ (Ci)	= Total Quantity (Ci)
Kr 87				
Xe 131m				
Xe 133				
I 131				
I 132				
I 133				
I 135				
Cs 134				
Rb 88				
Te 129				
Te 132				
Sr 89				
Ba 140				
La 140				
La 142				
Pr 144				

Total Quantity (Ci) = $A_{T,RCS} + A_{T,sump} + A_{T,cont}$

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-6. RECORD OF STEADY STATE POWER CORRECTION
(Reference Step 4.E.1)

Unit: _____ Average 30 Days Power Level: _____
Average 4 Days Power Level: _____

Isotope	Fuel History Grouping	Power Correction Factor x	Equilibrium Source Inventory*	= Power Corrected Source Inventory
Gas Gap Inventory				
Kr 87	2		1.48 E+05	
Xe 131m	1		4.13 E+04	
Xe 133	1		5.06 E+06	
I 131	1		6.98 E+06	
I 132	2		1.36 E+06	
I 133	2		5.58 E+06	
I 135	2		3.13 E+06	
Fuel Pellet Inventory				
Kr 87	2		3.67 E+07	
Xe 131m	1		7.09 E+05	
Xe 133	1		1.28 E+08	
I 131	1		6.01 E+07	
I 132	2		9.61 E+07	
I 133	2		1.34 E+08	
I 135	2		1.27 E+08	
Cs 134	1		7.73 E+06	
Rb 88	2		5.28 E+07	
Te 129	2		2.09 E+07	
Te 132	1		9.60 E+07	
Sr 89	1		6.98 E+07	
Ba 140	1		1.21 E+08	
La 140	1		1.29 E+08	
La 142	2		1.11 E+08	
Pr 144	2		8.46 E+07	

Corrected Source Inventory = Power Correction Factor x Equilibrium Source Inventory.

* Values from Reference 2.1.4.

Group 1 Power Correction Factor = Average Level for Prior 30 Days / 100.

Group 2 Power Correction Factor = Average Level for Prior 4 Days / 100.

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-7. RECORD OF TRANSIENT POWER CORRECTION
(Reference Step 3.D.5.B)

Unit: _____

Prior 30 Days Power History:

Power (Percent)	Duration (Days)	Time to Trip (Days)
_____	_____	_____
_____	_____	_____
_____	_____	_____

Isotope	Equilibrium Source Inventory*	x	Power Correction Factor	=	Power Corrected Source Inventory
Gas Gap Inventory					
Kr 87	1.48 E+05				
Xe 131m	4.13 E+04				
Xe 133	5.06 E+06				
I 131	6.98 E+06				
I 132	1.36 E+06				
I 133	5.58 E+06				
I 135	3.13 E+06				
Fuel Pellet Inventory					
Kr 87	3.67 E+07				
Xe 131m	7.09 E+05				
Xe 133	1.28 E+08				
I 131	6.01 E+07				
I 132	9.61 E+07				
I 133	1.34 E+08				
I 135	1.27 E+08				
Cs 134	7.73 E+06				
Rb 88	5.28 E+07				
Te 129	2.09 E+07				
Te 132	9.60 E+07				
Sr 89	6.98 E+07				
Ba 140	1.21 E+08				
La 140	1.29 E+08				
La 142	1.11 E+08				
Pr 144	8.46 E+07				

Corrected Source Inventory = Power Correction Factor x Equilibrium Source Inventory.

* Values from Reference 2.1.4

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DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-8. RECORD OF PERCENT RELEASE
(Reference Step 4.F)
(Page 1 of 2)

Unit: _____

Isotope	Total Quantity Available for Release (Ci) (Data Sheet 8-5)	Power Corrected Source Inventory (Ci) (Data Sheet 8-6 or 8-7)	Percent*
Gas Gap Inventory			
Kr 87			
Xe 131m			
Xe 133			
I 131			
I 132			
I 133			
I 135			
Fuel Pellet Inventory			
Kr 87			
Xe 131m			
Xe 133			
I 131			
I 132			
I 133			
I 135			
Cs 134			
Rb 88			
Te 129			
Te 132			
Sr 89			
Ba 140			
La 140			
La 142			
Pr 144			

* Percent = (Total Quantity Available for Release + Power Corrected Source Inventory) x 100

ATTACHMENT 8
DETAILED RADIOLOGICAL ANALYSIS
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DATA SHEET 8-8. RECORD OF PERCENT RELEASE
(Reference Step 4.F)
(Page 2 of 2)

Summary of Results:

_____
_____
_____
_____
_____
_____
_____

NOTE

Compare percent clad damage, percent fuel overheat, and percent fuel melt results obtained from the radionuclide analysis to those obtained from the auxiliary indicators analyses.

If results are in agreement, the core damage assessment is complete. If the results are not in agreement, a re-check of both analyses may be performed or certain indications may be discounted based on engineering judgement.

Prepared by: _____ Date: ____/____/____

Reviewed by: _____ Date: ____/____/____

Approved by: _____ Date: ____/____/____

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.	Current Rev. No.	Effective Date:
EPIP-12	8	12/20/00

Title:

MAINTAINING EMERGENCY PREPAREDNESS - RADIOLOGICAL EMERGENCY PLAN TRAINING

PSL CONTROL COPY 68 PROCEDURE PRODUCTION

Responsible Department: **EMERGENCY PREPAREDNESS**

Revision Summary

Revision 8 - THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Removed training requirement for FAPDT (First-Aid Personnel Decontamination Tram) training for Chemistry personnel, added statement regarding Security First Aid Training, and made editorial and administrative changes. (J. R. Walker, 12/07/00)

AND

Added reference to NP-912, revised GET procedure number, updated trng. mgr. title,, revised annual retraining to allow credit for drill/exercise participation, identified use of PSL/PTN common training modules, deleted RM training module from qual req for ECO and NDDO and made administrative changes. (J. R. Walker, 10/13/00)

Revision 7 - Eliminated backshift paramedic position due to first responder training of Security personnel. (G. Varnes, 08/08/00)

Revision 6 - Added controls for pagers. (Donna Calabrese, 04/27/00)

Revision 5 - Removed PAR training from the qualification requirements for the TSC Dose Assessor position. (J. R. Walker, 12/03/99)

Revision 4 - Changed title throughout (Protection Services Manager) and addressed changes prompted by use of PQD as official training database. (J. R. Walker, 07/08/99)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
8	12/07/00	R. G. West Plant General Manager	12/07/00
		N/A Designated Approver	

S___OPS
DATE
DOCT PROCEDURE
DOCN EPIP-12
SYS
COMP COMPLETED
ITM 8

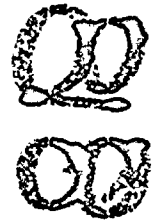

TABLE OF CONTENTS

1.0 PURPOSE

1.1 This procedure provides the Emergency Plan (E-Plan) training requirements for site personnel and personnel in the St. Lucie Plant Emergency Response Organization (ERO).

1.2 In order to maintain emergency preparedness, personnel should be familiar with certain pre-planned actions specified in the Emergency Plan Implementing Procedures (EPIPs). The primary objectives of this training are as follows:

1. Familiarize appropriate individuals with the E-Plan and related EPIPs.

2. Instruct individuals in their specific duties to ensure effective and expeditious action during an emergency.

3. Periodically present significant changes in the scope or content of the E-Plan and the EPIPs.

4. Provide annual retraining to ensure that personnel are familiar with their emergency duties and responsibilities.

5. Provide the various emergency organization groups with the required training that will ensure an integrated and prompt response to an emergency situation.

1.3 The annual training cycle normally occurs in the first quarter of each year.

1.4 The E-Plan Training Review Committee provides for the review and evaluation of changes, the impact on training, and the determination if training is needed prior to the next cycle.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 References

§1 1. St. Lucie Plant Radiological Emergency Plan (E-Plan)

¶1 2. QI 1-PR/PSL-1, Site Organization.

¶2 3. QI-17-PSL-1, Quality Assurance Records.

¶4 4. ADM-18.06, General Employee Training.

5. AP 1800022, Fire Protection Plan.

6. ADM-11.11, Severe Accident Management Guidelines Program Administration

7. St. Lucie Plant Emergency Response Directory.

8. NP-912, Respiratory Qualifications Requirements

2.2 Records Required

¶2 Records documenting the Emergency Plan Training received by individuals are Quality Assurance records and shall be maintained in the plant files in accordance with QI-17-PSL-1, Quality Assurance Records.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.3 Commitment Documents

1. 10 CFR 50.47, Emergency Plans.
2. 10 CFR 50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities.
3. 10 CFR 26, Fitness for Duty.
4. NUREG 0737, 11.B.4, Training for Mitigating Core Damage

§2 5. NOV Response L-97-20, Violation II.C, Part 4A.

§3 6. NOV Response L-97-20, Violation II.C, Part 4B.

§4 7. NRC Inspection Report 96-18 URI P5.2

¶3 8. QAS-EMP-96-01, Finding 2

¶5 9. PMAI PM99-05-183 (Use and Update of the Personnel Qualification Database (PQD))

¶6 10. PMAI PM99-09-077, CR 99-1353 (Training requirements for TSC Dose Assessor)

¶7 11. CR 00-0544, Audit QSL-EP-00-02 (Discrepancies with Primary and Backup ERO Augmentation Processes)

3.0 RESPONSIBILITIES

3.1 The Site Training Manager is responsible for:

1. Designing, establishing, implementing and maintaining training programs for the St. Lucie Plant.
2. Ensuring initial orientation training is provided to permanently assigned new employees.

3.0 RESPONSIBILITIES (continued)

3.1 The Site Training Manager is responsible for: (continued)

3. Ensuring all Emergency Plan Training, both initial training and periodic retraining, is conducted and documented for the St. Lucie Plant ERO.

3.2 Protection Services Manager is responsible for:

¶1 **1.** Ensuring that a qualified Emergency Response Organization (ERO) is maintained in compliance with the St. Lucie Radiological Emergency Plan.

2. Coordinating emergency planning at the plant.

3.3 Emergency Preparedness is responsible for:

1. Establishing qualifications standards for ERO personnel.

¶7 **A.** Ensuring non-bargaining unit personnel pagers are correctly programmed.

2. Reviewing and approving the Emergency Plan Training Program.

§1 **3.** Offering training to each contracted local hospital, at least once each year.

A. The content of that training should consist of radiological controls, medical consideration of contaminated injuries, and other topics as appropriate.

§1 **4.** Offering training to each State and local emergency response agency, at least once each calendar year.

A. The content of that training should consist of an overview of normal and emergency plant operations and concepts of radiation protection, including protective actions.

B. This training may be in the form of a presentation, text, or other acceptable means.

3.0 RESPONSIBILITIES (continued)

3.3 Emergency Preparedness is responsible for: (continued)

5. Providing the table of Emergency Action Levels (EALs) to state and local officials for their review, on an annual basis.

6. Revising the St. Lucie Plant Emergency Response Directory (ERD) and the FPL Emergency Recall System (autodialer) database when notified via a form similar to Attachment 1.

7. Providing a list of personnel designated to fill emergency response positions and requiring training per this procedure, to the Training Department.

8. Removing individuals who fail to maintain training qualifications from the ERD and the FPL Emergency Recall System (autodialer) database when notified by the appropriate department head or the Training Department.

9. Providing guidelines to plant management to assist in identifying the appropriate number of ERO personnel for each ERO position.

10. Notifying the Site Training Manager if changes in the E-Plan and/or EPIPs justify additional training for ERO personnel.

11. Chairing EP Training Review Committee Meetings.

3.4 Each Manager and Department Head is responsible to ensure that each ERO member under his/her supervision attends training in accordance with Attachments 2 and 3, and remains fully qualified at all times to perform his/her assigned emergency response duties.

1. Ensure personnel in his/her department who are assigned an on-site position in the ERO maintain unescorted access to the Protected Area and Radiation Controlled Area.

2. Ensure changes in his/her employees' status which would impair or limit the ability to perform emergency response duties be promptly reported to the Protection Services Manager (directly or through EP).

A. Provide alternate personnel to be trained to fill open positions.

3.0 RESPONSIBILITIES (continued)

3.4 (continued)

¶7 **3.** Ensure that non-bargaining unit personnel have pagers.

3.5 The Protection Services Manager is responsible to ensure that Security personnel maintain EP training qualifications per this procedure.

3.6 ERO members, supervisors, training instructors, HP dosimetry personnel and medical facility staff are responsible for promptly reporting any failure in training, testing or other condition, which would disqualify an emergency responder, to the Protection Services Manager (directly or through EP).

3.7 Each ERO member is responsible for advising the Protection Services Manager (directly or through EP) when changes in status occur that could impact ERO participation.

4.0 DEFINITIONS

4.1 **Annual** - occurring once per calendar year (January 1 through December 31).

4.2 **Duty Call Supervisor (DCS)** - is a specifically designated and trained supervisor responsible for assisting the Emergency Coordinator in making notifications and calls to the Emergency Response Organization.

4.3 **Emergency Plan** - formally known as the St. Lucie Plant Radiological Emergency Plan, establishes the requirements for training the Emergency Response Organization; also referred to as the Plan or E-Plan.

4.4 **Emergency Planning (EP)** - activities undertaken to satisfy the commitments of the Emergency Plan, used interchangeably with Emergency Preparedness.

4.5 **Emergency Response Directory (ERD)** - formally known as the St. Lucie Plant Emergency Response Directory, provides a list of the current (revised on a quarterly basis) Emergency Response Organization personnel.

4.0 DEFINITIONS (continued)

4.6 **Emergency Response Organization (ERO)** - personnel trained and qualified to provide specific emergency response functions as defined by their individual positions. Persons can become members of the Emergency Response Organization by following the instructions outlined in this procedure.

4.7 **EP Training Review Committee (TRC)** - representatives from Emergency Preparedness, Training, and other departments who meet periodically to discuss training issues related to the Emergency Response Organization.

4.8 **SAMG** - Severe Accident Management Guidelines.

5.0 INSTRUCTIONS

NOTE

- In the event of an emergency, the Emergency Coordinator or Recovery Manager has the authority to assign personnel to positions for which they have not received the required Emergency Plan training, if that action is prudent in order to protect the health and safety of the public and plant personnel.
- The training requirements listed in this procedure are for the purpose of emergency preparedness and are in addition to other training required to hold a position, e.g., Nuclear Plant Supervisor (NPS).
- Personnel filling the position of Emergency Coordinator, TSC OPS Coordinator, or EOF RM OPS Advisor/Logkeeper should have SRO level knowledge (i.e., current or previous SRO license or SRO equivalent training such as Engineering Management Operations Training (EMOT)).

5.1 Initial Training

NOTE

- Initial Training is intended for personnel who are new to the ERO and is designed to orient the individual to his/her function and responsibilities within the ERO.
- Drill participation is not required prior to qualifying for an ERO position.
- It may be desirable to allow persons filling the following positions to participate in and/or observe their position in a drill prior to being assigned to the ERO:
  - Emergency Coordinator
  - Recovery Manager
  - TSC Supervisor
  - OSC Supervisor
  - TSC Coordinator with the OSC
  - OSC Coordinator with the TSC

$§_1$ 1. Initial Orientation Training (Plant Access Training - PAT) shall be provided to permanently assigned new employees.

5.0 INSTRUCTIONS (continued)

5.1 Initial Training (continued)

1. (continued)

A. Training includes information describing:

1. Actions to be taken by an individual who discovers an emergency condition.

2. Location of assembly areas.

3. Identification of emergency alarms.

4. Action to be taken upon hearing alarms.

¶4 **B.** PAT Training is conducted in accordance with ADM-18.06, General Employee Training.

§3¶3 **2.** Personnel shall complete the Initial Training requirements identified in Attachment 2, ERO Initial Training Matrix, prior to being assigned to the ERO.

3. To become a member of the ERO, an individual should fill out Attachment 1, Emergency Response Organization Change Request.

A. Complete the personal information (originator section).

B. Obtain Department Head approval.

C. Forward the Attachment to Emergency Preparedness Supervisor.

4. Emergency Preparedness (EP) should authorize the training of personnel designated to become new members of the ERO on Attachment 1.

5.0 INSTRUCTIONS (continued)

5.1 Initial Training (continued)

5. Training Department personnel should document completion of required training on Attachment 1 and forward to the Emergency Preparedness Supervisor when new members complete the training requirements as identified in Attachment 2, ERO Initial Training Matrix.

6. EP should make changes to the Emergency Recall System (ERS) and the Emergency Response Directory (ERD) upon receipt of Attachment 1 from Technical Training.

END OF SECTION 5.1

5.0 INSTRUCTIONS (continued)

NOTE

Retraining is intended to ensure that ERO personnel maintain the level of skill and knowledge necessary to accomplish their emergency duties. Retraining may be accomplished through a combination of programmed instruction and/or participation in drills or exercises.

5.2 Annual Retraining

§1 1. Annual retraining shall be provided at least once per calendar year.

2. Annual retraining may be accomplished by classroom training or drill/exercise participation.

¶3 A. Annual retraining shall include a review of significant changes in the scope or content of the Emergency Plan or applicable Emergency Plan Implementing Procedures.

¶3 B. Classroom training shall include topics identified in Attachment 3, ERO Annual Retraining Matrix.

C. The EP Training Review Committee shall identify additional annual retraining topics, which may include:

- review of selected initial training topics
- industry operating experience
- a review of past drill/exercise performance problems

D. Drill participation shall include attendance at the pre-drill facility brief, participation as a player, controller or mentor and participation in the end of drill critique.

1. The EP Training Review Committee shall designate annual retraining topics and Attachment 3 topics for which drill/exercise participation will be an acceptable alternative.

E. Other training methodologies may be used on an as needed basis when approved by the EP Training Review Committee and the Site Training Manager.

5.0 INSTRUCTIONS (continued)

5.2 Annual Retraining (continued)

3. Individuals may challenge annual retraining examinations for topics not accounted for in drill/exercise participation.

4. Personnel who teach a class should receive credit for completion of that class at the discretion of the Site Training Manager.

> **NOTE**
> Deviation from this schedule requires the approval of the President, Nuclear Division.

$§_2$ **5.** Emergency Response Facility (ERF) drills shall be conducted at least four times per calendar year and should be conducted approximately once each quarter.

> **NOTE**
> It is the intent of the drill and exercise program that each ERO member have an opportunity to function in his/her position annually.

A. Participation in drills and exercises should be tracked by Emergency Preparedness Supervisor and forwarded to Technical Training.

1. Drill rosters should be reviewed and used to record participants in all Emergency Response Facilities (ERFs) including the Emergency News Center (ENC).

2. Drill critiques should list Players, Controllers, Evaluators, Mentors and Observers for each facility.

3. Drill participation should be recorded in the training database.

5.0 INSTRUCTIONS (continued)

5.2 Annual Retraining (continued)

5. (continued)

§4¶3 **B.** Personnel should be rotated through drills and exercises with the goal of having as many as feasible participate in at least one drill or exercise per year. This applies to all ERO members, including those who are NOT in the Nuclear Division.

1. Participation in a drill or exercise shall be recognized if an ERO member functions as a Player, Mentor or Controller.

2. Failure to participate in an ERF drill annually may result in remedial training as determined by the Training Manager and Protection Services Manager.

END OF SECTION 5.2

5.0 INSTRUCTIONS (continued)

¶3 **5.3** Loss of ERO Qualifications

1. If an individual fails an initial training topic, Then that individual shall not be assigned to the ERO until he/she has successfully met requirements.

2. If an individual fails Plant Access Training (PAT), Radiation Controlled Area Training (RCAT), or fails to maintain qualifications for use of respiratory protection (as specified in Attachment 3), Then he/she shall promptly be removed from the ERO.

3. If an individual fails an annual retraining evaluation, the Site Training Manager shall notify the Emergency Preparedness Supervisor or designee of the results.

   A. The individual should then be removed from the ERS and ERD until appropriate remedial training, as recommended by the Site Training Manager and approved by the Emergency Preparedness Supervisor, has been completed.

4. The individual should complete remedial training at the earliest opportunity.

END OF SECTION 5.3

5.0 INSTRUCTIONS (continued)

5.4 Training for Security Personnel

1. Security personnel shall receive initial training and annual retraining for emergency response in accordance with this procedure.

2. Security personnel shall receive First Aid Team training in accordance with Security procedures.

END OF SECTION 5.4

5.0 INSTRUCTIONS (continued)

5.5 Fire Brigade

1. Fire Brigade training is covered by the Fire Protection Plan, AP 1800022.

END OF SECTION 5.5

5.0 INSTRUCTIONS (continued)

5.6 Training Exemptions and Substitutions

1. No specific Emergency Plan Training is required for ERO positions whose emergency job functions are similar to normal job functions. Examples of these positions include:

   A. Emergency News Center / Corporate Communications Staff

   B. Governmental Affairs Staff

   C. Risk Manager

   D. Regulatory Affairs

2. Personnel who participate in a drill or attend annual requalification training at PTN may receive credit/satisfy the requirements for drill participation and/or annual retraining as required by this procedure. ERO positions eligible to receive credit include (but are not limited to):

   A. Emergency Information Manager (EIM)

   B. Nuclear Division Duty Officer (NDDO)

   C. Emergency Control Officer (ECO)

END OF SECTION 5.6

ATTACHMENT 1
EMERGENCY RESPONSE ORGANIZATION CHANGE REQUEST

ORIGINATOR

NOTE
Personnel will not be assigned to an emergency response organization position until required training for that position is completed.

Originator:_____ Dept. _____

☐ Add ☐ Remove
☐ Change (Circle new info)

* Name: _____
Soc. Sec. No.: _____
* Position number: _____
* Position: _____
Work Phone: _____
Home Phone: _____
Pager: _____
Other: _____

DEPT HEAD

¶7

NOTE
Non-bargaining unit personnel will not be assigned to a position if they do not have a pager.

Department Head/Supv. Signature:_____ Date: ___/___/___

EP

Authorization for ERO training

EP Supervisor Date: ___/___/___

TRAINING

¶5 ☐ The individual listed above meets the training/qualification requirements of EPIP-12 for the position(s) indicated per the Personnel Qualification Database (PQD).

☐ The individual listed above requires training. Notify the Dept. Head, Dept. Training Coord. (if applicable) and the Technical Training Supervisor.

Signature:_____ Date ___/___/___

EP

¶7 ☐ Pager correctly programmed: Date: ___/___/___ Init.:_____

☐ Emergency Recall System database updated: Date: ___/___/___ Init.:_____

☐ Emergency Response Directory (draft) updated: Date: ___/___/___ Init.:_____

☐ Notifications to ERO: Date: ___/___/___ Init.:_____

¶5 ☐ Notification of Personnel Qualification Database (PQD) Administrator Date: ___/___/___ Init.:_____

* Only information required if removing from ERO (by EP)

END OF ATTACHMENT 1

ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
(Page 1 of 9)

ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
	Licensed EC					G	G[2]	X	X	X	X	X											X		
	STA	X				G			X			X	X	X											
	NLO	X			X	G	G[2]											G[2]				G[2]			
	PS/SEC/First Aid Responder																	G							
100	DCS	X				G			X	X[1]															
101	Emergency Coordinator	X		X		G		X	X	X	X	X		X									X		X
102	TSC Supervisor	X		X		G			X																
103	TSC HP Supervisor	X		X		G					X												X		
104	TSC Chem. Supervisor	X		X		G				X	X								X	X	B				
105	TSC Reactor Engineer	X		X		G								X	X										X

X = Required
B = Accident Chemistry Considerations Module
C = Respirator Only
[1] = Included in ERO Activation training for DCS only:
- Autodialer JPM
- Written exam
- Simulator practice session with E-Plan events

[2] = If qualified to hold shift position, Then position meets ERO qualification criteria

E = PSL/PTN Common Responder Version
G = Training/Requal Frequency IAW other Plant Procedures
H = FFD Pool
D = Included in Emerg. Rad. Monitoring

ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
(Page 2 of 9)

ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
106	TSC Communicator	X		X		G			X																
107	TSC EM PST Rep.	X		X		G																			X
108	TSC MM PST Rep.	X		X		G																			X
109	HP Shift Supervisor					G				X															
110	TSC OPS Coordinator	X		X		G		X			X														X
¶₆ 111	TSC Dose Assessor	X		X		G													X	X					
112	TSC HP Communicator	X		X		G										X									
113	TSC SP Phonetalker	X		X		G			X																
114	TSC ERDADS Op.	X		X		G											X								

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
115	TSC PST Leader	X		X		G																			X
116	TSC ERDADS Tech	X		X		G											X								
117	TSC I&C PST Rep.	X		X		G																			X
118	TSC SRO PST Rep.	X		X		G																			X
119	TSC Security Supv.	X		X		G																	X		
120	TSC Coord. with OSC	X		X		G																			
121	TSC Admin Staff	X		X		G																			
124	TSC EC Assist/Log.	X		X		G		X	X		X														
151	OSC HP Tech.	X			X	G	G			X						X									

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
152	OSC EM Re-Entry Supv.	X			X	G	G																		
153	OSC I&C Re-Entry Supv.	X			X	G	G																		
154	OSC MM Re-Entry Supv.	X			X	G	G																		
155	OSC Chem. Supv.	X			X	G	G			X											B				
156	OSC Electrical Chief	X			X	G	G																		
157	OSC Supervisor	X			X	G																			
158	OSC Coord. with TSC	X			X	G																			
159	OSC HP Supv.	X			X	G				X						X							X		
160	OSC Chemist	X			X	G	G														X				

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
161	OSC Electrician	X			X	G	G																		
162	OSC Mechanic	X			X	G	G																		
163	OSC I&C Spec.	X			X	G	G																		
165	OSC On-Shift Security Spec.	X			X	G																	X		
166	OSC Dosi. Tech.	X			X	G																			
168	OSC MM Foreman	X			X	G	G																		
169	OSC NMM Staff Rep.	X			X	G																			
170	OSC Safety Rep.	X			X	G	G																		

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
171	OSC Admin Tech/Log.	X			X	G																			
172	Assembly Area Supv.	X			X	G																	X		
173	OSC OPS Re-Entry Supv.	X			X	G	G																		
174	OSC Prot and Control Rep	X			X	G																			
175	OSC I&C Shop Supv.	X			X	G	G																		
176	Field Mon Team Driver	X			X	G	G/C																		
177	OSC Info Services Rep.	X			X	G																			
200	Recovery Manager	X	X			H			X		X													X	
205	Govt. Affairs Mgr.	X	X							X															

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
209	EOF RM OPS Adv/Log.	X	X			H			X		X													X	
213	EOF ERDADS Op.	X	X			H											X								
216	EOF Status Board Keeper	X	X			H																			
230	EOF Emerg Technical Mgr	X	X			H				X															
231	EOF Project Engineer	X	X			H				X															
232	EOF Mech. Engineer	X	X			H											X								
233	EOF Nuclear Engineer	X	X			H				X							X								
235	EOF Nuc Fuels Eng.	X	X			H								X	X		X								X
236	EOF Civil Engineer	X	X			H																			

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
237	EOF I&C Engineer	X	X			H											X								
238	EOF Electrical Engineer	X	X			H											X								
240	EOF HP Manager	X	X			H					X								X	X					
245	EOF Dos Assessor/FMT	X	X			H					X								X	X					
246	EOF HP Tech Support	X	X			H					X								X	X					
247	EOF Rad Stat Bds Keeper	X	X			H																			
250	EOF Nuc. Lic. Mgr.	X	X			H			X																
255	EOF Communicator	X	X			H			X																
260	Emerg. Security Mgr.	X	X			H																			

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ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
270	EOF Emerg Info Mgr.	E	E			H				E															
271	NDDO	E	E			H			E	E	E														
273	EIM/ENC Tech Advisor	X	X			H																			
280	EOF Admin Supervisor	X	X			H																			
281	EOF Admin Staff	X	X			H																			
291	Governor's Advisor																								
294	St. Lucie Co Tech Adv	X	X			H																			
295	Martin Co Tech Adv	X	X			H																			
300	Emer Control Officer	E	E			H			E	E	E														

X = Required
B = Accident Chemistry Considerations Module
C = Respirator Only
[1] = Included in ERO Activation training for DCS only:
- Autodialer JPM
- Written exam
- Simulator practice session with E-Plan events

[2] = If qualified to hold shift position, Then position meets ERO qualification criteria

E = PSL/PTN Common Responder Version
G = Training/Requal Frequency IAW other Plant Procedures
H = FFD Pool
D = Included in Emerg. Rad. Monitoring

END OF ATTACHMENT 2

ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
	Licensed EC	X			G	G[2]	X	X	X	X											
	STA	X			G			X		X	X										
	NLO	X			G	G[2]									G[2]				G[2]		
	PS/Sec/First Aid Responder														G						
101	Emergency Coordinator	X			G		X	X	X	X	X										F
102	TSC Supervisor	X			G			X													
103	TSC HP Supervisor	X			G				X												
104	TSC Chem. Supervisor	X			G				X							X	X	B/G			
105	TSC Reactor Engineering	X			G						X	X									F
106	TSC Communicator	X			G			X													

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B = Accident Chemistry Considerations Module
C = Respirator Only
[2] = If qualified to hold shift position, Then position meets ERO qualification criteria

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F = SAMG Requal Frequency IAW ADM-11.11
G = Training/Requal Frequency IAW other Plant Procedures
H = FFD Pool

ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
107	TSC EM PST Rep.	X			G																F
108	TSC MM PST Rep.	X			G																F
110	TSC OPS Coordinator	X			G		X		X												F
111	TSC Dose Assessor				G											X	X				
112	TSC HP Communicator	X			G								X								
113	TSC SP Phonetalker	X			G			X													
114	TSC ERDADS Op.	X			G									X							
115	TSC PST Leader	X			G																F
116	TSC ERDADS Tech	X			G									X							

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
117	TSC I&C PST Rep.	X			G																F
118	TSC SRO PST Rep.	X			G																F
119	TSC Security Supv.	X			G																
120	TSC Coord. with OSC	X			G																
121	TSC Admin Staff	X			G																
124	TSC EC Assist/Log.	X			G		X	X	X												
151	OSC HP Tech.		X		G	G							X								
152	OSC EM Re-Entry Supv.		X		G	G															
153	OSC I&C Re-Entry Supv.		X		G	G															

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
154	OSC MM Re-Entry Supv.		X		G	G															
155	OSC Chem. Supv.		X		G	G												B/G			
156	OSC Electrical Chief		X		G	G															
157	OSC Supervisor		X		G																
158	OSC Coord. with TSC		X		G																
159	OSC HP Supv.		X		G								X								
160	OSC Chemist		X		G	G												G			
161	OSC Electrician		X		G	G															
162	OSC Mechanic		X		G	G															

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
163	OSC I&C Spec.		X		G	G															
165	OSC On-Shift Security (Spec.)		X		G																
166	OSC Dosl. Tech.		X		G																
168	OSC MM Foreman		X		G	G															
169	OSC NMM Staff Rep.		X		G																
170	OSC Safety Rep.		X		G	G															
171	OSC Admin Tech/Log.		X		G																
172	Assembly Area Supv.		X		G																

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
173	OSC OPS Re-Entry Supv.		X		G	G															
174	OSC Prot and Control Rep		X		G																
175	OSC I&C Shop Supv.		X		G	G															
176	Field Mon Team Driver		X		G	G/C															
177	OSC Info Services Rep.		X		G																
200	Recovery Manager			X	H			X	X											X	
205	Govt. Affairs Mgr.			X																	
209	EOF RM OPS Adv/Log.			X	H			X	X											X	
213	EOF ERDADS Op.			X	H									X							

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
216	EOF Status Board Keeper			X	H																
230	EOF Emerg Technical Mgr			X	H																
231	EOF Project Engineer			X	H																
232	EOF Mech. Engineer			X	H									X							
233	EOF Nuclear Engineer			X	H									X							
235	EOF Nuc Fuels Eng.			X	H						X	X		X							F
236	EOF Civil Engineer			X	H																
237	EOF I&C Engineer			X	H																
238	EOF Electrical Engineer			X	H																

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C = Respirator Only
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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
240	EOF HP Manager			X	H				X							X	X				
245	EOF Dose Assessor/FMT			X	H				X							X	X				
246	EOF HP Tech Support			X	H				X							X	X				
247	EOF Rad Stat Bds Keeper			X	H																
250	EOF Nuc. Lic. Mgr.			X	H			X													
255	EOF Communicator			X	H			X													
260	Emerg. Security Mgr.			X	H																
270	EOF Emerg Info Mgr.			E	H																
271	NDDO			E	H			X	X												

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	PASS	Fire Brigade	Recovery Mgr. Training	SAMG
273	EIM/ENC Tech Advisor			X	H																
280	EOF Admin Supervisor			X	H																
281	EOF Admin Staff			X	H																
291	Governor's Advisor																				
294	St. Lucie Co Tech Advisor			X	H																
295	Martin Co Tech Advisor			X	H																
300	Emergency Control Officer			E	H			X	X												

X = Required
B = Accident Chemistry Considerations Module
C = Respirator Only
² = If qualified to hold shift position, Then position meets ERO qualification criteria

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END OF ATTACHMENT 3

50-335 Superseded Per Revis to EPIP's Dtd 10/29/01 #ML013540246

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-12

Current Rev. No.
9

Effective Date:
07/25/01

Title:

MAINTAINING EMERGENCY PREPAREDNESS - RADIOLOGICAL EMERGENCY PLAN TRAINING

Responsible Department: **EMERGENCY PREPAREDNESS**

Revision Summary

Revision 9 - Revised Chemistry training relative to PASS elimination. (J. R. Walker, 07/23/01)

Revision 8 - THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Removed training requirement for FAPDT (First-Aid Personnel Decontamination Tram) training for Chemistry personnel, added statement regarding Security First Aid Training, and made editorial and administrative changes. (J. R. Walker, 12/07/00)

AND

Added reference to NP-912, revised GET procedure number, updated trng. mgr. title,, revised annual retraining to allow credit for drill/exercise participation, identified use of PSL/PTN common training modules, deleted RM training module from qual req for ECO and NDDO and made administrative changes. (J. R. Walker, 10/13/00)

Revision 7 - Eliminated backshift paramedic position due to first responder training of Security personnel. (G. Varnes, 08/08/00)

Revision 6 - Added controls for pagers. (Donna Calabrese, 04/27/00)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
9	07/23/01	R. G. West Plant General Manager	07/23/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS
DATE
DOCT PROCEDURE
DOCN EPIP-12
SYS
COMP COMPLETED
ITM 9

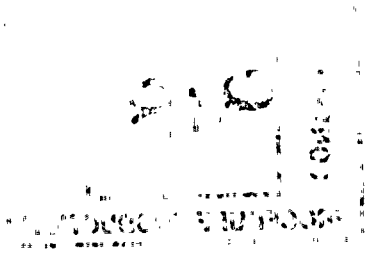

TABLE OF CONTENTS

1.0 PURPOSE

1.1 This procedure provides the Emergency Plan (E-Plan) training requirements for site personnel and personnel in the St. Lucie Plant Emergency Response Organization (ERO).

1.2 In order to maintain emergency preparedness, personnel should be familiar with certain pre-planned actions specified in the Emergency Plan Implementing Procedures (EPIPs). The primary objectives of this training are as follows:

1. Familiarize appropriate individuals with the E-Plan and related EPIPs.

2. Instruct individuals in their specific duties to ensure effective and expeditious action during an emergency.

3. Periodically present significant changes in the scope or content of the E-Plan and the EPIPs.

4. Provide annual retraining to ensure that personnel are familiar with their emergency duties and responsibilities.

5. Provide the various emergency organization groups with the required training that will ensure an integrated and prompt response to an emergency situation.

1.3 The annual training cycle normally occurs in the first quarter of each year.

1.4 The E-Plan Training Review Committee provides for the review and evaluation of changes, the impact on training, and the determination if training is needed prior to the next cycle.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 References

§1 1. St. Lucie Plant Radiological Emergency Plan (E-Plan)

¶1 2. QI 1-PR/PSL-1, Site Organization.

¶2 3. QI-17-PSL-1, Quality Assurance Records.

¶4 4. ADM-18.06, General Employee Training.

5. AP 1800022, Fire Protection Plan.

6. ADM-11.11, Severe Accident Management Guidelines Program Administration

7. St. Lucie Plant Emergency Response Directory.

8. NP-912, Respiratory Qualifications Requirements

2.2 Records Required

¶2 Records documenting the Emergency Plan Training received by individuals are Quality Assurance records and shall be maintained in the plant files in accordance with QI-17-PSL-1, Quality Assurance Records.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.3 Commitment Documents

1. 10 CFR 50.47, Emergency Plans.
2. 10 CFR 50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities.
3. 10 CFR 26, Fitness for Duty.
4. NUREG 0737, 11.B.4, Training for Mitigating Core Damage

§2 5. NOV Response L-97-20, Violation II.C, Part 4A.

§3 6. NOV Response L-97-20, Violation II.C, Part 4B.

§4 7. NRC Inspection Report 96-18 URI P5.2

¶3 8. QAS-EMP-96-01, Finding 2

¶5 9. PMAI PM99-05-183 (Use and Update of the Personnel Qualification Database (PQD))

¶6 10. PMAI PM99-09-077, CR 99-1353 (Training requirements for TSC Dose Assessor)

¶7 11. CR 00-0544, Audit QSL-EP-00-02 (Discrepancies with Primary and Backup ERO Augmentation Processes)

3.0 RESPONSIBILITIES

3.1 The Site Training Manager is responsible for:

1. Designing, establishing, implementing and maintaining training programs for the St. Lucie Plant.
2. Ensuring initial orientation training is provided to permanently assigned new employees.

3.0 RESPONSIBILITIES (continued)

3.1 The Site Training Manager is responsible for: (continued)

3. Ensuring all Emergency Plan Training, both initial training and periodic retraining, is conducted and documented for the St. Lucie Plant ERO.

3.2 Protection Services Manager is responsible for:

¶1 **1.** Ensuring that a qualified Emergency Response Organization (ERO) is maintained in compliance with the St. Lucie Radiological Emergency Plan.

2. Coordinating emergency planning at the plant.

3.3 Emergency Preparedness is responsible for:

1. Establishing qualifications standards for ERO personnel.

¶7 **A.** Ensuring non-bargaining unit personnel pagers are correctly programmed.

2. Reviewing and approving the Emergency Plan Training Program.

§1 **3.** Offering training to each contracted local hospital, at least once each year.

A. The content of that training should consist of radiological controls, medical consideration of contaminated injuries, and other topics as appropriate.

§1 **4.** Offering training to each State and local emergency response agency, at least once each calendar year.

A. The content of that training should consist of an overview of normal and emergency plant operations and concepts of radiation protection, including protective actions.

B. This training may be in the form of a presentation, text, or other acceptable means.

3.0 RESPONSIBILITIES (continued)

3.3 Emergency Preparedness is responsible for: (continued)

5. Providing the table of Emergency Action Levels (EALs) to state and local officials for their review, on an annual basis.

6. Revising the St. Lucie Plant Emergency Response Directory (ERD) and the FPL Emergency Recall System (autodialer) database when notified via a form similar to Attachment 1.

7. Providing a list of personnel designated to fill emergency response positions and requiring training per this procedure, to the Training Department.

8. Removing individuals who fail to maintain training qualifications from the ERD and the FPL Emergency Recall System (autodialer) database when notified by the appropriate department head or the Training Department.

9. Providing guidelines to plant management to assist in identifying the appropriate number of ERO personnel for each ERO position.

10. Notifying the Site Training Manager if changes in the E-Plan and/or EPIPs justify additional training for ERO personnel.

11. Chairing EP Training Review Committee Meetings.

3.4 Each Manager and Department Head is responsible to ensure that each ERO member under his/her supervision attends training in accordance with Attachments 2 and 3, and remains fully qualified at all times to perform his/her assigned emergency response duties.

1. Ensure personnel in his/her department who are assigned an on-site position in the ERO maintain unescorted access to the Protected Area and Radiation Controlled Area.

2. Ensure changes in his/her employees' status which would impair or limit the ability to perform emergency response duties be promptly reported to the Protection Services Manager (directly or through EP).

A. Provide alternate personnel to be trained to fill open positions.

3.0 RESPONSIBILITIES (continued)

3.4 (continued)

¶7 **3.** Ensure that non-bargaining unit personnel have pagers.

3.5 The Protection Services Manager is responsible to ensure that Security personnel maintain EP training qualifications per this procedure.

3.6 ERO members, supervisors, training instructors, HP dosimetry personnel and medical facility staff are responsible for promptly reporting any failure in training, testing or other condition, which would disqualify an emergency responder, to the Protection Services Manager (directly or through EP).

3.7 Each ERO member is responsible for advising the Protection Services Manager (directly or through EP) when changes in status occur that could impact ERO participation.

4.0 DEFINITIONS

4.1 **Annual** - occurring once per calendar year (January 1 through December 31).

4.2 **Duty Call Supervisor (DCS)** - is a specifically designated and trained supervisor responsible for assisting the Emergency Coordinator in making notifications and calls to the Emergency Response Organization.

4.3 **Emergency Plan** - formally known as the St. Lucie Plant Radiological Emergency Plan, establishes the requirements for training the Emergency Response Organization; also referred to as the Plan or E-Plan.

4.4 **Emergency Planning (EP)** - activities undertaken to satisfy the commitments of the Emergency Plan, used interchangeably with Emergency Preparedness.

4.5 **Emergency Response Directory (ERD)** - formally known as the St. Lucie Plant Emergency Response Directory, provides a list of the current (revised on a quarterly basis) Emergency Response Organization personnel.

4.0 DEFINITIONS (continued)

4.6 **Emergency Response Organization (ERO)** - personnel trained and qualified to provide specific emergency response functions as defined by their individual positions. Persons can become members of the Emergency Response Organization by following the instructions outlined in this procedure.

4.7 **EP Training Review Committee (TRC)** - representatives from Emergency Preparedness, Training, and other departments who meet periodically to discuss training issues related to the Emergency Response Organization.

4.8 **SAMG** - Severe Accident Management Guidelines.

5.0 INSTRUCTIONS

NOTE

- In the event of an emergency, the Emergency Coordinator or Recovery Manager has the authority to assign personnel to positions for which they have not received the required Emergency Plan training, if that action is prudent in order to protect the health and safety of the public and plant personnel.
- The training requirements listed in this procedure are for the purpose of emergency preparedness and are in addition to other training required to hold a position, e.g., Nuclear Plant Supervisor (NPS).
- Personnel filling the position of Emergency Coordinator, TSC OPS Coordinator, or EOF RM OPS Advisor/Logkeeper should have SRO level knowledge (i.e., current or previous SRO license or SRO equivalent training such as Engineering Management Operations Training (EMOT)).

5.1 Initial Training

NOTE

- Initial Training is intended for personnel who are new to the ERO and is designed to orient the individual to his/her function and responsibilities within the ERO.
- Drill participation is not required prior to qualifying for an ERO position.
- It may be desirable to allow persons filling the following positions to participate in and/or observe their position in a drill prior to being assigned to the ERO:
  - Emergency Coordinator
  - Recovery Manager
  - TSC Supervisor
  - OSC Supervisor
  - TSC Coordinator with the OSC
  - OSC Coordinator with the TSC

$§_1$ 1. Initial Orientation Training (Plant Access Training - PAT) shall be provided to permanently assigned new employees.

5.0 INSTRUCTIONS (continued)

5.1 Initial Training (continued)

1. (continued)

A. Training includes information describing:

1. Actions to be taken by an individual who discovers an emergency condition.

2. Location of assembly areas.

3. Identification of emergency alarms.

4. Action to be taken upon hearing alarms.

¶4 **B.** PAT Training is conducted in accordance with ADM-18.06, General Employee Training.

§3¶3 **2.** Personnel shall complete the Initial Training requirements identified in Attachment 2, ERO Initial Training Matrix, prior to being assigned to the ERO.

3. To become a member of the ERO, an individual should fill out Attachment 1, Emergency Response Organization Change Request.

A. Complete the personal information (originator section).

B. Obtain Department Head approval.

C. Forward the Attachment to Emergency Preparedness Supervisor.

4. Emergency Preparedness (EP) should authorize the training of personnel designated to become new members of the ERO on Attachment 1.

5.0 INSTRUCTIONS (continued)

5.1 Initial Training (continued)

5. Training Department personnel should document completion of required training on Attachment 1 and forward to the Emergency Preparedness Supervisor when new members complete the training requirements as identified in Attachment 2, ERO Initial Training Matrix.

6. EP should make changes to the Emergency Recall System (ERS) and the Emergency Response Directory (ERD) upon receipt of Attachment 1 from Technical Training.

END OF SECTION 5.1

5.0 INSTRUCTIONS (continued)

> **NOTE**
> Retraining is intended to ensure that ERO personnel maintain the level of skill and knowledge necessary to accomplish their emergency duties. Retraining may be accomplished through a combination of programmed instruction and/or participation in drills or exercises.

5.2 Annual Retraining

§1 **1.** Annual retraining shall be provided at least once per calendar year.

2. Annual retraining may be accomplished by classroom training or drill/exercise participation.

¶3 **A.** Annual retraining shall include a review of significant changes in the scope or content of the Emergency Plan or applicable Emergency Plan Implementing Procedures.

¶3 **B.** Classroom training shall include topics identified in Attachment 3, ERO Annual Retraining Matrix.

C. The EP Training Review Committee shall identify additional annual retraining topics, which may include:

- review of selected initial training topics
- industry operating experience
- a review of past drill/exercise performance problems

D. Drill participation shall include attendance at the pre-drill facility brief, participation as a player, controller or mentor and participation in the end of drill critique.

1. The EP Training Review Committee shall designate annual retraining topics and Attachment 3 topics for which drill/exercise participation will be an acceptable alternative.

E. Other training methodologies may be used on an as needed basis when approved by the EP Training Review Committee and the Site Training Manager.

5.0 INSTRUCTIONS (continued)

5.2 Annual Retraining (continued)

3. Individuals may challenge annual retraining examinations for topics not accounted for in drill/exercise participation.

4. Personnel who teach a class should receive credit for completion of that class at the discretion of the Site Training Manager.

NOTE

Deviation from this schedule requires the approval of the President, Nuclear Division.

§2 **5.** Emergency Response Facility (ERF) drills shall be conducted at least four times per calendar year and should be conducted approximately once each quarter.

NOTE

It is the intent of the drill and exercise program that each ERO member have an opportunity to function in his/her position annually.

A. Participation in drills and exercises should be tracked by Emergency Preparedness Supervisor and forwarded to Technical Training.

1. Drill rosters should be reviewed and used to record participants in all Emergency Response Facilities (ERFs) including the Emergency News Center (ENC).

2. Drill critiques should list Players, Controllers, Evaluators, Mentors and Observers for each facility.

3. Drill participation should be recorded in the training database.

5.0 INSTRUCTIONS (continued)

5.2 Annual Retraining (continued)

5. (continued)

§4¶3 **B.** Personnel should be rotated through drills and exercises with the goal of having as many as feasible participate in at least one drill or exercise per year. This applies to all ERO members, including those who are NOT in the Nuclear Division.

1. Participation in a drill or exercise shall be recognized if an ERO member functions as a Player, Mentor or Controller.

2. Failure to participate in an ERF drill annually may result in remedial training as determined by the Training Manager and Protection Services Manager.

END OF SECTION 5.2

5.0 INSTRUCTIONS (continued)

¶3 **5.3** Loss of ERO Qualifications

1. If an individual fails an initial training topic, Then that individual shall not be assigned to the ERO until he/she has successfully met requirements.

2. If an individual fails Plant Access Training (PAT), Radiation Controlled Area Training (RCAT), or fails to maintain qualifications for use of respiratory protection (as specified in Attachment 3), Then he/she shall promptly be removed from the ERO.

3. If an individual fails an annual retraining evaluation, the Site Training Manager shall notify the Emergency Preparedness Supervisor or designee of the results.

   A. The individual should then be removed from the ERS and ERD until appropriate remedial training, as recommended by the Site Training Manager and approved by the Emergency Preparedness Supervisor, has been completed.

4. The individual should complete remedial training at the earliest opportunity.

END OF SECTION 5.3

5.0 INSTRUCTIONS (continued)

5.4 Training for Security Personnel

1. Security personnel shall receive initial training and annual retraining for emergency response in accordance with this procedure.

2. Security personnel shall receive First Aid Team training in accordance with Security procedures.

END OF SECTION 5.4

5.0 INSTRUCTIONS (continued)

5.5 Fire Brigade

1. Fire Brigade training is covered by the Fire Protection Plan, AP 1800022.

END OF SECTION 5.5

5.0 INSTRUCTIONS (continued)

5.6 Training Exemptions and Substitutions

1. No specific Emergency Plan Training is required for ERO positions whose emergency job functions are similar to normal job functions. Examples of these positions include:

   A. Emergency News Center / Corporate Communications Staff

   B. Governmental Affairs Staff

   C. Risk Manager

   D. Regulatory Affairs

2. Personnel who participate in a drill or attend annual requalification training at PTN may receive credit/satisfy the requirements for drill participation and/or annual retraining as required by this procedure. ERO positions eligible to receive credit include (but are not limited to):

   A. Emergency Information Manager (EIM)

   B. Nuclear Division Duty Officer (NDDO)

   C. Emergency Control Officer (ECO)

END OF SECTION 5.6

ATTACHMENT 1
EMERGENCY RESPONSE ORGANIZATION CHANGE REQUEST

ORIGINATOR

NOTE
Personnel will not be assigned to an emergency response organization position until required training for that position is completed.

Originator:_____ Dept. _____

☐ Add ☐ Remove
☐ Change (Circle new info)

* Name: _____
Soc. Sec. No.: _____
* Position number: _____
* Position: _____
Work Phone: _____
Home Phone: _____
Pager: _____
Other: _____

DEPT HEAD

¶7

NOTE
Non-bargaining unit personnel will not be assigned to a position if they do not have a pager.

Department Head/Supv. Signature:_____ Date: ___/___/___

EP

Authorization for ERO training

EP Supervisor Date: ___/___/___

TRAINING

¶5 ☐ The individual listed above meets the training/qualification requirements of EPIP-12 for the position(s) indicated per the Personnel Qualification Database (PQD).

☐ The individual listed above requires training. Notify the Dept. Head, Dept. Training Coord. (if applicable) and the Technical Training Supervisor.

Signature:_____ Date ___/___/___

EP

¶7 ☐ Pager correctly programmed: Date: ___/___/___ Init.:_____

☐ Emergency Recall System database updated: Date: ___/___/___ Init.:_____

☐ Emergency Response Directory (draft) updated: Date: ___/___/___ Init.:_____

☐ Notifications to ERO: Date: ___/___/___ Init.:_____

¶5 ☐ Notification of Personnel Qualification Database (PQD) Administrator Date: ___/___/___ Init.:_____

* Only information required if removing from ERO (by EP)

END OF ATTACHMENT 1

ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
(Page 1 of 9)

ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	Accident Chemistry Considerations	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
	Licensed EC					G	G[2]	X	X	X	X	X											X		
	STA	X				G			X			X	X	X											
	NLO	X			X	G	G[2]											G[2]				G[2]			
	PS/SEC/First Aid Responder																	G							
100	DCS	X				G			X	X[1]															
101	Emergency Coordinator	X		X		G		X	X	X	X	X		X									X		X
102	TSC Supervisor	X		X		G			X																
103	TSC HP Supervisor	X		X		G					X												X		
104	TSC Chem. Supervisor	X		X		G				X	X								X	X	X				
105	TSC Reactor Engineer	X		X		G								X	X										X

X = Required
C = Respirator Only
[1] = Included in ERO Activation training for DCS only:
- Autodialer JPM
- Written exam
- Simulator practice session with E-Plan events

[2] = If qualified to hold shift position, Then position meets ERO qualification criteria

E = PSL/PTN Common Responder Version
G = Training/Requal Frequency IAW other Plant Procedures
H = FFD Pool
D = Included in Emerg. Rad. Monitoring

ATTACHMENT 2
ERO INITIAL TRAINING MATRIX
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ERO #	POSITION	Emergency Plan Overview	EOF Responder	TSC Responder	OSC/Re-entry Team	RCA Access	SCBA	Emergency Classification	Emergency Notifications	ERO Activation	PARs	Accident Assess./Corrective Actions	Tech. Spec. Review	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	Accident Chemistry Considerations	Fire Brigade	Evacuation & Accountability	Recovery Mgr. Training	SAMG
106	TSC Communicator	X		X		G			X																
107	TSC EM PST Rep.	X		X		G																			X
108	TSC MM PST Rep.	X		X		G																			X
109	HP Shift Supervisor					G				X															
110	TSC OPS Coordinator	X		X		G		X			X														X
¶₆ 111	TSC Dose Assessor	X		X		G													X	X					
112	TSC HP Communicator	X		X		G										X									
113	TSC SP Phonetalker	X		X		G			X																
114	TSC ERDADS Op.	X		X		G											X								

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ERO INITIAL TRAINING MATRIX
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115	TSC PST Leader	X		X		G																			X
116	TSC ERDADS Tech	X		X		G											X								
117	TSC I&C PST Rep.	X		X		G																			X
118	TSC SRO PST Rep.	X		X		G																			X
119	TSC Security Supv.	X		X		G																	X		
120	TSC Coord. with OSC	X		X		G																			
121	TSC Admin Staff	X		X		G																			
124	TSC EC Assist/Log.	X		X		G		X	X		X														
151	OSC HP Tech.	X			X	G	G			X						X									

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ERO INITIAL TRAINING MATRIX
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152	OSC EM Re-Entry Supv.	X			X	G	G																		
153	OSC I&C Re-Entry Supv.	X			X	G	G																		
154	OSC MM Re-Entry Supv.	X			X	G	G																		
155	OSC Chem. Supv.	X			X	G	G			X											X				
156	OSC Electrical Chief	X			X	G	G																		
157	OSC Supervisor	X			X	G																			
158	OSC Coord. with TSC	X			X	G																			
159	OSC HP Supv.	X			X	G				X						X							X		
160	OSC Chemist	X			X	G	G														X				

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ERO INITIAL TRAINING MATRIX
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161	OSC Electrician	X			X	G	G																		
162	OSC Mechanic	X			X	G	G																		
163	OSC I&C Spec.	X			X	G	G																		
165	OSC On-Shift Security Spec.	X			X	G																	X		
166	OSC Dosi. Tech.	X			X	G																			
168	OSC MM Foreman	X			X	G	G																		
169	OSC NMM Staff Rep.	X			X	G																			
170	OSC Safety Rep.	X			X	G	G																		

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ERO INITIAL TRAINING MATRIX
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171	OSC Admin Tech/Log.	X			X	G																			
172	Assembly Area Supv.	X			X	G																	X		
173	OSC OPS Re-Entry Supv.	X			X	G	G																		
174	OSC Prot and Control Rep	X			X	G																			
175	OSC I&C Shop Supv.	X			X	G	G																		
176	Field Mon Team Driver	X			X	G	G/C																		
177	OSC Info Services Rep.	X			X	G																			
200	Recovery Manager	X	X			H			X		X													X	
205	Govt. Affairs Mgr.	X	X							X															

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209	EOF RM OPS Adv/Log.	X	X			H			X		X													X	
213	EOF ERDADS Op.	X	X			H											X								
216	EOF Status Board Keeper	X	X			H																			
230	EOF Emerg Technical Mgr	X	X			H				X															
231	EOF Project Engineer	X	X			H				X															
232	EOF Mech. Engineer	X	X			H											X								
233	EOF Nuclear Engineer	X	X			H				X							X								
235	EOF Nuc Fuels Eng.	X	X			H								X	X		X								X
236	EOF Civil Engineer	X	X			H																			

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237	EOF I&C Engineer	X	X			H											X								
238	EOF Electrical Engineer	X	X			H											X								
240	EOF HP Manager	X	X			H					X								X	X					
245	EOF Dos Assessor/FMT	X	X			H					X								X	X					
246	EOF HP Tech Support	X	X			H					X								X	X					
247	EOF Rad Stat Bds Keeper	X	X			H																			
250	EOF Nuc. Lic. Mgr.	X	X			H			X																
255	EOF Communicator	X	X			H			X																
260	Emerg. Security Mgr.	X	X			H																			

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ERO INITIAL TRAINING MATRIX
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270	EOF Emerg Info Mgr.	E	E			H				E															
271	NDDO	E	E			H			E	E	E														
273	EIM/ENC Tech Advisor	X	X			H																			
280	EOF Admin Supervisor	X	X			H																			
281	EOF Admin Staff	X	X			H																			
291	Governor's Advisor																								
294	St. Lucie Co Tech Adv	X	X			H																			
295	Martin Co Tech Adv	X	X			H																			
300	Emer Control Officer	E	E			H			E	E	E														

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END OF ATTACHMENT 2

ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	Accident Chemistry Considerations	Fire Brigade	Recovery Mgr. Training	SAMG
	Licensed EC	X			G	G[2]	X	X	X	X											
	STA	X			G			X		X	X										
	NLO	X			G	G[2]									G[2]				G[2]		
	PS/Sec/First Aid Responder														G						
101	Emergency Coordinator	X			G		X	X	X	X	X										F
102	TSC Supervisor	X			G			X													
103	TSC HP Supervisor	X			G				X												
104	TSC Chem. Supervisor	X			G				X							X	X	G			
105	TSC Reactor Engineering	X			G						X	X									F
106	TSC Communicator	X			G			X													

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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107	TSC EM PST Rep.	X			G																F
108	TSC MM PST Rep.	X			G																F
110	TSC OPS Coordinator	X			G		X		X												F
111	TSC Dose Assessor				G											X	X				
112	TSC HP Communicator	X			G								X								
113	TSC SP Phonetalker	X			G			X													
114	TSC ERDADS Op.	X			G									X							
115	TSC PST Leader	X			G																F
116	TSC ERDADS Tech	X			G									X							

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ERO ANNUAL REQUALIFICATION MATRIX
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117	TSC I&C PST Rep.	X			G																F
118	TSC SRO PST Rep.	X			G																F
119	TSC Security Supv.	X			G																
120	TSC Coord. with OSC	X			G																
121	TSC Admin Staff	X			G																
124	TSC EC Assist/Log.	X			G		X	X	X												
151	OSC HP Tech.		X		G	G							X								
152	OSC EM Re-Entry Supv.		X		G	G															
153	OSC I&C Re-Entry Supv.		X		G	G															

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ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
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154	OSC MM Re-Entry Supv.		X		G	G															
155	OSC Chem. Supv.		X		G	G												G			
156	OSC Electrical Chief		X		G	G															
157	OSC Supervisor		X		G																
158	OSC Coord. with TSC		X		G																
159	OSC HP Supv.		X		G								X								
160	OSC Chemist		X		G	G												G[2]			
161	OSC Electrician		X		G	G															
162	OSC Mechanic		X		G	G															

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163	OSC I&C Spec.		X		G	G															
165	OSC On-Shift Security (Spec.)		X		G																
166	OSC Dosi. Tech.		X		G																
168	OSC MM Foreman		X		G	G															
169	OSC NMM Staff Rep.		X		G																
170	OSC Safety Rep.		X		G	G															
171	OSC Admin Tech/Log.		X		G																
172	Assembly Area Supv.		X		G																

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173	OSC OPS Re-Entry Supv.		X		G	G															
174	OSC Prot and Control Rep		X		G																
175	OSC I&C Shop Supv.		X		G	G															
176	Field Mon Team Driver		X		G	G/C															
177	OSC Info Services Rep.		X		G																
200	Recovery Manager			X	H			X	X											X	
205	Govt. Affairs Mgr.			X																	
209	EOF RM OPS Adv/Log.			X	H			X	X											X	
213	EOF ERDADS Op.			X	H									X							

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216	EOF Status Board Keeper			X	H																
230	EOF Emerg Technical Mgr			X	H																
231	EOF Project Engineer			X	H																
232	EOF Mech. Engineer			X	H									X							
233	EOF Nuclear Engineer			X	H									X							
235	EOF Nuc Fuels Eng.			X	H						X	X		X							F
236	EOF Civil Engineer			X	H																
237	EOF I&C Engineer			X	H																
238	EOF Electrical Engineer			X	H																

X = Required
C = Respirator Only
² = If qualified to hold shift position, Then position meets ERO qualification criteria

E = PSL/PTN Common Responder Version
F = SAMG Requal Frequency IAW ADM-11.11
G = Training/Requal Frequency IAW other Plant Procedures
H = FFD Pool

/R9

ATTACHMENT 3
ERO ANNUAL REQUALIFICATION MATRIX
(Page 8 of 9)

ERO #	POSITION	TSC Annual Update	OSC Annual Update	EOF Annual Update	RCA Access	SCBA	Emergency Classification	Emergency Notifications	PARs	Accident Assess./Corrective Actions	Core Melt Scenario	Core Damage Assessment	Emergency Rad. Monitoring	ERDADS Operations	First Aid Team	Ventilation Systems	OSDC	Accident Chemistry Considerations	Fire Brigade	Recovery Mgr. Training	SAMG
240	EOF HP Manager			X	H				X							X	X				
245	EOF Dose Assessor/FMT			X	H				X							X	X				
246	EOF HP Tech Support			X	H				X							X	X				
247	EOF Rad Stat Bds Keeper			X	H																
250	EOF Nuc. Lic. Mgr.			X	H			X													
255	EOF Communicator			X	H			X													
260	Emerg. Security Mgr.			X	H																
270	EOF Emerg Info Mgr.			E	H																
271	NDDO			E	H			X	X												

X = Required
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273	EIM/ENC Tech Advisor			X	H																
280	EOF Admin Supervisor			X	H																
281	EOF Admin Staff			X	H																
291	Governor's Advisor																				
294	St. Lucie Co Tech Advisor			X	H																
295	Martin Co Tech Advisor			X	H																
300	Emergency Control Officer			E	H			X	X												

X = Required
C = Respirator Only
[2] = If qualified to hold shift position, Then position meets ERO qualification criteria

E = PSL/PTN Common Responder Version
F = SAMG Requal Frequency IAW ADM-11.11
G = Training/Requal Frequency IAW other Plant Procedures
H = FFD Pool

/R9

END OF ATTACHMENT 3

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No. **EPIP-13**

Current Rev. No. **5**

Effective Date: **12/20/00**

Title:

MAINTAINING EMERGENCY PREPAREDNESS - EMERGENCY EXERCISES, DRILLS, TESTS AND EVALUATIONS

Responsible Department: **EMERGENCY PREPAREDNESS**

Revision Summary

Revision 5 - Added quarterly test for ERDS link and reference to Generic Letter #GL 93-01. (J. R. Walker, 12/07/00)

AND

Deleted reference to PSL policy PSL-110, revised FRG review of EPIPs, changed the symbol of response to CR00-0544 from regulatory commitment to mgmt directive and added EPIP-08 to the list of EPIPs. (J. R. Walker, 10/13/00)

Revision 4 - Added staff augmentation program maintenance items and NRC performance indicator tracker. (D. Calabrese, 04/27/00)

Revision 3 - Changed responsibility for EP from Training Manager to Protection Services Manager. Improved definition for drill per E-Plan. Corrected eval. exercise frequency from annual to biennial per E-Plan. Corrected recovery plan review frequency. Corrected review of annual training. Corrected procedure number and title of upgraded E-Plan chemistry procedures. Corrected ex critique review from Training Manager to FRG per E-Plan. Made editorial and administrative changes. (J. R. Walker, 06/17/99)

Revision 2 - Minor Corrections page 18, C-110 changed to COP-06.06 and C-111 changed to COP-06.11. (Russ Cox, 06/01/99)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
5	12/07/00	R. G. West Plant General Manager	12/07/00
		N/A Designated Approver	

S__OPS
DATE
DOCT PROCEDURE
DOCN EPIP-13
SYS
COMP COMPLETED
ITM 5

TABLE OF CONTENTS

1.0 PURPOSE

This procedure provides instructions for:

- Periodic exercises and drills conducted in order to test the state of emergency preparedness by FPL personnel, support organizations and off-site governmental agencies.

- Periodic tests and reviews of components of the Emergency Planning Program (e.g. facilities, equipment, Emergency Plan and Emergency Plan Implementing Procedures, etc.) conducted to ensure availability, operability and reliability.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 References

§1 1. St. Lucie Plant Radiological Emergency Plan (E-Plan)

¶1 2. QI 1-PR/PSL-1, Site Organization

¶2 3. QI-1-PSL-15, Protection Services Organization

¶3 4. QI-5-PSL-1, Preparation, Revision, Review/Approval of Procedures.

¶4 5. QI-17-PSL-1, Quality Assurance Records

6. NBS-NPS-EP-WP-001, Public Alert and Notification System Testing, Maintenance and Engineering

7. ADM-25.02, NRC Performance Indicators

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.2 Records Required

¶4 **1.** The following records are maintained in accordance with QI-17-PSL-1 Quality Assurance Records:

2. Data Sheet 1, EP Program Maintenance Checklist

3. Data Sheet 2, Emergency Plan 6 Year Element Demonstration

4. Data Sheet 3, EPIP Biennial Review

5. Data Sheet 4, EP Annual Exercise Checklist

6. Attachment 1, EP Program Schedule

2.3 Commitment Documents

§2 **1.** 10 CFR 50, Domestic Licensing of Production and Utilization Facilities

§5 **2.** Generic Letter #GL 93-01, Emergency Response Data System Test Program /R5

¶5 **3.** PMAI #96-02-237, Evaluation of Continuous Emergency Response

§3 **4.** NOV Response L-97-20, Violation II. A, Part 4.D. /R5

¶6 **5.** CR 00-0544, QA Audit (Ineffective Corrective Actions) QSL-EP-00-02

3.0 RESPONSIBILITIES

§1 **3.1** The Protection Services Manager is responsible for:

1. Planning, scheduling, and coordinating emergency exercises involving off-site agencies.

2. Reviewing Attachment 1, EP Program Schedule, upon completion.

3. Reviewing results of exercises and major drills.

3.0 RESPONSIBILITIES (continued)

§1 **3.2** The Protection Services Manager, in conjunction with plant management, is responsible for ensuring that adequate resources are made available to support and conduct emergency preparedness activities including:

1. Exercise and drill scenario development and control
2. Exercise and drill participation /R5
3. Support for maintenance of emergency facilities and equipment

§1 **3.3** The Facility Review Group (FRG) is responsible to review the following:

1. Revisions to the St. Lucie Plant Radiological Emergency Plan. /R5
2. Revisions to Emergency Plan Implementing Procedures (EPIPs) other than minor changes. /R5
3. Biennial Exercise Critique Report.

3.4 The Emergency Preparedness (EP) Supervisor is responsible for:

1. Maintaining awareness of EP activities.
2. Ensuring coordination of EP drills and exercises in accordance with this procedure.
3. Ensuring documentation of EP program maintenance in Attachment 1, EP Program Schedule.
4. Ensuring documentation of major element demonstration as indicated on Data Sheet 2, Emergency Plan 6 Year Element Demonstration.
5. Ensuring critiques of exercises, drills, and actual events are conducted, documented, and that deficiencies are addressed in accordance with plant corrective action practices.

3.0 RESPONSIBILITIES (continued)

3.4 The Emergency Preparedness (EP) Supervisor is responsible for: (continued)

6. Ensuring that EPIPs are reviewed through feedback from the following sources:

A. Daily use

B. Drills and exercises

C. Actual events

D. Training

E. Biennial EPIP review as indicated on Data Sheet 3, EPIP Biennial Review

7. Ensuring biennial review of the Recovery Plan.

4.0 DEFINITIONS

4.1 **Annual** - Annual is defined as once per calendar year (January 1 through December 31).

4.2 **Biennial** - Biennial is defined as once per two calendar years.

4.3 **Drill**

1. **Communications Tests and Drills** - Communications tests involve the use of emergency communications equipment to verify operability. Communications drills involve use of emergency communications equipment to notify and transfer simulated emergency information to off-site governmental agencies.

2. **Health Physics Drills** - Health Physics drills test various tasks employed by that department during an emergency condition. Health Physics drills are conducted semi-annually and one of the semi-annual drills may be incorporated into the radiological monitoring drill.

4.0 DEFINITIONS (continued)

4.3 **Drill** (continued)

3. **Medical Emergency Drill** - A medical emergency drill involves a simulated contaminated individual, with provisions for activation of the plant First Aid/Personnel Decontamination Team. Participation by local support services (i.e., ambulance and off-site medical treatment facility) is tested separately once per year or as part of the annual medical drill. Medical Emergency Drills are conducted at least once every calendar year.

4. **Radiological Monitoring Drill** - Radiological monitoring drills include collection and analysis of air samples, testing of communications, and understanding of messages between Health Physics supervision and the off-site monitoring teams. A radiological monitoring drill will be conducted at least once every calendar year.

5. **Emergency Response Facility (ERF) Drill** - An ERF Drill demonstrates various emergency response capabilities including management and coordination of emergency response, accident assessment, protective action decision-making, and plant system repair and corrective action involving all or certain Emergency Response Facilities [Control Room, Technical Support Center (TSC), Operational Support Center (OSC), Emergency Operations Facility (EOF), and/or Emergency News Center (ENC)]. These drills are conducted at least four (4) times per calendar year and should be conducted approximately once each calendar quarter. One of these drills is designed to satisfy the requirements of an exercise as defined below.

   Non-exercise drills provide an opportunity to consider accident management strategies. Supervised instruction can be permitted for these drills, with operating staff having the opportunity to resolve problems (success paths) rather than have controllers intervene. Additionally, non-exercise drills may focus on on-site training objectives.

4.0 DEFINITIONS (continued)

4.4 **Exercise** - An exercise is an event that tests the integrated capability of a major portion of the basic elements existing within the St. Lucie Plant Radiological Emergency Plan. An exercise is required biennially per 10 CFR 50. Off-site agency participation is required biennially. Exercises are developed, scheduled, and conducted in a manner consistent with the regulations and guidance of 10 CFR 50 Appendix E, NUREG 0654, and other appropriate regulatory documents. Biennial exercises involving off-site agencies shall be conducted as a Site Area Emergency and should escalate to General Emergency. The exercise scenarios are varied such that all major elements of the Plan are tested at least every six (6) years.

4.5 **Letter of Agreement (LOA)** - Support or assistance from outside agencies is established and maintained through Letters of Agreement or, in some instances, purchase orders/contracts.

Letters of Agreement are confirmed annually through correspondence, direct contact, or by telephone. Each agreement is renewed at least every three (3) years. Purchase orders/contracts are renewed as required.

4.6 **Monthly** - Monthly is defined as at least once each calendar month, being the first day of each month until the last unless otherwise specified.

4.7 **Quarterly** - Quarterly is defined as once per calendar quarter, with the quarters being January through March, April through June, July through September and October through December.

4.8 **Semi-annual** - Semi-annual is defined as twice per calendar year, with one time from January 1 to June 30 and one from July 1 to December 31.

5.0 INSTRUCTIONS

5.1 Protection Services Manager Instructions

1. Review completed documentation of Attachment 1, EP Program Schedule, on an annual basis.

2. Ensure that State and County Emergency Management officials are made aware of non-emergency events that have a potential for media interest.

   A. Inform Emergency Preparedness (EP) of event

   B. Verify that EP has informed appropriate Emergency Management officials.

§1 3. Ensure that State and County Emergency Management officials are made aware of the following on an annual basis:

   A. Significant changes to the Emergency Plan/EPIPs.

   B. Emergency Action Levels (EALs)

4. Maintain awareness of the status of the Alert and Notification System (ANS) operability.

   A. Ensure that EP updates this information on the Plant Daily Status Report.

   B. Ensure that degradations of the ANS are promptly addressed.

   - The Manager, Plant Services is responsible to maintain operability of the ANS per NBS-NPS-EP-WP-001, Alert and Notification System Testing, Maintenance and Engineering.

5.0 INSTRUCTIONS (continued)

5.1 Protection Services Manager Instructions (continued)

§1 **5.** Ensure the following is performed in support of exercises:

A. Schedule a date for the exercise in coordination with the primary State and County emergency response agencies.

B. Provide the opportunity for State and County response agencies to participate in an exercise.

C. Coordinate FPL efforts with other participating personnel, organizations, and agencies.

- If the Federal Emergency Management Agency (FEMA) is evaluating State and County emergency response, Then ensure that the exercise scenario is developed within the timeframes specified by the regulations, as defined in Data Sheet 4, EP Annual Exercise Checklist.

D. Discuss and evaluate annual exercise performance with plant management, FPL controller/evaluators and principal participants.

END OF SECTION 5.1

5.0 INSTRUCTIONS (continued)

5.2 Emergency Preparedness Supervisor

1. At the beginning of each calendar year:

A. Schedule the items on Data Sheet 1, EP Program Maintenance Checklist.

B. Record on Data Sheet 2, Emergency Plan 6 Year Element Demonstration, the data of the most recent performance.

1. Ensure the year last performed date is less than 6 years from the current year.

C. Schedule additional elements to be performed this year as necessary on Attachment 1, EP Program Schedule (Item 7).

D. Schedule procedure reviews from Data Sheet 3, EPIP Biennial Review on Attachment 1, EP Program Schedule.

2. Maintain awareness of status of completion of Attachment 1, EP Program Schedule.

A. Response actions performed as part of actual plant emergencies may be credited towards the following drills or tests:

- integrated facility activation drill
- call out phone test/drill
- HP drill
- off-site agency communications drill
- medical drill

B. Evolutions incorporated within a multiple scope drill/exercise may count as drill or test completion, as example:

- HP drill, medical drill, or off-site communications drill as part of quarterly integrated facility activated drill or annual exercise.

5.0 INSTRUCTIONS (continued)

5.2 Emergency Preparedness Supervisor (continued)

2. (continued)

¶6 **C.** Off Hours Augmentation including: /R5

- weekly tests of automated recall system
- quarterly off-hours phone test (at least one per year should be manual)
- monthly review of Emergency Response Directory
- quarterly verification of Emergency Response Directory data
- quarterly verification of Emergency Response Directory distribution list
- quarterly publication and distribution of Emergency Response Directory

D. NRC Performance Indicators

- prepare and submit in accordance with ADM-25.01

3. Ensure the completion of the items on Data Sheet 2, Emergency Plan 6 Year Element Demonstration.

4. Ensure the completion of the items on Data Sheet 3, EPIP Biennial Review.

5. Ensure the completion of the items on Data Sheet 4, EP Annual Exercise Checklist.

END OF SECTION 5.2

DATA SHEET 1

EP PROGRAM MAINTENANCE CHECKLIST

(Page 1 of 3)

(YEAR)_____

Semi-Annual/Annual/Biennial EP Maintenance Items:			INITIAL / DATE
§1	1.	HP Drill (Semi-Annual)	
		A. (Jan-Jun) Date____/____/____	_____/_____
		B. (Jul-Dec) Date____/____/____	_____/_____
§1	2.	Radiological Monitoring Drill (Annual)	
		A. Date____/____/____	_____/_____
§1,2	3.	Biennial Exercise (Include Data Sheet 4, EP Exercise Checklist)	
		A. Date____/____/____	_____/_____
		B. FEMA Evaluated (Even Years Only) Yes / No	_____/_____
§1	4.	Annual Offsite Agencies Communications Drill	
		A. Date____/____/____	_____/_____
§1	5.	Annual Unannounced Communications Drill	
		A. Date____/____/____	_____/_____
§1	6.	Annual Medical Drill	
		A. Date____/____/____	_____/_____

S__OPS

DATE_____
DOCT CHECKLIST
DOCN EPIP-13
SYS_____
COMP COMPLETED
ITM REV

DATA SHEET 1
EP PROGRAM MAINTENANCE CHECKLIST
(Page 2 of 3)

(YEAR)_____

Semi-Annual/Annual/Biennial EP Maintenance Items (continued):			INITIAL / DATE
§1	7.	Emergency Plan Review:	_____/_____
		A. Emergency Plan Review (Annual)	_____/_____
		B. Letters of Agreement Certification (Annual Confirmation/Triennial Renewal)	_____/_____
		C. EPIP Review (Even years only) (Include Data Sheet 3, EPIP Biennial Review)	_____/_____
§1	8.	Media Day (Annual)	_____/_____
§1	9.	Public Information Brochure (Annual)	_____/_____
§1	10.	Review and update Six Year Plan (Annual) (Include Data Sheet 2, Emergency Plan 6 Year Element Demonstration)	_____/_____
§1	11.	Significant Emergency Plan/EPIP Changes, Emergency Action Levels (EALs) Meeting with State/County Emergency Management (Annual)	_____/_____
§1	12.	Hospital Training (Annual)	_____/_____
§1	13.	Off-site Training (Annual)	_____/_____
	14.	Recovery Plan Review (Biennial)	_____/_____

DATA SHEET 1

EP PROGRAM MAINTENANCE CHECKLIST

(Page 3 of 3)

(YEAR)_____

Semi-Annual/Annual/Biennial EP Maintenance Items (continued): INITIAL / DATE

15. Annual training review of ERO

    A. Solicit verification of annual ERO training completion from the Training Department. _____/_____

    B. Review training completion feedback and remove any ERO members not qualified. _____/_____

16. EP Program Monthly Schedule (Attachment 1, EP Program Schedule) _____/_____

Completed by_____
Emergency Preparedness Supervisor

Reviewed by_____
Protection Services Manager

END OF DATA SHEET 1

DATA SHEET 2
EMERGENCY PLAN 6 YEAR ELEMENT DEMONSTRATION

YEAR_____

Element	Year Last Performed	Year Next Scheduled	Date Completed/ Initial
Off hours staffing (6 P.M. - 4 A.M.)			
Activation of Emergency News Center			
Use of fire control teams			
Use of medical support personnel			
Use of Security personnel for prompt access to emergency equipment or support			
Use of one or more portions of backup communications for notification			
Field monitoring			
Capability for determining the magnitude and impact of the particular components of a release			
Capability for post-accident coolant sampling and analysis			
Assembly and accountability			
Initial recovery planning activities			

END OF DATA SHEET 2

DATA SHEET 3
EPIP BIENNIAL REVIEW
(Page 1 of 2)

(YEAR)_____

I. Emergency Plan Implementing Procedures (Biennial)

		Revision No.	Date Reviewed	PCR Y / N
EPIP-00	Discovery and Identification of an Emergency Condition (including Chemical, Fire and Natural Emergencies)			
EPIP-01	Classification of Emergencies			
EPIP-02	Duties and Responsibilities of the Emergency Coordinator			
EPIP-03	Emergency Response Organization Notification/Staff Augmentation			
EPIP-04	Activation and Operation of the Technical Support Center			
EPIP-05	Activation and Operation of the Operational Support Center			
EPIP-06	Activation and Operation of the Emergency Operations Facility			
EPIP-07	Conduct of Evacuations/Assembly			
EPIP-08	Off-site Notifications and Protective Action Recommendations			
EPIP-09	Offsite Dose Calculations			
EPIP-10	Off-Site Radiological Monitoring			
EPIP-11	Core Damage Assessment			
EPIP-12	Maintaining Emergency Preparedness - Radiological Emergency Plan Training			
EPIP-13	Maintaining Emergency Preparedness - Emergency Exercises, Drills, Tests and Evaluations			
HP-90	Emergency Equipment			
HP-200	HP Emergency Organization			
HP-201	Emergency Personnel Exposure Control			

/R5

DATA SHEET 3
EPIP BIENNIAL REVIEW
(Page 2 of 2)

(YEAR)_____

I. Emergency Plan Implementing Procedures (Biennial) (continued)

		Revision No.	Date Reviewed	PCR Y / N
HP-202	Environmental Monitoring During Emergencies			
HP-203	Personnel Access Control During Emergencies			
HP-204	In Plant Radiation and Contamination Surveys during Emergencies			
HP-205	Emergency Inplant Air Sampling			
HP-206	Analysis of Emergency Inplant Air Samples			
HP-207	Monitoring Evacuated Personnel During Emergencies			
HP-208	Personnel Decontamination During Emergencies			
COP-06.06	Guidelines for Collecting Post Accident Samples			
COP-06.11	Establishing Remote Laboratory for Analysis of Accident Samples			

END OF DATA SHEET 3

DATA SHEET 4
EP EXERCISE CHECKLIST

(YEAR)_____

Exercise Items:	INITIAL / DATE
1. Exercise Date Selection:	
A. Evaluated Date ____/____/____	_____/_____
2. ERO Participant Notification	_____/_____
3. Scenario Development Personnel Assigned	_____/_____
4. Controllers/Evaluators Assigned	_____/_____
5. Exercise Objectives	
A. Protection Services Manager Approval	_____/_____
B. Submitted to Licensing (75 Day NRC Submittal, Even years only)	_____/_____
6. Exercise Scenario	
A. Provided to Florida DEM (60 Day FEMA Submittal, Even years only)	_____/_____
B. Submitted to Licensing (45 Day NRC Submittal, Even years only)	_____/_____
7. Post Exercise Critique Date:____/____/____	_____/_____
§1 8. Facility Review Group (FRG) Critique Report Review	_____/_____

END OF DATA SHEET 4

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 1 of 16)

JANUARY (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 2 of 16)

FEBRUARY (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 3 of 16)

MARCH (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

   C. Quarterly verification of Emergency Response Directory Data. _____/_____

   D. Quarterly verification of Distribution List for Emergency Response Directory. _____/_____

   E. Quarterly publication of Emergency Response Directory. _____/_____

3. Quarterly Integrated Facility Activation Drill

   Drill Date _____ _____/_____

4. Quarterly Off-Hours Call-Out Phone Test

   Drill Date _____ _____/_____

5. Quarterly Self-Assessment _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 4 of 16)

MARCH
(continued)

(YEAR)_____

INITIAL / DATE

6. Quarterly submittal of EP Performance Indicators _____/_____

   A. Participation _____

   B. Drill & Exercise Performance _____

   C. Alert & Notification System _____

7. §5 Quarterly test of the NRC Emergency Response Data System (ERDS) link. _____/_____

8. Other Surveillances/Drills/Evolutions

   _____ _____/_____

   _____ _____/_____

/R5

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 5 of 16)

APRIL (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

   Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 6 of 16)

MAY (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 7 of 16)

JUNE (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

   C. Quarterly verification of Emergency Response Directory Data. _____/_____

   D. Quarterly verification of Distribution List for Emergency Response Directory. _____/_____

   E. Quarterly publication of Emergency Response Directory. _____/_____

3. Quarterly Integrated Facility Activation Drill

   Drill Date _____ _____/_____

4. Quarterly Off-Hours Call-Out Phone Test

   Drill Date _____ _____/_____

5. Quarterly Self-Assessment _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 8 of 16)

JUNE (YEAR)_____
(continued)

INITIAL / DATE

6. Quarterly submittal of EP Performance Indicators _____/_____

   A. Participation _____

   B. Drill & Exercise Performance _____

   C. Alert & Notification System _____

7. §5 Quarterly test of the NRC Emergency Response Data System (ERDS) link. _____/_____

8. Other Surveillances/Drills/Evolutions

   _____ _____/_____

   _____ _____/_____

/R5

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 9 of 16)

JULY (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

   Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 10 of 16)

AUGUST (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 11 of 16)

SEPTEMBER (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

   C. Quarterly verification of Emergency Response Directory Data. _____/_____

   D. Quarterly verification of Distribution List for Emergency Response Directory. _____/_____

   E. Quarterly publication of Emergency Response Directory. _____/_____

3. Quarterly Integrated Facility Activation Drill

   Drill Date _____ _____/_____

4. Quarterly Off-Hours Call-Out Phone Test

   Drill Date _____ _____/_____

5. Quarterly Self-Assessment _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 12 of 16)

SEPTEMBER (YEAR)_____
(continued)

INITIAL / DATE

6. Quarterly submittal of EP Performance Indicators _____/_____

   A. Participation _____

   B. Drill & Exercise Performance _____

   C. Alert & Notification System _____

7. §5 Quarterly test of the NRC Emergency Response Data System (ERDS) link. _____/_____

8. Other Surveillances/Drills/Evolutions

   _____ _____/_____

   _____ _____/_____

/R5

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 13 of 16)

OCTOBER (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 14 of 16)

NOVEMBER (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

3. Other Surveillances/Drills/Evolutions:

   A. _____ _____/_____

   B. _____ _____/_____

   C. _____ _____/_____

   D. _____ _____/_____

   E. _____ _____/_____

   F. _____ _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 15 of 16)

DECEMBER (YEAR)_____

INITIAL / DATE

1. Emergency Response Facility Surveillance: _____/_____

   Date

   - TSC _____
   - OSC _____
   - EOF _____

2. ¶6 Off-Hours Augmentation Methodologies: /R5

   A. Weekly test of automated emergency recall system (Autodialer). _____/_____

      Dates:_____

   B. Monthly review of Emergency Response Directory. _____/_____

   C. Quarterly verification of Emergency Response Directory Data. _____/_____

   D. Quarterly verification of Distribution List for Emergency Response Directory. _____/_____

   E. Quarterly publication of Emergency Response Directory. _____/_____

3. Quarterly Integrated Facility Activation Drill

   Drill Date _____ _____/_____

4. Quarterly Off-Hours Call-Out Phone Test

   Drill Date _____ _____/_____

5. Quarterly Self-Assessment _____/_____

ATTACHMENT 1
EP PROGRAM SCHEDULE
(Page 16 of 16)

DECEMBER (YEAR)_____
(continued)

INITIAL / DATE

6. Quarterly submittal of EP Performance Indicators _____/_____

   A. Participation _____

   B. Drill & Exercise Performance _____

   C. Alert & Notification System _____

7. §5 Quarterly test of the NRC Emergency Response Data System (ERDS) link. _____/_____

8. Other Surveillances/Drills/Evolutions

   _____

   _____

/R5

END OF ATTACHMENT 1

30-335 Superseded Per Revs To EPIP's Dtd 7/10/01 (#0119800116

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No. **EPIP-02**

Current Rev. No. **8**

Effective Date: **12/20/00**

Title:

DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

Responsible Department: **EMERGENCY PLANNING**

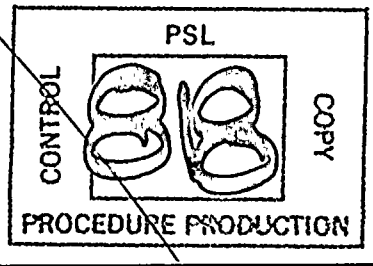
Revision Summary

Revision 8 - Revised off-site assembly area to jensen public beach parking area in accordance with revision 38 of the E-Plan and made administrative changed. (J. R. Walker, 10/13/00)

Revision 7 - Deleted policy reference per PMAI, clarified windspeed for unit shutdown, revised re-entry guidelines and made editorial changes. (J. R. Walker, 09/21/00)

Revision 6 - THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Deleted information and instructions for off-site notifications and PARs. Relocated to new EPIP-08 off-site notifications and protective action recommendations. Addressed early activation of emergency response facilities per PMAI PM00-13-122. Made administrative and editorial changes. (Donna Calabrese, 05/31/00)

Revision 5 - Added instructions for implementation / actuation of new gai-tronics alarm - emergency plan activation and made human factors improvements. (J. R. Walker, 01/18/00)



Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
8	10/13/00	R. G. West Plant General Manager	10/13/00
		N/A Designated Approver	

S___OPS
DATE
DOCT PROCEDURE
DOCN EPIP-02
SYS
COMP COMPLETED
ITM 8

TABLE OF CONTENTS

1.0 PURPOSE

This procedure provides guidance and instructions to be followed by the Emergency Coordinator when an emergency occurs that requires the implementation of the Radiological Emergency Plan for St. Lucie Plant.

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

2.1 References

1. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2 (Section 9.5.A.7.2)

§1 2. St. Lucie Plant Radiological Emergency Plan (E-Plan)

3. St. Lucie Plant Physical Security Plan

4. St. Lucie Plant Safeguards Contingency Plan

5. E-Plan Implementing Procedures (EPIP 00-13)

6. 10 CFR 50, Domestic Licensing of Production and Utilization Facilities.

7. NUREG/BR-0150, Vol. 1, Response Technical Manual (USNRC).

8. NUREG-0654, FEMA-REP-1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.1 (continued)

9. EPA 400-R-92-001, Manual of Protective Actions Guides and Protective Actions for Nuclear Incidents, October, 1991.

2.2 Records Required

¶10 A copy of the checklists or data generated by this procedure shall be maintained in the plant files in accordance with QI-17-PSL-1, Quality Assurance Records. Records include:

1. Emergency Class Checklists

2.3 Commitment Documents

¶1 **1.** PMAI PM96-04-165, "ITR 96-006" (Unusual Event Declared Due to Dropped Rod)

¶2 **2.** NRC Inspection Report 91-01, Closure of IFIs 89-31-03 and 89-31-01

¶3 **3.** PMAI PM96-09-185, Condition Report CR-96-1750 (Off-site Notification Using Commercial Phone)

¶5 **4.** PMAI PM96-05-233, (Off-site Notification Process).

¶6 **5.** Condition Report CR 96-2389, (Off-site Dose Calculations).

¶7 **6.** Condition Report CR 98-1536 (EC Responsibilities Remain in the Control Room).

¶8 **7.** PMAI PM98-09-006 (Control of NLOs Under E-Plan).

¶9 **8.** Condition Report CR 99-1406 (Field Operator Dosimetry Under E-Plan).

¶10 **9.** PMAI PM99-10-191, Condition Report CR 99-1656 (Quality Records, Downpower Guidance Due to Hurricanes).

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.3 (continued)

¶11 **10.** PMAI PM99-10-142, Condition Report CR 99-1647 (EC Turnover).

¶12 **11.** PMAI PM99-09-016, (PARs Based on FMT Data, Completion of NRC Notification Form).

¶13 **12.** PMAI PM00-01-043, (Gai-Tronics E-Plan Alarm).

¶14 **13.** PMAI PM00-03-122, (Early Activation of ERFs).

3.0 RESPONSIBILITIES

3.1 The Nuclear Plant Supervisor (NPS) and the shift operating staff represent the first line of response to any developing emergency condition. The primary responsibility of the NPS is to control the condition as well as possible.

3.2 The NPS upon declaration of an emergency classification becomes the Emergency Coordinator (EC). The NPS remains the EC until the position is turned over.

Specific Responsibilities of the EC are:

Direction of the on-site emergency organization to bring the emergency under control.

Notification of off-site agencies within specific time limits as mandated by regulations.

Changes in Emergency Classification based on changing conditions.

Protective Action Recommendations (PARs) until turnover to the Recovery Manager.

Interfaces with the Nuclear Regulatory Commission (NRC) Reactor Safety Operations Coordinator (RSOC) when the NRC site team arrives at the TSC.

4.0 DEFINITIONS

4.1 Owner Controlled Area Evacuation (= Site Evacuation) - The evacuation from the owner controlled area of all personnel except those required to place the plant in a safe condition, the Emergency Response Organization (ERO), and Security personnel to fulfill responsibilities for evacuation.

4.2 Release (during any declared emergency)

1. Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values.

OR

2. Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

5.0 INSTRUCTIONS

5.1 General Overview

¶7,11 **1.** Upon Declaration of an emergency classification the NPS becomes the EC.

To ensure access to the EC for direction and control decisions and so that the responsibilities of the position can be successfully completed, the EC position shall remain, initially in the affected Control Room and then in the Technical Support Center (TSC), when it goes operational.

Prior to the TSC being operational, the duties and responsibilities of the EC, while a Control Room position, may be turned over to another qualified EC:

- If both Units are in classified events, the EC should locate in the Unit's Control Room with the highest classified event. If the site is in a dual Unit event, the EC should locate in the Unit 1 Control Room (due to proximity to the TSC).

If the TSC is activated, Then the EC position is turned over to an EC qualified member of plant management and the position relocated to the TSC. The prospective EC receives a turnover (refer to Attachment 3, Turnover Guidelines) from the Control Room EC and then reports to the TSC. Following verification of TSC operational readiness, the prospective EC accepts EC responsibility from the Control Room EC. The TSC EC may temporarily turnover responsibility to the TSC OPS Coordinator as the need arises.

2. To meet the above responsibilities, plus others described in this procedure, the EC will likely need to delegate many tasks. Although delegated, the completion of these tasks is still the responsibility of the EC.

5.0 INSTRUCTIONS (continued)

5.1 General Overview (continued)

2. (continued)

The EC shall not delegate the following responsibilities prior to Emergency Operations Facility (EOF) being declared operational:

A. Classification of the emergency.

B. The decision to notify state and local authorities and the content of those notifications.

C. Recommendation of protective actions for the public.

Once the EOF is operational and proper turnover has been conducted, the Recovery Manager (RM) will assume responsibility for off-site notifications to the state and local authorities and for recommending protective actions.

3. Order of Succession

If the NPS is incapacitated, Then the EC shall be (in order of succession):

A. Assistant Nuclear Plant Supervisor (ANPS) (from the affected unit)

B. Nuclear Watch Engineer (NWE)

C. Any other member of the plant staff with an active SRO license.

4. Watch Relief

A. The EC shall grant permission for watch relief, including his/her own, only when it is safe in his/her judgement to do so.

5.0 INSTRUCTIONS (continued)

5.1 General Overview (continued)

¶14 **5.** Early Activation of Emergency Response Facilities

It may be useful to have technical and/or operational support available early in an emergency prior to when the Technical Support Center (TSC), Operational Support Center (OSC), or Emergency Operations Facility (EOF) is required to be operational. Activation of any of these facilities does not require declaration of an emergency class or entry into a specific emergency classification. If early activation of one or more of the facilities is desired, then follow these guidelines:

A. This is an option during normal working hours only.

B. A page announcement should be made to request that appropriate Emergency Response Organization personnel to report to the [identify what facility/facilities is/are to be activated early].

C. Turnover of EC responsibilities is done in accordance with Step 5.1.1., above.

D. The E-Plan Activation Alarm is used only when the Emergency Response Facilities (ERFs) are to be activated in accordance with the requirements of the Emergency Plan (i.e., at the Alert or higher emergency level) and is provided for in the checklist included in this procedure.

E. Staff augmentation due to actual facility activation is to be done in accordance with the Alert Checklist or Site Area or General Emergency Checklist which are part of this procedure.

6. Security Event

A. Site security and Local Law Enforcement (LLEA) will take the lead in response to a Security Event in accordance with the Security Plan.

5.0 INSTRUCTIONS (continued)

5.1 General Overview (continued)

6. (continued)

B. Based on the nature of the Security Event and as conditions warrant, the Emergency Coordinator may delay, postpone or institute special arrangements concerning, but not limited to:

Emergency Response Facility (ERF) activation

Local or Site Evacuation

Site or Radiation Controlled Area (RCA) access

Operator field activities

Unit shutdown

7. Severe Weather Considerations

¶10 If a hurricane warning is in effect, and either one or both Unit(s) is/are in Mode 1, 2 or 3, Then use the following criteria for unit shutdown:

NOTE
Sustained hurricane force winds are sustained winds of 74 mph (64 kt or 119 kph) or greater.

A. For storms projected to reach a Category 1 or 2, the Unit(s) shall be placed in HOT STANDBY (Mode 3) or below at least two (2) hours before the projected onset of sustained hurricane force winds within the Owner Controlled Area and both Units shall remain off-line for the duration of the hurricane force winds (or restoration of reliable offsite power).

B. For storms projected to reach Category 3, 4 and 5 prior to landfall, the Units shall be shut down to a temperature less than 350 degrees T ave. at least two (2) hours before the projected onset of sustained hurricane force winds within the Owner Controlled Area and both Units shall remain off-line for the duration of the hurricane force winds (or restoration of reliable offsite power).

C. Establish an acceptable update frequency with state and local officials.

5.0 INSTRUCTIONS (continued)

5.1 General Overview (continued)

8. Drill Messages

During exercises, drills, or tests, **ALL MESSAGES** shall begin and end with **THIS IS A DRILL** or **THIS IS AN EXERCISE** or **THIS IS A TEST.**

END OF SECTION 5.1

5.0 INSTRUCTIONS (continued) TIME / INIT

5.2 Emergency Declaration Checklist

CAUTION

State and/or local authorities shall be notified within 15 minutes of declaration of the emergency classification.

NOTE

Steps should be performed in the order presented. When conditions warrant, steps may be performed out of sequence. PA announcements are provided as a guideline. Actual announcements may vary from the text provided.

1. The NPS shall declare the emergency to the Control Room staff and formally announce that he/she is the Emergency Coordinator (EC). ____/____

2. Notify plant personnel using Gai-tronics and boost function. ____/____

"Attention all plant personnel, Unit (1) (2) has declared (classification). Shift Technical Advisor and Duty Call Supervisor report to the Control Room immediately. All other plant personnel be aware and listen for further instructions. Limit radio and phone use until further notice." ____/____

3. Complete the appropriate Emergency Classification Section Checklist (attached):

A. Section 5.3 (Notification of) **Unusual Event Checklist** ____/____

B. Section 5.4 **Alert Checklist** ____/____

C. Section 5.5 **Site Area or General Emergency Checklist** ____/____

END OF SECTION 5.2

5.0 INSTRUCTIONS (continued) TIME / INIT

5.3 UNUSUAL EVENT CHECKLIST

Date ____/____/____
Message # _____

NOTE

- Prepare a new checklist for each notification made during an Unusual Event emergency.
- The term "release" has a specific definition in Section 4.0 of this procedure.

CAUTION

Any data related to a release of radioactive material (e.g., off-site dose projections or field monitoring readings) shall first be reviewed against the Emergency Action Levels (EALs) in EPIP-01, Classification of Emergencies, and secondarily against the Protective Action Recommendation (PAR) guidance in EPIP-08, Off-Site Notifications and Protective Action Recommendations, for applicability.

¶6

1. If a radioactive release has occurred or is in progress, Then notify Chemistry to promptly perform off-site dose calculations per EPIP-09, Off-site Dose Calculations, and report results to the EC. If Chemistry is unavailable, Then have the DCS call out a Chemist. ____/____

2. If evacuation of an area is necessary, Then initiate a local evacuation in accordance with EPIP-07, Conduct of Evacuations/Assembly. (Refer to Attachment 2, Criteria for Evacuation.) ____/____

3. Mobilize emergency response personnel to respond as required using Gai-tronics and boost function. ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.3 UNUSUAL EVENT CHECKLIST (continued)

NOTE
The Duty Call Supervisor (DCS) is a specifically designated and trained supervisor responsible for assisting the Emergency Coordinator (EC) in making notifications and calls to the Emergency Response Organization (ERO).

4. If the DCS is not available to perform off-site notifications, Then perform the required notifications in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations. ____/____

5. Ensure notification of Plant Management, Security and the Nuclear Division Duty Officer (NDDO). This may be accomplished by the DCS. ____/____

6. Reassess corrective and protective actions. Verify assigned activities are under way and proper progress is being made. Reassign personnel and emergency teams as necessary. ____/____ /R8

7. Continue to assess conditions and review any changes against the Emergency Action Levels (EALs) in EPIP-01, Classification of Emergencies. ____/____ /R8

8. Reclassify the event as necessary and follow instructions in the appropriate checklist. ____/____ /R8

¶½

NOTE
New notification forms shall be prepared for all updates.

9. If the classification is unchanged but a significant change in plant conditions has occurred, Then start a new Unusual Event Checklist. ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.3 UNUSUAL EVENT CHECKLIST (continued)

10. If the event can be terminated, Then complete the notification forms (State, NRC) and notify the following:

State Warning Point ____/____

Plant Management ____/____

Security ____/____

NDDO ____/____

NRC ____/____

11. All Unusual Event Checklist items completed/satisfied. ____/____

END OF SECTION 5.3

5.0 INSTRUCTIONS (continued) TIME / INIT

5.4 ALERT CHECKLIST

Date ____/____/____
Message # _____

NOTE

- For assistance with control of Non-licensed Operators (NLOs), refer to:
  - Attachment 4, Re-entry Guidelines.
  - Attachment 5, Basis for Exposure Limits for Emergency Response Personnel.
- Prepare a new checklist for each notification made during an Alert emergency.
- The term "release" has a specific definition in Section 4.0 of this procedure.

CAUTION

Any data related to a release of radioactive material (e.g., off-site dose projections or field monitoring readings) shall first be reviewed against the Emergency Action Levels (EALs) in EPIP-01, Classification of Emergencies, and secondarily against the Protective Action Recommendation (PAR) guidance in EPIP-08, Off-Site Notifications and Protective Action Recommendations, for applicability.

¶6

1. If a radioactive release has occurred or is in progress, Then notify Chemistry to promptly perform off-site dose calculations per EPIP-09, Off-site Dose Calculations, and report results to the EC. If Chemistry is unavailable, Then have the DCS call out a Chemist. ____/____

2. If evacuation of an area is necessary, Then initiate a local evacuation in accordance with EPIP-07, Conduct of Evacuations/Assembly. (Refer to Attachment 2, Criteria for Evacuation.) ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.4 ALERT CHECKLIST (continued)

¶13 **3.** Sound the Emergency Plan (E-Plan) Activation Alarm (N/A for updates). ____/____

4. Notify plant personnel of the emergency declaration using Gai-tronics and boost function (N/A for updates).

"Attention all plant personnel, Unit (1) / (2) has declared an ALERT."

"All emergency response organization personnel report at once to your assigned emergency response facility."

"All non-emergency response organization personnel report to your normal work location or contact your supervisor."

Repeat the announcement. ____/____

¶2 **5.** If a release is in progress, Then review personnel access with Health Physics personnel and notify Security personnel with any special instructions (N/A for updates). ____/____

NOTE

The Duty Call Supervisor (DCS) is a specifically designated and trained Supervisor responsible for assisting the Emergency Coordinator (EC) in making notifications and calls to the Emergency Response Organization (ERO).

6. If the DCS is not available to initiate staff augmentation, Then perform the call-out process in accordance with EPIP-03, "Emergency Response Organization Notification/ Staff Augmentation." (N/A for updates.) ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.4 ALERT CHECKLIST (continued)

7. If the DCS is not available to perform off-site notifications, Then perform the required notifications in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations. ____/____

8. Verify notification of Plant Management, Security and the NDDO. This may be accomplished by the DCS. ____/____

9. Initiate the Operations Department Accountability Aid for both Unit 1 and Unit 2 and provide this list to the TSC when requested. This may be accomplished by the DCS. (N/A for updates). ____/____

¶9 **10.** Ensure Operations field personnel have returned to the Control Room to obtain emergency Electronic Personal Dosimetry (EPD) from the HP Kit. ____/____

11. Reassess corrective and protective actions. Verify assigned activities are under way and proper progress is being made. Reassign personnel and emergency teams as necessary. ____/____ /R8

12. Continue to assess conditions and review any changes against the Emergency Action Levels (EALs) in EPIP-01, Classification of Emergencies. ____/____ /R8

13. Reclassify the event as necessary and follow instructions in the appropriate checklist. ____/____ /R8

¶2

NOTE
New notification forms shall be prepared for all updates.

14. If the classification is unchanged but a significant change in plant conditions has occurred, Then start a new Alert Checklist. ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.4 ALERT CHECKLIST (continued)

15. If a State/Local notification has not been completed in the last 60 minutes, Then provide a routine update. Start a new notification form and make the appropriate notifications. ____/____

16. If the event can be terminated, Then complete the notification forms (State, NRC) and notify the following:

State Warning Point ____/____

Plant Management ____/____

Security ____/____

NDDO ____/____

NRC ____/____

17. All Alert Checklist items completed/satisfied. ____/____

END OF SECTION 5.4

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST

Date ____/____/____
Message # _____

NOTE

- For assistance with control of Non-licensed Operators (NLOs), refer to:
  - Attachment 4, Re-entry Guidelines
  - Attachment 5, Basis for Exposure Limits for Emergency Response Personnel
- Prepare a new notification form for each notification made during a Site Area Emergency or General Emergency.
- The term "release" has a specific definition in Section 4.0 of this procedure.

CAUTION

Any data related to a release of radioactive material (e.g., off-site dose projections or field monitoring readings) shall first be reviewed against the Emergency Action Levels (EALs) in EPIP-01, Classification of Emergencies, and secondarily against the Protective Action Recommendation (PAR) guidance in EPIP-08, Off-Site Notifications and Protective Action Recommendations, for applicability.

¶6

1. If a radioactive release has occurred or is in progress, Then notify Chemistry to promptly perform off-site dose calculations per EPIP-09, Off-site Dose Calculations, and report results to the Emergency Coordinator. If Chemistry is unavailable, Then have the DCS call out a Chemist. ____/____

2. If a radioactive release has occurred or is in progress, Then identify wind direction. ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST (continued)

NOTE

When the EOF is declared operational AND the Recovery Manager has assumed responsibility, Then notifications and PARs will be performed from the EOF.

¶2 **3.** If a release is in progress, Then review personnel access with Health Physics personnel and notify Security personnel with any special instructions (N/A for updates). ____/____

¶13 **4.** If the Technical Support Center, Operational Support Center and Emergency Operations Facility are **NOT** activated, Then:

A. Sound the Emergency Plan (E-Plan) Activation Alarm (N/A for updates). ____/____

B. Notify plant personnel of the emergency declaration using Gai-tronics and boost function (N/A for updates).

"Attention all plant personnel, Unit (1)/(2) has declared a (SITE AREA EMERGENCY)/(GENERAL EMERGENCY)."

"All emergency response organization personnel report at once to your assigned emergency response facility." ____/____

C. Repeat Steps A and B above (N/A for updates). ____/____

5. If the site is **NOT** evacuated, Then sound the Site Evacuation Alarm. ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST (continued)

> **NOTE**
> To provide a clear announcement, the following step should be read and the content of the announcement determined prior to starting the announcement.

6. Make the necessary plant announcement using Gai-tronics and boost function:

A. If done in Step 5.5.4 above, Then GO TO Step 5.5.6.B.

OR

Announce the following (N/A for updates):

"Attention all plant personnel, Unit (1)/(2) has declared a (SITE AREA EMERGENCY)/ (GENERAL EMERGENCY)." ____/____

> **NOTE**
> An alternate off-site Assembly Area at the Jensen Public Beach Parking Area is available if the wind direction is from 146° to 270°.

/R8

B. If the site is **NOT** evacuated and there is **NOT** or has **NOT** been a radiological release, Then announce the following:

"All non-emergency response organization personnel are to commence evacuation of the Owner Controlled Area, report to your vehicle and proceed to your homes."

OR

If the site is **NOT** evacuated and there is or has been radiological release, Then announce the following:

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST (continued)

6. (continued)

B. (continued)

"All non-emergency response organization personnel are to commence evacuation of the Owner Controlled Area. Persons leaving the site are to proceed (North)/(South) away from the plant to (Jaycee Park)/(Jensen Public Beach Parking Area) for contamination check, accountability and further instructions." /R8

7. If a SITE AREA EMERGENCY, Then REPEAT Steps 5.5.6.A and 5.5.6.B above (N/A for updates).

OR

If a GENERAL EMERGENCY, Then REPEAT Step 5.5.6.A above (N/A for updates).

8. If the site is **NOT** evacuated, Then order Security to ensure evacuation of the Owner Controlled Area and to report personnel accountability as soon as possible (N/A for updates). ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST (continued)

CAUTION

PARs are always required for General Emergencies and may be required for lesser emergencies. Refer to EPIP-08, Off-site Notifications and Protective Action Recommendations.

NOTE

The Duty Call Supervisor (DCS) is a specifically designated and trained supervisor responsible for assisting the Emergency Coordinator (EC) in making notifications and calls to the Emergency Response Organization (ERO).

9. If the TSC and OSC are **NOT** activated, Then: ____/____

A. Notify the DCS to initiate staff augmentation in accordance with EPIP-03, Emergency Response Organization Notification/Staff Augmentation, if available.

OR

B. Perform the call-out process in accordance with EPIP-03.

10. If the DCS is **NOT** available to perform off-site notifications, Then perform the required notifications in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations. ____/____

11. Verify notification of Plant Management, Security and NDDO. This may be accomplished by the DCS. ____/____

12. Initiate the Operations Department Accountability Aid for both Unit 1 and Unit 2 and provide this list to the TSC when requested. This may be accomplished by the DCS. (N/A for updates). ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST (continued)

13. Verify with Security that the evacuation of the Owner Controlled Area has been completed and all personnel have been accounted for (N/A for updates). ____/____

14. Update the State Warning Point and NRC when the evacuation is complete. This may be accomplished by the DCS or TSC. (N/A for updates). ____/____

¶9 **15.** Ensure Operations field personnel have returned to the Control Room or OSC to obtain emergency Electronic Personal Dosimetry (EPD) (N/A for updates). ____/____

¶8 **16.** Direct that all Non-licensed Operators (NLOs), from **both** Units, report to the OSC (when operational) following evacuation of the Owner Controlled Area (N/A for updates). ____/____

17. Reassess corrective and protective actions. Verify assigned activities are under way and proper progress is being made. Reassign personnel and emergency teams as necessary. ____/____

18. Continue to assess conditions and review any changes against the Emergency Action Levels (EALs) in EPIP-01, Classification of Emergencies. ____/____

19. Upgrade to a General Emergency, as necessary. Start new checklist upon upgrading. ____/____

20. If the classification is unchanged but a significant change in plant conditions has occurred AND the EOF is **NOT** operational, Then start a new Site Area or General Emergency Checklist, prepare notification forms and make the appropriate notifications as soon as possible. ____/____

5.0 INSTRUCTIONS (continued) TIME / INIT

5.5 SITE AREA OR GENERAL EMERGENCY CHECKLIST (continued)

CAUTION

Only the Recovery Manager (RM) can authorize the downgrading of emergency classifications from Site Area or General Emergency.

NOTE

If the EOF is not operational at this time, contact Recovery Manager for information concerning turnover of notification and PAR responsibilities.

21. If the event can be downgraded or terminated, Then discuss with Recovery Manager. ____/____

¶2

NOTE

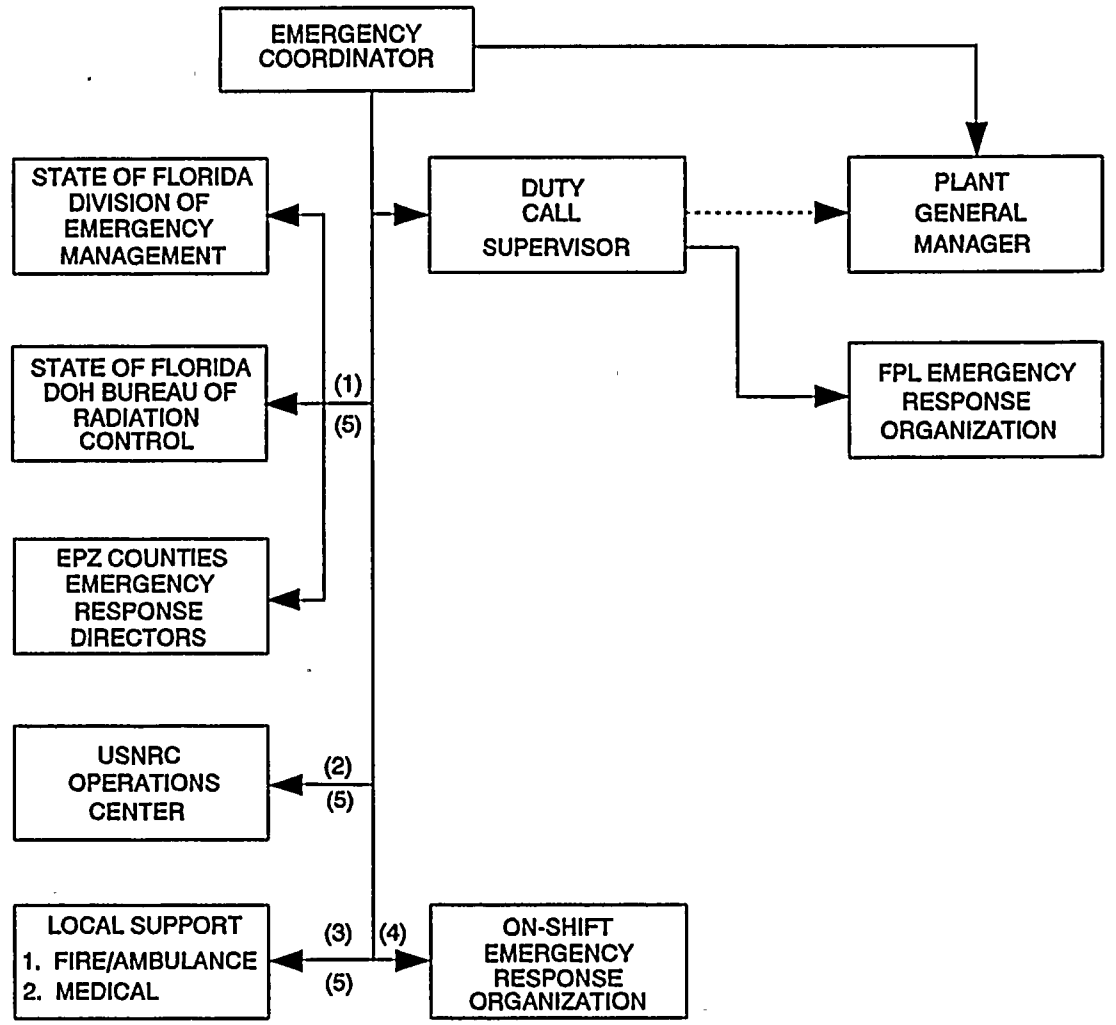
New notification forms shall be prepared for all updates.

22. If an off-site notification has not been completed in the last 60 minutes AND the EOF is **NOT** operational, Then provide a routine update. Start a new notification form and make the appropriate notifications. ____/____

23. All Site Area or General Emergency Checklist items completed/satisfied. ____/____

END OF SECTION 5.5

ATTACHMENT 1
INITIAL NOTIFICATION FLOW
(Page 1 of 1)



Legend:
——— Primary Notification Pathway
-------- Alternate Notification Pathway

(1) Via State Hot Ring Down Telephone (HRD)
(2) Via Emergency Notification System (ENS)
(3) Medical & Fire Emergencies Only, As Needed
(4) Via Plant Public Address System (PA)
(5) May be performed by the Duty Call Supervisor.

(EPIP-02A.WPG)

END OF ATTACHMENT 1

ATTACHMENT 2
CRITERIA FOR EVACUATION
(Page 1 of 1)

A. Criteria for Local Evacuation

The need for Local Evacuation should be determined in accordance with the following criteria:

Evacuate the affected local area in which any of the following conditions occur:

1. Area Radiation Monitor Alarm.

2. Containment Evacuation Alarm.

3. Unevaluated direct radiation dose rate increase in excess of 100 mRem/hour above normal levels.

4. Unexpected airborne radioactivity concentration in excess of 1×10^{-9} micro Ci/cc.

5. Removable radioactive surface contamination in an unposted area in excess of 1000 dpm/100 cm^2 beta-gamma over an area of 100 ft^2.

6. Removable radioactive surface contamination in an unposted area in excess of 50 dpm/100cm^2 alpha over an area of 100 ft^2.

7. The Emergency Coordinator determines that a situation exists for which Local Evacuation is appropriate.

B. Criteria for Owner Controlled Area Evacuation

The Owner Controlled Area shall be evacuated in the following circumstances:

1. Site Area Emergency

2. General Emergency

3. If the Emergency Coordinator determines that the entire Owner Controlled Area should be evacuated.

END OF ATTACHMENT 2

ATTACHMENT 3
TURNOVER GUIDELINES
(Page 1 of 2)

Upon arrival at the affected Control Room, the prospective Emergency Coordinator should review the following items/issues with the Control Room Emergency Coordinator (not in a particular order):

> **NOTE**
> This information (1-10 below) should be reviewed with the DCS.

1. Type of accident or incident
2. Plant status
3. Equipment out-of-service
4. Operator actions underway
5. Radiological conditions
6. Meteorological conditions
7. Procedure status
8. Emergency Plan activities underway, including any on-site or off-site protective actions
9. Conditions and/or trends of concern
10. Personnel injuries or radiation exposures

Prior to leaving Control Room verify the status of the following:

1. Emergency classification
2. Off-site notifications

ATTACHMENT 3
TURNOVER GUIDELINES
(Page 2 of 2)

Bring the following items to the Technical Support Center:

1. Copy of RCO log (entries from start of the event)
2. Completed notification forms (State and NRC)
3. Operations Accountability Aid (only if completed)

END OF ATTACHMENT 3

ATTACHMENT 4
RE-ENTRY GUIDELINES
(Page 1 of 1)

CAUTION

As specified in ADM-17.09, Invoking 10 CFR 50.54(x), the Emergency Coordinator (EC) may (with the concurrence of a licensed senior operator) waive re-entry requirements to place the plant in a safe shutdown condition or mitigate a release, if this immediate action is needed to protect the health and safety of the public.

1. **Prior to evacuation and with the Operational Support Center (OSC) NOT operational.**

   Re-entry guidelines do not apply.

2. **Prior to evacuation and with the OSC operational.**

¶8 Operators in the field should return to the Control Rooms and obtain an Electronic Personal Dosimeter (EPD) from the Health Physics Emergency Kit prior to returning to field.

¶8
3. **Evacuation ordered and with the OSC NOT operational.**

   Operator actions in the field must be viewed as re-entry activities. Operators shall return to the Control Rooms following the evacuation order. Operators shall obtain an Electronic Personal Dosimeter (EPD) from the Health Physics Emergency Kit, if not done previously. Re-entry into the plant requires:

   a. The EC (initially the NPS) authorize the entry.

   b. Maintenance of appropriate radiological and safety measures.

   c. Tracking the whereabouts of the team.

4. **Evacuation ordered and with the OSC operational**

   a. NLOs, from both Units, are to report to the OSC once it is declared operational.

   b. All field activities are re-entries and shall be coordinated and controlled by the OSC.

END OF ATTACHMENT 4

ATTACHMENT 5
§1 BASIS FOR EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
(Page 1 of 3)

Exposure to emergency response personnel should be maintained As Low As Reasonably Achievable (ALARA). Actions taken during an emergency should take into consideration the amount of exposure required to accomplish the task versus the potential benefit to the public health and safety.

Conditions may warrant re-entry into high radiation areas leading to exposure in excess of the regulatory limit. Except for rescue of personnel (life-saving only), authorization must be given in advance by the Emergency Coordinator (EC) in consultation with the TSC Health Physics Supervisor (or alternate). If time permits, the EC should obtain concurrence from the Recovery Manager if the EOF is operational. In any case, where regulatory limits have been exceeded the EC shall notify the RM of the event.

For those remote circumstances involving an event in progress and obtaining EC approval will result in leaving the accident scene or decrease the victim(s) chance of survival, lifesaving actions may be performed without obtaining EC approval. The EC shall be notified immediately following the rescue operation.

Re-entry personnel that have been selected/chosen to exceed regulatory exposure limits should be volunteers[4], broadly familiar with the risks involved (radiosensitivity of fetuses, effects of acute exposures, etc.), whose normal duties have trained them for such missions.

EPA 400 Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA 400-R-92-001 states that "To assure adequate protection of minors and the unborn during emergencies, the performance of emergency services should be limited to non-pregnant adults". FPL endorses this guidance; however, FPL recognizes that it is the right of the worker to make the decision to perform as an on-site emergency worker, understanding the potential risks involved.

Since, by their very nature, emergency exposures requiring immediate action are not planned, they are not controlled as a Planned Special Exposure. Dose received from exposure under emergency conditions will be added to the dose received during the current year, prior to the emergency, to determine compliance with the occupational dose limits in 10 CFR 20.

ATTACHMENT 5
§1 BASIS FOR EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
(Page 2 of 3)

Doses above regulatory limits will require reporting pursuant to 10 CFR 20.2202 and 20.2203. Any dose in excess of the annual limits specified in Section 20.1201(a) will be accounted for in accordance with 10 CFR 20.1206(e). If an individual exceeds any of these limits, then the individual will not be available for additional dose under 20.1201(a).

NOTE

1. Both Total Dose (TEDE) and Thyroid Dose (CDE) should be used for purposes of controlling exposure.
2. Protective clothing, including respirators, should be used where appropriate.

For the following missions, the exposure limit is[1]:	Total Dose[2] (TEDE)	THYROID[3] (CDE)
Performance of actions that would not directly mitigate the event, minimize escalation, or minimize effluent releases.	5 REM	50 REM
Performance of actions that mitigate the escalation to the event, rescue persons from a non-life threatening situation, minimize exposures or minimize effluent releases.	10 REM	100 REM
Performance of actions that decrease the severity of the event or terminate the processes causing the event in an attempt to control effluent releases to avoid extensive exposure of large populations. Also, rescue of persons from a life-threatening situation.	25 REM	250 REM
Rescue of person from a life-threatening situation. (Volunteers[4] should be above the age of 45.)	(5)	(5)

ATTACHMENT 5
§1 BASIS FOR EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
(Page 3 of 3)

(1) Exposure limits to the lens of the eye are 3 times the Total Dose (TEDE) values listed.

(2) Total Dose (TEDE) is the total whole body exposure from both external and internal (weighted) sources - Total Effective Dose Equivalent.

(3) Thyroid Dose (CDE) commitment from internal sources - Committed Dose Equivalent. The same dose limits also apply to other organs (CDE), skin (Shallow Dose Equivalent) and extremities (Extremity Dose Equivalent).

(4) Volunteers with full awareness of risks involved including numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects.

(5) No upper limit for Total Dose (TEDE) and/or Thyroid Dose (CDE) exposure has been established because it is not possible to prejudge the risks that one person should be allowed to take to save the life of another. Also, no specific limit is given for thyroid exposure since in the extreme case, complete thyroid loss might be an acceptable sacrifice for a life saved. This should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning.

END OF ATTACHMENT 5

FPL	ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE SAFETY RELATED	Procedure No. EPIP-04 Current Revision No. 7 Effective Date 12/28/00

Title:

ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER

Responsible Department: **EMERGENCY PLANNING**

REVISION SUMMARY:

Revision 7 – Revised mandatory functions to include classification and PARs, removed references to STA, revised responsibilities of the TSC EC Assist/Logkeeper and TSC Chemistry Supervisor, and made editorial and administrative changes. (J. R. Walker, 12/07/00)

Revision 6 - Changed responsibility for filling in the State Notification Form from the TSC HRD Communication to the TSC EC Assist/Logkeeper. Made editorial and administrative changes. Revised TSC briefing guidance IAW CR 00-0429. Added new PST Tracking form. (Donna Calabrese, 05/31/00)

Revision 5 - Changed Chemistry minimum staff position from TSC Chem Supv to TSC Dose Assessor, addressed PMAI by providing alternate notification methods, added instruction to produce list of EPIPs with current rev. numbers, revised re-entry worksheet, added instruction to create conf. bridge for OPS, and made editorial and administrative changes. (J. R. Walker, 11/18/99)

Revision 4 - Removed reference to the rotating maintenance shift supervisor filling the position of TSC coordinator with OSC. (J. R. Walker, 07/01/99)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
7	12/07/00	R. G. West Plant General Manager	12/07/00
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS
DATE
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COM COMPLETED
ITM 7

TABLE OF CONTENTS

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(continued)

SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

1.1 Discussion

This procedure provides instructions for the activation and operation of the Technical Support Center (TSC).

1.2 Location and Description

The TSC is on the 62 foot elevation of the Unit 1 Reactor Auxiliary Building (RAB). The TSC is located adjacent to the Unit 1 Control Room and is enclosed in the same habitability envelope. The TSC has emergency communications equipment, precalculated emergency data, pertinent reports, plans, procedures and drawings available for use. Should the Unit 1 Control Room envelope require evacuation, alternate locations for the TSC have been identified as follows:

1. South Service Building
2. Nuclear Training Center

1.3 TSC Functions

1. Mandatory Functions

   A. Classification of emergencies in accordance with EPIP-01, Classification of Emergencies. IR7

NOTE
The following tasks become the responsibility of the Emergency Operations Facility (EOF) when manned and fully operational.

   B. Relief to the Control Room for off-site communications to the State and local agencies and the NRC in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations.

   C. Performance of off-site dose calculations in accordance with EPIP-09, Off-site Dose Calculations, or the Class A computer model. IR7

   D. Protective Action Recommendations (PARs) in accordance with EPIP-08. IR7

1.3 TSC Functions (continued)

2. Additional Functions

A. Management of emergency mitigation activities.

B. Technical support in determining current and projected plant status and providing in-depth diagnostic and engineering assistance to the Control Room.

C. Direct the re-entry activities of the Operational Support Center (OSC).

D. Coordination with the Emergency Operations Facility (EOF) regarding emergency status, corrective and protective actions, off-site interface, radiological conditions, core damage assessment, etc.

1.4 Minimum Staffing

1. The following is the list of the minimum positions needed for TSC operation:

- Emergency Coordinator
- TSC Supervisor
- TSC Dose Assessor
- TSC Reactor Engineer
- TSC Elec Rep - PST (Problem Solving Team)
- TSC Mech Rep - PST
- (3) TSC Communicator (HRD, ENS, EOF)

1.5 §2 Activation

Activation of the TSC is the responsibility of the Emergency Coordinator (EC) and is required for an Alert or higher declared emergency. Arrangements have been made to staff the TSC in a timely manner.

1.6 Operations

The TSC has sufficient space to accommodate the Florida Power & Light Company (FPL) response organization and designated representatives of the Nuclear Regulatory Commission (NRC) Site Team. Arrangements have been made which allow for continuous operation, as necessary.

2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on an attachment.

2.1 References

1. §1 St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)
2. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2
3. §2 St. Lucie Plant Radiological Emergency Plan (E-Plan)
4. §3 St. Lucie Plant Topical Quality Assurance Report (TQAR)
5. E-Plan Implementing Procedures (EPIP 00-13)
6. HP-200 Series Procedures
7. ADM-17.09, Invoking 10 CFR 50.54(x)
8. ADM-17.11, 10 CFR 50.59 Screening
9. St. Lucie Plant Emergency Response Directory (ERD)
10. QI-17-PSL-1, Quality Assurance Records
11. ERDADS Reactor Operator's Manual (8770-12058)
12. St. Lucie Plant Severe Accident Management Guidelines (SAMGs)
13. §4 Fitness for Duty Rule, 10 CFR 26
14. NUREG 1394, Emergency Response Data System (ERDS)

2.2 Records Required

1. The following shall be retained following a plant emergency:

   - Checklists, data and paperwork generated per this procedure.
   - Log books maintained during the plant emergency.

2. §1 Recorded information shall be forwarded to Emergency Planning following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 Commitment Documents

1. ¶1 PMAI PM97-04-142, Training Drill Critique 1/24/97, (ERDADS screen mimics and full staffing guidance)

2. ¶2 Condition Report 97-1389, (Emergency Supplies)

3. ¶3 PMAI PM99-09-017, Training Drill Critique 7/22/99, (Alternate Notification Methods)

4. ¶4 PMAI PM96-09-185, Condition Report CR 96-1750 (Off-site Notification Using Commercial Phone)

5. ¶5 Condition Report 00-0429 (TSC Briefing)

3.0 RESPONSIBILITIES

3.1 Emergency Coordinator (EC)

1. The responsibilities for this position are provided in EPIP-02, Duties and Responsibilities of the Emergency Coordinator.

3.2 TSC EC Assist/Logkeeper

1. Initiates and maintains the EC Logbook.
2. Provides assistance to the EC to ensure EC responsibilities are met, particularly off-site notifications and Protective Action Recommendations (PARs).
3. Performs duties as directed/assigned by the EC.

3.3 TSC Supervisor

1. Provides command and control of TSC activities.
2. Supervises the TSC staff particularly the communicators and administrative personnel.
3. Coordinates activities to ensure adequate support of the EC.
4. Ensures communications are performed with off-site agencies until the EOF is activated.
5. Ensures the communication flow is maintained within the facility and with the Control Room, OSC and EOF.
6. Coordinates facility briefings.
7. Arranges for long term operation of the TSC.

3.4 TSC Coordinator with the OSC

1. Serves as the coordinator with the OSC.
2. Provides the OSC with requests for Re-entry Teams.
3. Tracks the re-entry activities of the OSC.
4. Updates the TSC regarding OSC team status and corrective actions.

IR7

3.5 TSC OPS Coordinator

NOTE
This position is filled by two persons, one located in the affected unit's Control Room, the other in the TSC.

1. Provides expertise in plant operations to the EC in the TSC.
2. Provides communications assistance to the NPS in the affected Control Room.
3. Ensures the unaffected unit's Control Room is kept apprised of the status of the emergency.
4. Maintains communication flow between the TSC and the affected Control Room concerning status of operations.
5. Serves as primary Severe Accident Management Guidelines (SAMG) decision maker.

3.6 TSC Reactor Engineer

1. Monitors critical safety functions for indications of core status.
2. Assists Nuclear Fuels personnel in the EOF in assessment of core damage.
3. Assists in Severe Accident Management Guidelines (SAMG) evaluation.

3.7 TSC Chemistry Supervisor

1. Directs dose assessment activities in the TSC.
2. Assists the EC with Protective Action Recommendations (PARs).
3. Keeps the EC apprised of chemistry related issues.
4. Assists the Chemistry Supervisor in the OSC.

3.8 TSC HP Supervisor (TSCHPS)

1. The responsibilities for this position are provided in HP-200, Health Physics Emergency Organization.

/R7

3.9 TSC Security Supervisor

1. Establishes and maintains site accountability.
2. Arranges site access for the NRC Site Team.
3. Controls on-site security operations throughout the emergency.

3.10 TSC Problem Solving Team (PST)

1. Evaluates plant conditions and provides recommendations to the EC.
2. Anticipates component failures and accident consequences.
3. Researches affected systems and components.
4. Develops mitigation strategies and/or countermeasures.
5. Performs Severe Accident Management Guidelines (SAMG) evaluation.

4.0 DEFINITIONS

4.1 Facility Status

1. **Activation** - the request to staff and establish an Emergency Response Facility (ERF).
2. **Operational** - when sufficient personnel (i.e., minimum staff) are available to accomplish mandatory facility functions such as off-site notifications and dose calculations.
3. **Fully Staffed** - the complete complement of personnel is present in the facility.

4.2 **FPL Emergency Recall System (ERS)** - the call-out system used as a means of off hours call-out, as described in EPIP-03, Emergency Response Organization/Staff Augmentation.

4.3 **Videolink** - a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF allowing the EC briefings to be available in all the Emergency Response Facilities (ERFs).

/R7

5.0 INSTRUCTIONS

NOTE

- This section provides general information and instructions for all TSC responders.
- Position specific checklists are included as attachments to this procedure.
- Individuals specifically designated as members of the TSC Emergency Response Organization (ERO) are identified in the ERD.

5.1 When notified, TSC emergency responders are to report to the facility as quickly as possible.

5.2 The initial responder to the TSC should do the following:

1. Unlock the facility with a key from the NPS or Assistant Nuclear Plant Supervisor (ANPS). If these persons are unavailable, break the glass to the keybox next to the door and remove the key.
2. Turn on the facility lights.
3. Open all facility equipment / document storage cabinets.

5.3 Upon arrival at the facility, each TSC emergency responder should perform the following:

1. Sign-in on:
   - **A.** the status board on the South (rear) wall of the facility in the space corresponding to your position and
   - **B.** the TSC ERO Shift Staffing and Accountability Roster.
2. Obtain your specific position notebook from the storage cabinet.
3. Place your name on your position (player) badge (located in the position notebook) with a dry erase marker or in any other non permanent manner.
4. Make your workstation/location operational.
5. Notify your supervisor or the TSC Supervisor of your readiness status.

5.4 §3 Only controlled copies of nuclear safety-related procedures, drawings and other available plant information shall be used. Non-controlled documents or drawings should be verified with a controlled copy prior to use in the TSC.

5.5 During facility briefings, stop what you are doing, pay attention and contribute, as requested.

5.6 Upon termination of the event:

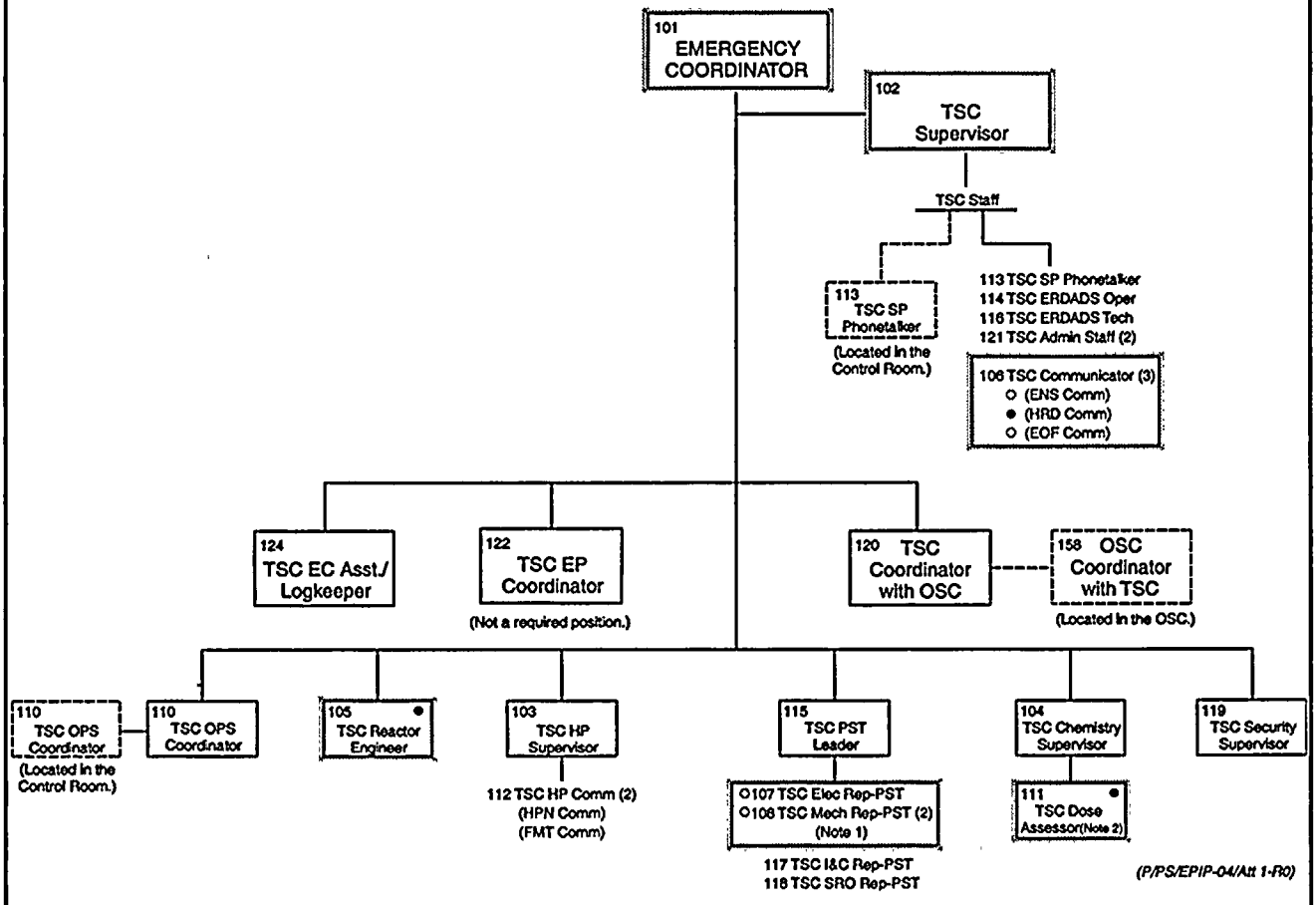
1. All TSC personnel should return their workstations/locations to a normal state and assist in restoring the facility to a ready condition.

2. Collect all significant information and documentation, such as completed EPIPs and attachments, logs, notification forms and other notes and data sheets (not bound in the position notebooks), and provide this material to the TSC Supervisor.

/R7

END OF SECTION 5.0

ATTACHMENT 1
TSC EMERGENCY RESPONSE ORGANIZATION AND SHIFT STAFFING
(Page 1 of 1)



Autodialer position numbers are listed with position titles.
- ● 30 minute response goal, per NUREG 0654, Table B-1
- ○ 60 minute response goal, per NUREG 0654, Table B-1

Note 1- Only one person in the TSC Mech Rep-PST position is required as minimum staff.
Note 2- The Dose Assessor function will be performed by the on-shift Chemist.
▭ Indicates minimum staffing positions that must be filled in order to declare the facility operational.

END OF ATTACHMENT 1

/R7

ATTACHMENT 2
TSC EC ASSIST / LOGKEEPER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Remove the EC Logbook from the EC position notebook and initiate the EC Log (use Attachment 2A, Typical Information to be Included in the EC Logbook). _____

2. Review the requirements of EPIP-02, Duties and Responsibilities of the Emergency Coordinator. _____

3. Steps to occur continually while the facility is in operation:

a. Maintain the EC Logbook.

b. Assist the EC in the completion of the requirements of EPIP-02.

c. Prior to the Emergency Operations Facility going operational, assist the EC in completion of the State Notification Form, including determination of Protective Action Recommendations (PARs), as necessary in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations.

d. Verify that the EC approves all off-site notification forms.

e. Remind the EC of time limits for notification of off-site agencies.

f. Ensure checklists/paperwork are properly completed.

g. Provide EC a summary of recent log entries for facility briefings.

ATTACHMENT 2
TSC EC ASSIST / LOGKEEPER CHECKLIST
(Page 2 of 2)

B. 3. (continued) INITIAL

h. Support EC as needed or requested.

i. Assist the Emergency Notification System (ENS) Communicator in responding to requests for information from the NRC.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Ensured all facility activities closed out. _____

2. Closed out the EC Log, returned the Logbook to the EC position notebook and returned the notebook to the storage cabinet. _____

3. Ensured all paperwork collected. _____

4. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____ IR7

5. Returned position notebook to storage cabinet. _____ IR7

END OF ATTACHMENT 2

ATTACHMENT 2A
TYPICAL INFORMATION TO BE INCLUDED IN THE EC LOGBOOK
(Page 1 of 1)

Maintaining concise, detailed logs during an emergency event is important. Following the event, all information recorded will be needed to provide a clear picture of actions taken.

A. The following information should be included in the EC Logbook:

1. Key events (e.g., classification changes, injuries, etc.).
2. Status changes in equipment, radiological conditions, personnel, etc.
3. Decisions made or actions taken.
4. Other items of significance.

B. Log entry requirements:

1. Time of entry.
2. Use ink.
3. Write/print legibly.
4. Use concise and accurate wording.
5. Strike through and initial changes.
6. Do not remove pages from the log.

END OF ATTACHMENT 2A

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 1 of 4)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Determine operational readiness of the TSC by verifying the following:

NOTE
Attachment 3B, TSC Minimum Staffing Requirements, should be used to determine staff and suitable alternates.

a. Minimum staff available (use to Attachment 3A, TSC ERO Shift Staffing and Accountability Roster). _____

b. Communications equipment, procedures and other supplies are available, checked and ready to use. _____

- Commercial phone as backup to State/County and NRC Notifications (DO NOT test call HRD or ENS).
- Extension phones in TSC.
- Procedure, drawing, tech manual cabinets unlocked.
- Instruct personnel to verify their position notebook procedures against the posted revision numbers.

c. Minimum staff prepared to accomplish mandatory facility functions. _____

3. Recommend to the EC that the TSC should be declared operational. Operational at_____ _____

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 2 of 4)

A. (continued) INITIAL

NOTE

¶1 Unless authorized by the EC, facility staffing should be in accordance with Attachment 3A, TSC ERO Shift Staffing and Accountability Roster.

4. Review additional staffing status with the EC. _____

5. TSC fully staffed. _____

6. Ensure that the EC log, completed notification forms and checklists and any other pertinent information have been faxed to the EOF. _____

B. FACILITY OPERATION

1. Initiate the TSC Logbook. _____

NOTE

The TSC Reactor Engineer is responsible for establishing the communication between the St. Lucie Plant's Emergency Response Data Acquisition and Display System (ERDADS) and the NRC's Emergency Response Data System (ERDS).

2. Ensure ERDADS Link with the NRC (ERDS) established/ attempted. _____

3. ¶2 Obtain food and water supply for the Unit 1 Control Room/TSC personnel. _____

4. ¶2 Obtain food and water supply for the Unit 2 Control Room personnel. _____

5. Arrange for long term staffing (use Attachment 3A, TSC ERO Shift Staffing and Accountability Roster). _____

6. As directed by the EC, initiate steps for relocation of the TSC (use Attachment 3D, Guidelines for Relocation of the TSC). _____

/R7

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 3 of 4)

B. (continued) INITIAL

7. Steps to occur continually while the facility is in operation:

a. Maintain the TSC Logbook.

b. Manage/supervise activities of TSC Communicators (HRD, ENS, EOF, HPN, Sound-Powered Phonetalker, FMT).

c. Manage/supervise activities of the TSC Administrative Staff.

d. Maintain low noise levels in the facility.

e. Coordinate overall support functions of the TSC.

f. Conduct briefings in accordance with Attachment 3C, TSC Facility Briefings.

g. Ensure the OSC is kept well informed regarding emergency status and plant conditions (an audio/video link may be used for this purpose).

h. Ensure the EOF is kept well informed regarding emergency status and plant conditions (an audio/video link may be used for this purpose).

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All communications links terminated. _____

2. All communications paperwork collected. _____

3. All facility activities closed out. _____

4. All documents, equipment and supplies returned to pre-activation condition and/or location. _____

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 4 of 4)

C. (continued) INITIAL

5. Closed out TSC Logbook. _____

6. Provided all completed paperwork (not bound in the position notebook(s)) to Emergency Planning. _____ /R7

7. Returned position notebook to storage cabinet. _____ /R7

END OF ATTACHMENT 3

ATTACHMENT 3A
TSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 1 of 1)

Shift[1,2] _____, Hours _____ To _____

POSITION {Minimum staff in bold[3]}	NAME	BADGE NO.	POSITION {Minimum staff in bold[3]}	NAME	BADGE NO.
Emergency Coordinator			**TSC Supervisor**		
TSC Reactor Engineer			**TSC Dose Assessor[5]**		
TSC Communicator[4]			**TSC Communicator[4]**		
TSC Communicator[4]			**TSC Elec Rep – PST**		
TSC Mech Rep – PST			**TSC Mech Rep – PST**		
TSC Mech Rep – PST			**TSC I&C Rep – PST**		
TSC SRO Rep – PST			**TSC PST Leader**		
TSC HP Comm			**TSC HP Comm**		
TSC HP Supervisor			**TSC Chemistry Supervisor**		
TSC OPS Coord (in TSC)			**TSC OPS Coord (in Control Room)**		
TSC SP Phonetalker (in TSC)			**TSC SP Phonetalker (in Control Room)**		
TSC EC Assist/ Logkeeper			**TSC Coordinator with OSC**		
TSC ERDADS Operator			**TSC ERDADS Tech**		
TSC Admin Staff			**TSC Admin Staff**		
TSC Security Supervisor			**TSC EP Coordinator (not required)**		

1 Long term staffing, refer to the St. Lucie Plant Emergency Response Directory (ERD) for position alternates.
2 Long term staffing includes the Control Rooms, attach list to this sheet.
3 Refer to Attachment 3B, TSC Minimum Staffing Requirements, to this attachment for temporary alternates for minimum staff positions.
4 TSC Communicator position fills the following positions:
   a. TSC ENS Communicator
   b. TSC HRD Communicator
   c. TSC EOF Communicator
5 Position may be relieved when the EOF goes operational and takes the lead for dose assessment.

END OF ATTACHMENT 3A

/R7

ATTACHMENT 3B
TSC MINIMUM STAFFING REQUIREMENTS
(Page 1 of 1)

Major Functional Area[1]	Position Title and ID No.[2]	# in Position	Qualifications/ Temporary Alternate
Senior Mgmt. Rep.	Emergency Coordinator, 101	1	Senior Manager with Emergency Coordinator qualifications
Off-site Dose Assessment	TSC Dose Assessor, 111	1	Member of Chemistry Department
Core/Thermal Hydraulics	TSC Reactor Engineer, 105	1	Member of the Reactor Engineering Department or current or prior STA
Notification/Communication	TSC Communicator, 106	3	TSC responder with -STA or equivalent background for ENS Communicator -Technical/operational background for HRD or EOF Communicator
Electrical	TSC Elec Rep - PST, 107	1	Electrical Engineer or Electrical Maintenance Supervisor
Mechanical	TSC Mech Rep - PST, 108	1	Mechanical Engineer or Mechanical Maintenance Supervisor
Facility Command and Control	TSC Supervisor, 102	1	TSC Coordinator with OSC

1 This function(s) may be accomplished during the first 75 minutes of an emergency by an individual(s) meeting the corresponding listed qualifications.

2 These Emergency Response Organization (ERO) positions were established to accomplish the indicated function(s).

END OF ATTACHMENT 3B

¶5

ATTACHMENT 3C
TSC FACILITY BRIEFINGS
(Page 1 of 2)

NOTE
Briefings should be carried by the Videolink.

A. GENERAL GUIDELINES

1. Coordinated by the TSC Supervisor or his/her designee:

   a. Establish a frequency (e.g., approximately every 30 minutes). Frequency of briefings may be changed (e.g., decreased during a protracted event or increased during rapidly changing conditions).

   b. Set criteria (i.e., attendance, noise and activity level, collection and circulation of information, etc.).

2. TSC Supervisor should announce the start of the briefing and then turn the briefing over to the EC.

3. TSC Supervisor should assist the EC during the briefing.

   a. Ensure that the EC receives any updated information. Coordinate this with the TSC EC Assistant/Logkeeper.

   b. Ensure that the EC repeats any questions that are asked from the floor to ensure that the OSC and EOF members have heard them.

¶5

ATTACHMENT 3C
TSC FACILITY BRIEFINGS
(Page 2 of 2)

B. GENERAL FORMAT - the following information should be included in facility briefings.

> **NOTE**
> It is **not** necessary to have all department representatives participate in each briefing. Use discretion in this area to avoid unnecessary repetition of information.

1. Initial status and summary to include:
   - **a.** Time of the briefing.
   - **b.** Emergency Classification.
   - **c.** Plant status (affected unit, unaffected unit).
   - **d.** Radiological conditions (e.g., release in progress, contaminated areas, etc.).
   - **e.** Status of protective actions (e.g., site evacuation, actions underway by the public, etc.).
   - **f.** Status of activities underway in the facility.
   - **g.** Priority activities/primary focus.
2. Input/update information from other departments:
   - **a.** Operations (including EOP actions, discussion of SAMGs).
   - **b.** Health Physics (including field monitoring activities).
   - **c.** Reactor Engineering (including status of the reactor core).
   - **d.** Problem Solving Team (including SAMGs).
   - **e.** TSC Coordinator with the OSC (including re-entry activity status).
3. Major activities underway in other facilities.
4. Concerns or questions.

END OF ATTACHMENT 3C

ATTACHMENT 3D
GUIDELINES FOR RELOCATION OF THE TSC
(Page 1 of 3)

If habitability of the Unit 1 Control Room is challenged (e.g., due to fire/smoke) and evacuation is required, the TSC will need to be relocated. The following guidelines are provided to assist in this endeavor.

A. Emergency Coordinator

1. Transfer the responsibilities of the EC as follows:

   a. Classification of the emergency - NPS

NOTE
The EOF, once operational, has responsibility for recommending protective actions and for off-site notifications.

   b. Protective Action Recommendations (PARs) - NPS

   c. Decision to notify off-site officials and the content of notification messages - NPS

   d. Request the unaffected Control Room ANPS to support the NPS in off-site notifications.

2. Conduct a transfer of EC responsibilities with the NPS (via phone conversation) once the alternate TSC is prepared to go operational.

B. TSC Supervisor

1. In conjunction with the EC and the TSC HP Supervisor, determine the appropriate area to relocate the TSC. Choose one of the following:

   a. South Service Building

   b. Nuclear Training Center

2. Direct the evacuation by briefing TSC personnel on location, travel route, materials to take and any immediate actions prior to leaving the facility (e.g., formally terminate communications, turn off equipment, etc.)

ATTACHMENT 3D
GUIDELINES FOR RELOCATION OF THE TSC
(Page 2 of 3)

B. (continued)

3. Re-establish command and control of TSC functions as quickly as possible.

a. Transfer the responsibility for off-site notifications from the unaffected Control Room (if this responsibility has not been transferred to the EOF) to the communicators in the relocated TSC.

C. All TSC Personnel

1. Formally discontinue communications.

2. Gather position notebooks and other pertinent materials.

3. Travel per the prescribed route to the alternate TSC location.

4. Assist Security in re-establishing accountability as quickly as possible.

5. Re-establish TSC functions as quickly as possible.

ATTACHMENT 3D
GUIDELINES FOR RELOCATION OF THE TSC
(Page 3 of 3)

Suggested Arrangements and Equipment Availability at Alternate TSC Locations:

SOUTH SERVICE BUILDING NUCLEAR TRAINING CENTER

Communications		
HRD Phone	EP area fourth floor	Simulator
ENS Phone	Any commercial phone	Any commercial phone
HPN Phone	Any commercial phone	Any commercial phone
EOF Phone	Any commercial phone	Any commercial phone
FMT Radio	EP area fourth floor	Simulator
Dose Assessment		
Class A Model	EP area fourth floor	Technical Training area second floor
TSC Functions		
Command and Control	EP area fourth floor	Conference room and Supervisor offices second floor
Problem Solving Team	Engineering area third floor	Conference room second floor
Other	Cubicles second and fourth floor	Cubicles second floor

END OF ATTACHMENT 3D

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 1 of 4)

NOTE

1. This checklist applies to the following Communicator positions in the TSC:

   HRD Communicator — ENS Communicator
   EOF Communicator — Sound-powered Phonetalker (CR/TSC)

2. The responsibilities of the TSC HP Communicators are provided as follows:

   HPN Communicator - in HP-200, Health Physics Emergency Organization
   FMT Comm/Coord - in EPIP-10, Off-site Radiological Monitoring

3. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

NOTE

Communicator positions should be filled in the following order:

1. Hot Ring Down (HRD) Phone
2. Emergency Notification System (ENS)
3. EOF
4. Sound-powered Phone (CR)
5. Sound-powered Phone (TSC)

2. Filling the position of _____ _____

3. Review appropriate information in Attachment 4A, Communications Guidelines. _____

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

HRD Communications

a. Assist the EC with State and County notifications by:

1. Reviewing the State Notification Form for completeness.

2. As necessary, ensuring Protective Action Recommendations (PARs) match the PAR Worksheet (see Notification from the Technical Support Center in EPIP-08, Off-site Notifications and Protective Action Recommendations).

3. Ensure the EC has approved the form.

b. Transmit the notification form in accordance with EPIP-08.

c. Request the TSC EC Assist/Logkeeper log notification times.

d. Following turnover of notification responsibility to the EOF HRD Communicator, identify availability to the TSC Supervisor. Be prepared to provide assistance as requested.

/R7

ENS Communications

a. If necessary, transmit an initial NRC Notification Form in accordance with EPIP-08.

b. At an Alert or higher emergency classification, request the NRC to establish the ENS conference bridge.

c. Maintain an open line of communication and a transmission log.

d. Request the TSC EC Assist/Logkeeper:

1. Provide assistance in responding to requests for information from the NRC.

2. Log notification times, as appropriate.

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 3 of 4)

B. 1. (continued)

ENS Communications (continued)

e. Log all questions asked by NRC.

f. Obtain answers to questions from appropriate TSC staff member (e.g., HP, Chemistry, Reactor Engineering, etc.), as necessary.

g. Obtain EC approval prior to providing additional information to the NRC.

EOF Communications

a. Maintain an open line of communication with the EOF.

b. If ERDADS is out of service, use Attachment 4B, Safety Functions Equipment Status and Radioactive Gaseous Source Terms, to obtain plant parameter and radiological data (use Attachment 4B) via the Sound-powered Phonetalker and share the information with the EOF (via the TSC Communicator in the EOF).

c. Provide clarification of any discrepant information as requested by the EOF.

Sound-powered Phonetalker

a. Provide an open line of communication between the affected Control Room and the TSC.

b. Provide fan status for dose assessment.

c. Provide clarification of data and/or obtain additional data as requested by the TSC.

d. If ERDADS is out of service, use Attachment 4B, Safety Functions Equipment Status and Radioactive Gaseous Source Terms, to obtain plant parameter and radiological data.

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 4 of 4)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All communications links (HRD, ENS, EOF, Sound-powered phone) terminated. _____
2. All communications paperwork collected. _____
3. All phone equipment returned to pre-activation condition. _____
4. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____ /R7
5. Returned position notebook to storage cabinet. _____ /R7

END OF ATTACHMENT 4

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 1 of 7)

NOTE
If communications are associated with drill or exercise, the statement "This is a drill" should precede and follow the actual message.

A. GENERAL GUIDELINES

1. Always speak clearly, firmly and with normal tone when using any communication system.

2. The sender and receiver should be clearly identified.

3. Message text:

   a. Communication must be free of ambiguity. Slang terms should not be used. Avoid the use of words that sound alike; for example, avoid increase and decrease, use raise and lower instead.

   b. Communications must be specific. Use noun names for plant equipment, not acronyms; for example Low Pressure Safety Injection Pump instead of LPSI.

   c. The phonetic alphabet should be used to identify specific train, bus, channel or equipment designations, not just letter identifier; for example, refer to the 1Alpha heater drain pump, not the 1A heater drain pump. The following is the phonetic alphabet to be used:

A	Alpha	J	Juliet	S	Sierra
B	Bravo	K	Kilo	T	Tango
C	Charlie	L	Lima	U	Uniform
D	Delta	M	Mike	W	Whiskey
E	Epsilon	N	November	X	X-ray
F	Foxtrot	O	Oscar	Y	Yankee
G	Golf	P	Papa	Z	Zulu
H	Hotel	Q	Quebec		
I	India	R	Romeo		

   d. The phonetic alphabet should not be used for stringed letter references, acceptable acronyms or location symbols; for example, AB bus, AC or DC, TSC, respectively.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 2 of 7)

A. (continued)

4. Acknowledgement and confirmation (3-way communication) - messages shall be comprised of proper transmission, acknowledgement, and confirmation.

   a. The message is properly transmitted from the originator to the receiver.

   b. The message receiver should acknowledge the communication by giving functional repeat-back to the message originator. The repeat-back can be provided by either paraphrasing or explaining the message in one's own words, or by verbatim repeat-back. In all cases, verbatim repeat-back should be used for equipment identifiers.

   c. If the message receiver does not understand the message he/she should ask for the message to be repeated.

   d. If an incorrect repeat-back is given, the message originator should immediately correct the miscommunication with a statement such as, "WRONG", followed by restating the correct message.

   e. The message originator should confirm the acknowledgement (repeat-back) with a statement such as, "That is correct".

5. The Call Sign should be used periodically when using the Local Government Radio (LGR).

6. Prior to transmission, ensure that information has been verified and approved by the appropriate authority, as necessary.

7. Ensure that any incoming pertinent information is provided to the TSC Supervisor and the Emergency Coordinator or designee.

8. Maintain documentation of any significant information provided or received.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 3 of 7)

B. COMMUNICATIONS SYSTEMS

1. State Warning Point (SWP) Hot Ring Down Phone (HRD)

   a. **This is the primary communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

   b. A self-verifying phone system which is initiated by entering the 3 digit code corresponding to the desired location of contact. The codes appear on a list in a pull-out drawer attached to the base of the phone or in the St. Lucie Plant Emergency Response Directory (ERD). A confirmation ring-back (double tone) will be heard if the dialed terminal is successfully contacted. When the party answers, begin transmission by depressing the "push-to-talk" bar in the handset. Release the "push-to-talk" bar to receive response.

2. NRC Emergency Notification System (ENS)

   a. **This is the primary communications pathway to the NRC.**

   b. Part of the NRC Emergency Telecommunications System (ETS). Initiate contact by dialing (direct, no access code needed) one of the phone numbers provided on the phone or in the ERD. This will become an open line of communication at the Alert or higher emergency class. The EOF will join the conference bridge.

3. EOF Direct-line Telephone

   a. This is a direct line to the Emergency Operations Facility (EOF). Initiate contact by removing the handset from the cradle which will cause the phone in the EOF to ring. When the phone is answered, begin transmission. This link can also be initiated from the EOF.

/R7

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 4 of 7)

B. (continued)

4. Sound-powered Phone

   a. As the name implies, these phone (headsets) are powered by sound.

   b. The Unit 1 phone jack is located near the Dose Assessment Status Board; the Unit 2 phone jack is located next to the Chronology Status Board in the rear of the room.

   c. Once the headsets have been connected in both the affected Control Room and the TSC, transmission can begin by speaking into the mouthpiece.

5. Commercial Telephone

   a. **This is the first alternate communications pathway to the State Warning Point and St. Lucie, Martin Counties, and NRC.**

   b. Dial 9 for a Fort Pierce exchange; dial 8-1-Area Code for all other numbers. An authorization code is needed for long distance calls.

6. Emergency Satellite Communications System (ESATCOM)

   a. **This is a second alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

   b. To initiate transmission, lift the handset and depress the "push-to-talk" bar in the handset. Wait 3-5 seconds to hear a beep before starting to talk. The red light on the phone is a power indicator, when lit, power is available.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 5 of 7)

B. (continued)

7. Local Government Radio (LGR) - Call Sign: Kilo November Golf Romeo 8-7-4 (KNGR874).

a. **This is the third alternate communications pathway to the State Warning Point.**

b. A backup communication system to the Counties and indirectly to the State. A table radio, Motorola Command Series, provides two channels, the primary F2 (39.180 MHz, State Channel 1) and the secondary F1 (39.100 MHz, State Channel 2). Channel selection can be made by depressing the "F1/F2" button (the radio is set to monitor F2). The radio can be operated either by depressing the "transmit" button on the console or be removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. (Preference should be given to using the handset).

8. Satellite Telephone

a. Instructions for use of the satellite telephone are provided in the phone's briefcase.

b. The phone is stored in a supply cabinet in the TSC.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 6 of 7)

C. ¶3 Alternate State Warning Point Notification Methods (recommended format):

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

1. Alternate 1 - Commercial phone

   Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Unit ____ Nuclear Plant with an emergency declaration. My callback number is _____."

   Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the State of Florida Notification Message Form.

   ¶4 Request callback to verify that State Warning Point has notified St. Lucie and Martin Counties and the Bureau of Radiation Control.

2. Alternate 2 - ESATCOM

   Hold down the button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk.

   Announce "State Warning Point, this is St. Lucie Unit ____," then release the button in order to listen.

   When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Unit ____ (classification), repeat (classification)."

   When the State Warning Point gives go-ahead, provide the information from the State of Florida Notification Message Form.

   Announce "St. Lucie clear" at the end of the conversation.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 7 of 7)

C. (continued)

3. Alternate 3 - Local Government Radio (LGR) communication to St. Lucie and Martin County Emergency Operations Centers (EOCs) with relay to the State Warning Point.

On channel 2, contact the county EOCs by depressing the transmit button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Unit ____. Over." When St. Lucie County replies, direct them to standby while you contact Martin County.

When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Unit ____ declaring a (classification), repeat (classification). I am standing by to transmit State of Florida Notification Message Form information when you are ready to copy. Over."

When the counties give the go-ahead, provide the information from the State of Florida Notification Message Form.

End the conversation by announcing "This is St. Lucie Unit ____, KNGR 874, over and out."

END OF ATTACHMENT 4A

ATTACHMENT 4B
SAFETY FUNCTIONS EQUIPMENT STATUS - UNIT 1
(Page 1 of 4)

1

¶1 ERDADS SF1 Screen Mimic /R7

PLANT PARAMETERS	SAFEGUARDS	CONTAINMENT	BALANCE OF PLANT
REACTOR PWR (WR) _____%	PUMP STATUS (ON/OFF)	PRESSURE _____PSIG	ELECTRICAL PLANT
REACTOR VSL LEVEL _____%	HPSI A ON/OFF	LEVEL (NR) _____FEET ((-7) TO 0)	4.16 KV A3 _____VOLTS
RCS PRESSURE (NR) _____PSIA (1500-2500)	HPSI B ON/OFF	LEVEL (WR) _____FEET ((-1) TO 26)	4.16 KV B3 _____VOLTS
RCS PRESSURE (LR) _____PSIA (0-1600)	LPSI A ON/OFF	TEMPERATURE	DIESEL GENERATORS
PRESSURIZER LEVEL _____%	LPSI B ON/OFF	ATMOSPHERE _____DEG F	D/G A _____VOLTS
CET TEMPERATURE _____DEG F	CHRG A ON/OFF	SUMP _____DEG F	D/G A _____AMPS
HOT LEG A TEMP _____DEG F	CHRG B ON/OFF	RADIATION LEVEL	D/G B _____VOLTS
HOT LEG B TEMP _____DEG F	CHRG C ON/OFF	CHHRM _____R/HR	D/G B _____AMPS
COLD LEG A1 TEMP _____DEG F	CCW A ON/OFF	POST/LOCA _____MR/HR	TANK STATUS
COLD LEG A2 TEMP _____DEG F	CCW B ON/OFF	PARTICULATE _____CPM	RWT _____FEET
COLD LEG B1 TEMP _____DEG F	CCW C ON/OFF	GASEOUS _____CPM	CST _____FEET
COLD LEG B2 TEMP _____DEG F	AFW A ON/OFF	HYDROGEN CONCENTRATION	BAMT A _____%
LMTNG SBCOOL MRGN _____DEG F	AFW B ON/OFF	A ANALYSER _____%	BAMT B _____%
S/G A PRESSURE _____PSIG	AFW C ON/OFF	B ANALYSER _____%	HVAC STATUS (ON/OFF)
S/G A LEVEL (WR) _____%	AUX FEED FLOW (GPM)	CONTAINMENT COOLERS (ON/OFF)	HVE 4A ON/OFF
S/G B PRESSURE _____PSIG	A_____ B_____ C_____	CNTMT COOLER A ON/OFF	HVE 4B ON/OFF
S/G B LEVEL (WR) _____%	HPSI FLOW (GPM)	CNTMT COOLER B ON/OFF	HVE 8A ON/OFF
CNTMT PRESS (WR) _____PSIG	A1_____ A2_____	CNTMT COOLER C ON/OFF	HVE 8B ON/OFF
CONTAINMENT TEMP _____DEG F	B1_____ B2_____	CNTMT COOLER D ON/OFF	HVE 9A ON/OFF
	LPSI FLOW (GPM)		HVE 9B ON/OFF
	A1_____ A2_____		HVE 10A ON/OFF
	B1_____ B2_____		HVE 10B ON/OFF
	SIT'S LEVEL (%)		
	A1_____ A2_____		
	B1_____ B2_____		
	SIT'S PRESS (PSIA)		
	A1_____ A2_____		
	B1_____ B2_____		
	SAFEGUARDS SIGNALS		
	SIAS A YES / NO		
	SIAS B YES / NO		
	MSIS A YES / NO		
	MSIS B YES / NO		

ATTACHMENT 4B
RADIOACTIVE GASEOUS SOURCE TERMS - UNIT 1
(Page 2 of 4)

1

/R7

¶1 ERDADS RG1 Screen Mimic

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
AIR TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F / 50 METER	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
05-01	A MAIN STM	_____	MR/HR	58	A HI RANGE	_____	R/HR
05-02	B MAIN STM	_____	MR/HR	59	B HI RANGE	_____	R/HR
		_____			PRESSURE	_____	PSIG
CHANNEL	ECCS 1A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
02-05	LOW RANGE	_____	uC/cc	01-05	LOW RANGE	_____	uC/cc
02-07	MID RANGE	_____	uC/cc	01-07	MID RANGE	_____	uC/cc
02-09	HI RANGE	_____	uC/cc	01-09	HI RANGE	_____	uC/cc
02-10	FLOW	_____	SCFM	01-10	FLOW	_____	SCFM
CHANNEL	ECCS 1B	VALUE	UNITS	CHANNEL	FUEL BLDG	VALUE	UNITS
03-05	LOW RANGE	_____	uC/cc	04-05	LOW RANGE	_____	uC/cc
03-07	MID RANGE	_____	uC/cc	04-07	MID RANGE	_____	uC/cc
03-09	HI RANGE	_____	uC/cc	04-09	HI RANGE	_____	uC/cc
03-10	FLOW	_____	SCFM	04-10	FLOW	_____	SCFM

ATTACHMENT 4B
RADIOACTIVE GASEOUS SOURCE TERMS - UNIT 2
(Page 3 of 4)

2

¶1 ERDADS SF2 Screen Mimic

/R7

PLANT PARAMETERS	SAFEGUARDS	CONTAINMENT	BALANCE OF PLANT
REACTOR POWER (WR) _____	PUMP STATUS (ON/OFF)	PRESSURE _____PSIG	ELECTRICAL PLANT
RX VSL HEAD LEVEL _____%	HPSI A ON/OFF	LEVEL (NR) _____FEET ((-7) TO 0)	4.16 KV A3 _____VOLTS
RX VSL PLENUM LEVEL _____%	HPSI B ON/OFF	LEVEL (WR) _____FEET ((-1) TO 26)	4.16 KV B3 _____VOLTS
RCS PRESSURE (NR) _____PSIA (1500-2500)	LPSI A ON/OFF	TEMPERATURE	DIESEL GENERATORS
RCS PRESSURE (LR) _____PSIA (0-750)	LPSI B ON/OFF	ATMOSPHERE _____DEG F	D/G A _____VOLTS
PRESSURIZER LEVEL _____%	CHRG A ON/OFF	SUMP _____DEG F	D/G A _____AMPS
CET TEMPERATURE _____DEG F	CHRG B ON/OFF	RADIATION LEVEL	D/G B _____VOLTS
HOT LEG A TEMP _____DEG F	CHRG C ON/OFF	CHHRM _____R/HR	D/G B _____AMPS
HOT LEG B TEMP _____DEG F	CCW A ON/OFF	POST/LOCA _____MR/HR	TANK STATUS
COLD LEG A1 TEMP _____DEG F	CCW B ON/OFF	PARTIC _____CPM	RWT _____FEET
COLD LEG A2 TEMP _____DEG F	CCW C ON/OFF	GASEOUS _____CPM	CST _____FEET
COLD LEG B1 TEMP _____DEG F	AFW A ON/OFF	HYDROGEN CONCENTRATION	BAMT A _____%
COLD LEG B2 TEMP _____DEG F	AFW B ON/OFF	A ANALYSER _____%	BAMT B _____%
LMTNG SBCOOL MRGN _____DEG F	AFW C ON/OFF	B ANALYSER _____%	HVAC STATUS (ON/OFF)
S/G A PRESSURE _____PSIG	AUX FEED FLOW (GPM)	CONTAINMENT COOLERS (ON/OFF)	HVE 4A ON/OFF
S/G A LEVEL (WR) _____%	A_____ B_____ C_____	CNTMT COOLER A ON/OFF	HVE 4B ON/OFF
S/G B PRESSURE _____PSIG	HPSI FLOW (GPM)	CNTMT COOLER B ON/OFF	HVE 8A ON/OFF
S/G B LEVEL (WR) _____%	A1_____ A2_____	CNTMT COOLER C ON/OFF	HVE 8B ON/OFF
CNTMT PRESS (WR) _____PSIG	B1_____ B2_____	CNTMT COOLER D ON/OFF	HVE 9A ON/OFF
CONTAINMENT TEMP _____DEG F	LPSI FLOW (GPM)		HVE 9B ON/OFF
	A1_____ A2_____		HVE 10A ON/OFF
	B1_____ B2_____		HVE 10B ON/OFF
	SIT'S LEVEL (%)		
	A1_____ A2_____		
	B1_____ B2_____		
	SIT'S PRESS (PSIA)		
	A1_____ A2_____		
	B1_____ B2_____		
	SAFEGUARDS SIGNALS		
	SIAS A YES / NO		
	SIAS B YES / NO		
	MSIS A YES / NO		
	MSIS B YES / NO		

ATTACHMENT 4B
RADIOACTIVE GASEOUS SOURCE TERMS - UNIT 2
(Page 4 of 4)

2

/R7

¶1 ERDADS RG2 Screen Mimic

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
CURRENT TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
631	A MAIN STM	_____	MR/HR	40	A HI RANGE	_____	R/HR
632	B MAIN STM	_____	MR/HR	41	B HI RANGE	_____	R/HR
633	BACKGROUND	_____	MR/HR		PRESSURE	_____	PSIG

CHANNEL	ECCS 2A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
601	LOW RANGE	_____	uC/cc	621	LOW RANGE	_____	uC/cc
602	MID RANGE	_____	uC/cc	622	MID RANGE	_____	uC/cc
603	HI RANGE	_____	uC/cc	623	HI RANGE	_____	uC/cc
604	EFFLUENT	_____	uC/SEC	624	EFFLUENT	_____	uC/SEC

CHANNEL	ECCS 2B	VALUE	UNITS
611	LOW RANGE	_____	uC/cc
612	MID RANGE	_____	uC/cc
613	HI RANGE	_____	uC/cc
614	EFFLUENT	_____	uC/SEC

END OF ATTACHMENT 4B

ATTACHMENT 5
TSC ERDADS OPERATOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

CAUTION
Ensure data is being collected for the affected unit. Each unit has predesignated ERDADS terminals.

1. Check out ERDADS terminals and determine operability status. _____

   If ERDADS is inoperable or printouts are not available, Then assist the Sound-powered Phonetalker in collecting plant parameter and radiological data by completing Attachment 4B, Safety Functions Equipment Status and Radioactive Gaseous Source Terms.

2. Steps to occur continually while the facility is in operation:

   a. Call up EPIP screens and additional data as requested, refer to Attachment 5A, ERDADS Data Acquisition.

   b. Provide the following printouts to the TSC Administrative Staff.

      1. Safety Functions Equipment Status (SF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

      3. Other screens as requested.

   c. Support dose assessment by providing requested data from ERDADS.

ATTACHMENT 5
TSC ERDADS OPERATOR CHECKLIST
(Page 2 of 2)

B. **2.** (continued) INITIAL

d. Observe ERDADS data during interval between report printing for significant changes and trends, report changes to appropriate members of the TSC staff.

e. Refer to Attachment 5B, ERDADS Data Points, for a description of ERDADS data points.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. ERDADS system returned to preactivation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 5

/R7

ATTACHMENT 5A
ERDADS DATA ACQUISITION
(Page 1 of 3)

I. DATA ACQUISITION

A. ERDADS - Emergency Response Data Acquisition and Display System, the following information is available on the display screens indicated.

1. Meteorological Data -

   Display: **SMD** (Site Meteorological Data)

2. Plant Parameter Data -

CAUTION
Certain parameters (e.g., fan status) available on Unit 2 are NOT available on Unit 1.

   Display: in the TSC - **SF (1/2)** (Safety Functions and Equipment Status)

3. Radiological Data -

   Display: **RG (1/2)** (Radiation Gaseous Source Terms) **RBS** (Health Physics Evaluation Screen - containment radiation levels and trends) **R11** (Area Radiation Monitors, Unit 1) **R21** (Area Radiation Monitors, Unit 2)

4. Chemistry Data -

   Display: **R12** (S/G Blowdown, Steam Jet Air Ejector, Unit 1) **R22** (S/G Blowdown, Steam Jet Air Ejector, Unit 2)

ATTACHMENT 5A
ERDADS DATA ACQUISITION
(Page 2 of 3)

I. DATA ACQUISITION (continued)

A. (continued)

5. To access data -

a. Press "CLEAR"

b. Type in "Pup Unit (1/2)"

c. Press "EXEC"ute, top of screen will read "Unit change is complete" or "Current Unit is same as entered Unit"

d. Press "EPIP"

e. The "PAGE UP" and "PAGE DOWN" keys will cause the following display sequence:

SMD - RG (1/2) - SF (1/2) - RBS - EF (1/2) - SMD

6. To go directly to a screen -

a. Press "CLEAR"

b. Type in screen designation, e.g., "**RG1**"

c. Press "DISPLAY"

B. Sound-powered Phonetalker - The Sound-powered Phonetalker can be utilized as a primary source of information or as an alternate method to ERDADS.

1. Primary source - status of fans needed for dose assessment exhaust fans 6, 7, 8, 9, 10, 15, 16 and 17.

/R7

ATTACHMENT 5A
ERDADS DATA ACQUISITION
(Page 3 of 3)

II. ERDADS - COLOR/SYMBOL CONVENTIONS

Color/Symbol	Explanation [1]
Numeric value in white on dark green background	Data value is valid and within the instrument range.
Numeric value blinking (yellow on blue/ red on white)	Value may be yellow on blue background (urgent alarm) or red on white background (critical alarm), indicates an alarm setting has been exceeded, the alarm must be acknowledged in the Control Room (operators are unable to acknowledge ERDADS alarms in the Simulator Control Room), the value will continue to blink until acknowledged; the value will continue to update.
"BAD" (blue on white)	Preceded by a numeric value in white on a blue background signifying a suspect value indicating that one or several inputs to this composite point is/are out of instrument range, when all inputs to the point are out of range the word "BAD" replaces the numeric value.
"FAILED"	Point is from a single instrument and the value is out of range.
"NO DATA"	Point does not have input to ERDADS, usually point available on one unit, but not the other.

[1]Based on Table 4.1 in the ERDADS Reactor Operator's Manual (8770-12058)

END OF ATTACHMENT 5A

¶2

ATTACHMENT 5B
ERDADS DATA POINTS
(Page 1 of 8)

The following data point descriptions for St. Lucie Plant correspond with the data normally tracked on the plant parameters status board. Consult ERDADS Manual, as necessary, for verification of point IDs, point names or description information.

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. RCS T Hot (HLA and HLB) (deg. F)	QTA541-1/2		Average	This parameter is the average of the "A" and "B" steam generator inlet temperature. It is also referred to as the average hot leg temperature. The individual "A" and "B" hot leg temperatures are derived by choosing between current narrow and wide range sensor values. The choice depends on the current values, qualities and direction of the rates of change of the instrumentation values, as well as two pairs of overlapping switching limits and the most recent range utilized. The outputs from the calculation consist of the choice of range, the associated value and rate of change together with the quality of each.
RCS Pressure WR (psia)	QA0501-1/2	RCS Pressure	Average	This parameter is a Reactor Coolant System (RCS) wide range instrument. It derived from Pressurizer Pressure signals PT1107-2 and PT1108-2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 2 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
RCS Pressurizer Level (%)	QA0001-1/2	PRZR LVL	Average	This parameter is pressurizer level. It is derived from Pressurizer Level control signals LT1110X-2 and LT1110Y-2 which are linear. These two signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. The top of the heaters is 73.98 inches above the lower top centerline.
Charging Flow to Regen Hx (GPM)	FT2212-1/2	RCS CHG/MU	N/A	This parameter is reactor coolant system makeup flow. It is converted to engineering units using a linear equation.
Subcooling Margin (deg. F)	QA0005-1/2	Submargin	Minimal	This parameter is derived from eight subcooled values, TMARHEAD-A-1/2, TMARRCS-B-1/2, TMARUR-A-1/2,TMARHEAD-B-1/2, TMARCET-A-1/2 TMARUR-B-1/2, TMARRCS-A-1/2 and TMARCET-B-1/2, which are provided by the Qualified Safety Parameter Display System (QSPDS). They are processed by a signal auctioneering minimum algorithm. This function finds the highest usable data value in a specified group. Each data value of the group and its quality is examined and the following quantities are obtained: 1. Lowest usable data value, 2. Point number of the lowest usable data value, 3. Number of usable data values, and 4. Lowest quality of the usable data. • For two or more usable data values, the result is the highest usable value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.

ATTACHMENT 5B
ERDADS DATA POINTS
(Page 3 of 8)

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POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. Core Exit Temperature (deg. F)	QA0003-1/2	Temp. Core Ex.	Average	This parameter is derived from 45 Unit 1 detectors, or 56 Unit 2 detectors located just above the upper fuel alignment plate. The Qualified Safety Parameter Display System (QSPDS) provides the values. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.
Reactor Vessel Level (%)	Unit 1: QA0004-1 Unit 2: RLEV H-2 RLEV P-2		Minimum	The reactor vessel level for Unit 1 QA0004-1 is derived from the reactor vessel levels RLEV-A-1 and RLEV-B-1 which are provided by the Qualified Safety Parameter Display System. The ERDADS select the lowest of the two values. For only one good data value, the result is set to that value and the quality is poor. The reactor vessel level for Unit 2 is displayed as reactor plenum level RLEVPB-2 and reactor head level RLEVHB-2 which is provided by the "B" side Qualified Safety Parameter Display System (QSPDS). These two parameters are displayed with no calculations being performed by the ERDADS computer system. The QSPDS obtains these values from the heated and unheated junction thermocouples located inside the reactor. They are positioned between the head and upper fuel alignment plate in the reactor internals.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 4 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Reactor Vessel Level % (continued)				Unit 1 Level Information: Head and Plenum together

Sensor	Location* (* in. to fuel) alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	186 ¼	20	80
2	144 3/8	19	61
3	108	18	43
4	71 5/8	14	29
5	50 5/8	10	19
6	29 5/8	7	12
7	19 5/8	5	7
8	10 5/8	7	0

Unit 2 Level Information: Head and Plenum together

Sensor	Location* (* in. to fuel) alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	170 ½	52	48
2	140 ¾	28	20
3	111 1/8	20	0
None			100
4	98 5/8	18	82
5	74 5/8	21	61
6	53 5/8	20	41
7	32 5/8	19	22
8	12 5/8	22	0

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 5 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
HPSI Total Flow (GPM)	HSITTLF-1/2	HPSI Flow	Sum	This parameter measures total HPSI flow and is derived from HPSI Header Flow signals FT3311-1/2, FT3321-1/2, FT3331-1/2 and FT3341-1/2 which are square roots. The signals are processed with a sum of inputs algorithm. This function obtains the algebraic sum of values with a good status.
LPSI Total Flow (GPM)	QA0908-1/2	LPSI Flow	Sum	This parameter measures total LPSI flow and is derived from LPSI Header Flow signals FT3312-1/2, FT3322-1/2, FT3332-1/2 and FT3342-1/2 which are square roots. These signals are processed by an algorithm which provides a sum of the inputs. This function obtains the algebraic sum of values with a good status.
Containment Temp. (deg. F)	TE07-3B-1/2	Cntmnt Temp	N/A	This parameter is a containment temperature instrument. It is converted to engineering units using a linear equation.
Containment Pressure WR (psig)	QA0507-1/2	Cntmnt Press	Average	This parameter measures containment pressure and is a wide range indicator. It is derived from Wide Range Containment Pressure signals PT07-4A1-1/2 and PT07-4B1-1/2 which are linear. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad. In this case the result is bad.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 6 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Containment Sump Level WR (Ft.)	QA0008-1/2	Cntmnt Smp WR	Maximum	This parameter is a containment sump wide range instrument. It is derived from Containment Sump Level signals LT07-13A-1/2 and LT07-13B-1/2 which are linear. They are processed by a signal auctioneering maximum algorithm. This function finds the highest usable data value in the specified group. Each data value of the group and its quality is examined and the following rules are used. • For two or more usable data values, the result is the highest usable data value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.
Containment Hydrogen (%)	CH2-1/2	H2 Conc.	Average	This parameter is a containment hydrogen average concentration measurement. It is derived from Hydrogen Concentration signals A-HYDROGEN-1/2 and B-HYDROGEN-1/2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor.
SG Level A WR (%)	LT9012-1/2	SG Level A	N/A	This parameter is the "A" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 19.5 inches above the bottom of the U tubes.
SG Level B WR (%)	LT9022-1/2	SG Level B	N/A	This parameter is the "B" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 19.5 inches above the bottom of the U tubes.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 7 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
SG Pressure A (psig)	QA0021-1/2	SG Pres./A	Redundant Sensor Algorithm	This parameter is the "A" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8013A-1/2, PT8013B-1/2 and PT8013C-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
SG Pressure B (psig)	QA0022-1/2	SG Pres./B	Redundant Sensor Algorthim	This parameter is the "B" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8023A-1/2, PT8023B-1/2 and PT8023D-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
Refueling Water Tank Avg. Level (Ft.)	RWTAL-1/2	BWST Level	Average	This parameter measures refueling water tank level. It is derived from three inputs. They are LT07-2A-1/2, LT07-2B-1/2 and LT07-2C-1/2. These points are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. Tank bottom refers to zero gallons.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 8 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
CHRRM. Channel (R/HR)	Unit 1: RE 26-58-1 (A Channel) RD 26-59-1 B Channel) Unit 2: RIM 26-40-2 (A Channel) RIM 26-41-1 (B Channel)	Cntmnt. Rad	Maximum	The high containment radiation instruments for Unit 1 are the "A" side monitor RE 26-58-1 and the "B" side monitor RE 26-59-1. These monitors are only range checked and flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees. The high containment radiation instruments for Unit 2 are the "A" side monitor RIM 26-40-2 and the "B" side monitor RIM 26-41-2. These monitors are only range checked and are flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees.

END OF ATTACHMENT 5B

ATTACHMENT 6
TSC ADMINISTRATIVE STAFF CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify procedures by posting revision numbers on the status board. Post all procedures (EPIP, HP, Chem.). Consult Control Copy 5 in the TSC document cabinets or follow the steps below to print out an EPIP list: _____

   a. In Lotus Notes, click on the PSL Procedures icon.

   b. On the Search line toolbar, click the far right button (with 2 circles and a down arrow).

   c. Select Group Search from the drop down menu.

   d. In the Search line type "EP" (where the "XX" is).

   e. Click Search or hit Enter.

   f. EPIP list is now displayed (not in any particular order).

   g. To print the list - Click File
      - Select Print from the drop down menu
      - Select View Options in the dialogue box
      - Click OK

3. Telecopy the EC Log, completed notification forms and checklists, and any other pertinent information to the EOF. _____

ATTACHMENT 6
TSC ADMINISTRATIVE STAFF CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION

NOTE
Information should be updated every 15-30 minutes and not longer than 60 minutes.

1. Synchronize the facility clock(s) with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.

2. Steps to occur continually while the facility is in operation:

   a. Obtain the following ERDADS data sheets (printouts) from the ERDADS Operator:

      1. Safety Functions Equipment Status (SF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

   b. Update status boards with new ERDADS data.

   c. Request the sound-powered phonetalker to obtain any information/data not provided by the ERDADS printouts.

   d. Verify all data has been accurately transferred to the status board.

   e. Update the sequence of events board following each facility briefing and as needed. Provide relevant information concerning items such as:

      1. Change in classification.

      2. Significant change in plant condition.

      3. Status of plant system(s) of concern.

      4. Injured personnel status.

      5. Other items of relevant interest.

   f. Update dose assessment and field monitoring data as information is provided by Chemistry and HP, respectively.

   g. Make corrections, when identified, by circling the corrected data.

/R7

ATTACHMENT 6
TSC ADMINISTRATIVE STAFF CHECKLIST
(Page 3 of 3)

B. 2. (continued) INITIAL

h. When all status board columns/blanks are filled, erase the first two columns/blanks, enter new data with a different colored marker leaving a space between the new and the old data.

i. Provide any incoming telecopy materials to the TSC Supervisor or as designated on the cover page.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Status boards have been cleaned and returned to preactivation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

/R7

END OF ATTACHMENT 6

ATTACHMENT 7
TSC COORDINATOR WITH OSC CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Establish contact with the OSC Coordinator with the TSC (in the OSC). _____

2. Steps to occur continually while the facility is in operation:

   a. Ensure all requests for re-entry activities are documented on Attachment 7A, Re-entry Worksheet.

   b. Ensure all re-entry requests have been approved and prioritized by the EC.

   c. Track all requests for Re-entry Teams using Attachment 7B, Re-entry Log.

   d. Communicate re-entry requests to the OSC Coordinator with the TSC per Attachment 7B, Re-entry Log.

   e. Update the OSC Status Board with Re-entry Team information.

ATTACHMENT 7
TSC COORDINATOR WITH OSC CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Closed out all Re-entry Teams entered in the Re-entry Team Log and the status board. _____

2. Status board has been cleaned and returned to preactivation condition. _____

3. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

4. Returned position notebook to storage cabinet. _____

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END OF ATTACHMENT 7

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 1 of 7)

DATA SHEET 1
REQUEST DESCRIPTION
(Page 1 of 1)

NOTE

This worksheet is used for the following:

1. Requesting in-plant/field response activities prior to the restrictions imposed by local and/or site evacuation.
2. Requesting Re-entry Team dispatch from the Operational Support Center (OSC).
3. Requesting engineering support from the Emergency Operations Facility (EOF).
4. Requesting SAMG directives to the Control Room(s) (CR(s)).

Attach appropriate data sheets together for each request.

Step 1. DESCRIBE the nature of the problem/concern/request:

_____
_____
_____
_____

(Attach additional pages if required)

Originated by:_____ Date/Time:____/____/____ _____

Forward to PST Leader

Step 2. Is the request complex (i.e., not routine or covered by existing plant procedure(s))?

☐ Yes, Go to Data Sheet 2

☐ No, Go to Data Sheet 3

Signature:_____ Date/Time:____/____/____
PST Leader

END OF DATA SHEET 1

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 2 of 7)

DATA SHEET 2
PST ACTIONS
(Page 1 of 1)

Step 1. PST Leader ASSIGN a PST member to fill out the following assessment/review (initial and date entry):

_____
_____
_____
_____

(Attach additional pages if required)

NOTE
50.59 screening is required for any alterations of systems, structures or components. Actions that are outside of design basis shall require implementation of ADM-17.09, Invoking 50.54(x).

Step 2. A. PST PROVIDE recommendation/response below (initial and date entry): or

B. If EOF assistance is needed, Then complete Data Sheet 4 and attach.

_____
_____
_____
_____

(Attach additional pages if required)

Step 3. A. If recommendation/response action detailed in Step 2 above is NOT routine or covered by existing plant procedure(s), Then PERFORM a 50.59 Screening in accordance with ADM-17.11, 10 CFR 50.59 Screening (if not performed by the EOF).

50.59
☐ ☐
Y N

B. If the actions are SAMG related, Then complete Data Sheet 5 and attach.

SAMG
☐ ☐
Y N

Signature:_____ Date/Time:____/____/____
PST Leader

END OF DATA SHEET 2

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 3 of 7)

DATA SHEET 3
EC REVIEW AND APPROVAL
(Page 1 of 3)

Step 1. Review of proposed action — INITIAL

A. If the action/activity is routine or covered by existing plant procedure(s), Then go to Step 2.

B. Consider the following questions in the review for task approval (EC initials required).

1. Do these actions affect the margin of nuclear safety of the unaffected Unit that has NOT been addressed? _____

2. Are the instructions clear and easy to understand? _____

3. Are all referenced components and systems properly identified and labeled? _____

4. Have appropriate engineering reviews been performed to avoid unintentional operation of systems outside design characteristics? _____

5. Do steps, that have operating parameters specified, contain operating bands? _____

Step 2. Approval

☐ Approve as written

☐ Approve with the following corrections/changes:

_____

_____

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 4 of 7)

DATA SHEET 3
EC REVIEW AND APPROVAL
(Page 2 of 3)

INITIAL

CAUTION
Priorities are set based on the urgency of the task and by considering resources available (NOT everything is or can be priority 0), evaluate thoughtfully.

0 = Dispatch team in less than 5 minutes (fire, injury or certain operator actions)

1 = Dispatch team in less than 15 minutes (Emergency Coordinator top priority)

2 = Dispatch team in less than 30 minutes (routine re-entries)

Step 3. Priority (circle one): 0 1 2

Step 4. Signature:_____ Date/Time:____/____/____
Emergency Coordinator

Step 5. FORWARD the Attachment 7A (appropriate data sheets) to the applicable communicator.

A. If the task is specifically for the OSC, Then the TSC Coordinator with OSC shall perform the following:

1. ASSIGN a task description:_____
_____ _____

2. COMPLETE Re-entry Log entry. _____

3. COMMUNICATE the task to the OSC (record time call completed: _____). _____

OR

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 5 of 7)

DATA SHEET 3
EC REVIEW AND APPROVAL
(Page 3 of 3)

Step 5. (continued) INITIAL

B. If the task is specifically for Operations, Then the TSC OPS Coordinator shall PERFORM the following:

1. COMMUNICATE the task instructions to the required Control Room(s). _____

2. If OSC concurrent re-entry actions are required, Then ORIGINATE a new Re-entry Worksheet form for this purpose. _____

Step 6. RETURN the form to the originator named in Data Sheet 1.

END OF DATA SHEET 3

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 6 of 7)

DATA SHEET 4
EOF ASSISTANCE
(Page 1 of 1)

INITIAL

Step 1. If EOF assistance is determined to be required, Then the PST Leader (or designee) shall perform the following:

A. SEND Data Sheets 1 and 2 to the EOF (verbal and/or telecopy). _____

Step 2.

NOTE
50.59 screening is required for any alterations of systems, structures or components. Screenings are to be performed in accordance with ADM-17.11, 10 CFR 50.59 Screening.

A. EOF PROVIDE recommendation/response below:

_____
_____
_____
_____

(Attach additional pages, if required)

Step 3. If recommendation/response action detailed in Step 2 above is NOT routine or covered by existing plant procedures, Then PERFORM a 50.59 screening.

Signature:_____ Date/Time:____/____/____
Emerg. Tech. Mgr./EOF Proj. Eng.

Step 4. Emergency Technical Manager (or designee) RETURN EOF recommendation/response to the PST Leader for review and appropriate action. _____

END OF DATA SHEET 4

ATTACHMENT 7A
RE-ENTRY WORKSHEET
(Page 7 of 7)

DATA SHEET 5
SAMG
(Page 1 of 1)

INITIAL

Step 1. If the actions are SAMG related, Then the PST Leader (or designee) shall:

A. ASSIGN a SAMG tracking number - SAMG Sequence Number: **SAMG -** _____. _____

B. POST the task on the PST SAMG White Erase Board. _____

NOTE
During severe accident events, where 10 CFR 50.54(x) has been invoked on one Unit at the entry of the SAMGs, alterations affecting the other Unit's hardware, structures, systems or components, outside design basis, shall require separate 50.54(x) invocations in accordance with ADM-17.09, Invoking 10 CFR 50.54(x).

Step 2. CONSULT the TSC OPS Coordinator for 10 CFR 50.54(x) SRO evaluation. _____

Step 3. If implementation of 10 CFR 50.54(x) is required, Then IMPLEMENT ADM-17.09. _____

END OF DATA SHEET 5

END OF ATTACHMENT 7A

ATTACHMENT 7B
RE-ENTRY LOG
(Page 1 of 1)

RE-ENTRY TASK REQUEST	RE-ENTRY TEAM ASSIGNMENT
Complete this section with information from the Re-entry Worksheet and transfer to OSC.	OSC Coordinator with TSC should provide this information once completed by the OSC Supervisor.
A. Task Description:______ ______ B. *Priority______ C. Time______ D. Reason for request:______ ______ E. Info contact:______ F. Phone:______	G. Team No.:______ H. Title:______ I. Re-entry Supv.:______ J. Time out:______ K. Time in:______ L. Comments:______ ______
A. Task Description:______ ______ B. *Priority______ C. Time______ D. Reason for request:______ ______ E. Info contact:______ F. Phone:______	G. Team No.:______ H. Title:______ I. Re-entry Supv.:______ J. Time out:______ K. Time in:______ L. Comments:______ ______
A. Task Description:______ ______ B. *Priority______ C. Time______ D. Reason for request:______ ______ E. Info contact:______ F. Phone:______	G. Team No.:______ H. Title:______ I. Re-entry Supv.:______ J. Time out:______ K. Time in:______ L. Comments:______ ______
A. Task Description:______ ______ B. *Priority______ C. Time______ D. Reason for request:______ ______ E. Info contact:______ F. Phone:______	G. Team No.:______ H. Title:______ I. Re-entry Supv.:______ J. Time out:______ K. Time in:______ L. Comments:______ ______
A. Task Description:______ ______ B. *Priority______ C. Time______ D. Reason for request:______ ______ E. Info contact:______ F. Phone:______	G. Team No.:______ H. Title:______ I. Re-entry Supv.:______ J. Time out:______ K. Time in:______ L. Comments:______ ______

*0 = Dispatch in less than 5 minutes (e.g., fire, injury, or certain Operator actions)
1 = Dispatch in less than 15 minutes (e.g., Emergency Coordinator top priority)
2 = Dispatch in less than 30 minutes (e.g., routine re-entries)

END OF ATTACHMENT 7B

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 1 of 4)

NOTE

1. This position is filled by two persons, one located in the affected Control Room, the other in the TSC. The position in the Control Room is also known as the NPS Communicator.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION INITIAL

NOTE

The first person to arrive at the TSC should report to the affected Control Room to relieve the Duty Call Supervisor.

1. Filling position in:_____
2. (TSC position only) Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Establish communications with counterpart. _____
2. In the TSC, establish the OPS Conference Bridge as follows: /R7
   - a. Obtain contact phone numbers for:
     1. OPS Coordinator in the Control Room _____
     2. OSC OPS Re-entry Supervisor _____
     3. Problem Solving Team _____
     4. Other participant _____
   - b. Call the OPS Coordinator
     1. State: "stay on the line"
     2. Depress the conference button

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 2 of 4)

B. 2. (continued) INITIAL

c. Call the OSC OPS Re-entry Supervisor

1. State: "stay on the line"

2. Depress the conference button

d. Call the Problem Solving Team

1. State: "press handsfree/mute button"

2. Depress the conference button

e. Call any other participant

1. State: "stay on the line"

2. Depress the conference button

f. Hail all parties to verify bridge successfully established.

3. Initiate the OPS Logbook. (TSC only) _____

4. Steps to occur continually while the facility is in operation:

TSC

a. Provide expertise in plant operations to the EC.

b. Maintain communication flow between the TSC and the affected Control Room concerning status of operations.

c. Maintain OPS Logbook.

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 3 of 4)

B. 4. (continued) INITIAL

d. Severe Accident Management Guidelines (SAMG) actions

1. Perform evaluations in accordance with ADM-17.09, Invoking 10 CFR 50.54(x), as needed.

2. Review/approve actions as outlined in Attachment 7A, Re-entry Worksheet.

3. Communicate SAMG actions to the affected Control Room(s).

Control Room

a. Provide communications assistance to the NPS.

b. Monitor procedure use and keep the TSC informed.

c. Investigate questions/concerns as requested by the TSC.

d. Update the unaffected unit's Control Room with emergency status.

e. Gather Severe Accident Management Guidelines (SAMG) instructions/information from the TSC OPS Coordinator.

1. If the TSC is unable to telecopy, Then use Attachment 7A, Re-entry Worksheet to record SAMG instructions/ information.

f. Communicate SAMG actions to the NPS.

g. Provide feedback to the TSC OPS Coordinator regarding SAMG actions.

IR7

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 4 of 4)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Phone connection terminated. _____
2. Closed out the OPS Logbook. _____
3. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____ /R7
4. Returned position notebook to storage cabinet. _____ /R7

END OF ATTACHMENT 8

ATTACHMENT 9
TSC REACTOR ENGINEER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps in this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions.	_____
B.	FACILITY OPERATION	
1.	Establish the ERDADS link with the NRC Emergency Response Data System (ERDS) (use Attachment 9A, Initiating and Terminating the ERDS Link).	_____

/R7

ATTACHMENT 9
TSC REACTOR ENGINEER CHECKLIST
(Page 2 of 3)

B. (continued) INITIAL

2. Steps to occur continually while the facility is in operation:

CAUTION

Be aware of the following conditions. These Emergency Action Levels (EALs) are associated with Initiating Conditions (ICs) used in the classification of emergencies (EPIP-01, Classification of Emergencies). The Emergency Coordinator needs to know if any of these conditions exist.

1. Dose Equivalent Iodine (DEQ) I-131 activity greater than 275 µCi/ml.
2. CHHRM readings greater than 7.3E+03 R/hr OR greater than 1.46E+05 R/hr.
3. Post LOCA Monitor readings greater than 100 mR/hr OR greater than 1000 mR/hr.
4. Step increase in radiation monitor readings in the Plant Vent and/or Fuel Handling Building.
5. Loss of subcool margin resulting in saturated conditions.
6. Highest Core Exit Thermocouple (CET) per core quadrant indicates greater than 10°F superheat or 700°F.
7. Damage to more than one irradiated fuel assembly.
8. Uncovering of one or more irradiated fuel assemblies in the Spent Fuel Pool.

/R7

a. Monitor critical plant parameters for indications of core status.

b. Assist Nuclear Fuels personnel in the EOF in the assessment of core damage in accordance with EPIP-11, Core Damage Assessment.

/R7

c. Assist in Severe Accident Management Guidelines (SAMG) activities as a SAMG Evaluator.

ATTACHMENT 9
TSC REACTOR ENGINEER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Core damage assessment activities terminated. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____ /R7

3. Returned position notebook to storage cabinet. _____ /R7

END OF ATTACHMENT 9

ATTACHMENT 9A
INITIATING AND TERMINATING THE ERDS LINK
(Page 1 of 2)

This attachment provides the instructions for initiating and terminating the communications link between the St. Lucie Emergency Response Data Acquisition and Display System (ERDADS) and the NRC Emergency Response Data System (ERDS). This communications link must be activated not later than one hour after declaring an emergency class of ALERT or higher. If communications cannot be established then the accepted method of data transmission to the NRC will be through the Emergency Notification System (ENS).

INITIATING the ERDS communication link:

1. At any TSC ERDADS terminal clear the display screen by depressing the CLEAR key.

2. Log on to ERDADS by typing in PSW ## XXXXXXXX (the Xs stand for the password issued to Operations Support Engineering). Then depress the EXEC key.

3. Clear the screen with the CLEAR key and select the desired St. Lucie Unit by typing PUP UNIT X (the X will be either a 1 or 2 depending on the unit). Then depress the EXEC key.

4. Clear the screen by depressing the CLEAR key and type in ERD and depress the DSPLY key. This will display the ERDS link control picture on the terminal.

5. Depress the TAB + keys to place the cursor on the INITIATE action bar and then depress the ENTER key. The depressing of the ENTER key will initiate the communications link to the NRC ERDS.

6. After the communication link with the NRC ERDS has been established clear the terminal screen by depressing the CLEAR key and log off by typing in PSW 0 and depressing the EXEC key. The logging off of the terminal's screen will allow that terminal to be used in obtaining information for TSC activities without affecting the communication link with the NRC ERDS.

7. Periodically check the status of the ERDS link by typing in HLX (the X will be a 2 for Unit 1 or 3 for Unit 2) and depress the DSPLY key.

ATTACHMENT 9A
INITIATING AND TERMINATING THE ERDS LINK
(Page 2 of 2)

NOTE

- If the blinking message NOTIFY THE NRC appears after the CURRENT STATUS then the communications link has been lost and a reconnection is necessary when the NRC requests it through the established voice connection in the TSC. If this happens then it will be necessary to reinitiate the communications link beginning with step 1.
- Generally the ERDS link will be terminated by the NRC. The following steps are to be used if the link needs to be terminated from the TSC.

TERMINATING the ERDS communication link:

1. At any TSC ERDADS terminal clear the display screen by depressing the CLEAR key.
2. Log on to ERDADS by typing in PSW ## XXXXXXXX (the Xs stand for the password issued to Operations Support Engineering). Then depress the EXEC key.
3. Clear the screen with the CLEAR key and select the desired St. Lucie Unit by typing PUP UNIT X (the X will be either a 1 or 2 depending on the unit). Then depress the EXEC key.
4. Clear the screen by depressing the CLEAR key and type in ERD and depress the DSPLY key. This will display the ERDS link control picture on the terminal.
5. Depress the TAB - keys to place the cursor on the TERMINATE action bar and then depress the ENTER key. The depressing of the ENTER key will terminate the communications link to the NRC ERDS.
6. After the communication link with the NRC ERDS has been terminated clear the terminal screen by depressing the CLEAR key and log off by typing in PSW 0 and depressing the EXEC key.

END OF ATTACHMENT 9A

ATTACHMENT 10
TSC CHEMISTRY SUPERVISOR CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps in this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Initiate the Chemistry Logbook. _____

2. Steps to occur continually while the facility is in operation:

NOTE
Dose assessment shall be a primary responsibility of the EOF once it becomes operational.

a. Supervise dose assessment activities.

b. Review all dose projection printouts.

c. Advise the EC of dose projection results.

d. Assist the EC in evaluating off-site dose estimates for PARs.

e. Assist the TSC EC Assist/Logkeeper/EC in determining the "Off-site Release Significance Category" as called for on the State Notification Form, as necessary.

f. Provide technical support to the OSC Chemistry Supervisor.

/R7 /R7

ATTACHMENT 10
TSC CHEMISTRY SUPERVISOR CHECKLIST
(Page 2 of 3)

B. 2. (continued)

CAUTION

Be aware of the following conditions. These Emergency Action Levels (EALs) are associated with Initiating Conditions (ICs) used in the classification of emergencies (EPIP-01, Classification of Emergencies). The Emergency Coordinator needs to know if any of these conditions exist.

1. Dose Equivalent Iodine (DEQ) I-131 activity greater than 275 µCi/ml.
2. Result of analysis of a gaseous or liquid release is greater than ten (10) times the ODCM limit.
3. CHHRM readings greater than 7.3E+03 R/hr OR greater than 1.46E+05 R/hr.
4. Post LOCA Monitor readings greater than 100 mR/hr OR greater than 1000 mR/hr.
5. Step increase in radiation monitor readings in the Plant Vent and/or Fuel Handling Building.
6. Off-site dose calculation worksheet values at one (1) mile in excess of 50 mrem/hr (total dose – TEDE) or 250 mrem/hr (thyroid dose - CDE) for one half (1/2) hour OR 500 mrem/hr (total dose - TEDE) or 2500 mrem/hr (thyroid dose - CDE) for two (2) minutes.
7. Off-site dose calculation worksheet values indicate site boundary (one (1) mile) exposure levels have been exceeded as indicated by any of the following:
   a. 1000 mrem/hr (total dose rate)
   b. 1000 mrem (total dose - TEDE)
   c. 5000 mrem/hr (thyroid dose rate)
   d. 5000 mrem (thyroid dose - CDE)

g. Advise the EC on plant chemistry related matters.

h. Maintain chronological log of activities.

/R7

ATTACHMENT 10
TSC CHEMISTRY SUPERVISOR CHECKLIST
(Page 3 of 3)

B. **2.** (continued) INITIAL

i. Review and verify radiological and protective action information entered on status boards.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Dose assessment activities terminated. _____
2. Closed out the Chemistry Logbook. _____
3. Provided all paperwork (not bound in the position notebook) to the TSC Supervisor. _____
4. Returned position notebook to storage cabinet. _____

/R7 /R7

END OF ATTACHMENT 10

ATTACHMENT 11
TSC DOSE ASSESSOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps in this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

NOTE
1. Initial operating instructions for use of the Class A Model are provided in EPIP-09, Off-site Dose Calculations.
2. If the computerized Class A Model is not available, dose projections shall be performed in accordance with EPIP-09.

1. Ensure all previous dose calculation paperwork is sent to the EOF. _____

2. Establish communication link with the EOF Dose Assessor. _____

3. Complete Class A Model QC Check. _____

4. Steps to occur continually while the facility is in operation:

a. Obtain input data for the Class A Model from the ERDADS Operator (RG 1/2 Screen).

b. Report dose projection results to the TSC Chemistry Supervisor.

c. Coordinate dose assessment with the EOF unless directed otherwise by the TSC Chemistry Supervisor.

ATTACHMENT 11
TSC DOSE ASSESSOR CHECKLIST
(Page 2 of 2)

B. 4. (continued) INITIAL

d. Provide status board update information to the TSC Administrative Staff (use Attachment 11A and Attachment 11B).

1. Using carbon paper, make a copy as data is entered into the form in either Attachment 11A or 11B. Retain the original, provide the copy to the TSC Administrative Staff to update the status boards.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Dose projection activities terminated. _____
2. EOF communications linked terminated. _____
3. All documents, equipment and supplies returned to preactivation condition and/or location. _____
4. All paperwork collected. _____
5. Provided all completed paperwork (not bound in the position notebook) to the TSC Chemistry Supervisor. _____
6. Returned position notebook to storage cabinet. _____

/R7 /R7

END OF ATTACHMENT 11

ATTACHMENT 11A
OFF-SITE RADIOLOGICAL ASSESSMENT
(Page 1 of 1)

OFFSITE DOSE RADIOLOGICAL ASSESSMENT STATUS AND TRENDS									
PARAMETER	Unit	Highest Downwind Sector Dose Rates							
Day # of Month									
Time of Day	2400								
Downwind Sectors									
Dose Rate @		TEDE	CDE	TEDE	CDE	TEDE	CDE	TEDE	CDE
1 mile	mRem/hr								
2 miles	mRem/hr								
5 miles	mRem/hr								
10 miles	mRem/hr								
Wind Direction at 10 meter elev	Degrees								
Downwind Sector									
Wind Speed at 10 meter elev	mph								
60 meter - 10 meter delta T	Deg F								
Stability Class									
10 meter Temperature	Deg F								
Noble Gas Rel Rate	Ci/sec								
Iodine Rel Rate	Ci/sec								
Noble Gas Total Ci	Ci								
Iodine Total Ci	Ci								
Contain Hi Range	R/hr								
_____ Vent	Ci/sec								
ECCS A	Ci/sec								
ECCS B	Ci/sec								
Main Steam A	mR/hr								
Main Steam B	mR/hr								

TEDE = Total Dose CDE = Thyroid Dose

END OF ATTACHMENT 11A

ATTACHMENT 11B
PROTECTIVE ACTION RECOMMENDATIONS
(Page 1 of 1)

PROTECTIVE ACTION RECOMMENDATIONS			
REASON: ISSUED BY:		DATE/TIME:	
		S = SHELTER E = EVACUATE	
SECTOR	0 - 2 Miles	2 - 5 Miles	5 - 10 Miles
A (N)			
B (NNE)			
C (NE)			
D (ENE)			
E (E)			
F (ESE)			
G (SE)			
H (SSE)			
J (S)			
K (SSW)			
L (SW)			
M (WSW)			
N (W)			
P (WNW)			
Q (NW)			
R (NNW)			

ADDITIONAL COMMENTS: _____

_____

_____

_____

_____

_____

END OF ATTACHMENT 11B

ATTACHMENT 12
TSC PROBLEM SOLVING TEAM CHECKLIST
(Page 1 of 2)

NOTE

1. This checklist applies to the following Problem Solving Team (PST) positions:

   TSC PST Leader (Engineering)
   TSC Elec Rep – PST TSC I&C Rep - PST
   TSC Mech Rep - PST (3) TSC SRO Rep - PST

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

NOTE

1. Refer to the Document Control Index for a listing of Tech Manuals available in the TSC.
2. The computer provides a LAN connection and access to the Total Equipment Database (TEDB).

1. Steps to occur continually while the facility is in operation:

   a. Problem Solving Team Leader

      1. Maintain command and control of all PST activities. The from provided in Attachment 12A, PST Activities List may be used by the PST to track and communicate the status of PST activities.

      2. Ensure all PST members are aware of and understand the status of equipment.

      3. Maintain high level of inquiry and investigation by all PST members.

      4. Track progress of all Re-entry Worksheets (Attachment 7A) given to or initiated by the PST.

ATTACHMENT 12
TSC PROBLEM SOLVING TEAM CHECKLIST
(Page 2 of 2)

B. 1. a. (continued) INITIAL

5. Encourage development of multiple success paths.

6. Review all Re-entry Worksheets (Attachment 7A).

b. Problem Solving Team Member

1. Participate as a member of the Problem Solving Team by providing technical support in your area of expertise.

2. Evaluate system and equipment failures.

3. Propose mitigative and corrective action(s) as promptly as possible.

4. Document recommendations on a form similar to Attachment 7A, Re-entry Worksheet.

5. Serve as a Severe Accident Management Guidelines (SAMG) Evaluator.

6. Provide all recommendations to the EC.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Returned all documents, equipment and supplies to preactivation condition and/or location. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

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END OF ATTACHMENT 12

ATTACHMENT 12A
PST ACTIVITIES LIST
(Page 1 of 1)

Item	Problem Description	Probable Cause	PST Recommendation	Status

END OF ATTACHMENT 12A

ATTACHMENT 13
TSC SECURITY SUPERVISOR CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions.	_____
2.	Verify that the Energy Encounter has been notified of the emergency. (consult the ERD Section 3.6, other company numbers, for the phone number)	_____
B.	FACILITY OPERATION	
1.	Establish access control for the TSC.	_____
2.	Contact the Control Rooms and request a completed "Operations Department Accountability Aid" be forwarded to the TSC.	_____
3.	Initiate facility accountability by requesting a completed copy of Attachment 3A, TSC ERO Shift Staffing and Accountability Roster from the TSC Supervisor.	_____
4.	Telecopy the completed Attachment 3A, TSC ERO Shift Staffing and Accountability Roster, and the "Operations Department Accountability Aid" forms to Security.	_____
5.	Contact the EOF Emergency Security Manager (ESM).	_____
a.	Establish responsibility/protocol for notification of off-site authorities regarding the status of site evacuation.	_____

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ATTACHMENT 13
TSC SECURITY SUPERVISOR CHECKLIST
(Page 2 of 3)

B. (continued) INITIAL

6. Upon declaration of a Site Area Emergency. _____

a. Start accountability at:_____ _____

b. Start sweeps at:_____ _____

1. Off-site work areas.

2. West forty and Fitness Center.

3. Owner Controlled Area.

a. Beach side.

b. River side.

4. On-site and Radiation Controlled Area.

5. Marine Research Center.

c. Accountability completed at_____. _____

d. Sweeps completed at_____. _____

7. Steps to occur continually while the facility is in operation:

CAUTION
Ensure the EC is aware of any actions required by the Security Plan (e.g., alert or emergency declaration, suspension of safeguards, etc.).

a. Advise the EC on Security related manners.

ATTACHMENT 13
TSC SECURITY SUPERVISOR CHECKLIST
(Page 3 of 3)

B. 7. (continued) INITIAL

b. In conjunction with the ESM, provide liaison function between local law enforcement and rescue agencies and FPL for issues such as:

1. Bomb threats or acts of terrorism.

2. Member of the public or media arriving at the site.

3. Site egress and ingress.

4. Fire or rescue/medical response.

c. Coordinate safeguards suspension with the ESM and EC.

d. Maintain site accountability of all personnel throughout the emergency.

e. Follow Security Procedures.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Closed out with the local law enforcement agencies, as needed. _____

2. Closed out Security Logbook. _____

3. All paperwork collected. _____

4. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

5. Returned position notebook to the storage cabinet. _____

IR7 IR7

END OF ATTACHMENT 13

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No. **EPIP-05**

Current Rev. No. **5**

Effective Date: **08/10/00**

Title:

ACTIVATION AND OPERATION OF THE OPERATIONAL SUPPORT CENTER

Responsible Department: **EMERGENCY PLANNING**

Revision Summary

Revision 5 - Eliminated OSC paramedic position, revised re-entry guidelines and made editorial and administrative changes. (G. Varnes, 08/08/00)

Revision 4 - Clarified role of OPS Re-entry Supervisor per PM 99-04-122. Added guidelines for OSC command and control assistance per PM 99-04-143. Provided instructions for emergency access to restricted areas per PM 99-09-079. Revised the minimum staff position in Chemistry to the OSC Chemistry. Clarified facility sign-in and accountability instructions. Reinforced instructions for development of a contingency team. Made editorial changes. (Rick Walker, 10/05/99)

Revision 3 - Added OSC information services rep position and responsibilities to procedure and added editorial changes. (J. R. Walker, 3/2/99)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
5	08/08/00	R. G. West Plant General Manager	08/08/00
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

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DOCN EPIP-05
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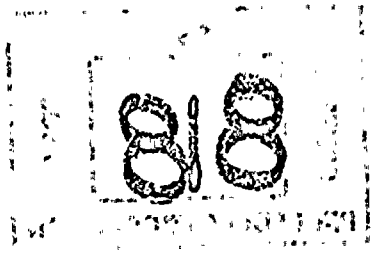

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(continued)

1.0 PURPOSE

1.1 Discussion

This procedure provides instructions for activation and operation of the Operational Support Center. This procedure also provides instructions for the selection and deployment of Re-entry Teams.

1.2 Location and Description

The OSC is located on the second floor of the South Service Building in conference room 2200 and adjoining room 2300. Ample space is available for the assembly of auxiliary operators, Heath Physics technicians, Maintenance personnel, and other personnel needed for emergency response. Due to potential habitability concerns, alternate locations capable of supporting OSC operations have been identified as follows:

1. North Service Building, conference area or maintenance shops
2. Blowdown Building
3. Unaffected Reactor Auxiliary Building (RAB)

1.3 OSC Functions

1. Mandatory Functions

   A. Provide a resource pool of personnel to assist the Control Room and TSC in accident assessment and mitigation.

   B. Respond to requests for Re-entry Teams.

   C. Maintain radiological exposure controls in accordance with the HP-200 series procedures.

2. Additional Functions

   A. Provide the interface with the Off-site Assembly Area.

   B. Serve as access control point following site evacuation.

1.0 PURPOSE (continued)

1.4 Minimum Staffing

1. The following is the list of the minimum positions needed for OSC operation:

- OSC Supervisor
- OSC Chemist
- OSC HP Technician (12)
- OSC Electrician (2)
- OSC Mechanic (2)
- OSC I&C Specialist

§2 **1.5** Activation

Activation of the OSC is the responsibility of the Emergency Coordinator (EC) and is required for an Alert or higher declared emergency. Arrangements have been made to staff the OSC in a timely manner.

1.6 Operations

The OSC has sufficient space available and radiation protection equipment and other supplies to support emergency response personnel conducting re-entry activities. The OSC has the capability to provide 24 hour continuous operation, as necessary.

Initial work activities directed by the OSC, at the Alert Level, are considered pre-re-entry and certain aspects of this procedure may be relaxed (e.g., HP coverage). Following a site evacuation order (evacuation of the Owner Controlled Area) or if radiological conditions exist outside the Radiation Controlled Area, all provisions of this procedure are required for re-entry into affected areas.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 REFERENCES

§1 1. St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)

2. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2

§2 3. St. Lucie Plant Radiological Emergency Plan (E-Plan)

§3 4. St. Lucie Plant Topical Quality Assurance Report (TQAR)

5. E-Plan Implementing Procedures (EPIP 00-13)

6. HP-200 Series Procedures

7. ADM-17.09, Invoking 10 CFR 50.54(x)

8. St. Lucie Plant Emergency Response Directory (ERD)

9. QI-17-PSL-1, Quality Assurance Records

10. Fitness for Duty Rule, 10 CFR 26

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.2 RECORDS REQUIRED

1. The following shall be retained following a plant emergency:

   - Checklists and paperwork generated per this procedure.
   - Logbooks maintained during the plant emergency.

§1 2. Recorded information shall be forwarded to Emergency Planning following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 COMMITMENT DOCUMENTS

¶1 1. PMAI PM97-04-142, Training Drill Critique 1/24/97 (Definition of contingency team and full staffing guidance).

¶2 2. PMAI PM98-04-144, Evaluated Exercise Critique 3/18/98 (Establish threshold dose rate for OSC relocation).

¶3 3. PMAI PM98-09-006 (Control of NLOs Under E-Plan)

¶4 4. PMAI PM99-04-122 (Ops Re-entry Supervisor Role)

¶5 5. PMAI PM99-04-143 (OSC Command and Control Assistance)

¶6 6. PMAI PM99-09-079 (Hot Tool Room Access During an Emergency)

3.0 RESPONSIBILITIES

3.1 OSC Supervisor

1. Provides command and control of OSC activities.

2. Coordinates activities to ensure adequate support to the TSC/EC.

3. Ensures that all Re-entry Teams are adequately briefed prior to leaving the OSC and thoroughly debriefed upon their return.

3.0 RESPONSIBILITIES (continued)

3.1 OSC Supervisor (continued)

4. Ensures communications flow is maintained within the facility, with the Re-entry Teams, and with the TSC.

5. Coordinates facility briefings.

6. Arranges for long term operation of the OSC.

3.2 OSC Coordinator with TSC

1. Serves as the coordinator with the TSC for Re-entry Team requests.

2. Logs and tracks re-entry activities.

3. Keeps the OSC Supervisor abreast of the emergency conditions and plant status.

3.3 OSC Re-entry Supervisor

NOTE

1. Each of the following areas has a Re-entry Supervisor: (1) Mechanical Maintenance, (2) Electrical Maintenance, (3) I&C Maintenance, (4) Operations, (5) Chemistry, and (6) Health Physics.

2. Responsibilities for the Health Physics Re-entry Supervisor (HPOSC) are provided in HP-200, Health Physics Emergency Organization.

1. Ensures departmental Emergency Response Organization (ERO) personnel are available for re-entry activities.

2. Assists the OSC Supervisor in selection of Re-entry Team members.

3. Provides task specific briefings to their departmental re-entry personnel.

4. Conducts Re-entry Team debriefings.

3.0 RESPONSIBILITIES (continued)

3.4 OSC Departmental Representative

NOTE

The following departments have representatives in the OSC: (1) Nuclear Materials Management (NMM), (2) Safety, (3) Protection and Control, (4) Security and (5) Information Services. /R5

1. Provides input to the OSC Supervisor, as requested in support of re-entry operations.

2. Participates in re-entries, as needed.

4.0 DEFINITIONS

4.1 **Facility Status**

1. **Activation** - the request to staff and establish an Emergency Response Facility (ERF).

2. **Operational** - when sufficient personnel (i.e., minimum staff) are available to accomplish the mandatory function of conduct of re-entry activities.

3. **Fully Staffed** - the complement of personnel is present in the facility.

4.2 **FPL Emergency Recall System (ERS)** - the call-out system used as a means of off-hours call-out, as described in EPIP-03, Emergency Response Organization/Staff Augmentation.

4.3 **Re-entry** - access to areas where evacuation (local or site) has been ordered constitutes a re-entry. Re-entry into an evacuated area is authorized only by the EC.

4.4 **Re-entry Team** - a group of qualified personnel who will enter an evacuated area under the authorization of the EC to accomplish an assigned task (e.g., repair damage control, rescue, etc.). A Re-entry Team shall consist of at least two qualified persons, one of whom shall be knowledgeable in Health Physics procedures.

4.0 DEFINITIONS (continued)

4.5 **Videolink** - a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF allowing the EC briefings to be available in all the Emergency Response Facilities (ERFs).

5.0 INSTRUCTIONS

NOTE

- This section provides general information and instructions for all OSC responders.
- Position specific checklists are included as attachments to this procedure.
- Individuals specifically designated as members of the OSC Emergency Response Organization (ERO) are identified in the ERD.

5.1 When notified, OSC emergency responders are to report to the facility as quickly as possible.

5.2 Upon arrival at the facility, each OSC responder should perform the following:

1. Sign-in instructions:

   A. Persons working in room 2300 (supervisors' area) of the OSC should sign in on the status board on the south wall in the space corresponding to their position.

   B. All OSC Re-entry Supervisors should ensure that the names of their department's Re-entry Team members and foreman are signed in on the status board in Room 2300.

   C. The OSC Administrative Tech/Logkeeper should ensure that all personnel in both Rooms 2200 and 2300 are signed in on the status board and that this information concurs with Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

2. Obtain a "Player" badge and place your name (and position title, if necessary) on the badge with a dry erase marker or in any other non-permanent manner.

3. Obtain specific position notebook (if applicable) with procedural checklists, forms and instructions. /R5

5.0 INSTRUCTIONS (continued)

5.2 (continued)

4. Make your workstation/location operational, as necessary.

5. Notify your supervisor or the OSC Supervisor of your readiness status.

6. Assist in establishing accountability by signing in on a form similar to Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

§3 **5.3** Only controlled copies of nuclear safety-related procedures, drawings, and other available plant information shall be used. Non-controlled documents or drawings should be verified with a controlled copy prior to use in the OSC.

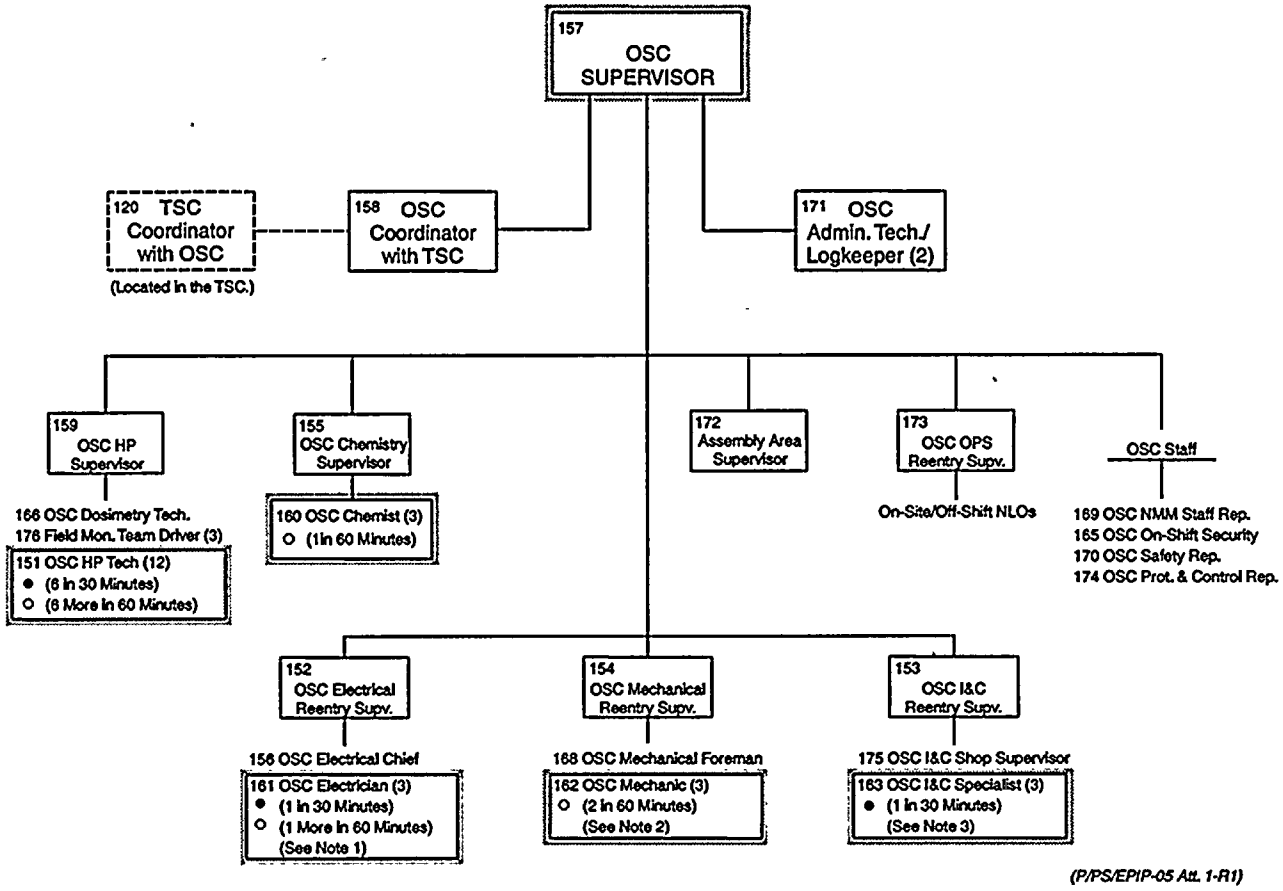
5.4 During facility briefings, stop what you're doing, pay attention, and contribute as requested.

5.5 Upon termination of the event:

1. All OSC personnel should return their workstations/locations to a normal state and assist in restoring the facility to a ready condition.

2. All OSC personnel should collect all significant information and documentation, such as notes and completed data sheets (not bound in position notebooks) and forward this material to the OSC Supervisor. /R5

ATTACHMENT 1
OSC EMERGENCY RESPONSE ORGANIZATION AND SHIFT STAFFING
(Page 1 of 1)



(P/PS/EPIP-05 Att. 1-R1)

Autodialer position numbers are listed with position titles.

● 30 minute response goal, per NUREG 0654, Table B-1

○ 60 minute response goal, per NUREG 0654, Table B-1

Note 1- Minimum staffing requirements may be filled by Electrical Reentry Supervisor, Chief or Electrician.
Note 2- Minimum Staffing requirements may be filled by Mechanical Reentry Supervisor, Foreman or Mechanic.
Note 3- Minimum Staffing requirements may be filled by I&C Reentry Supervisor, Shop Supervisor or I&C Specialist.

☐ Indicates minimum staffing positions that must be filled in order to declare the facility operational.

/R5

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 1 of 5)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Determine operational readiness of the OSC by verifying the following:

   a. Communications established with the TSC. _____

   b. Minimum staff available (use Attachment 2A, OSC ERO Shift Staffing and Accountability Roster or refer to the sign in board). _____

   c. Communications equipment and other supplies are available and ready for use. _____

   d. Ensure Room 2200 set up is underway. If the OSC Safety Rep is not available, then reassign the responsibility. _____

   e. Minimum staff prepared to accomplish mandatory facility functions. _____

3. If Step 2 above is satisfied, Then declare the facility operational at _____. _____

4. Notified the EC/TSC Supervisor that the OSC is operational. _____

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 2 of 5)

B. FACILITY OPERATION — INITIAL

NOTE
¶1 Unless authorized by the EC, facility staffing should be in accordance with Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

1. OSC fully staffed. _____

2. Instruct personnel to verify their position notebook procedures against the posted revision number. _____

¶1 3. Direct the HPOSC to identify and prepare a representative from HP and each maintenance discipline for a rapid response contingency team. _____

4. Instruct the OSC Administrative Tech/Logkeeper to initiate the OSC Logbook. _____

5. Establish what team(s) or individual(s) is known to be working in the plant, the task/job, and the communications method/controlling facility. _____

¶6 6. Identify the necessity and means for providing access to all tool rooms (including the Hot Tool Room) and any other area with restricted access. _____

7. Obtain food and water supply for the OSC. _____

8. Arrange for long term staffing (use Attachment 2A, OSC ERO Shift Staffing and Accountability Roster). _____

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 3 of 5)

B. (continued) INITIAL

¶2

CAUTION
The OSC affords limited protection against a release of radioactive material. During the time that a radioactive release is occurring, the habitability of the OSC is to be monitored. A measured dose rate of 50 mrem/hr, in the facility, is established as the threshold for relocation of the OSC.

9. If necessary, initiate steps for relocation of the OSC (use Attachment 2E, Guidelines for Relocation of the OSC). _____

10. Steps to occur continually while the facility is in operation:

a. Oversee communications

b. Maintain low noise level in the facility

c. Conduct facility briefings (use Attachment 2F, OSC Facility Briefings).

d. Ensure emergency status and plant conditions are routinely updated. (The videolink may be used for this purpose.)

e. Re-entry Checklist - When requested by the OSC Coordinator with the TSC, complete the following in response to a request for a Re-entry Team:

1. Review Attachment 2C, Re-entry Guidelines, to this attachment as necessary.

2. Complete the Re-entry Team Assignment section of Attachment 3A, Re-entry Log (letters G - I prior to team dispatch).

3. Select the most appropriate Re-entry Supervisor based on the nature of the task.

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 4 of 5)

B. (continued)

10. (continued)

e. (continued)

4. Assign completion of Parts I, II and III of Attachment 5A, Re-entry Team Form, to the chosen Re-entry Supervisor.

5. Direct the HPOSC to assist in team development by satisfying the requirements of HP 203.1, Evacuated Area Re-entry Authorization, in HP-203, Personnel Access Control During Emergencies.

6. Review Attachment 2D, Briefing Guidelines, to this procedure, as necessary.

7. When requested by the assigned Re-entry Supervisor, complete Part IV of Attachment 5A, Re-entry Team Form.

8. Record Time out in the Re-entry Team Assignment section of Attachment 3A, Re-entry Log (letter J).

9. Instruct the OSC Coordinator with the TSC to provide the information in the Re-entry Team Assignment section of Attachment 3A, Re-entry Log (letters G - J) to the TSC.

10. When the team returns to the OSC, complete Part VI of Attachment 5A, Re-entry Team Form.

11. Record Time in and any comments in the Re-entry Team Assignment sections of Attachment 3A, Re-entry Log (letters K and L).

12. Instruct the OSC Coordinator with the TSC to provide the information in the Re-entry Team Assignment, section of Attachment 3A, Re-entry Log (letters K and L) to the TSC to close out the Re-entry Team.

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 5 of 5)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All Re-entry Teams are logged back in and accounted for. _____
2. All facility activities closed out. _____
3. All equipment and supplies returned to preactivation condition and/or location. _____
4. All paperwork collected. _____
5. Closed out the OSC Logbook. _____
6. Returned position notebook to storage shelf. _____
7. Provided all completed paperwork (not bound in position notebooks) to Emergency Planning. _____ /R5

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 1 of 4)

Shift[1] _____, Hours: _____ To _____

POSITION {Minimum staff in **bold**[2]}	NAME	BADGE NO.
OSC HP Supervisor:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC Dosimetry Tech:		
Field Mon Team Driver:		
Field Mon Team Driver:		
Field Mon Team Driver:		

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 2 of 4)

POSITION	NAME	BADGE NO.
OSC I&C Re-entry Supv:		
OSC I&C Shop Supervisor:		
OSC I&C Specialist:		
OSC I&C Specialist:		
OSC I&C Specialist:		
OSC Mech Re-entry Supv:		
OSC Mechanical Foreman:		
OSC Mechanic:		
OSC Mechanic:		
OSC Mechanic:		
OSC Elec Re-entry Supv:		
OSC Electrical Chief:		
OSC Electrician:		
OSC Electrician:		
OSC Electrician:		

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 3 of 4)

POSITION	NAME	BADGE NO.
OSC Supervisor:		
OSC Coordinator with TSC:		
OSC Chemistry Supv.:		
OSC Chemist:		
OSC Chemist:		
OSC Chemist:		
OSC On-Shift Security:		
OSC On-Shift Security:		
OSC On-Shift Security:		
OSC OPS Re-entry Supv:		
OSC Prot and Control Rep:		
OSC NMM Staff Rep:		
OSC Safety Rep:		
OSC Information Services Rep:		
OSC Admin Tech/Logkeeper:		
OSC Admin Tech/Logkeeper:		
Assembly Area Supervisor:		

/R5

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 4 of 4)

POSITION	NAME	BADGE NO.
Other:_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

[1]Long term staffing, refer to the St. Lucie Plant Emergency Response Directory (ERD) for position alternates.

[2]Refer to Attachment 2B for temporary alternates for minimum staff positions.

[3]Position fills the following positions:

a. TSC HP Surveys
   1. Unit 1 Control Room/TSC
   2. Unit 2 Control Room
   3. OSC
   4. Access Control

b. HP Field Teams
   1. Red Team
   2. Orange Team
   3. Blue Team

ATTACHMENT 2B
OSC MINIMUM STAFFING
(Page 1 of 1)

Major Functional Area[1]	Position Title and ID No.[2]	# in Position	Qualifications/ Temporary Alternate
Health Physics Technician	OSC HP Tech, 151	12	Member of the Health Physics Department
Rad/Chem Technician	OSC Chemist, 160	1	Member of the Chemistry Department
Electrical Maintenance	OSC Electrician, 161	2	Electrical Maintenance Journeyman or Chief or Supervisor
Mechanical Maintenance/Radwaste Operator	OSC Mechanic, 162	2	Mechanical Maintenance Journeyman or Foreman or Supervisor
I&C Technician	OSC I&C Specialist, 163	1	I&C Maintenance Specialist or Supervisor
Facility Command and Control	OSC Supervisor, 157	1	OSC Coordinator with TSC

[1] This function(s) may be accomplished during the first 75 minutes of an emergency by an individual(s) meeting the corresponding listed qualifications.

[2] These Emergency Response Organization (ERO) positions were established to accomplish the indicated function(s).

ATTACHMENT 2C
RE-ENTRY GUIDELINES
(Page 1 of 3)

CAUTION

As specified in ADM-17.09, Invoking 10 CFR 50.54(x), the Emergency Coordinator (EC) may (with the concurrence of a licensed senior operator) waive re-entry requirements to place the plant in a safe shutdown condition or mitigate a release, if this immediate action is needed to protect the health and safety of the public.

/R5

1. **Prior to evacuation and with the Operational Support Center (OSC) NOT operational.**

   Re-entry guidelines do not apply.

2. **Prior to evacuation and with the OSC operational.**

¶3 **a.** Operators in the field should return to the Control Rooms and obtain an Electronic Personal Dosimeter (EPD) from the Health Physics Emergency Kit prior to returning to field.

b. Since teams may be dispatched from the OSC prior to evacuation of any plant areas, the OSC Supervisor and Health Physics Supervisor in the OSC (HPOSC) should evaluate the event in progress and determine the most likely trends in radiological conditions. If the event is likely to result in evacuation(s), due to radiological concerns, the teams should be dressed, equipped, and briefed, similarly to Re-entry Teams.

¶3 3. **Evacuation ordered and with the OSC NOT operational.**

Operator actions in the field must be viewed as re-entry activities. Operators shall return to the Control Rooms following the evacuation order. Operators shall obtain an Electronic Personal Dosimeter (EPD) from the Health Physics Emergency Kit, if not done previously. Re-entry into the plant requires: /R5

a. The EC (initially the NPS) authorize the entry.

/R5

b. Maintenance of appropriate radiological and safety measures.

c. Tracking the whereabouts of the team.

ATTACHMENT 2C
RE-ENTRY GUIDELINES
(Page 2 of 3)

4. Evacuation ordered and with the OSC operational

a. NLOs, from both Units, are to report to the OSC once it goes operational. /R5

b. All field activities are re-entries and shall be coordinated and controlled by the OSC.

c. Re-entry into an evacuated area shall be made only when authorized by the EC and under the direction of the TSC HP Supervisor (TSCHPS) and the HPOSC for one or more of the following reasons:

1. To ascertain that all personnel who were in the affected area have been evacuated and to search for unaccounted for personnel.

2. To assist in evacuating injured or incapacitated personnel from the affected area.

3. To perform operations which mitigate the effect of the emergency or hazardous condition.

4. To determine the nature and extent of the emergency and/or radiological conditions.

5. To establish definite personnel exclusion area boundaries.

ATTACHMENT 2C
RE-ENTRY GUIDELINES
(Page 3 of 3)

5. General Consideration

a. The Re-entry Team members should be selected based on appropriate qualifications relevant to the purpose for the entry.

b. A Re-entry Team shall consist of at least two qualified persons, one of whom shall be knowledgeable in Health Physics procedures.

c. The most qualified (relative to the entry) person should be selected to serve as the Re-entry Team Leader. He/she should be fully briefed concerning the nature of the emergency and the expectations for the entry.

d. All Re-entry Team members shall wear protective clothing, dosimeters, respiratory devices, and other protective devices as specified by the HPOSC.

¶1 **e.** A contingency Re-entry Team should be developed consisting of representatives from each of the maintenance disciplines and Health Physics. This team anticipates the need for a high priority, rapid response request from the EC/TSC.

ATTACHMENT 2D
BRIEFING GUIDELINES
(Page 1 of 1)

PRE-ENTRY

1. The Re-entry Team Form takes the place of a Nuclear Plant Work Order (NPWO) package, therefore, careful documentation is required.

2. Ensure that the Re-entry Team members are instructed as to what is required of them during the entry by the assigned Re-entry Supervisor.

3. Ensure that the Re-entry Team members are briefed concerning the nature of the emergency and the possible radiation hazards present by the HPOSC.

4. Verify that the Re-entry Team understands that they should not deviate from the planned route and task, unless due to unanticipated circumstances such as rescue, performing an operation which would minimize the emergency condition, etc. and only after acknowledgement from the OSC.

5. Verify that the Re-entry Team understands that if the monitored dose rates encountered during the entry exceed the limits set by the HPOSC that the Team should return to the OSC or, at a minimum, move to an area of low background and review conditions with the OSC.

6. If a Re-entry Team is to be assigned a new or additional task while still in the field, Part II, Task Assessment, of Attachment 5A, Re-entry Team Form, must be re-evaluated by an appropriate Re-entry Supervisor and the HPOSC consulted, prior to providing a field briefing.

POST ENTRY

1. Evaluate the success of the Re-entry Team in completing the re-entry task.

2. Ensure that Part V, Team Work Report, of the Re-entry Team Form (Attachment 5A) is completed by the Re-entry Team for documentation.

ATTACHMENT 2E
GUIDELINES FOR RELOCATION OF THE OSC
(Page 1 of 2)

A. OSC Supervisor

1. In conjunction with the Emergency Coordinator and the TSC HP Supervisor, obtain approval to relocate the OSC to one of the following locations: (not in any priority)

   a. North Service Building, conference area or maintenance shops

   b. Blowdown Building

   c. Unaffected Reactor Auxiliary Building (RAB)

   d. Other location deemed appropriate

2. Organize three relocation teams as follows:

   a. SETUP TEAM to prepare the alternate OSC location.

   b. EQUIPMENT AND SUPPLY TEAM to arrange for and transport equipment to the alternate OSC location.

   c. TURNOVER TEAM to maintain continuity with the TSC and communications with the Set Up Team.

3. Ensure that communications are established and checked at the alternate OSC.

4. Notify the TSC and Emergency Coordinator that the alternate OSC is operational and the primary OSC has been shutdown.

B. Maintenance Re-entry Supervisors

1. Identify tools and equipment for transfer.

2. Make vehicles available to transport equipment.

3. Maintain communications with Re-entry Teams.

ATTACHMENT 2E
GUIDELINES FOR RELOCATION OF THE OSC
(Page 2 of 2)

C. HP and Chemistry

1. Develop a relocation briefing regarding radiological conditions and travel route.

2. Chemistry assist HP in gathering Emergency Kit equipment, dosimetry, and exposure records and prepare for transport.

3. At the new location, reestablish:

   a. Access control

   b. Habitability surveys

   c. Decon location

D. Security

1. Reestablish accountability at the new location.

2. Ensure that the alternate location is identified to Security roadblocks.

E. Admin Tech and Logkeeper

1. Create a new layout for the OSC in the alternate location, as necessary.

2. Create a new call list of OSC phone numbers in the alternate location.

   a. A minimum of ten (10) phone lines should be identified, including one line for a telecopy machine, if a machine is available.

      (1) Radio channels may need to be substituted for missing phone lines.

3. Ensure all status board information is recorded and transferred.

ATTACHMENT 2F
OSC FACILITY BRIEFINGS
(Page 1 of 1)

A. GENERAL GUIDELINES

1. Conducted by the OSC Supervisor or his/her designee.

2. Establish a frequency (e.g., every 30 minutes or directly following the EC portion of the TSC briefings via the "Videolink").

3. Set criteria (i.e., attendance, noise and activity level, circulation of information).

B. GENERAL FORMAT - the following information should be included in facility briefings.

1. Time of the briefing

2. Current emergency classification

3. Plant status (affected Unit, unaffected Unit)

4. Radiological conditions (e.g., release in progress, contaminated areas, etc.)

5. Status of protective actions (e.g., site evacuation, actions underway by the public, etc.)

6. Status of activities underway in the facility

7. Request input/update information from other representatives (e.g., OPS, HP, Chem, Maintenance, Engineering, Security, etc.)

8. Major activity(s) underway in other facilities (e.g., notifications, field monitoring, dose assessment, etc.)

9. Concerns or questions

ATTACHMENT 3
OSC COORDINATOR WITH TSC CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Establish communication link with the TSC Coordinator with OSC (in the TSC). _____

3. Synchronize OSC clocks with the TSC. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Ensure all requests for re-entry activities are documented on Attachment 3A, Re-entry Log.

      1. Complete the Re-entry Task Request section of Attachment 3A (letters A - F) with information provided by the TSC Coordinator with OSC.

   b. Ensure all re-entry requests have been approved and prioritized by the EC.

   c. Give the Re-entry Log to the OSC Supervisor for completion of the Re-entry Team Assignment section.

ATTACHMENT 3
OSC COORDINATOR WITH TSC CHECKLIST
(Page 2 of 2)

B. (continued) INITIAL

1. (continued)

d. Upon return of the Re-entry Log form from the OSC Supervisor:

1. Provide the information in the Re-entry Team Assignment section of Attachment 3A, Re-entry Log (letters G - I) to the TSC.

2. Instruct the OSC Administrative Tech/Logkeeper to update the OSC Status Board with Re-entry Team information.

e. Inform the OSC Supervisor when the EC/TSC will be conducting a facility briefing.

f. Monitor information on the status board for accuracy.

g. Provide temporary coverage for the OSC Supervisor during Re-entry Team briefings and debriefings, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

> **NOTE**
> All paperwork completed in the position notebook should remain in the position notebook.

1. Phone connection to TSC terminated. _____

2. All Re-entry Log entries completed and closed out. _____

3. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____ /R5

4. Returned position notebook to storage shelf. _____ /R5

ATTACHMENT 3A
RE-ENTRY LOG
(Page 1 of 1)

RE-ENTRY TASK REQUEST	RE-ENTRY TEAM ASSIGNMENT
Complete this section with information from the TSC Coordinator with OSC.	The OSC Supervisor should complete this section.
A. Task Description:____ ____ B. *Priority: ____ C. Time:____ D. Reason for request:____ ____ E. Info contact:____ F. Phone:____	G. Team No.:____ H. Title:____ I. Re-entry Supv.:____ J. Time out: ____ K. Time in:____ L. Comments:____ ____
A. Task Description:____ ____ B. *Priority: ____ C. Time:____ D. Reason for request:____ ____ E. Info contact:____ F. Phone:____	G. Team No.:____ H. Title:____ I. Re-entry Supv.:____ J. Time out: ____ K. Time in:____ L. Comments:____ ____
A. Task Description:____ ____ B. *Priority: ____ C. Time:____ D. Reason for request:____ ____ E. Info contact:____ F. Phone:____	G. Team No.:____ H. Title:____ I. Re-entry Supv.:____ J. Time out: ____ K. Time in:____ L. Comments:____ ____
A. Task Description:____ ____ B. *Priority: ____ C. Time:____ D. Reason for request:____ ____ E. Info contact:____ F. Phone:____	G. Team No.:____ H. Title:____ I. Re-entry Supv.:____ J. Time out: ____ K. Time in:____ L. Comments:____ ____
A. Task Description:____ ____ B. *Priority: ____ C. Time:____ D. Reason for request:____ ____ E. Info contact:____ F. Phone:____	G. Team No.:____ H. Title:____ I. Re-entry Supv.:____ J. Time out: ____ K. Time in:____ L. Comments:____ ____

* 0 = Dispatch in less than 5 minutes (e.g., fire, injury, or certain Operator Actions)
1 = Dispatch in less than 15 minutes (e.g., Emergency Coordinator top priority)
2 = Dispatch in less than 30 minutes (e.g., routine re-entries)

ATTACHMENT 4
OSC ADMINISTRATIVE TECH/LOGKEEPER CHECKLIST
(Page 1 of 2)

NOTE

1. Two persons serve in this position. A division of labor should be established that best supports the OSC Supervisor.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____
2. Ensure status boards in the OSC are clean prior to facility activation. _____
3. Ensure the television sets in rooms 2200 and 2300 are turned on and set on channel 9 (for the "Videolink"). _____

B. FACILITY OPERATION

1. Ensure that all personnel in both Rooms 2200 and 2300 are signed in on the status board and that this information concurs with Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.
2. Steps to occur continually while the facility is in operation:
   a. Maintain the OSC Supervisor Logbook once turned over from OSC Supervisor (use Attachment 4A, Log Keeping and Status Boards).
   b. Maintain the OSC Status Board (use Attachment 4A, Log Keeping and Status Boards).
   c. Review status board entries with the OSC Coordinator with TSC to ensure accuracy.
   d. Provide administrative assistance and supplies to the OSC Supervisor and Re-entry Supervisors (supplies are available in the HP Emergency Kit).

ATTACHMENT 4
OSC ADMINISTRATIVE TECH/LOGKEEPER CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. The status board has been cleared and returned to preactivation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

3. Returned position notebook to storage shelf. _____

ATTACHMENT 4A
LOGKEEPING AND STATUS BOARDS
(Page 1 of 1)

LOG KEEPING

1. Example of information to be documented
   a. Key events (e.g., classification changes, injuries, etc.)
   b. Status changes in equipment, radiological conditions, personnel, etc.
   c. Decisions or actions taken
   d. Status board entries
   e. Other items of significance
2. Log entry requirements
   a. Time of entry
   b. Use ink
   c. Write legibly
   d. Use concise and accurate wording
   e. Strike through and initial any changes
   f. Do not remove pages from the log

STATUS BOARDS

1. Information should be updated every 15-30 minutes and not longer than 60 minutes.
2. Review posted information for accuracy (e.g., review the Re-entry Team number against the Re-entry Log) and verify discrepancies with the OSC Coordinator with TSC.
3. Designate corrected information by circling the entry on the board.
4. When all available blanks are filled in for a given parameter/item, begin again with a different colored marker, erase the existing information (one blank/line at a time) and enter the new information.

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 1 of 4)

NOTE

1. This checklist applies to the following Re-entry Supervisor positions (responsibilities of the OSC HP Re-entry Supervisor (HPOSC) are provided in HP-200, Health Physics Emergency Organization):

   OSC Electrical Re-entry Supervisor
   OSC Mechanical Re-entry Supervisor
   OSC OPS Re-entry Supervisor
   OSC I&C Re-entry Supervisor
   OSC Chemistry Supervisor

2. This attachment also provides guidelines for the following Re-entry Team members:

   OSC Electrician
   OSC Mechanic
   OSC Non Licensed Operators
   OSC I&C Specialist
   OSC Chemist

3. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Assist in preparation and set-up of the OSC. _____

NOTE

1. Initially, on-shift Non-Licensed Operators (NLOs) are under the control of the NPS and are accounted for on the Operations Accountability Aid. Following site evacuation, NLOs report to the OSC and are then considered part of the OSC staff.

2. Extra (non on-shift) NLOs report to the OSC and are part of the OSC staff.

3. Ensure departmental Re-entry Team members are signed-in on a form similar to Attachment 2A, OSC ERO Shift Staffing and Accountability Roster. _____

4. Provide activation status of your group to the OSC Supervisor. _____

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION — INITIAL

1. All Re-entry Supervisors initiate a Logbook. _____

2. Steps to occur continually by all Re-entry Supervisors while the facility is in operation:

   a. Maintain documentation of activities in the Logbook.

   b. Re-entry Checklist - When directed by the OSC Supervisor complete the following in response to a request for a Re-entry Team:

      1. Complete Part I, Team Assignment, portion of Attachment 5A, Re-entry Team Form, as requested by the OSC Supervisor by selecting Re-entry Team members and a Re-entry Team Leader.

      2. Work with other members of the OSC staff to complete Part II, Task Assessment, of the Re-entry Team Form.

      3. Review Attachment 5B, Re-entry Team Guidelines, as necessary.

      4. Complete Part III, Team Pre-entry Briefing, of Attachment 5A, Re-entry Team Form.

      5. Provide the Re-entry Team Form to the OSC Supervisor for completion of Part IV.

      6. Once dispatched, communicate with the Re-entry Team and keep the OSC Supervisor informed of status/activities.

      7. Upon return to the OSC, direct the Re-entry Team to complete Part V, Team Work Report, of Attachment 5A, Re-entry Team Form.

      8. Retain completed copies of Attachment 5A, Re-entry Team Form.

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 3 of 4)

B. (continued) INITIAL

2. (continued)

c. Coordinate shift relief activities with the OSC Supervisor.

d. Perform shift turnover with an alternate Re-entry Supervisor, when directed.

1. Ensure shift turnover of other departmental re-entry personnel.

¶4 **3.** OPS Re-Entry Supervisor

a. Establish link with OPS Conference Bridge (originated in the TSC). _____

NOTE
At site evacuation and at the direction of the EC, NLOs will report to the OSC.

b. Verify that on-shift NLOs are aware of the following (may be communicated through the Control Room or directly):

1. Emergency dosimetry (Electronic Personal Dosimeter (EPD)), in the Control Room HP Emergency Kits, must be used at ALERT or higher emergency class. _____

2. The EC will direct the NLOs to the OSC following a site evacuation. _____

3. Travel route to the OSC will be established by the HPOSC. _____

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 4 of 4)

B. (continued) INITIAL

3. (continued)

CAUTION
As specified in ADM-17.09, Invoking 10 CFR 50.54(x), the Emergency Coordinator (EC) may (with the concurrence of a licensed senior operator) waive re-entry requirements to place the plant in a safe shutdown condition or mitigate a release, if this immediate action is needed to protect the public health and safety.

c. Coordinate operator actions over the OPS Conference Bridge and in conjunction with the OSC Supervisor.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Directed departmental personnel to turn in documentation. _____
2. Closed out the Logbook. _____
3. Generate Nuclear Plant Work Orders (NPWOs), following termination of the emergency, to ensure all maintenance activities are recorded in plant maintenance program records, as necessary. _____
4. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____ /R5
5. Returned position notebook to storage shelf. _____

ATTACHMENT 5A
RE-ENTRY TEAM FORM
(Page 1 of 2)

NOTE
This form takes the place of a Nuclear Plant Work Order (NPWO) package, therefore, careful documentation is required.

PART I. TEAM ASSIGNMENT

A. Team No.: _____ B. Title: _____ C. Priority: _____ D. Time: _____

E. Team Members:

	Name	TLD No.	Department
1.			
2.			
3.			
4.			
5.			

F. Designated Team Leader: _____

G. Completed by: _____, Re-entry Supervisor

CAUTION
IF the Re-entry Team is assigned a new or additional task, THEN this section shall be re-evaluated and the HPOSC consulted, prior to the field briefing.

PART II. TASK ASSESSMENT

A. Task description: _____

B. Clearance consideration (OPS): _____ C. Security: _____ D. Safety/Heat Stress: _____

E. Material available (NMM): _____ F. Tools: _____ G. Instruction Level: _____

H. Work guidelines: _____

I. Completed by: _____, Re-entry Supervisor

PART III. TEAM PRE-ENTRY BRIEFING

A. Review task assessment: _____

B. Special instructions: _____

C. Communications, primary: _____ alternate: _____

D. Completed by: _____, Re-entry Supervisor

ATTACHMENT 5A
RE-ENTRY TEAM FORM
(Page 2 of 2)

PART IV. TEAM DISPATCH

A. Team understands the re-entry task? _____
B. Team has necessary materials, tools, and protective equipment? _____
C. HP re-entry briefing complete? _____
D. Other: _____
E. Time Out: _____
F. Completed by: _____, OSC Supervisor

PART V. TEAM WORK REPORT

A. Report: _____

B. Report completed by: _____

PART VI. TEAM EXIT DEBRIEF

A. Time in: _____
B. Task status: _____
C. Additional information (problems/hazards): _____
D. Team closeout: _____
E. Completed by: _____, Re-entry Supervisor
F. HP Form 203.1 Completed by _____, HPOSC
G. Reviewed by: _____, OSC Supervisor
H. NPWO generated by: _____, Re-entry Supervisor, Date _____/_____/_____

ATTACHMENT 5B
RE-ENTRY TEAM GUIDELINES
(Page 1 of 1)

MEMBERS OF RE-ENTRY TEAMS:

1. Should obtain, as appropriate, tools, equipment, supplies, and communications equipment necessary to perform emergency repair/damage control activities.

2. Should report any equipment or supply problems to the Re-entry Supervisor.

3. Shall don personal protective equipment/clothing and dosimetry, if directed by the HPOSC.

4. Should proceed along the pre-planned route to the work location and perform emergency repair/damage control activities, as directed by the Re-entry Supervisor, HPOSC, and OSC Supervisor.

5. Should maintain communications with the Re-entry Supervisor.

6. Should request additional personnel/equipment, as necessary, through the Re-entry Supervisor.

7. Shall check dosimetry/monitor exposure. If the alarm of the Electronic Personal Dosimeter (EPD) sounds, follow the instructions provided by the HPOSC.

8. Should follow the self-monitoring and personnel decontamination procedures as specified by the HPOSC, when the re-entry is complete.

9. Should complete Part V, Team Work Report, in Attachment 5A, Re-Entry Team Form, and report to the OSC Supervisor for debrief on return to the OSC.

10. Should report to HP for exposure history update.

11. Should stand-by for further instructions from the Re-entry Supervisor.

ATTACHMENT 6
OSC RE-ENTRY FOREMAN CHECKLIST
(Page 1 of 2)

NOTE

1. This checklist applies to the following Re-entry Foreman positions:

   OSC Electrical Chief
   OSC Mechanical Foreman
   OSC I&C Shop Supervisor

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Assist the Re-Entry Team Supervisor in identification of departmental journeyman. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Assist the Re-entry Supervisor in re-entry activities as follows:

      1. Evaluation of re-entry tasks.

      2. Selection of departmental personnel for re-entry tasks.

ATTACHMENT 6
OSC RE-ENTRY FOREMAN CHECKLIST
(Page 2 of 2)

B. (continued) INITIAL

1. (continued)

a. (continued)

NOTE

1. A computer provides a LAN connection and access to the Total Equipment Database (TEDB) in Passport.

2. Procedures, Tech Manuals, and drawings are available across the hall from the OSC in the Maintenance Library (an Information Services representative is part of the OSC staff, if needed).

3. Determination of level of instruction needed by the Re-entry Team members.

4. Selection of tools, equipment, and supplies necessary to perform emergency repair/damage control activities.

b. Perform as a Re-entry Team Leader, as directed. _____

C. FACILITY CLOSEOUT AND RESTORATION

NOTE

All paperwork completed in the position notebook should remain in the position notebook.

1. Directed departmental personnel to evaluate status of equipment and supplies and report deficiencies. _____

2. Had departmental Re-entry Team members return all equipment and supplies to normal/storage locations. _____

3. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____ /R5

4. Returned position notebook to storage shelf. _____ /R5

ATTACHMENT 7
OSC DEPARTMENTAL REPS CHECKLIST
(Page 1 of 3)

NOTE

1. This checklist applies to the following OSC Department Reps:

   OSC Safety Rep
   OSC NMM Staff Rep
   OSC Protection and Control Rep
   OSC Information Services Rep

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

/R5

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. OSC Information Services Rep

   a. Verify procedures by posting revision numbers on the status board. Post all procedures (EPIP, HP, Chem). Consult the control copy of procedures in the OSC HP Emergency Kit or follow the steps below to print out an EPIP list. _____

      (1) In Lotus Notes, click on the PSL Procedures icon.

      (2) On the Search line toolbar, click the far right button (with 2 circles and a down arrow).

      (3) Select Group Search from the drop down menu.

      (4) In the Search line type "EP" (where the "XX" is).

      (5) Click Search or hit Enter.

      (6) EPIP list is now displayed (not in any particular order).

ATTACHMENT 7
OSC DEPARTMENTAL REPS CHECKLIST
(Page 2 of 3)

A. (continued) INITIAL

2. (continued)

a. (continued)

(7) To print the list:

- Click the File.
- Select Print from the drop down menu.
- Select View Options in the dialogue box.
- Click OK.

b. Ensure copies of the Emergency Response Directory (ERD) are available for use by the OSC Supervisor and OSC Re-entry Supervisors. Copies of the ERD may be obtained from the HP Emergency Kit.

3. OSC Safety Rep (or as designated by the OSC Supervisor)

a. Initiate set up of Room 2200 in accordance with Attachment 7A, Room 2200 Guidelines, and 7B, Room 2200 Set Up. _____

B. FACILITY OPERATION

NOTE
Computers are available in Room 2300 for accessing the LAN, as needed.

1. Steps to occur continually while the facility is in operation:

a. OSC Safety Rep (or as designated by the OSC Supervisor)

(1) Supervise activities in Room 2200. Follow the guidance provided in Attachment 7A, Room 2200 Guidelines.

ATTACHMENT 7
OSC DEPARTMENTAL REPS CHECKLIST
(Page 3 of 3)

B. FACILITY OPERATION (continued) — INITIAL

1. (continued)

b. Each representative should be alert to assist the OSC Supervisor in advising Re-entry Teams or participating in re-entry as needed.

c. Provide support and/or expertise as follows:

1. OSC NMM Staff Rep - materials and equipment in Stores

2. OSC Protection and Control Rep - off-site power and switchyard issues /R5

3. OSC Information Services Rep - obtain and/or produce copies of tech manuals, drawings, procedures, diagrams and other controlled documents, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

> **NOTE**
> All paperwork completed in the position notebook should remain in the position notebook.

1. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____ /R5

2. Returned position notebook to storage shelf. _____ /R5

ATTACHMENT 7A
ROOM 2200 GUIDELINES
(Page 1 of 3)

A. SET UP

1. Instruct personnel to arrange the tables and chairs in accordance with the facility layout shown in Attachment 7B, Room 2200 Set Up. Each department should ensure their area is properly located and arranged.

2. The OSC Supervisor should be advised when the room is set up.

B. STAFF AND ACCOUNTABILITY

1. Assist Security in establishing accountability by instructing all personnel to sign in on Attachment 2A, OSC ERO Shift Staffing and Accountability Roster. Instruct all foremen to ensure their personnel are signed in.

2. Ensure one completed copy of Attachment 2A is provided to the OSC Supervisor and another completed copy is given to one of the OSC Administrative Tech/Logkeepers.

C. CONDUCT OF FACILITY OPERATIONS

1. Identify and process personnel from HP, OPS, Chemistry and Maintenance to initially establish a rapid response/contingency Re-entry Team.

2. Review the rules:

   a. Orderly conduct is to be maintained at all times.

   b. Personnel are to listen to TSC briefings broadcast over the Videolink.

   c. Briefings will occur following the TSC briefings (approximately every 30 minutes) and will allow for questions.

   d. Personnel are allowed to leave Room 2200 (to use the bathroom, make copies, go the Maintenance Library, etc.), but must notify their foreman if appropriate, and in all instances, sign out on roster provided by Security.

   e. Personnel are NOT to enter Room 2300 unless instructed to do so.

ATTACHMENT 7A
ROOM 2200 GUIDELINES
(Page 2 of 3)

C. (continued)

3. Have personnel identify any tools, instruments or other supplies that are necessary for their response efforts. These requests need to be provided to the OSC Supervisor so that arrangements can be made to obtain this material.

D. HP BRIEFINGS

1. In addition to re-entry specific briefings, HP should routinely provide general HP briefings to personnel addressing the following:

a. Location of the Access Control Point.

b. Current dress out requirements.

c. Dosimetry, alarm setpoints, and appropriate actions if an alarm should sound.

d. General radiological conditions based on on-site survey data.

e. Radiological conditions in the OSC.

f. Release or dose concerns.

E. SAFETY BRIEFINGS

1. Safety considerations associated with re-entries should include:

a. Clearance considerations.

b. Caution in unknown environments, for example, be wary of steam leaks or other potentially dangerous conditions.

c. Personal safety with respect to your physical condition, for example, remain sensitive to the dangers of Heat Stress.

d. Be familiar with surroundings and alert to changing conditions.

ATTACHMENT 7A
ROOM 2200 GUIDELINES
(Page 3 of 3)

E. (continued)

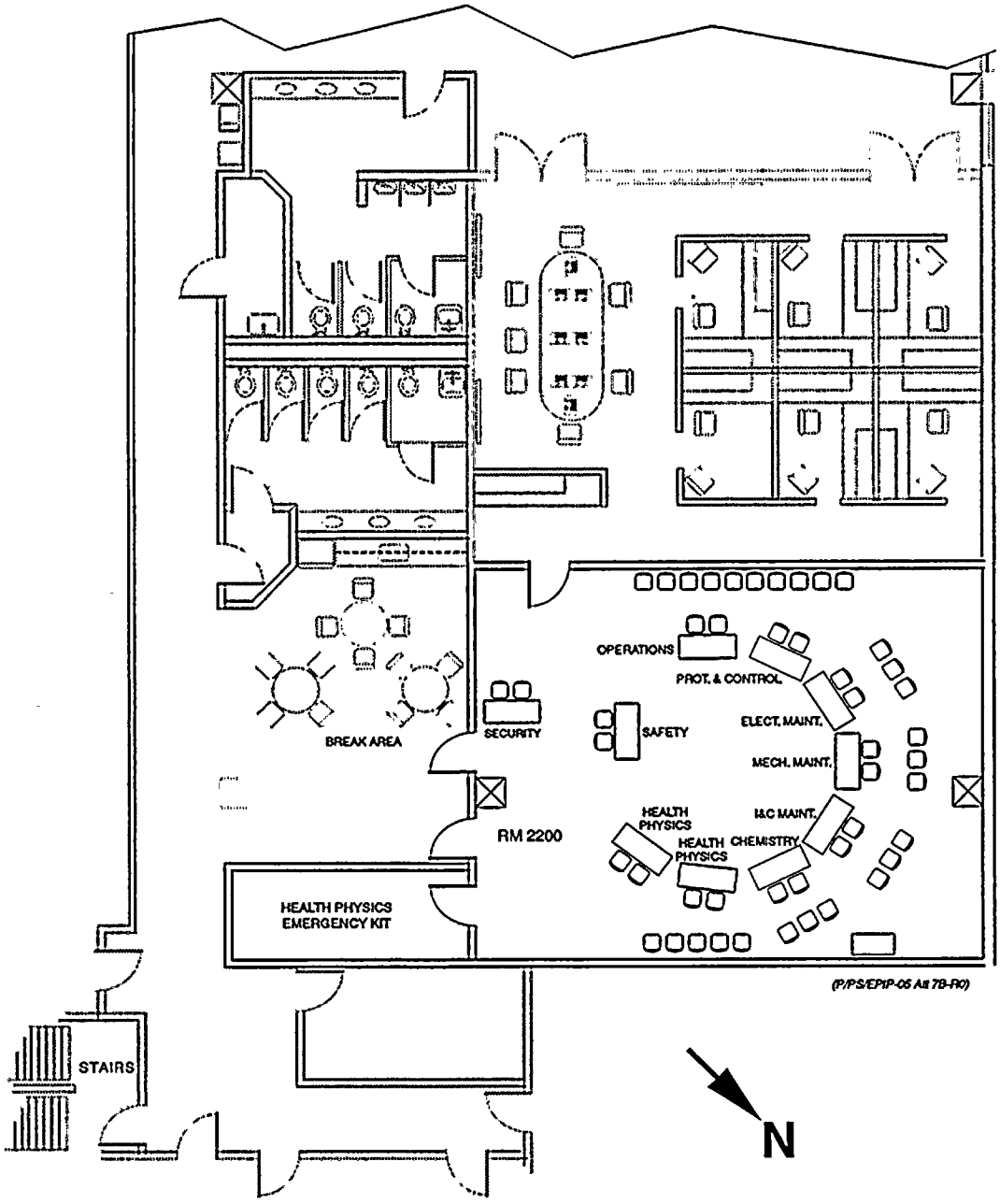
1. (continued)

e. Keep in contact with the Re-entry Supervisor.

f. Perform the work as safely as possible.

2. When in the field, always review any proposed change in the re-entry plan (ingress, egress, or assigned task) with the Re-entry Supervisor.

ATTACHMENT 7B
ROOM 2200 SET UP
(Page 1 of 1)



/R5

ATTACHMENT 8
OSC SECURITY CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

NOTE
Priority is given to identifying the minimum staff (positions in bold on Attachment 2A) which allows the OSC Supervisor to declare the OSC operational. Accountability must be established for both Room 2200 and 2300. The facility head count must agree with the number of persons signed in on the accountability forms.

2. Using Attachment 2A, OSC ERO Shift Staffing and Accountability Roster, initiate the establishment of initial facility accountability. _____

B. FACILITY OPERATION

NOTE
Certain positions assigned to the OSC are not necessarily located in the OSC, but for accountability these persons are tracked with OSC personnel. These positions are not to be logged as Re-entry Teams or to appear on the Accountability Roster if the persons have actually left site.

1. Log the names and badge numbers of persons filling the following positions and maintain accountability for them even after leaving the facility and/or site:

   a. Assembly Area Supervisor: _____

   b. Control Room HP coverage

      1. Unit 1: _____

      2. Unit 2: _____

ATTACHMENT 8
OSC SECURITY CHECKLIST
(Page 2 of 3)

B. (continued) INITIAL

1. (continued)

c. Field Monitoring Team - Red

1. Driver: _____

2. HP: _____

d. Field Monitoring Team - Blue

1. Driver: _____

2. HP: _____

e. Field Monitoring Team - Orange

1. Driver: _____

2. HP: _____

f. Other (e.g., HP sent to off-site Assembly Area, hospital, etc.): _____

2. Establish initial facility personnel accountable roster required 30 minutes following evacuation of non-essential personnel. _____

3. Revise accountability when Non Licensed Operators report to the OSC following site evacuation. _____

4. Coordinate with the Assembly Area Supervisor to establish Security at the off-site Assembly Area based on Security resources availability. _____

ATTACHMENT 8
OSC SECURITY CHECKLIST
(Page 3 of 3)

B. (continued) INITIAL

5. Steps to occur continually while the facility is in operation:

a. Assist the TSC Security Supervisor in maintaining site accountability.

b. Assist Re-entry Teams in gaining access to plant areas, as needed.

c. Assist off-site agencies in gaining plant access.

d. Advise the OSC Staff of security related matters.

e. Follow Security Procedures.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____ /R5

2. Returned position notebook to storage shelf. _____ /R5

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.	Current Rev. No.	Effective Date:
EPIP-06	3	06/01/00

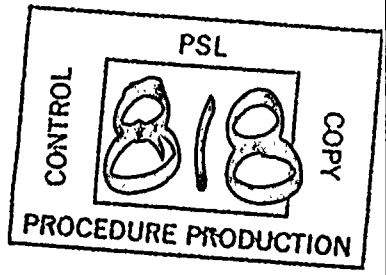
Title:

ACTIVATION AND OPERATION OF THE EMERGENCY OPERATIONS FACILITY

Responsible Department: **EMERGENCY PLANNING**

Revision Summary

Revision 3 - THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Added new PAR brief attachment. Deleted notification and PAR attachment (relocated to new EPIP-08. Moved responsibility for preparing State Notification Form from EOF HRD Communicator to EOF RM Ops Advisor/Logkeeper. Add alternate instruction for procedure revision verification. Made editorial and administrative changes. Added ETM Activities List form. (Donna Calabrese, 05/31/00)



Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
3	05/30/00	R. G. West Plant General Manager	05/31/00
		Designated Approver	

S___OPS
DATE
DOCT PROCEDURE
DOCN EPIP-06
SYS
COMP COMPLETED
ITM 3

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

TABLE OF CONTENTS
(continued)

SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

1.1 Discussion

This procedure provides instructions for the activation and operation of the Emergency Operations Facility (EOF).

1.2 Location and Description

The EOF is a dedicated facility located at the intersection of State Route 712 (Midway Road) and I-95 approximately 10 1/2 miles west of the St. Lucie Plant. The EOF has emergency communications equipment, precalculated emergency data, pertinent reports, plans, procedures, and drawings available for use.

1.3 EOF Functions

1. Accident assessment in conjunction with the Technical Support Center (TSC)

§2 2. Protective action decision making

§2 3. Off-site notifications (State, County, NRC)

4. Off-site dose assessment

5. Off-site field monitoring activities

6. Core damage assessment

7. Interfacility communications with the TSC

8. Interaction with off-site officials

9. Direction of recovery operations

1.0 PURPOSE (continued)

1.4 Minimum Staffing

1. The following is a recommended list of the minimum positions needed for EOF operation:

   - Recovery Manager
   - EOF RM OPS Advisor/Logkeeper
   - EOF Communicator (HRD)
   - ERDADS Operator OR EOF Communicator (to TSC)
   - EOF Dose Assessor/FMT Coord

§2 **1.5** Activation

Activation of the EOF is the responsibility of the Recovery Manager (RM) and is required for a Site Area Emergency or General Emergency. EOF personnel should be placed in the facility for an Alert, as conditions warrant. Arrangements have been made to activate the EOF in a timely manner.

1.6 Operations

The EOF has sufficient space to accommodate the Florida Power & Light Company (FPL) response organization and designated representatives of the Federal, State, and Local authorities. This co-location allows for an effective communications interface, coordinated decision making, and timely implementation of protective actions.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 REFERENCES

§$_1$ **1.** St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)

2. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2

§$_2$ **3.** St. Lucie Plant Radiological Emergency Plan (E-Plan)

4. St. Lucie Plant Physical Security Plan

5. St. Lucie Plant Safeguards Contingency Plan

¶$_1$ **6.** St. Lucie Plant Topical Quality Assurance Report

7. E-Plan Implementing Procedures (EPIP 00-13)

8. St. Lucie Plant Emergency Response Directory (ERD)

9. Florida Power & Light Company St. Lucie Plant Recovery Plan

10. Florida Power & Light Company Corporate Communications Nuclear Emergency Plan.

11. QI-17-PSL-1, Quality Assurance Records

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.1 REFERENCES (continued)

§3 **12.** Fitness for Duty Rule, 10 CFR 26

¶2 **13.** Reactor Operator Tech Manual 8770-12058

14. NUREG-0654, Rev. 1, FEMA Rep. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants; November, 1980.

15. St. Lucie Unit 1 and 2 as-built drawings, Nuclear Engineering files, and Ebasco Engineering files

¶3 **16.** Institute of Nuclear Power Operations, Emergency Resources Manual - INPO 86-032.

¶4 **17.** Nuclear Energy Policy on Exposure Limits for Emergency Response Personnel, Revision to Policy Statement, Ltr. No. JNO-HP-94-056, 26 October, 1994.

2.2 RECORDS REQUIRED

1. The following shall be retained following a plant emergency:

- Checklists, data and paperwork generated per this procedure.
- Log books maintained during the plant emergency.

§1 **2.** Recorded information shall be forwarded to Emergency Planning following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 COMMITMENT DOCUMENTS

§4 **1.** Condition Report 96-2900, (Review and approval of Recovery Plan)

¶5 **2.** PMAI 99-0-024 (RM Briefing Consistency)

3.0 RESPONSIBILITIES

3.1 Recovery Manager (RM)

§2 1. Declares the EOF operational for any Site Area Emergency or General Emergency.

2. Establishes and maintains command and control of the EOF.

§2 3. Assumes the following responsibilities from the Emergency Coordinator (EC) when the EOF is prepared to go operational:

A. Notification of off-site agencies (State and Counties), and

B. Develops and issues Protective Action Recommendations (PARs) to State and County officials.

§2 4. Declares the EOF operational with the concurrence from the EC.

§2 5. Ensures notification of State and County agencies occurs within fifteen (15) minutes following any change in emergency classification and notification of the NRC occurs immediately following notification of the State and Counties, and in all cases within one (1) hour.

§2 6. Establishes policies, for situations in which no company policy currently exists, to support the actions that will aid in mitigation of the emergency.

§2 7. Expends funds as necessary to cope with emergency situations.

§2 8. Provides support to the EC as necessary.

§2 9. Provides concurrence to the EC for exceeding 10 CFR 20 limits for emergency response personnel, as appropriate.

3.0 RESPONSIBILITIES (continued)

3.1 Recovery Manager (RM) (continued)

§2 **10.** Requests additional support as necessary.

11. Interfaces with the Nuclear Regulatory Commission, Director of Site Operations (NRC, DSO) when the NRC Site Team arrives at the EOF.

12. De-escalates all events classified as Site Area Emergency or General Emergency.

§2 **13.** Prepares an Incident Report for submittal to the State Division of Emergency Management (DEM) and the NRC within twenty-four (24) hours after termination of an Alert or higher emergency event.

3.2 EOF Emergency Technical Manager (ETM)

§2 **1.** Provides engineering support to the EOF by directing all engineering response including:

A. Nuclear Engineering

B. Nuclear Fuels Engineering and core damage analysis

C. Electrical Engineering

D. I&C Engineering

E. Mechanical Engineering

F. Civil Engineering

2. Supports the TSC in problem solving based on engineering design and as-built construction details.

3. Oversees plant data acquisition and posting.

4. Interfaces with the NRC Reactor Safety Coordinator when the NRC Site Team arrives at the EOF.

3.0 RESPONSIBILITIES (continued)

3.3 EOF Licensing Manager

1. Oversees EOF communications performed by the following communicators:

   A. Hot Ring Down (HRD) Communicator

   B. Emergency Notification System (ENS) Communicator

   C. Health Physics Network (HPN) Communicator

   D. TSC Communicator

¶3 2. Ensures that the Institute of Nuclear Power Operations (INPO) is kept abreast of emergency status and resource requirements.

3. Serves as primary liaison with the NRC once the Site Team arrives at the EOF, interfacing with the Emergency Response Coordinator.

3.4 EOF Health Physics Manager (HPM)

1. Directs the collection, assessment, and interpretation of all radiological and radiochemistry information in the EOF.

2. Assists the RM in PAR decision making.

3. Ensures that radiological questions/concerns arising from the Emergency News Center (ENC) are addressed/resolved.

4. Interfaces with the State of Florida's Department of Health, Bureau of Radiation Control on all radiological matters.

5. Interfaces with the Protective Measures Coordinator when the NRC Site Team arrives at the EOF.

3.0 RESPONSIBILITIES (continued)

3.5 EOF Emergency Security Manager (ESM)

1. Establishes facility security and personnel accountability throughout the emergency.

§3 **2.** Ensures the requirements of the Fitness for Duty rule are met by persons reporting for duty in EOF positions.

3. Coordinates with the TSC Security Supervisor to support any on-site security functions and in determining the need to suspend safeguards.

§2 **4.** Provides the interface with local law enforcement and rescue agencies.

5. Tracks the status of all site personnel transported to off-site medical facilities.

6. Interfaces with the Safeguards/Security Coordinator when the NRC Site Team arrives at the EOF.

3.6 EOF Administrative Supervisor

1. Oversees all administrative services such as:

CAUTION

¶1 Documents, such as instructions, procedures, drawings, and software which provide guidance, specifications, or requirements affecting the quality of safety-related structures, systems, and components, shall be controlled.

A. Availability of controlled documents

B. Reproduction and distribution services

C. Support for telephone and telecopy operations

2. Makes arrangements for long term facility operations including personnel, supplies, and equipment.

3.0 RESPONSIBILITIES (continued)

3.7 EOF RM OPS Advisor/Logkeeper

1. Assists the RM in all assigned responsibilities including off-site notifications and Protective Action Recommendations (PARs).

2. Fulfills the role of RM in the "bullpen" when the RM is in conference.

3. Maintains the RM Logbook which serves as the primary facility log.

3.8 Nuclear Division Duty Officer (NDDO)

1. This position is not required to be in the EOF.

2. Maintains 24 hour a day on-call availability.

3. Serves as a technical advisor to the Emergency Control Officer (ECO).

4. Performs the duties of the ECO if one can not be located.

5. Establishes initial contact with INPO.

3.9 Emergency Control Officer (ECO)

§2 1. Acts as the chief nuclear officer in the absence of the President of the Nuclear Division.

§2 2. Serves as the official spokesperson for the Nuclear Division.

3. Approves all press releases for the Nuclear Division.

3.10 Governmental Affairs Manager (GAM)

1. This position is not required to be in the EOF.

§2 2. Provides liaison function between the ECO and public officials.

3. Works with the Governmental Affairs Representative (GAR) and Governor's Advisor.

3.0 RESPONSIBILITIES (continued)

3.11 Risk Manager

1. This position is not required to be in the EOF.

2. Provides liaison to the nuclear insurance industry.

3.12 EP Manager

1. This position is not required to be in the EOF.

2. Provides emergency preparedness program expertise to the RM and other EOF staff as necessary.

3.13 EOF Emergency Information Manager (EIM)

1. Delegates responsibility for verbal and written communication as needed.

2. Determines when an emergency is serious enough to activate the Corporate Communications (CC) Nuclear Emergency Plan (CCNEP), including initiating notifications and calling for additional communications support as needed.

3. Calls for the activation of an Emergency News Center (ENC), after consulting with the ECO.

4. Invites Federal, State and County public information officers to respond to ENC where information can be jointly provided to the news media.

5. Declares the ENC operational, in coordination with the ENC Manager and ECO.

6. Ensures that technical advisors are assigned to the County Emergency Operations Centers (EOCs) and that contact is established.

4.0 DEFINITIONS

4.1 Emergency Planning Zones:

1. **Plume Exposure Pathway (10 mile EPZ)** - that area, approximately 10 miles in radius from the center of the plant, for which detailed plans are made to protect people from exposure to a plume containing radioactive materials.

2. **Ingestion Exposure Pathway (50 mile EPZ)** - that area, approximately 50 miles in radius from the center of the plant, for which plans are made to protect people from ingestion of food-stuffs and water contaminated by radioactive materials released from the plant.

4.2 Facility Status:

1. **Activation** - the request to staff and establish an Emergency Response Facility (ERF).

2. **Operational** - when sufficient personnel (i.e., minimum staff) are available to accomplish the mandatory facility functions of off-site notifications and development of PARs **AND** the RM has completed a turnover with the EC for assumption of these functions.

3. **Fully Staffed** - the complete complement of personnel is present in the facility.

4.3 FPL Emergency Recall System (ERS) - the call-out system used as the means of off hours call-out, as described in EPIP-03, Emergency Response Organization Notifications/Staff Augmentation.

4.4 Protective Actions Implemented (PAIs) - actual protective action instructions given to the general public based on the evaluation, by State and County officials, of the Protective Action Recommendations (PARs) received from FPL (i.e., actual shelter and/or evacuation response actions taken by the public).

4.5 Risk Counties - those counties located within the 10 mile Emergency Planning Zone of a nuclear plant. For St. Lucie Plant, the risk counties are **St. Lucie and Martin.**

4.0 DEFINITIONS (continued)

4.6 State Agencies:

1. **Florida Division of Emergency Management (DEM)** - headquartered in Tallahassee, responsible for the State of Florida Radiological Emergency Management Plan for Nuclear Power Plants.

2. **Florida Department of Health (DOH), Bureau of Radiation Control** - headquartered in Orlando, responsible for radiological monitoring and dose assessment.

4.7 **"Videolink"** - a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF allowing the EC briefings to be available in all the Emergency Response Facilities (ERFs).

5.0 INSTRUCTIONS

NOTE

- This section provides general information and instructions for all EOF responders.
- Position specific checklists are included as attachments to this procedure.
- Individuals specifically designated as members of the EOF Emergency Response Organization (ERO) are identified in the ERD.

5.1 Report when notified to the EOF as quickly as possible if available and able to safely do so.

5.2 Upon arrival at the facility, each EOF emergency responder should perform the following:

1. Present Security with a form of picture identification.
2. Inform Security of your "fitness for duty" status.
3. Obtain and wear a position specific access badge available in the Security area as you enter the building.
   - **A.** Place your name on the badge with a dry erase marker or in any other non-permanent manner.
4. Sign-in on the Staffing Board located on the south wall of the "bullpen" (room 101).
5. Obtain position specific notebook with procedural checklists, forms and instructions.
6. Make your workstation/location operational.
7. Notify your supervisor of your readiness status.

¶1

NOTE

Only controlled copies of nuclear safety-related procedures, drawings, and other available plant information shall be used. Non-controlled documents or drawings shall be verified with a controlled copy prior to use in the EOF.

5.3 Communications to the plant should be made through the phonetalkers and/or the TSC.

5.0 INSTRUCTIONS (continued)

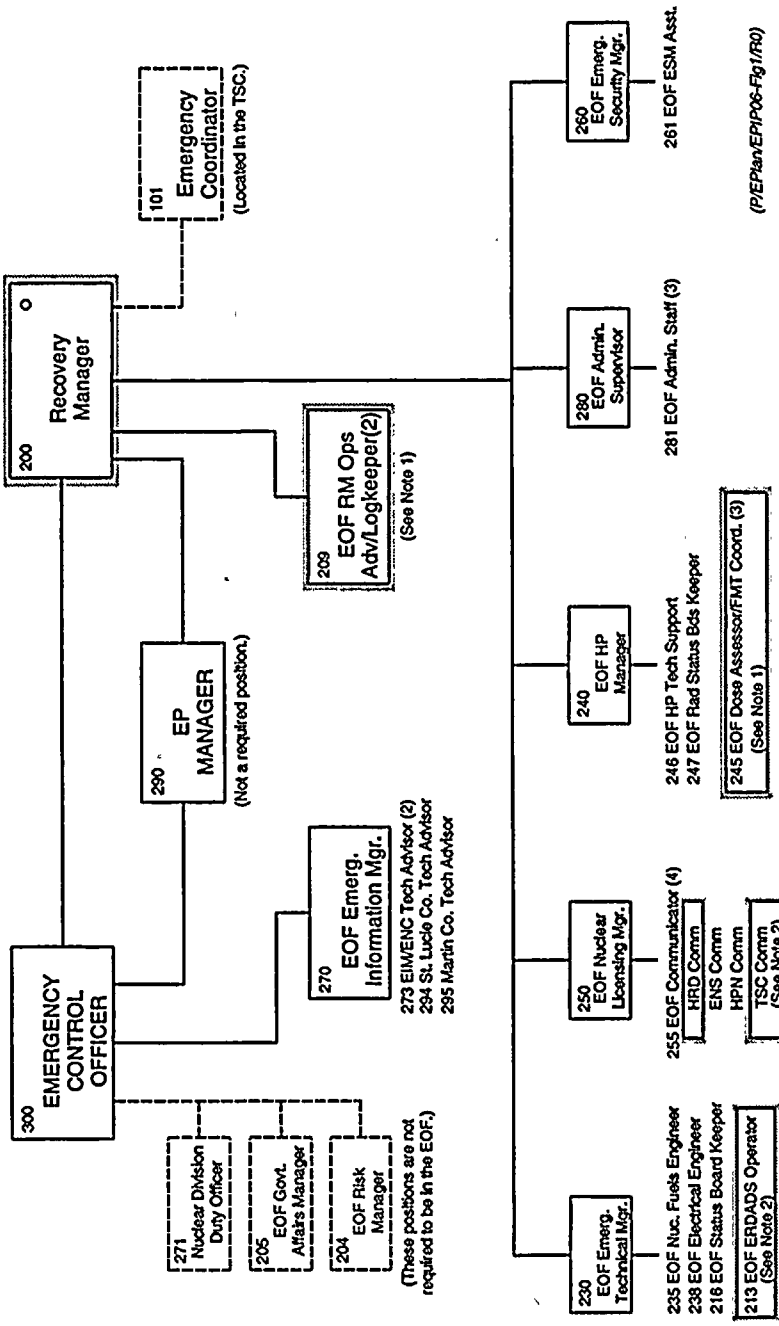
5.4 During facility briefings, stop what you are doing, pay attention and contribute as requested.

5.5 Upon termination of the event:

1. All EOF personnel should return their workstations/locations to a normal state and assist in restoring the facility to a ready condition.

2. Collect all significant information and documentation, such as completed EPIPs and attachments, logs, notification forms and other notes and data sheets, and forward this material to Emergency Planning.

ATTACHMENT 1
EOF EMERGENCY RESPONSE ORGANIZATION
(Page 1 of 1)



Autodialer position numbers are listed with position titles.

○ 60 minute response goal, per NUREG 0654, Table B-1

Note 1- One needed for minimum staffing.

Note 2- Either an ERDADS Operator OR a TSC Communicator is acceptable to meet the minimum staffing recommendation.

☐ Indicates minimum staffing to declare the facility operational.

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 1 of 4)

CAUTION
The mandatory function of the EOF is to assume responsibility for making notifications and PARs. The RM should assume this responsibility as soon as practicable, but not before the EOF staff is fully prepared to do so.

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION		INITIAL
1.	Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions.	_____
2.	Determine if minimum staff is available (refer to Attachment 2A, EOF Emergency Response Organization and Shift Staffing).	_____
3.	Determine from the Ops Advisor that EOF communications are available.	_____
4.	Notify the EC of the EOF's readiness to take responsibility for off-site notifications (State, Counties and NRC) and PARs.	_____
5.	Based on concurrence from the EC, declare EOF operational (steps 3 & 4 must be completed). Operational at _____.	_____

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 2 of 4)

A. FACILITY ACTIVATION (continued) — INITIAL

6. Notify the following that the EOF is operational:

   a. EC _____
   b. EOF staff _____
   c. State and local authorities _____
   d. NRC _____
   e. ECO _____

7. Request that all facility clocks be synchronized with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.

8. EOF fully staffed. _____

B. FACILITY OPERATION

1. Establish briefing frequency for facility updates. _____

2. Direct an RM OPS Advisor/Logkeeper to keep Logbook. _____

3. Steps to occur continually while the facility is in operation:

   a. Off-site notifications for both State/County and the NRC are approved and provided in a timely manner and in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations.

   b. Develop/adjust and approve PARs, as necessary in accordance with EPIP-08 and with the assistance of the EOF RM OPS Advisor/Logkeeper and the EOF HP Manager.

   c. Provide PAR Briefings to State and County personnel in the EOF with the assistance of the EOF RM OPS Advisor/Logkeeper and EOF HP Manager and using Attachment 2C, State and County PAR Briefing Guideline.

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 3 of 4)

B. FACILITY OPERATION (continued)

3. (continued)

CAUTION
The RM shall not delegate the following:

- State Notification Form approval
- Recommendation of Protective Actions
- Expenditure of Funds
- Policy Setting

d. Request an RM OPS Advisor/Logkeeper act as temporary relief when leaving the "Bull Pen".

e. Ensure that Protective Actions Implemented (PAIs) are posted in the EOF and reported to the EC.

f. Maintain facility command and control.

g. Conduct facility briefings (use Attachment 2B to this attachment).

h. Contact the EC frequently to maintain awareness of plant conditions and actions. (The "Videolink may be used for this purpose.)

§2 i. Provide support/resources to the EC from other FPL sources, nuclear power plants and/or vendors.

§2 j. Review emergency dose extensions with the EC (use Attachment 12A, Basis for Exposure Limits for Emergency Response Personnel.

k. Request additional support as necessary.

l. Routinely review status with the ECO.

m. Establish policies when situations arise where no company policy is in place to support the actions that will aid in mitigation of the emergency.

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 4 of 4)

B. FACILITY OPERATION (continued) — INITIAL

3. (continued)

   n. Expend funds as necessary to cope with emergency situations. (Solicit authorization from the President Nuclear Division)

   o. Interface with the NRC Director of Site Operations (DSO) and other members of the Site Team, as required.

4. Direct the EOF Administrative Supervisor to establish the capability for 24 hour operation of the EOF. _____

§2 5. De-escalate the emergency classification to Site Area Emergency or lower class (use Attachment 2D, De-escalation Guidelines). _____

6. Initiate the recovery plans (use Attachment 2E, Recovery Planning). _____

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

§2 1. Direct Licensing to prepare the Incident Report for submittal to DEM and NRC (within 24 hours after termination of an Alert or higher emergency event). _____

2. All facility activities closed out. _____

3. All paperwork collected. _____

4. All equipment and supplies returned to pre-activation condition and/or location. _____

5. Provided all completed paperwork to Emergency Planning. _____

ATTACHMENT 2A
EOF ERO SHIFT STAFFING
(Page 1 of 1)

SHIFT:_____

***RECOVERY MANAGER**		
*Ops Advisor	**HP Manager**	**Emergency Technical Manager**
Ops Advisor	HP Tech Support	Project Eng
Nuclear Licensing Manager	*Dose Assessor/FMT Coord	Nuclear Eng
*EOF Communicator (HRD)	Dose Assessor/FMT Coord	I&C Eng
EOF Communicator (ENS)	Dose Assessor/FMT Coord	Civil Eng
EOF Communicator (HPN)	Rad Status Brd Kpr	Mechanical Eng
*EOF Communicator (TSC)	**Admin Supervisor**	Mechanical Eng
	Admin Staff	Nuc Fuels Eng
	Admin Staff	Electrical Eng
** EP Manager	Admin Staff	
EMERGENCY CONTROL OFFICER	**Emergency Info. Manager**	
**Nuclear Division Duty Officer	ENC Manager	Plant Status Brd Kpr
**Risk Manager	EIM/ENC Tech Adv	*ERDADS Oper
**Gov. Affairs Manager	EIM/ENC Tech Adv	
**Gov. Adv - Tallahassee	St. Lucie County Tech Adv	
**Gov. Affairs Asst	Martin County Tech Adv	**Emergency Security Manager**
	Corp Comm / ENC Staff	
	_____ _____	
	_____ _____	
	_____ _____	
	_____ _____	

* Recommended Minimum Staffing
** Optional Staffing (not typically EOF responders)

Acceptable alternates for recommended minimum staffing:
Recovery Manager - Designated alternates in ERD.
RM OPS. Advisor - Any responder with active or past operating license or equivalent (RO, SRO, SRO Cert) at PSL or PTN.
HRD Communicator - Any responder
ERDADS Operator - Any responder with working familiarity with ERDADs computer
TSC Communicator - Any responder with plant technical background
Dose Assessment Coordinator - Any responder trained in radiological assessment.

ATTACHMENT 2B
EOF STAFF BRIEFING/UPDATE AGENDA
(Page 1 of 2)

TIME: _____

NOTE

1. Updates should occur approximately every 30 minutes. Significant changes in events should be announced promptly.
2. Briefings should not exceed 10 minutes.
3. Reference in RM Log and retain for archival.

Emergency Classification:

Unit 1 Status:

Unit 2 Status:

Current Information:

NOTE
Take the time necessary to explain events at the plant.

1. Classification changes
2. Radiological release occurrence or termination (this includes significant changes in source term or meteorological data)
3. Loss or restoration of significant equipment and/or system, such as loss of make-up capability, containment failure, etc.
4. Changes to PARs or to Protective Actions Implemented (PAIs)
5. Injured/Contaminated Personnel
6. Current mission(s) of EOF, assign task(s), as necessary.

ATTACHMENT 2B
EOF STAFF BRIEFING/UPDATE AGENDA
(Page 2 of 2)

Other Information (Request input/update information from other representatives. Remind contributors to be brief and limit comments to significant new information.)

1. Health Physics Representative:

2. Engineering Representative:

3. Security Representative:

4. State Representative:

   A. DEM:

   B. DOH:

5. St. Lucie County Representative:

6. Martin County Representative:

7. NRC Representative:

ATTACHMENT 2C
STATE AND COUNTY PAR BRIEFING GUIDELINE

¶5

(Page 1 of 2)

The following information should be provided to representatives from the State of Florida and St. Lucie and Martin Counties during each PAR briefing. Following initial review and discussion, the OPS Advisor, HP Manager, and others as needed should remain to answer any technical questions or to provide additional clarification.

1. Affected Unit(s): PSL 1 ☐ PSL 2 ☐ Both Units ☐

2. Current Emergency Classification: _____

3. Time when the current emergency classification was made: _____

4. Reason for the emergency declaration (in layman's terms):

   _____

   _____

5. Release Status: None / Occurred, but Stopped / Is Occurring

   If a release is Occurring, then is it?

   ☐ Within Normal Operating Limits

   ☐ Non-significant fraction of PAG range

   ☐ PAG range (protective actions required)

6. Weather:

   Wind Direction (from) _____ Sectors Affected _____

7. Status of Reactor:

   Shutdown / Core Adequately Cooled / Fuel Cladding Intact

8. Electrical Power Available: Yes ☐ No ☐

ATTACHMENT 2C

¶5 **STATE AND COUNTY PAR BRIEFING GUIDELINE**

(Page 2 of 2)

9. Affected Reactor(s) Core Condition:

   Getting Better / No Change / Worsening

10. Relevant Plant Equipment Issues (if any):

    _____

    _____

11. Protective Action Recommendations:

Miles	No Action	Evacuate Sectors	Shelter Sectors
0-2			
2-5			
5-10			

Protective Actions - Implementation

1. The State and Counties will determine resulting protective actions to implement.

2. As soon as practical after the briefing of any PARs to the State and Counties, the RM shall consult with DEM and County representatives in the EOF concerning the actual Protective Actions Implemented (PAIs).

3. When notified, record the results (using "areas") on the PAR Worksheet.

4. Request that the Governor's Authorized Representative (GAR) announce the Protective Actions Implemented to the EOF staff (the RM should make the announcement if the GAR is unavailable).

5. Notify the EC of the PAIs.

ATTACHMENT 2D
DE-ESCALATION GUIDELINES
(Page 1 of 1)

The following guidelines provide points to consider when de-escalation may be appropriate.

1. Review the Emergency Classification Tables in EPIP-01 with the Emergency Coordinator to assure that the classification criteria to enter the event are no longer applicable.

2. Verify additionally that the plant is stable, under control, and trend or prognosis indicates that improvement is the most likely prospect. Consider the following:

   a. Subcriticality
   b. Core Cooling Mode
   c. Heat Sink Mode
   d. RCS Pressure Boundary Integrity
   e. Inventory Control (Primary and Secondary Coolant)

3. Verify there is no foreseeable likelihood of a significant uncontrolled release. Consider containment pressure, containment/auxiliary building radiation levels, waste gas storage tank pressures and activities, and containment water volumes and activities.

4. Verify that the long-term staffing for both the site and the EOF is organized and in place as appropriate for the event.

NOTE
De-escalation of the event does not mean that protective actions for the general public would terminate. This issue should be addressed separately and special attention should be given via the ENC to ensure that public information channels are aware of the difference.

$\S_2$ 5. Verify that the Emergency Coordinator, Emergency Control Officer, DEM Governor's Authorized Representative, County Emergency Management Directors and the NRC are informed that de-escalation of the emergency classification is in order.

ATTACHMENT 2E
§4 RECOVERY PLANNING
(Page 1 of 1)

NOTE

The Florida Power & Light Company St. Lucie Plant Recovery Plan and other FPL company plans may be referenced as guidance to assist in the organization of recovery activities.

A. Formulate general plans for recovery operations using a typical outage management/work control format and including the following additional considerations:

1. Identification of organization, personnel, and facilities to be used in recovery operations.

   a. Portions of the ERO continue to function during recovery operations including lead emergency response managers:

      1. EC/Plant General Manager

      2. RM/Site Vice President

   b. Emergency response facilities (TSC, OSC, EOF) may be used for recovery activities.

2. Identification of external (FPL and industry) assistance for inclusion in the recovery organization.

3. Identification of interfaces between FPL organizations, off-site emergency authorities, regulatory agencies, and other applicable organizations.

4. Identification of interfaces between FPL and the news media.

   a. Corporate Communications organization used during the emergency may remain in place, if deemed appropriate.

ATTACHMENT 3
EOF RM OPS ADVISOR/LOGKEEPER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Assist the RM in declaring the EOF operational by verifying the following:

   a. Minimum staff available _____

   b. Communications equipment, procedures and other supplies are available, checked and ready for use. _____

      - Commercial phone as backup to State/County and NRC Notifications (DO NOT test call HRD or ENS).
      - Extension phones in EOF.
      - EOF personnel are verifying procedures in position notebooks.

   c. Minimum staff prepared to accomplish mandatory facility functions _____

   d. EC turnover completed _____

B. FACILITY OPERATION

1. Initiate the RM Logbook (use Attachment 3A, Typical Information to be Included in the RM Logbook). _____

2. Review Attachment 2, Recovery Manager Checklist. _____

ATTACHMENT 3
EOF RM OPS ADVISOR/LOGKEEPER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued)

3. Steps to occur continually while the facility is in operation:

   a. Routinely review Emergency Operating Procedures (EOPs) progress with the RM

   b. Continue to look ahead at possible emergency classifications and PARs

   c. Maintain the RM Logbook

   d. Assist the RM in completing the State Notification Form and developing PARs (use EPIP-08, Off-site Notifications and Protective Action Recommendations)

CAUTION
Responsibilities not delegable by the RM:

- State Notification Form approval
- Recommendation of Protective Actions
- Expenditure of Funds
- Policy setting

   e. Temporarily relieve the RM in the "Bull Pen" when RM is in conference

   f. Support the RM as needed or requested

   g. Provide operations status during PAR briefings

   h. Serve as an alternate interface to the NRC DSO and other members of the NRC Site Team

ATTACHMENT 3
EOF RM OPS ADVISOR/LOGKEEPER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Ensured all facility activities closed out. _____
2. Ensured all paperwork collected. _____
3. Closed out the RM Log, returned the logbook to the RM position notebook. _____
4. Returned position notebook to RM office. _____
5. Provided all completed paperwork to Emergency Planning. _____

ATTACHMENT 3A
TYPICAL INFORMATION TO BE INCLUDED IN THE RM LOGBOOK

(Page 1 of 1)

Maintaining concise, detailed logs during an emergency event is important. Following the event, all information recorded will be needed to provide a clear picture of actions taken.

A. The following information should be included in the RM Logbook:

1. Time of each entry.
2. Emergency classification changes.
3. Notable changes in plant conditions.
4. Protective Action Recommendations and Protective Actions Implemented.
5. Summary of any directions given to other emergency responders (who was told what to do when).
6. Summary of discussions/updates with Federal, State and Local agencies.
7. Summary of discussions/updates with Emergency Managers.
8. A detailed explanation of changes to or establishment of new company policy(s).
9. Significant information, events and actions taken relative to the emergency period should be recorded.

B. Log entry requirements:

1. Time of entry.
2. Use ink.
3. Write/print legibly.
4. Use concise and accurate wording.
5. Strike through and initial changes.
6. Do not remove pages from logbook.

ATTACHMENT 4
EOF EMERGENCY TECHNICAL MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following positions are filled:

   a. EOF ERDADS Operator (minimum staff) _____

   b. EOF Nuc Fuels Engineer _____

   c. EOF Electrical Engineer _____

   d. EOF Project Engineer _____

   e. EOF Nuclear Engineer _____

   f. EOF I&C Engineer _____

   g. EOF Civil Engineer _____

   h. EOF Mech Engineer _____

   i. EOF Mech Engineer _____

   j. EOF Status Board Keeper _____

ATTACHMENT 4
EOF EMERGENCY TECHNICAL MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION — INITIAL

1. Initiate the Engineering Logbook. _____
2. Obtain System availability status from System Operations. _____
3. Steps to occur continually while the facility is in operation:
   a. Review need for engineering support with the RM.
   b. Log requests for engineering support.
   c. Assign engineering tasks through the EOF Project Engineer.
   d. Participate in facility briefings conducted by the RM by providing status of engineering issues and progress of technical assistance. The form provided in Attachment 4A, ETM Activities List may be used to organize briefing information.
   e. Ensure plant parameter and sequence of events data are maintained current and are correct/ reasonable.
   f. Manage engineering activities in support of the TSC.
   g. Review the redundancy of critical plant equipment.
   h. Evaluate the long term plant actions to mitigate the consequences of the event.
   i. Interface with the EOF Health Physics Manager to resolve issues involving plant components effecting plant releases.
   j. Support the RM during PAR Briefings to the State and Counties.

ATTACHMENT 4
EOF EMERGENCY TECHNICAL MANAGER CHECKLIST
(Page 3 of 3)

B. FACILITY OPERATION (continued) INITIAL

3. (continued)

   k. Interface with the NRC Reactor Safety Coordinator when the NRC Site Team arrives at the EOF.

   l. Promptly inform the RM of engineering recommendations, determinations, or analysis results.

   m. Support recovery planning as requested by the RM by evaluating long-term plant actions to mitigate the consequences of the event.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All engineering tasks/projects are completed or assigned to a Condition Report. _____

2. All engineering paperwork is collected. _____

3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____

4. Closed out the Engineering Logbook. _____

5. Returned position notebook to the RM office. _____

6. Provided all completed paperwork to the RM. _____

ATTACHMENT 4A
ETM ACTIVITIES LIST

Item	Problem Description	Probable Cause	EMT Recommendation	Status

ATTACHMENT 5
EOF PROJECT ENGINEER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Notify the ETM when full engineering complement (as listed below) is available: _____

   a. EOF ERDADS Operator

   b. EOF Nuc Fuels Engineer

   c. EOF Electrical Engineer

   d. EOF Nuclear Engineer

   e. EOF I&C Engineer

   f. EOF Civil Engineer

   g. EOF Mech Engineer (2)

   h. EOF Status Board Keeper

3. Assign the following set-up items to the Engineering Staff: _____

   a. Synchronize clocks in the Engineering area with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.

   b. Obtain pens, pencils, paper and other necessary supplies from the Administration area.

ATTACHMENT 5
EOF PROJECT ENGINEER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Review requests for Engineering Support (use Attachment 5A, Engineering Task and Technical Response Form) with the ETM.

   b. Assign engineering tasks.

   c. Enter engineering task assignments on Attachment 5B, Engineering Task List.

   d. Oversee progress on assigned engineering tasks

   e. Post tasks/projects being worked and status on status board in ETM office.

   f. Review completed work for accuracy.

   g. File completed task sheets (Attachment 5A, Engineering Task and Technical Response Form).

   h. Serve as alternate interface to NRC Reactor Safety Coordinator.

   i. Promptly inform the ETM of engineering recommendations, determinations or results of analyses.

   j. Provide a copy of the current Attachment 5B, Engineering Task List, to the ETM for facility status meetings/briefings.

   k. Support the EOF ETM in establishing 24-hour staffing by completing Attachment 5C, Engineering Shift Staffing Schedule and provide a copy of the completed form to the EOF Administrative Supervisor.

ATTACHMENT 5
EOF PROJECT ENGINEER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Identified all engineering tasks/projects to the ETM for final action(s). _____

2. Supported restoration of all documents, equipment, and supplies to pre-activation condition and/or location. _____

3. Returned position notebook to the RM office. _____

4. Provided all completed paperwork to the ETM. _____

ATTACHMENT 5A

ENGINEERING TASK AND TECHNICAL RESPONSE FORM

(Page 1 of 1)

TO:_____ PRIORITY: 1 2 3 NO:_____

SUBJECT:	
DATE & TIME RECEIVED:	REQUESTER:
REQUEST:	
RESPONSE:	

BY:	VERIFIED:
PROJECTS:	
EMERGENCY TECHNICAL MANAGER:	
DATE & TIME:	

ATTACHMENT 5B
ENGINEERING TASK LIST
(Page 1 of 1)

To: Recovery Manager Date:____/____/____

From: Emergency Technical Manager Time:_____

TASK NO.		UNIT NO.	PRIORITY	DATE & TIME COMPLETE
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			

ATTACHMENT 5C
ENGINEERING SHIFT STAFFING SCHEDULE
(Page 1 of 1)

Emergency Technical Manager Approved:_____

	SHIFT 1	SHIFT 2	SHIFT 3
	Time_____to_____	Time_____to_____	Time_____to_____
	Date_____to_____	Date_____to_____	Date_____to_____
Emergency Tech. Mgr. EOF Ph #_____			
Projects EOF Ph #_____			
Plant Status Board EOF Ph #_____			
Nuclear EOF Ph #_____			
Mechanical EOF Ph #_____			
Electrical EOF Ph #_____			
I&C EOF Ph #_____			
Civil EOF Ph #_____			
Fuels EOF Ph #_____			
Other EOF Ph #_____			

ATTACHMENT 6
EOF ENGINEER CHECKLIST
(Page 1 of 2)

NOTE

1. This checklist applies to the following positions:

   EOF Nuclear Engineer — EOF Nuclear Fuels Engineer
   EOF Mechanical Engineer — EOF Civil Engineer
   EOF I&C Engineer — EOF Electrical Engineer

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions.	_____
2.	Identify availability to the EOF Project Engineer.	_____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Work tasks assigned by the EOF ETM or EOF Project Engineer.

   b. Confer with other EOF personnel as needed to complete problem resolutions.

   c. (Nuclear Fuels) perform core damage assessment in accordance with EPIP-11, Core Damage Assessment.

   d. (Nuclear Fuels) provide core damage assessment results to the EOF ETM and EOF Health Physics Manager.

   e. (Nuclear Fuels) Support Severe Accident Management Guidelines evaluations being conducted in the Technical Support Center (TSC).

   f. Keep the EOF Project Engineer appraised of status of working tasks/projects.

ATTACHMENT 6
EOF ENGINEER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

1. (continued)

   g. Document assessment/review and recommendation/ response on Attachment 5A, Engineering Task and Technical Response Form, for each task/project.

   h. Evaluate posted plant parameter data for accuracy.

   i. Ensure sequence of events board has sufficient detail to understand events in progress.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Completed all assigned tasks, as appropriate. _____

2. Returned all documents, equipment, and supplies to pre-activation condition and/or location. _____

3. Returned position notebook to the RM office. _____

4. Provided all completed paperwork to the EOF Project Engineer. _____

ATTACHMENT 7
EOF ERDADS OPERATOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Project Engineer. _____

B. FACILITY OPERATION

CAUTION
Ensure data is being collected for the affected unit. Each unit has predesignated ERDADS terminals, one in the engineering area and one in the dose assessment area.

1. Check out ERDADS terminals and determine operability status. _____

   If ERDADS is inoperable or printouts are not available, Then:

   a. Assist the EOF Communicator (to TSC) in collecting plant parameter and radiological data by completing Attachment 11 (Plant Data Sheet and Radioactive Gaseous Source Terms). _____

   b. Contact TSC ERDADS Tech to report the problem. _____

ATTACHMENT 7
EOF ERDADS OPERATOR CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) INITIAL

2. Steps to occur continually while the facility is in operation:

   a. Callup EPIP screens and additional data as requested, refer to Attachment 7A, ERDADS Data Acquisition.

   b. Provide the following printouts to the EOF Administrative Staff:

      1. St. Lucie EOF Data Sheet (EF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

      3. Other screens, as requested.

   c. Support dose assessment by providing requested data from ERDADS.

   d. Observe ERDADS data during interval between report printing for significant changes and trends, report changes to the EOF ETM and dose assessment, as appropriate.

   e. Refer to Attachment 7B, ERDADS Data Points, to this attachment for a description of ERDAD data points.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. ERDADS system returned to pre-activation condition per the instructions on the terminal. _____

2. Returned position notebook to the RM office. _____

ATTACHMENT 7A
ERDADS DATA ACQUISITION
(Page 1 of 3)

I. DATA ACQUISITION

A. ERDADS - Emergency Response Data Acquisition and Display System, the following information is available on the display screens indicated.

1. Meteorological Data -

Display: **SMD** (Site Meteorological Data)

2. Plant Parameter Data -

CAUTION
Certain parameters (e.g., fan status) available on Unit 2 are NOT available on Unit 1.

Display: in the EOF - **EF (1/2)** (Safety Functions and Equipment Status)

3. Radiological Data -

Display: **RG (1/2)** (Radiation Gaseous Source Term) **RBS** (Health Physics Evaluation Screen - containment radiation levels and trends) **R11** (Area Radiation Monitors, Unit 1) **R21** (Area Radiation Monitors, Unit 2)

4. Chemistry Data -

Display: **R12** (S/G Blowdown, Steam Jet Air Ejector, Unit 1) **R22** (S/G Blowdown, Steam Jet Air Ejector, Unit 2)

ATTACHMENT 7A
ERDADS DATA ACQUISITION
(Page 2 of 3)

I. DATA ACQUISITION (continued)

A. (continued)

5. To access data -

1 - Press "CLEAR"
2 - Type in "Pup Unit (1/2)"
3 - Press "EXEC"ute, top of screen will read "Unit change is complete" or "Current Unit is same as entered Unit"
4 - Press "EPIP"
5 - The "PAGE UP" and "PAGE DOWN" keys will cause the following display sequence:

SMD - RG(1/2) - SF(1/2) - RBS - EF(1/2) - SMD

6. To go directly to a screen -
1 - Press "CLEAR"
2 - Type in screen designation, e.g., **"RG1"**
3 - Press "DISPLAY"

B. TSC Communicator - The TSC Communicator can be utilized as a primary source of information or as an alternate method to ERDADS.

1. Primary source - status of fans needed for dose assessment: all fans for Unit 1; fans 6, 7, 8, 15, 16, and 17 for Unit 2.

ATTACHMENT 7A
ERDADS DATA ACQUISITION
(Page 3 of 3)

II. ERDADS - COLOR/SYMBOL CONVENTIONS

Color/Symbol	Explanation[1]
Numeric value in white on dark green background	Data Value is valid and within the instrument range
Numeric value blinking (yellow on blue/ red on white)	Value may be yellow on blue background (urgent alarm) or red on white background (critical alarm), indicates an alarm setting has been exceeded, the alarm must be acknowledged in the Control Room (operators are unable to acknowledge ERDADS alarms in the Simulator Control Room), the value will continue to blink until acknowledged; the value will continue to update
"BAD" (blue on white)	Preceded by a numeric value in white on a blue background signifying a suspect value indicating that one or several inputs to this composite point is/are out of instrument range, when all inputs to the point are out of range the word "BAD" replaces the numeric value
"FAILED"	Point is from a single instrument and the value is out of range
"NO DATA"	Point does not have input to ERDADS, usually point available on one unit, but not the other

[1]Based on Table 4.1 in the ERDADS Reactor Operator's Manual (8770-12058)

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 1 of 8)

The following data point descriptions for St. Lucie Plant correspond with the data normally tracked on the plant parameters status board. Consult ERDADS Manual, as necessary, for verification of point IDs, point names or description information.

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. RCS T Hot (HLA and HLB) (deg. F)	QTA541-1/2		Average	This parameter is the average of the "A" and "B" steam generator inlet temperature. It is also referred to as the average hot leg temperature. The individual "A" and "B" hot leg temperatures are derived by choosing between current narrow and wide range sensor values. The choice depends on the current values, qualities, and direction of the rates of change of the instrumentation values, as well as two pairs of overlapping switching limits and the most recent range utilized. The outputs from the calculation consist of the choice of range, the associated value, and rate of change together with the quality of each.
RCS Pressure WR (psia)	QA0501-1/2	RCS Pressure	Average	This parameter is a Reactor Coolant System (RCS) wide range instrument. It derived from Pressurizer Pressure signals PT1107-2 and PT1108-2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

ATTACHMENT 7B
¶2 ERDADS DATA POINTS
(Page 2 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
RCS Pressurizer Level (%)	QA0001-1/2	PRZR LVL	Average	This parameter is pressurizer level. It is derived from Pressurizer Level control signals LT1110X-2 and LT1110Y-2 which are linear. These two signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. The top of the heaters is 73.98 inches above the lower top centerline.
Charging Flow to Regen Hx (GPM)	FT2212-1/2	RCS CHG/MU	N/A	This parameter is reactor coolant system makeup flow. It is converted to engineering units using a linear equation.
Subcooling Margin (deg. F)	QA0005-1/2	Submargin	Minimal	This parameter is derived from eight subcooled values, TMARHEAD-A-1/2, TMARRCS-B-1/2, TMARUR-A-1/2, TMARHEAD-B-1/2, TMARCET-A-1/2, TMARUR-B-1/2, TMARRCS-A-1/2, and TMARCET-B-1/2, which are provided by the Qualified Safety Parameter Display System (QSPDS). They are processed by a signal auctioneering minimum algorithm. This function finds the highest usable data value in a specified group. Each data value of the group and its quality is examined and the following quantities are obtained: 1. Lowest usable data value., 2. Point number of the lowest usable data value, 3. Number of usable data values, and 4. Lowest quality of the usable data. • For two or more usable data values, the result is the highest usable value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.

ATTACHMENT 7B
¶2 ERDADS DATA POINTS
(Page 3 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. Core Exit Temperature (deg. F)	QA0003-1/2	Temp. Core Ex.	Average	This parameter is derived from 45 Unit 1 detectors, or 56 Unit 2 detectors located just above the upper fuel alignment plate. The Qualified Safety Parameter Display System (QSPDS) provides the values. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.
Reactor Vessel Level (%)	Unit 1: QA0004-1 Unit 2: RLEV H-2 RLEV P-2		Minimum	The reactor vessel level for Unit 1 QA0004-1 is derived from the reactor vessel levels RLEV-A-1 and RLEV-B-1 which are provided by the Qualified Safety Parameter Display System. The ERDADS select the lowest of the two values. For only one good data value, the result is set to that value and the quality is poor. The reactor vessel level for Unit 2 is displayed as reactor plenum level RLEVPB-2 and reactor head level RLEVHB-2 which is provided by the "B" side Qualified Safety Parameter Display System (QSPDS). These two parameters are displayed with no calculations being performed by the ERDADS computer system. The QSPDS obtains these values from the heated and unheated junction thermocouples located inside the reactor. They are positioned between the head and upper fuel alignment plate in the reactor internals.

ATTACHMENT 7B
½ ERDADS DATA POINTS
(Page 4 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Reactor Vessel Level % (continued)				Unit 1 Level Information: Head and Plenum together

Sensor	Location* (* in. to fuel alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	186 1/4	20	80
2	144 3/8	19	61
3	108	18	43
4	71 5/8	14	29
5	50 5/8	10	19
6	29 5/8	7	12
7	19 5/8	5	7
8	10 5/8	7	0

Unit 2 Level Information: Head separate from Plenum

Sensor	Location* (* in. to fuel alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	170 1/2	52	48
2	140 3/4	28	20
3	111 1/8	20	0
None			100
4	98 5/8	18	82
5	74 5/8	21	61
6	53 5/8	20	41
7	32 5/8	19	22
8	12 5/8	22	0

ATTACHMENT 7B
½ ERDADS DATA POINTS
(Page 5 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
HPSI Total Flow (GPM)	HSITTLF-1/2	HPSI Flow	Sum	This parameter measures total HPSI flow and is derived from HPSI Header Flow signals FT3311-1/2, FT3321-1/2, FT3331-1/2 and FT3341-1/2 which are square roots. The signals are processed with a sum of inputs algorithm. This function obtains the algebraic sum of values with a good status.
LPSI Total Flow (GPM)	QA0908-1/2	LPSI Flow	Sum	This parameter measures total LPSI flow and is derived from LPSI Header Flow signals FT3312-1/2, FT3322-1/2, FT3332-1/2 and FT3342-1/2 which are square roots. These signals are processed by an algorithm which provides a sum of the inputs. This function obtains the algebraic sum of values with a good status.
Containment Temp. (deg. F)	TE07-3B-1/2	Cntmnt Temp	N/A	This parameter is a containment temperature instrument. It is converted to engineering units using a linear equation.
Containment Pressure WR (psig)	QA0507-1/2	Ctmnt Press	Average	This parameter measures containment pressure and is a wide range indicator. It is derived from Wide Range Containment Pressure signals PT07-4A1-1/2 and PT07-4B1-1/2 which are linear. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 6 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Containment Sump Level WR (Ft.)	QA0008-1/2	Cntmnt Smp WR	Maximum	This parameter is a containment sump wide range instrument. It is derived from Containment Sump Level signals LT07-13A-1/2 and LT07-13B-1/2 which are linear. They are processed by a signal auctioneering maximum algorithm. This function finds the highest usable data value in the specified group. Each data value of the group and its quality is examined and the following rules are used. • For two or more usable data values, the result is the highest usable data value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.
Containment Hydrogen (%)	CH2-1/2	H2 Conc.	Average	This parameter is a containment hydrogen average concentration measurement. It is derived from Hydrogen Concentration signals A-HYDROGEN-1/2 and B-HYDROGEN-1/2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor.
SG Level A WR (%)	LT9012-1/2	SG Level A	N/A	This parameter is the "A" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 21 inches above the bottom of the U tubes.
SG Level B WR (%)	LT9022-1/2	SG Level B	N/A	This parameter the "B" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 21 inches above the bottom of the U tubes.

ATTACHMENT 7B
½ ERDADS DATA POINTS
(Page 7 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
SG Pressure A (psig)	QA0021-1/2	SG Pres./A	Redundant Sensor Algorithm	This parameter is the "A" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8013A-1/2, PT8013B-1/2, and PT8013C-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
SG Pressure B (psig)	QA0022-1/2	SG Pres./B	Redundant Sensor Algorthim	This parameter is the "B" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8023A-1/2, PT8023B-1/2, and PT8023D-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
Refueling Water Tank Avg. Level (Ft.)	RWTAL-1/2	BWST Level	Average	This parameter measures refueling water tank level. It is derived from three inputs. They are LT07-2A-1/2, LT07-2B-1/2, and LT07-2C-1/2. These points are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. Tank bottom refers to zero gallons.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 8 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
CHRRM. Channel (R/HR)	Unit 1: RE 26-58-1 (A Channel) RD 26-59-1 (B Channel) Unit 2: RIM 26-40-2 (A Channel) RIM 26-41-2 (B Channel)	Cntmnt. Rad	Maximum	The high containment radiation instruments for Unit 1 are the "A" side monitor RE26-58-1 and the "B" side monitor RE 26-59-1. These monitors are only range checked and flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees. The high containment radiation instruments for Unit 2 are the "A" side monitor RIM 26-40-2 and the "B" side monitor RIM 26-41-2. These monitors are only range checked and are flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees.

ATTACHMENT 8
EOF STATUS BOARD KEEPER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to EOF Project Engineer. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Obtain the following ERDADS data sheets (printouts) from the EOF Administrative Staff:

      1. St. Lucie EOF Data Sheet (EF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

   b. Update status boards with new ERDADS data.

   c. Verify that all data has been accurately transferred to the status boards.

   d. Update the sequence of events board following each facility briefing and as needed. Provide relevant information concerning items such as:

      1. Change in classification.

      2. Significant change in plant condition.

      3. Status of plant system(s) of concern.

ATTACHMENT 8
EOF STATUS BOARD KEEPER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued)

1. (continued)

   d. (continued)

      4. Injured personnel status.

      5. Other items of relevant interest.

   e. Make corrections, when identified, by circling the corrected data.

   f. When all status board columns/blanks are filled, erase the first two columns/blanks, enter new data, with a different colored marker, leaving a space between the new and the old data.

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Status boards have been cleared and returned to pre-activation condition. _____

2. Returned position notebook to the RM office. _____

3. Provided all completed paperwork to the EOF Project Engineer. _____

ATTACHMENT 9
EOF NUCLEAR LICENSING MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following positions are filled: _____

   a. EOF Communicator (4)

NOTE
Positions should be filled in this order.

   1. Hot Ring Down (HRD) Phone
   2. Emergency Notification System (ENS)
   3. TSC (direct line)
   4. Health Physics Network (HPN)

B. FACILITY OPERATION

1. Initiate the Licensing Logbook (use Attachment 9A, Typical Information to be included in the Logbook). _____

¶3 2. Verify INPO was notified. _____

3. Ensure backup communications devices are available and operable (work with the EOF Administrative Supervisor).

ATTACHMENT 9
EOF NUCLEAR LICENSING MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued) INITIAL

4. Steps to occur continually while the facility is in operation:

   a. Manage/supervise activities of EOF communicators (HRD, ENS, TSC, HPN).

   b. Ensure communications with the NRC (ENS, HPN) are logged by the communicators.

   c. Ensure coordination with INPO is maintained concerning industry assistance requests (if not being handled by the NDDO).

   e. Serve as primary liaison with the NRC once the Site Team arrives at the EOF, interfacing with the Emergency Response Coordinator.

      1. Ensure NRC work locations are functional.

      2. Coordinate the NRC interface with the FPL ERO, and State and County representatives in the EOF.

      3. Provide access to notification forms, press releases, and other information, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All communications links terminated. _____

2. All communications paperwork collected. _____

ATTACHMENT 9
EOF NUCLEAR LICENSING MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION (continued) — INITIAL

3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____

4. Closed out the Licensing Logbook. _____

5. Prepared Incident Report (format available in Florida Power & Light Nuclear Plant Recovery Plant) for review and approval by RM. _____

6. Returned position notebook to the RM office. _____

7. Provided all completed paperwork to the RM. _____

ATTACHMENT 9A
TYPICAL INFORMATION TO BE INCLUDED IN THE LOGBOOK
(Page 1 of 1)

Maintaining concise, detailed logs during an emergency event is important. Following the event, all information recorded will be needed to provide a clear picture of actions taken.

A. The following information should be included in the Logbook:

1. Key events (e.g., classification changes, injuries, etc.).
2. Status changes in equipment, radiological conditions, personnel, etc.
3. Decisions made or actions taken.
4. Other items of significance.

B. Log entry requirements:

1. Time of entry.
2. Use ink.
3. Write/print legibly.
4. Use concise and accurate wording.
5. Strike through and initial changes.
6. Do not remove pages from Logbook.

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 1 of 4)

NOTE

1. This checklist applies to all EOF Communicator positions as follows:

   HRD Communicator — ENS Communicator
   TSC Communicator — HPN Communicator

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

NOTE

The first EOF Communicator to arrive at the EOF should identify himself/herself to the RM.

2. Identify availability to the EOF Licensing Manager. _____

3. Review Attachment 10A, Communications Guidelines. _____

4. (TSC) Request copy of the EC Log, completed notification forms and checklists, and other pertinent information be transmitted to the EOF. _____

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION — INITIAL

1. (HRD) Complete turnover with TSC HRD Communicator, assume responsibility for State/County notifications. _____

2. (ENS) Complete turnover with TSC ENS Communicator, assume lead responsibility for NRC notifications. _____

3. (TSC) Establish direct line link with TSC. _____

4. (HPN) Establish connection on NRC HP conference bridge. _____

5. Steps to occur continually while the facility is in operation:

HRD Communications

a. Assist the RM with State and County notifications by:

1. Reviewing the State Notification Form for completeness.

2. As necessary, ensuring Protective Action Recommendations (PARs) match the PARs Worksheet (see Notification from the Emergency Operations Facility in EPIP-08, Off-site Notifications and Protective Action Recommendations).

3. Ensuring the RM has approved the form.

b. Transmit the notification from in accordance with EPIP-08.

c. Request the EOF RM OPS Advisor/Logkeeper log notification times.

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 3 of 4)

B. FACILITY OPERATION (continued)

5. (continued)

ENS/HPN Communications

a. Maintain an open line of communication and a transmission log.

b. (ENS) Ensure notifications are initiated within 1 hour (immediately following State and County notification) of a classification/PAR change or other significant event. Refer to EPIP-08 if additional information is needed.

c. Request the EOF RM OPS Advisor/Logkeeper log notification times.

d. Log all questions asked by NRC.

e. Obtain answers to questions from appropriate EOF Manager.

f. Obtain RM approval prior to providing additional information to the NRC.

TSC Communications

a. Maintain an open line of communication with the TSC.

b. If ERDADS is out of service, obtain plant parameter and radiological data (use Attachment 10B, Plant Data Sheet and Radioactive Gaseous Source Terms) through phone conversation with the TSC (EOF Communicator).

c. Clarify any discrepant information with the TSC (EOF Communicator), as requested.

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 4 of 4)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All communication links (HRD, ENS, HPN, TSC) terminated. _____
2. All communications paperwork collected. _____
3. All phone equipment returned to pre-activation condition. _____
4. Returned position notebook to the RM office. _____
5. Provided all completed paperwork to the EOF Nuclear Licensing Manager. _____

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 1 of 8)

I. General Guidelines

1. Always speak clearly, firmly, and with normal tone when using any communications system.

2. The sender and receiver shall be clearly identified.

3. Message text:

   a. Communication must be free of ambiguity. Slang terms shall not be used. Avoid the use of words that sound alike; for example, avoid increase and decrease, use raise and lower instead.

   b. Communications must be specific. Use noun names for plant equipment, not acronyms; for example use low pressure safety injection pump instead of LPSI.

   c. The phonetic alphabet will be used to identify specific train, bus, channel, or equipment designations, not just letter identifier; for example, refer to the 1 Alpha heater drain pump, not the 1A heater drain pump. The following is the phonetic alphabet to be used:

A Alpha	J Juliet	S Sierra
B Bravo	K Kilo	T Tango
C Charlie	L Lima	U Uniform
D Delta	M Mike	V Victor
E Epsilon	N November	W Whiskey
F Foxtrot	O Oscar	X X-ray
G Golf	P Papa	Y Yankee
H Hotel	Q Quebec	Z Zulu
I India	R Romeo	

   d. The phonetic alphabet should not be used for stringed letter references, acceptable acronyms, or location symbols; for example, AB bus, AC or DC, TSC, respectively.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 2 of 8)

I. **General Guidelines** (continued)

4. Acknowledgement and confirmation (3-way communication) - messages shall be comprised of proper transmission, acknowledgement, and confirmation.

   a. The message is properly transmitted from the originator to the receiver.

   b. The message receiver shall acknowledge the communication by giving a functional repeat-back to the message originator. The repeat-back can be provided by either paraphrasing or explaining the message in one's own words, or by verbatim repeat-back. In all cases, verbatim repeat-back shall be used for equipment identifiers.

   c. If the message receiver does not understand the message he/she shall ask for the message to be repeated.

   d. If an incorrect repeat-back is given, the message originator shall immediately correct the miscommunication with a statement such as, "WRONG", followed by restating the correct message.

   e. The message originator shall confirm the acknowledgement (repeat-back) with a statement such as, "That is correct".

5. Use of a Call Sign is not necessary when communicating with the HP Off-site Channel radio (station ID occurs every 30 minutes automatically).

6. The Call Sign should be communicated periodically when using the LGR.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 3 of 8)

I. **General Guidelines** (continued)

7. Prior to transmission, ensure that information has been verified and approved by the appropriate authority, as necessary.

8. Ensure that any incoming pertinent information is provided to the Recovery Manager or an RM OPS Advisor/Logkeeper.

9. Maintain documentation of any significant information provided or received.

II. **Communications Systems**

1. HRD Communicator

§2 A. State Warning Point (SWP) Hot Ring Down Phone (HRD)

1. **This is the primary communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. A self-verifying phone system which is initiated by entering the 3 digit code corresponding to the desired location of contact. The phone dialing location codes are available in the St. Lucie Plant Emergency Response Directory (ERD). A confirmation ring-back (double tone) will be heard if the dialed terminal is successfully contacted. When the party answers, begin transmission by depressing the "push-to-talk" bar in the handset. Release the "push-to-talk" bar to receive response.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 4 of 8)

II. **Communications Systems** (continued)

1. (continued)

§2 B. Commercial Telephone

1. **This is the first alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. EOF Telephone System

a. Long Distance Calls (off-network):

8+1+area code+seven digit number+authorization code (if prompted)

§2 C. Emergency Satellite Communications System (ESATCOM)

1. **This is the second alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. A backup communications system to the State and Counties. To initiate transmission, lift the handset and depress the "push-to-talk" bar in the handset. Wait 3-5 seconds to hear a beep before starting to talk. The red light on the phone is a power indicator, when lit, power is available.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 5 of 8)

II. **Communications Systems** (continued)

1. (continued)

§2 D. Local Government Radio (LGR) - CALL SIGN: KILO NOVEMBER GOLF ROMEO 8-7-4 (KNGR874)

1. **This is the third alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. A backup communications system to the Counties and indirectly to the State. The system has two low band radio frequencies. There are separate Motorola Command Series table radios, one set to the primary channel, F2 (39.180 Mhz, State channel 1) and the other set to the secondary channel, F1 (39.100 Mhz, State channel 2). The radios can be operated either by depressing the "transmit" button on the console or by removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. (Preference should be given to using the handset).

2. ENS Communicator

A. Emergency Notification System (ENS)

1. **This is the primary communications pathway to the NRC.**

2. The ENS is part of the NRC FTS 2000 phone system. Initiate contact by dialing one of the phone numbers provided on the phone of in the St. Lucie Plant Emergency Response Directory (ERD). The ENS will become an open line of communication at an ALERT or higher emergency class. The TSC should maintain that open line until the EOF is adequately staffed, then both the TSC and EOF should stay on the line.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 6 of 8)

II. **Communications Systems** (continued)

2. (continued)

B. Commercial Telephone

1. **This is the backup communications pathway to the NRC.**

2. EOF Telephone System

a. Long Distance Calls (off-network):

8+1+area code+seven digit number+authorization code (if prompted)

3. TSC Communicator

A. TSC Direct-line Telephone

1. This is a direct line to the Technical Support Center (TSC). Initiate contact by removing the handset from the cradle which will cause the phone in the TSC to ring. When the phone is answered, begin transmission. This link can also be initiated from the TSC.

4. HPN Communicator

A. Health Physics Network (HPN)

1. The HPN is part of the NRC FTS 2000 phone system. The HPN will become open line of communication at an ALERT or higher emergency class. Initiate contact by dialing one of the phone numbers provided in the St. Lucie Plant Emergency Response Directory (ERD). Request that the NRC Operations Center (NRCOC) duty officer establish the HPN Bridge for St. Lucie Plant. If the TSC has already established the bridge (with the NRCOC), request to be added on.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 7 of 8)

III. Other Communications Systems

1. EOF Telephone System

   A. St. Lucie Plant:

      For 4000 and 7000 numbers; Dial the 4 digit extension

      For 3000 numbers; Dial 9+465-3550+the 4 digit extension

   B. Network of Interoffice:

      8+FPL network number (example - to the GO 8+552-XXXX)

   C. Intrafacility:

      Dial the 4 digit extension

   D. Local Calls (off-network):

      9+outside 7 digit number

   E. Long Distance Calls (off-network):

      8+1+area code+7 digit number+authorization code (on the phone)

   F. Local Directory Assistance

      9+411

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 8 of 8)

III. **Other Communications Systems** (continued)

2. HP Off-site Radio Channel

A. A unique 900 Mhz channel for communications with the off-site field monitoring teams. The TSC has the primary responsibility for communicating with the field teams and use of this radio in the EOF is only as a backup to the TSC. The radio is a Motorola Spectra which has been set up so that the HP Off-site Channel is the "home" channel.

1. To power-up the radio:

a. Plug the power cord into the wall outlet behind the table.

b. Press the red button on the speaker box (Astron RS-12S) to the up position, button will illuminate.

c. Depress the "pwr" button on the Spectra radio.

2. To operate the radio:

a. Depress the transmit side (with the lightning bolt) of the microphone base and begin transmission.

ATTACHMENT 10B
PLANT DATA SHEET
(Page 1 of 3)

ERDADS EF 1/2 Screen Mimic

Avg RCS T hot	
RCS Prz Pres	
RCS Prz Lvl	
Charging Flow	
Limiting Subcooling Mrgn	
Average CET	
Rx Vessel Lvl	
HPSI Flow	
LPSI Flow	
CTMT Temp	
CTMT Pres (WR)	
CTMT Sump Lvl (NR)	
CTMT H2	
S/G Level (WR) A	
S/G Level (WR) B	
S/G Pressure A	
S/G Pressure B	
RWT Level	
CHRRM Ch. A	
CHRRM Ch. B	

SAFEGUARDS

HPSI A _____
HPSI B _____
LPSI A _____
LPSI B _____
CHG PUMP A _____
CHG PUMP B _____
CHG PUMP C _____
CTMT COOLER A _____
CTMT COOLER B _____
CTMT COOLER C _____
CTMT COOLER D _____
CCW A _____
CCW B _____
CCW C _____

CIRCULATION

RCP A1 _____
RCP A2 _____
RCP B1 _____
RCP B2 _____
LPSI A _____
LPSI B _____
LPSI A1 FLOW _____
LPSI A2 FLOW _____
LPSI B1 FLOW _____
LPSI B2 FLOW _____

FEEDWATER SOURCE

MAIN FWP A _____
MAIN FWP B _____
AFW A _____
AFW B _____
AFW C _____
A MAIN FEED FLOW _____
B MAIN FEED FLOW _____
A AUX FEED FLOW (GPM) _____
B AUX FEED FLOW (GPM) _____
C AUX FEED FLOW (GPM) _____

EMERGENCY DIESEL GENERATORS

A	B
VOLTS_____	VOLTS_____
AMPS_____	AMPS_____

ELECTRICAL SYSTEMS

4160 A3 (VOLTS) _____
4160 B3 (VOLTS) _____
6900 A1 (VOLTS) _____
6900 B1 (VOLTS) _____

(EPIP06B.WPG)

ATTACHMENT 10B
PLANT DATA SHEET
(Page 2 of 3)

ERDADS RG1 Screen Mimic

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
AIR TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F / 50 METER	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
05-01	A MAIN STM	_____	MR/HR	58	A HI RANGE	_____	R/HR
05-02	B MAIN STM	_____	MR/HR	59	B HI RANGE	_____	R/HR
					PRESSURE	_____	PSIG

CHANNEL	ECCS 1A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
02-05	LOW RANGE	_____	uC/cc	01-05	LOW RANGE	_____	uC/cc
02-07	MID RANGE	_____	uC/cc	01-07	MID RANGE	_____	uC/cc
02-09	HI RANGE	_____	uC/cc	01-09	HI RANGE	_____	uC/cc
02-10	FLOW	_____	SCFM	01-10	FLOW	_____	SCFM

CHANNEL	ECCS 1B	VALUE	UNITS	CHANNEL	FUEL BLDG	VALUE	UNITS
03-05	LOW RANGE	_____	uC/cc	04-05	LOW RANGE	_____	uC/cc
03-07	MID RANGE	_____	uC/cc	04-07	MID RANGE	_____	uC/cc
03-09	HI RANGE	_____	uC/cc	04-09	HI RANGE	_____	uC/cc
03-10	FLOW	_____	SCFM	04-10	FLOW	_____	SCFM

ATTACHMENT 10B
PLANT DATA SHEET
(Page 3 of 3)

ERDADS RG2 Screen Mimic

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
CURRENT TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
631	A MAIN STM	_____	MR/HR	40	A HI RANGE	_____	R/HR
632	B MAIN STM	_____	MR/HR	41	B HI RANGE	_____	R/HR
633	BACKGROUND	_____	MR/HR		PRESSURE	_____	PSIG

CHANNEL	ECCS 2A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
601	LOW RANGE	_____	uC/cc	621	LOW RANGE	_____	uC/cc
602	MID RANGE	_____	uC/cc	622	MID RANGE	_____	uC/cc
603	HI RANGE	_____	uC/cc	623	HI RANGE	_____	uC/cc
604	EFFLUENT	_____	uC/SEC	624	EFFLUENT	_____	uC/SEC

CHANNEL	ECCS 2B	VALUE	UNITS
611	LOW RANGE	_____	uC/cc
612	MID RANGE	_____	uC/cc
613	HI RANGE	_____	uC/cc
614	EFFLUENT	_____	uC/SEC

ATTACHMENT 11
COUNTY TECHNICAL ADVISOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. If arriving at EOF:

   a. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

   b. Identify availability to the EIM. _____

   c. Take a copy of your checklist when dispatched to the County. _____

OR

If arriving at the Emergency Operation's Center or having been dispatched from the EOF:

   a. Introduce yourself to the EOC staff. _____

   b. Contact the EOF and notify The EIM or an EIM/ENC Technical Advisor of your contact phone number. _____

   c. Request a copy of your checklist be telecopied to you. _____

ATTACHMENT 11
COUNTY TECHNICAL ADVISOR CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION — INITIAL

1. Steps to occur continually while the facility (EOC) is in operation:

   a. Provide overview of accident conditions and plant status.

   b. Answer technical questions and add clarification of issues not understood in the EOC.

   c. Contact personnel in the EOF for assistance in obtaining information (use the ERD).

   d. Participate in facility (EOC) briefings, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

1. Debriefed with EOC Manager. _____

2. Collected all generated paperwork. _____

3. Closed out with the EIM or EIM/ENC Technical Advisor. _____

4. Return position notebook and completed paperwork to Emergency Planning as soon as possible.

ATTACHMENT 12
EOF HEALTH PHYSICS MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions.	_____
2.	Verify that the following positions are filled:	
a.	EOF Dose Assessor/FMT Coord (3)	_____
b.	EOF HP Tech Support	_____
c.	EOF Rad Status Boards Keeper	_____
B.	FACILITY OPERATION	
1.	Initiate the HP Logbook.	_____
2.	Conduct a turnover with the TSC Chemistry Supervisor prior to commencing dose assessment.	_____
3.	Conduct a turnover with the TSC HP Supervisor prior to taking over the Field Monitoring Teams.	_____
4.	Request that clocks in the Dose Assessment area be synchronized with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.	_____
5.	Steps to occur continually while the facility is in operation:	
a.	Monitor radiological conditions associated with the emergency.	
b.	Manage the dose assessment and field monitoring activities in the EOF.	

ATTACHMENT 12
EOF HEALTH PHYSICS MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued)

5. (continued)

c. Routinely update the RM on radiological/meteorological conditions and potential impact to the event.

d. Assist the RM in determining PARs base on radiological conditions (use EPIP-08, Off-site Notifications and Protective Action Recommendations).

e. Review emergency dose extensions with the RM and the EC (use Attachment 12A, Basis for Exposure Limits for Emergency Response Personnel).

f. Provide technical support to EOF Communicators.

g. Interface with the EOF ETM to resolve issues involving plant components affecting plant releases.

h. Provide radiological information to support the EOF EIM and the Emergency News Center (ENC).

i. Interface with the State Bureau of Radiation Control.

j. Keep the RM abreast of the status of Bureau of Radiation Control activities.

k. Interface with the NRC Protective Measures Coordinator when the NRC Site Team arrives onsite.

l. Support recovery planning as requested by the RM.

ATTACHMENT 12
EOF HEALTH PHYSICS MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All radiological assessment activities in the EOF have been terminated. _____
2. All HP paperwork is collected. _____
3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____
4. Closed out the HP Logbook. _____
5. Returned position notebook to the RM office. _____
6. Provided all completed paperwork to the RM. _____

ATTACHMENT 12A
§2,¶4 BASIS FOR EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
(Page 1 of 3)

Exposure to emergency response personnel should be maintained As Low As Reasonably Achievable (ALARA). Actions taken during an emergency should take into consideration the amount of exposure required to accomplish the task versus the potential benefit to the public health and safety.

Conditions may warrant re-entry into high radiation areas leading to exposure in excess of the regulatory limit. Except for rescue of personnel (life-saving only), authorization must be given in advance by the Emergency Coordinator (EC) in consultation with the TSC Health Physics Supervisor (or alternate). If time permits, the EC should obtain concurrence from the Recovery Manager if the EOF is operational. In any case, where regulatory limits have been exceeded the EC shall notify the RM of the event.

For those remote circumstances involving an event in progress and obtaining EC approval will result in leaving the accident scene or decrease the victim(s) chance of survival, lifesaving actions may be performed without obtaining EC approval. The EC shall be notified immediately following the rescue operation.

Re-entry personnel that have been selected/chosen to exceed regulatory exposure limits should be volunteers[4], broadly familiar with the risks involved (radiosensitivity of fetuses, effects of acute exposures, etc.), whose normal duties have trained them for such missions.

EPA 400 Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA 400-R-92-001 states that "To assure adequate protection of minors and the unborn during emergencies, the performance of emergency services should be limited to non-pregnant adults". FPL endorses this guidance; however, FPL recognizes that it is the right of the worker to make the decision to perform as an on-site emergency worker, understanding the potential risks involved.

Since, by their very nature, emergency exposures requiring immediate action are not planned, they are not controlled as a Planned Special Exposure. Dose received from exposure under emergency conditions will be added to the dose received during the current year, prior to the emergency, to determine compliance with the occupational dose limits in 10 CFR 20.

ATTACHMENT 12A
§2,¶4 BASIS FOR EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
(Page 2 of 3)

Doses above regulatory limits will require reporting pursuant to 10 CFR 20.2202 and 20.2203. Any dose in excess of the annual limits specified in Section 20.1201(a) will be accounted for in accordance with 10 CFR 20.1206(e). If an individual exceeds any of these limits, then the individual will not be available for additional dose under 20.1201(a).

NOTE

1. Both Total Dose (TEDE) and Thyroid Dose (CDE) should be used for purposes of controlling exposure.
2. Protective clothing, including respirators, should be used where appropriate.

For the following missions, the exposure limit is[1]:	Total Dose[2] (TEDE)	THYROID[3] (CDE)
Performance of actions that would not directly mitigate the event, minimize escalation, or minimize effluent releases.	5 REM	50 REM
Performance of actions that mitigate the escalation to the event, rescue persons from a non-life threatening situation, minimize exposures or minimize effluent releases.	10 REM	100 REM
Performance of actions that decrease the severity of the event or terminate the processes causing the event in an attempt to control effluent releases to avoid extensive exposure of large populations. Also, rescue of persons from a life-threatening situation.	25 REM	250 REM
Rescue of person from a life-threatening situation. (Volunteers[4] should be above the age of 45.)	(5)	(5)

ATTACHMENT 12A
§2,¶4 BASIS FOR EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL
(Page 3 of 3)

(1) Exposure limits to the lens of the eye are 3 times the Total Dose (TEDE) values listed.

(2) Total Dose (TEDE) is the total whole body exposure from both external and internal (weighted) sources - Total Effective Dose Equivalent.

(3) Thyroid Dose (CDE) commitment from internal sources - Committed Dose Equivalent. The same dose limits also apply to other organs (CDE), skin (Shallow Dose Equivalent) and extremities (Extremity Dose Equivalent).

(4) Volunteers with full awareness of risks involved including numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects.

(5) No upper limit for Total Dose (TEDE) and/or Thyroid Dose (CDE) exposure has been established because it is not possible to prejudge the risks that one person should be allowed to take to save the life of another. Also, no specific limit is given for thyroid exposure since in the extreme case, complete thyroid loss might be an acceptable sacrifice for a life saved. This should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning.

ATTACHMENT 13
EOF DOSE ASSESSOR/FMT COORD CHECKLIST
(Page 1 of 2)

NOTE

1. The responsibilities of the FMT Coordinator are provided in EPIP-10, Off-Site Radiological Monitoring.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identified availability to RM (serve as initial EOF HP Manager)

OR

Identified availability to EOF HP Manager. _____

B. FACILITY OPERATION

NOTE

1. Initial operating instructions for use of the Class A Model are provided in EPIP-09, Off-Site Dose Calculations.
2. If the computerized Class A Model is not available, dose assessment shall be conducted in accordance with EPIP-09.

1. Establish communication link with the TSC Dose Assessor. _____

2. Request all previous dose calculation paperwork from the TSC. _____

3. Complete Class A Model QC check. _____

ATTACHMENT 13
EOF DOSE ASSESSOR/FMT COORD CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) INITIAL

4. Steps to occur continually while the facility is in operation:

   a. Obtain input data for the Class A Model from the EOF ERDADS Operator (RG 1/2 Screen).

   b. Coordinate dose assessment with the TSC.

   c. Provide status board update information to the EOF Rad Status Board keeper (use the "Status Board" printout from the Class A Program.

   d. Coordinate dose assessment with the State Bureau of Radiation Control.

   e. Review/compare field monitoring results with dose calculations.

   f. Report dose assessment results to the EOF HP Manager.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All dose assessment activities terminated. _____
2. TSC communications link terminated. _____
3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____
4. All paperwork collected. _____
5. Returned position notebook to the RM office. _____
6. Provided all completed paperwork to EOF HP Manager. _____

ATTACHMENT 14
EOF HP TECH SUPPORT CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to EOF Health Physics Manager. _____

B. FACILITY OPERATION

1. Synchronize clocks in the HP area with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room. _____

2. Steps to occur continually while the facility is in operation:

   a. Assist in dose assessment and/or field monitoring activities, as needed.

   b. Ensure HP data posted on status boards are current.

   c. Provide support to the EOF Health Physics Manager as requested.

   d. Support the EOF Health Physics Manager in establishing 24 hour staffing, report staffing to the EOF Administrative Supervisor.

   e. Provide HP technical information/support to the Emergency News Center (ENC) and assist with press briefings, as necessary.

ATTACHMENT 14
EOF HP TECH SUPPORT CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Assisted with termination of all HP activities in the EOF/ENC. _____
2. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____
3. Returned position notebook to the RM office. _____
4. Provided all completed paperwork to the EOF HP Manager. _____

ATTACHMENT 15
EOF RAD STATUS BOARD KEEPER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Health Physics Manager. _____

B. FACILITY OPERATION

1. Verify HP Emergency Kit inventory. _____

2. Steps to occur continually while the facility is in operation:

   a. Obtain data from the EOF Dose Assessor and EOF FMT Coordinator.

   b. Update status boards with new radiological data.

   c. Verify that all data has been accurately transferred to the status boards.

   d. Make corrections, when identified, by circling the corrected data.

   e. When all status board columns/blanks are filled, erase the first two columns/blanks, enter new data, with a different colored marker, leaving space between the new and the old data.

ATTACHMENT 15
EOF RAD STATUS BOARD KEEPER CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Status boards have been cleared and returned to pre-activation condition. _____

2. Equipment and supplies have been returned to the HP Emergency Kit. _____

3. Returned position notebook to the RM office. _____

4. Provided all completed paperwork to the EOF HP Manager. _____

ATTACHMENT 16
EOF ADMINISTRATIVE SUPERVISOR CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the Recovery Manager. _____

3. Direct an EOF Administrative staff member to post all EPIP revision numbers on the status board. _____

4. Ensure facility public address system is turned on (amplifier in Administration area, Room 102) and conduct a test page using the RM microphone.

   a. Coverage includes the Bullpen and the surrounding office areas.

   b. Coverage DOES NOT include the Emergency News Center (ENC). _____

5. Ensure the "Videolink" system is turned on.

   a. Turn on the master video switch located in the rack mount cabinet in Room 132 (key #14 in keybox).

   b. In the "Bullpen" turn on the two television sets using the remote controls (one for each television set) on the RM table.

   c. Set the channel selector to channel 7 and adjust volume.

ATTACHMENT 16
EOF ADMINISTRATIVE SUPERVISOR CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION — INITIAL

1. Ensure procedures, other documents and drawings are available and the revision numbers verified. _____

2. Steps to occur continually while the facility is in operation:

   a. Manage EOF Administrative Staff.

   b. Ensure photocopiers, telecopiers, computers, printers, and telephones are maintained operable.

   c. Supervise distribution of all data, notification forms, and other information.

   d. Facilitate distribution of clerical supplies to all groups in the EOF.

   e. Coordinate with facility managers or designee, to establish 24 hour staffing and completing Attachment 2A, EOF ERO Shift Staffing, Emergency Response Organization and Shift Staffing, (all positions should be filled, except as authorized by the RM).

   f. Ensure arrangements for food, water, and other necessities are made for next 48 to 72 hours, if necessary.

   g. Arrange for hotel reservations and car rentals for incoming personnel as directed by the RM.

   h. Work with the RM for authorization for the expenditure of funds.

ATTACHMENT 16
EOF ADMINISTRATIVE SUPERVISOR CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Supervised facility walkthrough to ensure all documents, equipment, and supplies were returned to pre-activation condition and/or location. _____

2. Returned position notebook to the RM office. _____

3. Provided all completed paperwork to the RM. _____

ATTACHMENT 17
EOF ADMINISTRATIVE STAFF CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Administrative Supervisor. _____

3. Verify procedures by posting revision numbers on the status board. Post all procedures (EPIP, HP, Chem). Consult Control Copy 1 in the Recovery Manager's Office or follow the steps below to print out an EPIP list. _____

   a. In Lotus Notes, click on the PSL Procedures Icon.

   b. On the Search line toolbar, click the far right button (with 2 circles and a down arrow).

   c. Select Group Search from the drop down menu.

   d. In the Search line type "EP" (where the "XX" is).

   e. Click Search or hit Enter.

   f. EPIP list is now displayed (not in any particular order).

   g. To print the list:

      - Click File.
      - Select Print from the drop down menu.
      - Select View Options in the dialogue box.
      - Click OK.

ATTACHMENT 17
EOF ADMINISTRATIVE STAFF CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION

1. All photocopiers, telecopiers, computers, printers, etc. energized and problems reported to EOF Administrative Supervisor. _____

2. Switchboard phone manned. _____

3. Establish log for incoming/outgoing telecopiers, using Attachment 17A, Telecopy Log. _____

4. Steps to occur continually while the facility is in operation:

   a. Provide clerical supplies to all groups in the EOF, as needed.

   b. Produce required/requested copies, retain originals.

   c. Distribute copies, telecopies, etc. to recipients as quickly as possible (e.g., ERDADS data sheets, notification forms, news releases, etc.).

   d. Provide any incoming telecopy materials to the RM, RM OPS Advisor/Logkeeper or as designated on the cover page.

   e. Assist the EOF Administrative Supervisor in establishing 24 hour staffing.

   f. Perform duties assigned by the EOF Administrative Supervisor.

ATTACHMENT 17
EOF ADMINISTRATIVE STAFF CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All photocopiers, telecopiers, computers, printers, etc. de-energized and problems reported to EOF Administrative Supervisor. _____

2. Conducted facility walkthrough to ensure all documents, equipment, and supplies were returned to pre-activation condition and/or location. _____

3. EOF phone switchboard set to "night call". _____

4. Returned position notebook to the RM office. _____

5. Provided completed paperwork to the EOF Administrative Supervisor. _____

ATTACHMENT 17A
EOF TELECOPY LOG
(Page 1 of 1)

___Incoming ___Outgoing Phone Number:_____ Date:____/____/____

Message #	Description	Received From	Time	Pages

Receiving Operator:_____

ATTACHMENT 18
EOF EMERGENCY SECURITY MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

			INITIAL
A.		FACILITY ACTIVATION	
	1.	Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions.	_____
	2.	Identify availability to the RM.	_____
§3	3.	Establish controls to ensure all EOF personnel comply with the requirements of the Fitness for Duty Rule.	_____
	4.	Verify operability of the intoxilyzer.	_____
	5.	Ensure EOF security force established.	_____
B.		FACILITY OPERATION	
	1.	Establish access control for the EOF and Emergency News Center (ENC).	_____
	2.	Contact the TSC Security Supervisor.	_____
		a. Establish responsibility/protocol for notification of off-site authorities regarding the status of site evacuation.	
	3.	Initiate the Security Logbook.	_____
	4.	Steps to occur continually while the facility is in operation:	
		a. Advise RM on security related matters.	
§2		b. Provide liaison function between local law enforcement and rescue agencies and FPL for issues such as:	
		1. Bomb threats or acts of terrorism.	

ATTACHMENT 18
EOF EMERGENCY SECURITY MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued) INITIAL

4. (continued)

b. (continued)

2. Members of the public or the media arriving at the site.

3. Site egress and ingress.

4. Fire or rescue/medical response.

c. Coordinate safeguards suspension with the TSC Security Supervisor.

d. Monitor site accountability status.

e. Interface with NRC Safeguards/Security Coordinator when the NRC Site Team arrives at the EOF.

f. Track status of injured personnel taken to an off-site medical facility (use Attachment 18A, Injured Person Report).

g. Maintain the Security Logbook.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All paperwork collected. _____

2. Closed out with the local law enforcement agencies. _____

3. Closed out Security Logbook. _____

ATTACHMENT 18
EOF EMERGENCY SECURITY MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION		INITIAL
4.	Returned position notebook to the RM office.	_____
5.	Provided all completed paperwork to the RM.	_____
6.	All access badges returned to pre-activation location.	_____
7.	Facility sweep completed.	_____
8.	Facility locked and alarm set.	_____

ATTACHMENT 18A
INJURED PERSON REPORT
(Page 1 of 1)

NAME:		EMPLOYER: ☐ FPL ☐ OTHER (list company name)	JOB DESCRIPTION:
TIME INJURED:	TIME REPORTED:	NATURE OF INJURY:	LOCATION WHERE INJURY OCCURRED:
IS THE VICTIM CONTAMINATED? ☐ NO ☐ YES		WHAT BODY PARTS CONTAMINATED?	LEVEL OF CONTAMINATION AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM
TRANSPORTED TO HOSPITAL? ☐ NO ☐ YES		HOW TRANSPORTED?	NAME OF HOSPITAL OR OTHER LOCATION
ACTIVITY AT THE TIME INJURY OCCURRED		CURRENT MEDICAL CONDITION	
MISC. INFO.			

NAME:		EMPLOYER: ☐ FPL ☐ OTHER (list company name)	JOB DESCRIPTION:
TIME INJURED:	TIME REPORTED:	NATURE OF INJURY:	LOCATION WHERE INJURY OCCURRED:
IS THE VICTIM CONTAMINATED? ☐ NO ☐ YES		WHAT BODY PARTS CONTAMINATED?	LEVEL OF CONTAMINATION AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM
TRANSPORTED TO HOSPITAL? ☐ NO ☐ YES		HOW TRANSPORTED?	NAME OF HOSPITAL OR OTHER LOCATION
ACTIVITY AT THE TIME INJURY OCCURRED		CURRENT MEDICAL CONDITION	
MISC. INFO.			

ATTACHMENT 19
NUCLEAR DIVISION DUTY OFFICER CHECKLIST
(Page 1 of 2)

NOTE
1. The following information is provided when responding in the EOF.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Initiate the Emergency Control Officer (ECO) Logbook. _____

2. Notify INPO that an Alert (or higher) emergency class was declared. _____

3. Steps to occur continually while the facility is in operation:

   a. Maintain 24 hour per day on-call availability.

   b. Serve as a technical advisor for the ECO.

      1. Serve as advisor to the EIM on technical matters that may aid in the formation of news releases.

      2. Serve as advisor to the GAM, Risk Manager, or to State and County agencies on technical matters.

      3. Make notifications for the ECO, as directed.

      4. Serve as "interim ECO" in the EOF during periods of time when the ECO leaves the facility.

ATTACHMENT 19
NUCLEAR DIVISION DUTY OFFICER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

3. (continued)

   c. Maintain a record of the event and activities in the ECO Logbook (use Attachment 19A, Typical Information to be Included in the ECO Logbook).

   d. Request that INPO assist FPL by performing the following:

      1. As requested, submit press releases over Nuclear Network.

      2. Promptly inform FPL of any media inquiries or industry offers to provide assistance by contacting you (NDDO) in the EOF (or other location) at your number.

      3. Record all conversations with INPO in detail in the ECO Logbook.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Terminated assistance to the ECO. _____

2. Collected all paperwork. _____

3. Closed out the ECO Log, returned the Logbook to the ECO position notebook office. _____

4. Returned position notebook to the RM office. _____

5. Provided all completed paperwork to the RM. _____

ATTACHMENT 19A
TYPICAL INFORMATION TO BE INCLUDED IN THE ECO LOGBOOK

(Page 1 of 1)

Maintaining concise detailed logs during an emergency event is very important. Following the event, all information recorded will be needed to provide a clear picture of actions taken. Regulatory agencies will use this information to evaluate the adequacy of mitigative and corrective actions taken by the Emergency Responders:

The following information should be included in the ECO Logbook:

- Time of each entry.
- Summary of any directions given to other Emergency Responders (i.e., who was told what to do when).
- Summary of discussions with Emergency Managers.
- Summary of discussions with the President - Nuclear Division.

Do not remove pages from the Logbook.

ATTACHMENT 20
EMERGENCY CONTROL OFFICER CHECKLIST
(Page 1 of 1)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Approve news releases.

   b. Serve as official spokesperson for the Nuclear Division.

   c. Ensure the RM is aware of the primary concerns of the media/public.

   d. Act as the chief nuclear officer.

   e. Keep the RM abreast of activities involving the Governmental Affairs Manager and Risk Manager, if they are not in the EOF.

   f. Maintain awareness of plant status and radiological conditions.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Spokesperson responsibilities have been returned to Corporate Communications. _____

2. Provided all completed paperwork to the RM. _____

ATTACHMENT 21
GOVERNMENTAL AFFAIRS MANAGER CHECKLIST
(Page 1 of 2)

NOTE
1. The following information is provided when responding in the EOF.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following are notified:

   a. Gov Affairs Rep (Tallahassee) _____

   b. Governor's Advisor _____

   c. Governmental Affairs Assistant _____

   d. Aviation Department _____

B. FACILITY OPERATION

NOTE
The liaison function between the ECO and public officials is accomplished by the GAM in conjunction with the Governmental Affairs Assistant, Governmental Affairs Representative in Tallahassee and the Governor's Advisor.

1. Steps to occur continually while the facility is in operation:

   a. Share informational updates.

   b. Refer any specific questions or comments from elected or political authorities to the ECO.

ATTACHMENT 21
GOVERNMENTAL AFFAIRS MANAGER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

1. (continued)

   c. Report summaries of interface with governmental officials routinely to the ECO.

   d. Promptly report rumors that could significantly impact emergency response capability to the ECO.

   e. Keep a log of all significant information.

C. FACILITY CLOSEOUT AND RESTORATION

1. All off-site interfaces have been discontinued. _____

2. Turnover and closeout provided to the ECO regarding liaison activities with off-site officials. _____

3. All paperwork collected. _____

4. All completed paperwork forwarded to Emergency Planning. _____

ATTACHMENT 22
EMERGENCY INFORMATION MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____
2. Obtain an update from the ECO or RM. _____
3. Re-establish contact with the Emergency News Center (ENC) Manager. _____
4. Re-establish contact with the "acting" EIM. _____
5. Resume responsibility for all communications, as appropriate. _____
6. Determine when sufficient staff is present to handle all further media briefings from the ENC. _____
7. Recommend to the ECO that the ENC should be declared operational. Operational at_____. _____

B. FACILITY OPERATION

1. Request that clocks in the ENC be synchronized with EOF (based on ERDADS).
2. Issue a news release announcing operation of the ENC, its location and the media phone number. _____
3. Ensure a County Technical Advisor is dispatched to St. Lucie and Martin Counties. _____
4. Direct an EIM/ENC Technical Advisor to keep Logbook. _____

ATTACHMENT 22
EMERGENCY INFORMATION MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued)

5. Steps to occur continually while the facility is in operation:

   a. When developing updates, subsequent statements and/or news releases, obtain approval from the ECO.

   b. Coordinate reviews with State, County and Federal representatives in the EOF.

   c. Ensure that all FPL news releases are delivered to the EOF Administrative Staff for distribution to the appropriate agencies (including the Corporate Communications (CC) staff in Juno Beach).

   d. Ensure that all FPL news releases are delivered to the ENC and shared among the participants in the joint news center prior to briefings.

   e. Conduct new briefings (use Attachment 22A, News Briefing Guidelines, to this attachment).

   f. Attend EOF briefings and meetings, especially those called to determine State and County Protective Action Recommendations (PARs) if possible.

ATTACHMENT 22
EMERGENCY INFORMATION MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
As necessary, continued interface with the media should be in accordance with standard Corporate Communications procedures.

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Media notified of ENC deactivation. _____
2. ENC returned to pre-activation condition. _____
3. County Technical Advisors recalled. _____
4. Provided all completed paperwork to the RM. _____

ATTACHMENT 22A
NEWS BRIEFING GUIDELINES
(Page 1 of 1)

NOTE

These guidelines are taken from the Corporate Communications Nuclear Emergency Plan (CCNEP). For additional information, the CCNEP should be consulted.

1. In coordination with the ENC Manager, schedule and moderate media briefings in the ENC Media Briefing Room.

2. These briefings should be proceeded by a briefing in the ENC to determine the following:

   A. Who has announcements

   B. What the announcements are

   C. What priority they should be in

3. Briefings should be conducted every hour.

4. Use the ECO, other FPL decisionmakers, FPL technical staff and representatives from State, County and Federal emergency agencies as spokespersons.

5. Use FPL's technical advisors to conduct background briefings between news briefings, as appropriate.

6. During the briefing, refer the media's questions to the agency having jurisdiction of the subject of the question.

ATTACHMENT 23
EIM/ENC TECHNICAL ADVISOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Initiate the EIM Logbook. _____

2. Steps to occur continually while the facility is in operation:

   a. Gather information and ensure the EIM is up-to-date on the emergency status in the following areas:

      - Emergency Classifications
      - Corresponding Emergency Action Levels (EALs)
      - Associated Protective Action Recommendations (PARs)
      - Plant conditions and parameters

   b. Assist the EIM with interpreting technical data to ensure accuracy of news releases.

   c. Assist in obtaining data from the EOF staff for use in news releases, as needed (pay particular attention to updates of radiological information through dose assessment).

ATTACHMENT 23
EIM/ENC TECHNICAL ADVISOR CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

2. (continued)

d. Verify that you are on the routing lists for the following information:

- HP/Chemistry data
- ETM/ERDADS updates
- Nuclear licensing/communications data

e. Review content of news releases for technical accuracy.

f. Ensure that the ENC is receiving accurate, up-to-date information needed for media backgrounders.

g. Conduct technical briefings, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Assisted EIM in ENC closeout. _____

2. Returned all documents, equipment and supplies to pre-activation condition and/or location. _____

3. Closed out the EIM Log, returned Logbook to the EIM position notebook, and returned the notebook to the RM office. _____

4. Returned position notebook to RM office. _____

5. Provided all completed paperwork to the EIM. _____

FPL

ST. LUCIE PLANT

EMERGENCY PLAN IMPLEMENTATION PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-08

Current Revision No.
2

Effective Date
01/23/01

Title:

OFF-SITE NOTIFICATIONS AND PROTECTIVE ACTION RECOMMENDATIONS

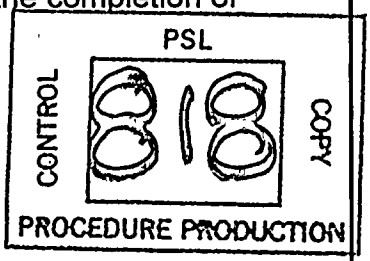
Responsible Department: **EMERGENCY PLANNING**

REVISION SUMMARY:

Revision 2 – Added new NRC Notification form and revised title of form throughout procedure. Clarified turnover responsibilities between EC and RM. Deleted EC turnover guidance (including in EC procedure). Improved overview information regarding PARs. Added reference to NUREG-1022. Clarified instructions for determining "time contact made." Added notes identifying the availability of information from printouts of the Class A model to assist in completion of off-site notification forms. Updated directions for completion of NRC Notification Form. Made administrative/editorial changes. (R. Walker, 01/18/01)

Revision 1 – THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Added definition, instruction section and added guidance on preparing the supplemental data sheet. Removed EC or RM signature from the PAR worksheets, deleted caution and instructions to review previously issued PARS and made the supplemental data sheet a required document for notifications with 60-minute time limits. (S. Knapp, 09/11/00)

Revision 0 – This procedure provides information and instructions for the completion of off-site notifications and Protective Action Recommendations (PARS). (Steve Knapp, 05/31/00)



Revision	FRG Review Date	Approved By	Approval Date
0	05/30/00	R. G. West Plant General Manager	05/31/00
2	01/17/01	R. G. West Plant General Manager	01/18/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS

DATE	
DOCT	PROCEDURE
DOCN	EPIP-08
SYS	
COM	COMPLETED
ITM	2

TABLE OF CONTENTS

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(continued)

SECTION PAGE

ATTACHMENTS

1.0 PURPOSE

1.1 Discussion

1. This procedure provides information and instructions for the completion of off-site notifications and Protective Action Recommendations (PARS).

2. This procedure is applicable to both Unit 1 and Unit 2.

3. This procedure is for use in the Control Room, Technical Support Center (TSC) and Emergency Operations Center (EOF).

4. Upon initial Declaration of an emergency classification the NPS assumes the duties of the Emergency Coordinator (EC). The EC position remains initially in the affected Control Room and then transfers to the Technical Support Center (TSC) if the TSC goes Operational. The TSC is required to be activated at an Alert or higher Emergency Class. The duties of the EC are turned over to an EC qualified member of plant management when the TSC goes Operational in accordance with EPIP-02, Duties And Responsibilities Of The Emergency Coordinator. /R2

5. Once the EOF is operational and proper turnover has been conducted, the Recovery Manager (RM) assumes responsibility for off-site notifications to the State and local authorities and the NRC. The RM also assumes responsibility for recommending off-site protective actions. /R2

1.1 Discussion (continued)

/R2

6. The following table illustrates which facility has a responsibility for Classification, Notification or PARs.

	Control Room (X until EC function transfers to the TSC)	**TSC** (X when operational)	**EOF** (X when operational)
Classifications	X transfers →	X	
Notifications	X transfers →	X transfers →	X
PARs	X transfers →	X transfers →	X

7. Off-site Notification

A. Purpose of Off-Site Notifications

FPL is required to notify off-site agencies in the event of any emergency that could threaten the health and safety of the public. These notifications provide an early warning to agencies responsible for public protection.

B. Who Shall Be Notified

- State Division of Emergency Management
- State Department of Health (Bureau of Radiation Control)
- St. Lucie County Emergency Operations Center
- Martin County Emergency Operations Center
- NRC

NOTE

The State Department of Health (Bureau of Radiation Control) may not have their office staffed on a 24-hour basis. In the event that they do not answer the Hot Ring Down (HRD) telephone, the State Warning Point assumes responsibility for notifying their duty officer.

1.1 Discussion (continued)

7. B. (continued)

1. State and Local Agencies are notified by using the Hot Ring Down (HRD) telephone. The HRD rings the State Warning Point. The State Warning Point puts the other agencies on line and reduces the need for individual calls. The NRC is notified using the Emergency Notification System (ENS) telephone. See Attachment 1 for information about Primary Emergency Communications Systems.

2. ¶4 After the State Coordinating Officer arrives in the EOF, he / she can transfer "NET Control" to the EOF. When this occurs, the Recovery Manager's briefing becomes the primary notification method for the State and Counties. The Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 2) and the Supplemental Data Sheet (form similar to Attachment 2A) should still be completed and provided to the State Coordinating Officer or his/her designee in the EOF. Calls by FPL personnel over the Hot Ring Down telephone should no longer be made.

3. NRC notifications occur through an open line of communication in the TSC and, when operational, the EOF.

8. Protective Action Recommendations

A. Protective actions for the general public are ordinarily NOT required prior to declaration of a General Emergency. It is possible however, that due to unusually stable and constant meteorological conditions, protective actions could be recommended at a Site Area Emergency based on projected doses. This is the exception rather than the rule. /R2

Protective actions for the general public are required to be recommended if a General Emergency is declared. Initial Protective Action Recommendations (PARs) are normally based on plant conditions. This would NOT be true if the General Emergency was declared based on off-site dose (either measured or projected) or a Security Emergency (per the Security Plan). The predetermined minimum PARs (based on plant conditions) are as given below. /R2

1.1 Discussion (continued).

8. (continued)

B. General Emergency - Minimum PARs

1. In any case where a GENERAL EMERGENCY has been declared, the minimum PAR shall be:

   Shelter all people within a 2-mile radius and out to 5 miles in the sectors affected. (Sectors affected are at least three, including the downwind sector plus the two adjacent sectors.)

2. If a GENERAL EMERGENCY has been declared due to actual or projected severe core damage, the minimum PAR shall be:

   Evacuate all people within a 2-mile radius from the plant and out to 5 miles in the sectors affected. Shelter all people in the remaining sectors from 2 to 5 miles and from 5 to 10 miles form the plant.

3. If a GENERAL EMERGENCY has been declared due to loss of physical control of the plant to intruders, including the Control Room or any other area(s) vital to the operation of the reactor system (as defined in the Security Plan), the minimum PAR shall be:

   Evacuate all people within a 2-mile radius from the plant and out to 5 miles in the sectors affected. Shelter all people in the remaining sectors from 2 to 5 miles and from 5 to 10 miles from the plant.

C. Once a release of radioactive material occurs, dose assessment should be utilized when evaluating PARs. The final determination of the PAR should consider all available information including off-site dose projections, plant conditions and field monitoring data. The most conservative recommendation shall be made. If it is anticipated that a PAR threshold will be exceeded, DO NOT wait until the threshold is exceeded to make that PAR.

/R2

2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on a data sheet.

2.1 References

1. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2
2. St. Lucie Plant Technical Specifications Unit 1 and Unit 2
3. § St. Lucie Plant Radiological Emergency Plan (E-Plan)
4. E-Plan Implementing Procedures (EPIP-00 – 13)
5. QI-17-PSL-1, Quality Assurance Records

2.2 Records Required

1. All PAR worksheets and notifications forms (Attachment 2 and 2A) shall be maintained in plant files in accordance with QI-17-PSL-1.

2.3 Commitment Documents

1. ¶1 PMAI PM96-04-165, "ITR 96-006" (Unusual Event Declared Due to Dropped Rod)
2. ¶2 PMAI PM96-09-185, Condition Report CR-96-1750 (Off-site Notification Using Commercial Phone)
3. ¶3 NRC Inspection Report 91-01, Closure of IFIs 89-31-03 and 89-31-01
4. ¶4 Condition Report CR-00-0428 (Evaluated Exercise Critique)

(continued on next page)

2.3 Commitment Documents (continued)

5. ¶6 PMAI PM96-05-233 (Off-site Notification Process)

6. ¶7 PMAI PM99-09-016 (PARs Based on FMT Data, Completion of NRC Notification Form)

7. ¶8 NUREG-1022, Event Reporting Guidelines 10 CFR 50.72 and 50.73, Section 4.2.4, ENS Event Notification Worksheet (NRC Form 361).

/R2

3.0 RESPONSIBILITIES

3.1 Emergency Coordinator – Responsible for Classifications, Notifications and PARs.

3.2 Recovery Manager – Responsible for Notifications and PARs.

3.3 Duty Call Supervisor – Assists EC with forms and notifications.

3.4 TSC EC Assistant / Logkeeper or TSC OPS Coordinator – Prepares notification forms for EC approval when the TSC is operational.

3.5 EOF RM OPS Advisor – Prepares notification forms for RM approval when the EOF is operational.

3.6 TSC HRD Communicator – Assists TSC EC Assistant / Logkeeper or TSC OPS Coordinator with form preparation and makes calls to complete notifications.

3.7 EOF HRD Communicator – Assists EOF RM OPS Advisor with form preparation and makes calls to complete notifications.

3.8 TSC Chemistry Supervisor (in his absence, TSC Dose Assessor) – Assists EC with radiological dose assessment data and PARS.

3.9 HP Manager (in his absence, EOF Dose Assessor) – Assists RM with radiological dose assessment data and PARS.

3.10 Licensing Manager – Oversees EOF communications performed by HRD Communicator, ENS Communicator, HPN Communicator and TSC Communicator.

4.0 DEFINITIONS

4.1 **Conservative** – Means more extensive or comprehensive action under a given set of circumstances to provide a greater measure of safety. For example, evacuation is more conservative than sheltering.

4.2 **Emergency** – Any off-normal event or condition which is classified into one of the four event categories (Unusual Event, Alert, Site Area Emergency, or General Emergency) by the NPS in accordance with EPIP-01, Classification of Emergencies.

4.3 **Emergency Coordinator** – The title assumed by the NPS, until relieved by plant management through proper turnover, in the event of plant conditions that trigger the Emergency Plan. The Emergency Coordinator (EC) is responsible for notifying off-site authorities, emergency responders both inside and outside the company, and has full authority and responsibility for on-site emergency response actions. The EC is also responsible for Protective Action Recommendations during the initial stages of an emergency.

4.4 **Florida Nuclear Plant Emergency Notification Form** = State Notification Form (SNF).

4.5 **Operational** (status for an emergency facility) – The mandatory minimum staff is present and the facility has taken responsibility for its procedurally assigned functions.

4.6 **Protective Action Recommendations** (PARs) – Recommendations, for action instructions to protect the public, made by the Emergency Coordinator or Recovery Manager to State and County officials. FPL may recommend No Action, Sheltering or Evacuation.

4.7 **Recovery Manager** (RM) – A designated company officer or senior manager, who will have responsibility for the direction and control of the EOF. He / she has the authority to establish policy and to expend funds necessary to cope with emergency situations that trigger the implementation of the Emergency Plan.

4.8 **Release** (during any declared emergency)

1. Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values.

OR

2. Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

5.0 INSTRUCTIONS

5.1 State and County Notification

1. Time Limits

   A. Notification shall be initiated within 15 minutes of any of the following:

      1. Recognition of entry into the Emergency Plan.
      2. Escalation in Emergency Class.
      3. De-escalation of the Emergency Class.
      4. Protective Action Recommendation.
      5. Change in Protective Action Recommendation.

   B. Notification shall be initiated within 60 minutes of any of the following:

      1. At an Alert or higher Emergency Class, the time of the last update (unless a different frequency has been agreed to by the off-site agencies as during a hurricane).
      2. A radiological release has been initiated.
      3. A radiological release has been terminated.
      4. A significant change in plant conditions has occurred (e.g., loss or restoration of off-site power or major plant equipment).
      5. Termination of the emergency.

5.1 State and County Notification (continued)

2. Forms Required for Notifications

CAUTION

Notifications require the use of a form similar to Attachment 2, Florida Nuclear Plant Emergency Notification Form (SNF). The Supplemental Data Sheet shall only be transmitted with a newly completed SNF.

A. Notifications with 15 minute time limits shall be made using a form similar to Attachment 2, Florida Nuclear Plant Emergency Notification Form.

NOTE

The Supplemental Data Sheet (Attachment 2A) is NOT intended for use by the Control Room and should NOT be prepared by or transmitted from that facility.

B. A form similar to the Supplemental Data Sheet (Attachment 2A) should also be prepared and transmitted with the SNF. It is permissible to prepare and transmit the "Plant Conditions Information" section only.

C. Notifications with 60 minute time limits shall be made using a form similar to Attachment 2, Florida Nuclear Plant Emergency Notification Form, and a form similar to the Supplemental Data Sheet (Attachment 2A). It is permissible to prepare and transmit the "Plant Conditions Information" section only, when dose assessment data is unavailable.

3. Special instructions due to extraordinary circumstances.

A. If Emergency Class escalation is necessary due to rapidly degrading conditions and

1. the transmission of the SNF has NOT been initiated, Then a new notification form should be filled-out describing the latest Emergency Class and conditions, but also including reference to the rapid escalation through the lower classification (e.g., the "Additional Information or Update" section of the form should include a statement similar to "Reactor Coolant System leakage had increased rapidly and did not allow for separate notification of an Unusual Event").

OR

5.1 State and County Notification (continued)

3. A. (continued)

2. the transmission of a completely filled-out and approved SNF is underway, Then provide the State and County authorities with the initial notification information by transmitting lines 1-6, at a minimum, of the SNF and terminate the phone call by stating that a new notification form will be provided within 15 minutes.

B. If one Unit is in a classified event and the same or the other Unit enters into an event where the same or lesser Emergency Class would apply, Then a new classification should NOT be declared. The event should be documented on a SNF as "Additional Information or Update" and issued as soon as practicable.

C. If one Unit is in a classified event and the other Unit enters into a more severe event in which a higher Emergency Class would apply, Then the new classification shall be declared and promptly, within the regulatory time limits, issued to the State, Counties and the NRC.

END OF SECTION 5.1

5.2 Nuclear Regulatory Commission (NRC) Notification

1. Time Limits

NOTE

Notification of the NRC is expected immediately after notification of State and local agencies. The one-hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

A. The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes (10 CFR 50.72 (a)(3)).

2. Special Instructions

A. Initial notification to the NRC using the Emergency Notification System (ENS) (usually done from the Control Room) should use Attachment 3, NRC Reactor Plant Event Notification Worksheet. /R2

B. At an Alert or higher Emergency Class, the NRC will want to establish an open line of communication with the Control Room, utilizing an ENS conference bridge tying in the licensee with NRC Headquarters and Region personnel. Once the Technical Support Center (TSC) is operational, the Control Room should transfer responsibility for NRC communications to the TSC.

C. The Emergency Operations Facility should join the TSC on the ENS conference bridge and take the lead for NRC communications.

D. The TSC and EOF should also utilize the Health Physics Network (HPN) line in a manner similar to the ENS.

E. Both the ENS and HPN Communicators in both facilities should keep logs of information transmitted and received from the NRC in accordance with procedures.

END OF SECTION 5.2

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- The EC has responsibility for notifications and PARs. The Duty Call Supervisor (DCS), or other personnel in the Control Room designated by the EC, shall assist. When the TSC becomes operational, TSC personnel take over this function. The DCS should provide the EC with documentation of any notifications made from the Control Room.

- The Duty Call Supervisor should make a mental note of the time when the notification is due and ensure that it is done within 15 minutes of classification.

- Off-site Communication Content and Protocol

  1. Prepare the Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 2 of this procedure). The Supplemental Data Sheet (form similar to Attachment 2A) is not for use in the Control Room.

  2. It should be clear from the "Reason For Emergency Declaration" which Emergency Action Level (EAL) required the emergency declaration. Wording should be non-technical with no acronyms or abbreviations (e.g., reactor coolant pump instead of RCP).

  3. Determining Downwind Sectors Affected

     A. Wind direction can be obtained from ERDADS by depressing the "EPIP" key, on the top row of the keyboard. The Met Tower Indicator Panel in the Unit 1 Control Room is an alternate source.

     B. If the indication is greater than 360° the wind direction is determined by subtracting 360° from the indicated number. Wind direction should be rounded to the nearest whole number.

     C. Wind direction is always given as "wind from." (An easterly wind, or wind direction 90°, means that the wind is blowing from east to west).

     D. When determining the sectors affected, the adjacent sectors on both sides of the actual downwind sector are included. Three sectors will typically be listed.

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3. (continued)

E. If the wind is located on the edge of a sector (i.e., 11°, 33°, etc.), an additional (fourth) sector should be added.

Wind From	Sectors Affected	Wind From	Sectors Affected	Wind From	Sectors Affected
348-11	HJK	123-146	PQR	236-258	CDE
11-33	JKL	146-168	QRA	258-281	DEF
33-56	KLM	168-191	RAB	281-303	EFG
56-78	LMN	191-213	ABC	303-326	FGH
78-101	MNP	213-236	BCD	326-348	GHJ
101-123	NPQ	There is no "O" sector		There is no "I" sector	

4. PARs Based on Plant Conditions.

CAUTION
If a release occurs, notify the EC that a dose assessor is required and follow the EC's directions for PARs. The EC should use the guidance in Appendix B of this procedure for determining PARs in the event of a release.

A. Beginning at the top left of the PAR flowchart below, answer the General Emergency question.

B. If the emergency is not a General Emergency (GE), and there is no release, "Utility Recommended Protective Actions" are NONE. If it is a GE, continue using the flowchart.

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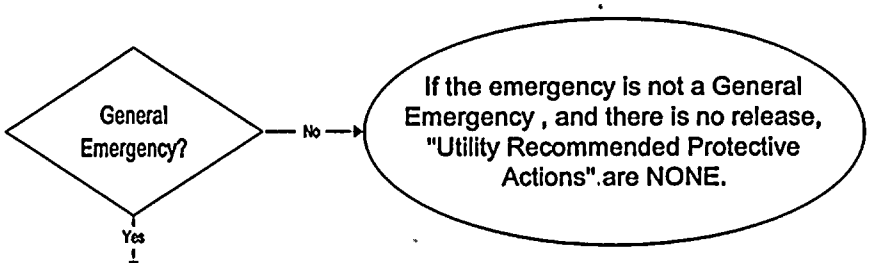
4. (continued)

C. Use the appropriate answer to each question to continue until you reach one of the two boxes that provide PAR information based on plant conditions.



MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	None	All
2-5	All Remaining	None	(Sectors Affected)
5-10	All	None	None

MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	All	None
2-5	None	(Sectors Affected)	All Remaining
5-10	None	None	All

Notes
1. Severe core damage is indicated by:
   - Loss of critical functions required for core protection (e.g., loss of injection with LOCA) OR
   - High core temperatures (valid CET greater than 700° F) OR
   - CHRRM reading greater than 4.2 E4 R/hr.

2. Loss of physical control of Control Room or vital reactor operating areas to intruders.

(P/EP/EPIP-08-F-APPEN A-R0)

D. Transfer the correct PARs information to the Florida Nuclear Plant Emergency Notification Form using the **actual letters of the sectors affected** where "(Sectors Affected)" is indicated in the flowchart's PARs box.

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5. Off-site Communication Protocol

CAUTION

- ¶1 If erroneous information is transmitted to off-site agencies and the error is discovered prior to event termination, a correction should be provided in an update. The need for and urgency of providing the update is dependent upon the importance of the error.
- ¶1 If erroneous information is transmitted to off-site agencies, and the error is discovered after event termination, the Licensing Department should be consulted to determine the need and method for contacting the off-site agencies with corrected information.
- ¶3 A new Florida Nuclear Plant Emergency Notification Form shall be completed for all updates.

A. **Obtain the Emergency Coordinator (EC) Approval signature prior to any off-site communication.** _____

B. Using the State HOT RING DOWN (HRD) Phone, dial 100. _____

C. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State answers, announce "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2)] with an emergency declaration. I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy." Allow the State Warning Point to contact St. Lucie County, Martin County and the Bureau of Radiation Control prior to transmitting the information from the Florida Nuclear Plant Emergency Notification Form. When the parties are on line, provide the information slowly and deliberately with time for the duty officers to write the data. _____

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5. (continued)

D. Alternate Communications if Hot Ring Down is not Available (If HRD is used, skip to section E, NRC Notification). _____

1. Alternate 1 – Commercial Phone

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

a. Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration. My callback number is _____." _____

b. Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

c. ¶2 Request callback from the State Warning Point to verify that they notified St. Lucie County, Martin County and the Bureau of Radiation Control. _____

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5. D. (continued)

2. Alternate 2 - ESATCOM

NOTE
Use ESATCOM only if Alternate 1 – commercial phone is not available.

a. Hold down the "push-to-talk" button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk. _____

b. Announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration." Then release the "push-to-talk" button in order to listen. _____

c. When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] declaring an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Announce "St. Lucie clear" at the end of the conversation. _____

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5. D. (continued)

NOTE
Use local government radio only if Alternate 1 and Alternate 2 are both unavailable. LGR communications can be made with St. Lucie County and Martin County Emergency Operations Centers (EOCs) who will relay to the State Warning Point and they relay to the Bureau of Radiation Control.

3. Alternate 3 – Local Government Radio

a. On channel 2, contact the county EOCs by holding down the push-to-talk button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration. Over." Then release the "push-to-talk" button in order to listen. When St. Lucie County replies, direct them to standby while you contact Martin County. _____

b. When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] declaring an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. Over." _____

c. When the counties give the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Request St. Lucie County (if they are unable, Martin County) callback to verify that they notified the State Warning Point and the Bureau of Radiation Control. _____

e. End the conversation by announcing "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)], KNGR 874, over and out." _____

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5. (continued)

E. § NRC Notification

NOTE

Notification of the NRC is expected immediately after notification of State and local agencies. The one hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged. The initial contact with the NRC will include use of the NRC Reactor Plant Event Notification Worksheet (Attachment 3). The Duty Call Supervisor (DCS), or other personnel in the Control Room designated by the EC, may assist with this function.

/R2 /R2

1. Prepare the NRC Reactor Plant Event Notification Worksheet. _____

2. Obtain EC approval. _____

3. Notify the NRC via the Emergency Notification System (ENS) telephone immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes (10 CFR 50.72 (a)(3)). The NRC Emergency Notification System (ENS) is the primary communications pathway to the NRC. Initiate contact by dialing (direct, no access code needed) one of the phone numbers provided on the phone or in the ERD. This will become an open line of communication at the Alert or higher emergency class. _____

END OF APPENDIX A

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
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- During the initial stages of an emergency the EC has responsibility for notifications and PARs. When the TSC becomes operational the TSC EC Assistant / Logkeeper should prepare the notification forms. The TSC OPS Coordinator is his alternate. The TSC Communicator makes calls to complete notifications.

- A TSC Communicator should forward documentation from any notifications made from the Control Room, and the TSC, to the EOF.

- When the EOF becomes operational the Recovery Manager has responsibility for notifications and PARs. The TSC Communicator is no longer required to make notification calls but the Communicator, who is on the open line with the NRC, should remain on the line with the EOF taking the lead.

- The TSC EC Assistant / Logkeeper should make a mental note of the time when the notification is due and ensure that it is done within 15 minutes of classification.

- Off-site Communication Content and Protocol

  1. Prepare the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet, per the instructions of this procedure.

  2. It should be clear from the "Reason For Emergency Declaration" which Emergency Action Level (EAL) required the emergency declaration. Wording should be non-technical with no acronyms or abbreviations (e.g., reactor coolant pump instead of RCP).

  3. Determining "Downwind Sectors Affected"

     A. Wind direction can be obtained from the TSC ERDADS Operator or directly from ERDADS by depressing the "EPIP" key on the top row of the keyboard. The Met Tower Indicator Panel in the Unit 1 Control Room is an alternate source.

     B. If the indication is greater than 360° the wind direction is determined by subtracting 360° from the indicated number. Wind direction should be rounded to the nearest whole number.

     C. Wind direction is always given as "wind from." (An easterly wind, or wind direction 90°, means that the wind is blowing from east to west).

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NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
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3. (continued)

   D. When determining the sectors affected, the adjacent sectors on both sides of the actual downwind sector are included. Three sectors will typically be listed.

   E. If the wind is located on the edge of a sector (i.e., 11°, 33°, etc.), an additional (fourth) sector should be added.

Wind From	Sectors Affected	Wind From	Sectors Affected	Wind From	Sectors Affected
348-11	HJK	123-146	PQR	236-258	CDE
11-33	JKL	146-168	QRA	258-281	DEF
33-56	KLM	168-191	RAB	281-303	EFG
56-78	LMN	191-213	ABC	303-326	FGH
78-101	MNP	213-236	BCD	326-348	GHJ
101-123	NPQ	There is no "O" sector		There is no "I" sector	

4. PARs Based on Plant Conditions

NOTE
Initial notification from the Control Room may utilize PARs based on plant conditions. Once dose assessment begins, (PARs) should be made utilizing all of the available data including plant conditions, field monitoring data or off-site dose projections. **Both plant conditions AND off-site doses shall be considered for PARs.** The most conservative recommendations should be made. If it is anticipated that a threshold for a PAR will be exceeded, it is neither necessary nor desirable to wait until the threshold is exceeded to make that PAR.

   A. Beginning at the top left of the PAR flowchart below, answer the General Emergency question.

   B. If the emergency is not a General Emergency (GE), and there is no release, "Utility Recommended Protective Actions" are NONE.

   C. If it is a GE, or there is a release involved, continue using the flowchart.

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
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4. (continued)

   D. Use the appropriate answer to each question until you reach one of the two boxes that provide PAR information based on plant conditions.

   E. If there is no release, go to the TSC PAR worksheet and fill it out based on plant conditions PARs.

   F. If a release has occurred, get information about the release from the TSC Chemistry Supervisor or TSC HP Supervisor.

NOTE

If the Class A Model printout is available it should be used, then

- Determine PARs based on Plant Conditions.
- Compare the dose-based PARs, from the Class A Model printout, to the PARs based on Plant Conditions.
- Write the more conservative PARs on the TSC PAR Worksheet.

1. Obtain the TEDE Dose (NOT dose rate) and the CDE Dose (NOT dose rate) forecasts for your use.

2. Follow the directions below, PARs Based On Off-Site Dose, and compare the results to find the most conservative PARs recommendations.

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NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
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5. PARs Based On Off-Site Dose

CAUTION

Evaluate each dose separately. Use the actual dose at each mile value and move right to the corresponding distance. The PAR is at the intersection. Do NOT use the 1 Mile Value (dose) to attempt finding PARs for 2-5, 5-10 or 10 mile distances.

A. Follow these steps to determine PARs Based on off-site Dose:

1. PARs are based on the Total Dose (TEDE) and/or the Thyroid Dose (CDE) from the Dose Calculation Worksheet in EPIP-09, Off-Site Dose Calculations. This same information is available, when using the Class A Model dose program, on the 10 Mile Standard Report in the Forecast Mode.

2. Using the information acquired in Step 1, start by finding the box, on the PARs flowchart, that corresponds with the projected TEDE dose at 1 mile.

3. Move across right to the first column, which indicates the 0-2 Mile PAR for that dose.

4. Write that PAR in the corresponding 0-2 Mile block on the TEDE DOSE table.

5. Complete the process for both TEDE and CDE.

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NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
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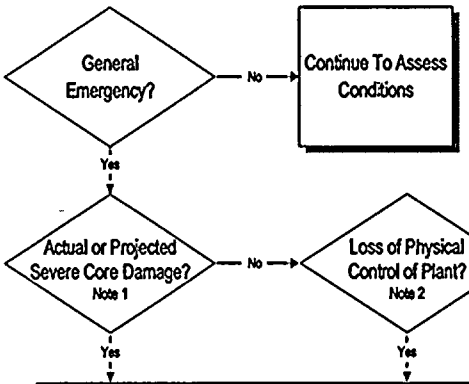
PARs Based on Plant Conditions



MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	None	All
2-5	All Remaining	None	(Sectors Affected)
5-10	All	None	None

MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	All	None
2-5	None	(Sectors Affected)	All Remaining
5-10	None	None	All

Notes
1. Severe core damage is indicated by:
   - Loss of critical functions required for core protection (e.g., loss of injection with LOCA) OR
   - High core temperatures (valid CET greater than 700° F) OR
   - CHRRM reading greater than 4.2 E4 R/hr.
2. Loss of physical control of Control Room or vital reactor operating areas to intruders.

PARs Based on Off-Site Dose
(Not to be completed when Class A Model is used)

TEDE DOSE	CDE (Thyroid) DOSE	0-2 Miles Use 1 mile value	2-5 Miles Use 2 mile value	5-10 Miles Use 5 mile value (Beyond 10 miles Use this Column and the 10 mile Dose Value)
TEDE 500*-999 mrem	CDE 1000*-4999 mrem	Shelter All	Shelter (Sectors Affected)	Shelter (Sectors Affected)
TEDE 1000-4999 mrem	CDE 5000-24999 mrem	Evacuate All	Evacuate (Sectors Affected) + Shelter All Remaining	Evacuate (Sectors Affected) + Shelter All Remaining
TEDE 5000 mrem or Greater	CDE 25000 mrem or Greater	Evacuate All	Evacuate All	Evacuate (Sectors Affected) + Shelter All Remaining

*Dose below this level requires NO ACTION

TEDE DOSE

Use the following terms in this table: NONE, ALL, ALL REMAINING or fill in the letters of the sectors affected.

Miles	NO ACTION	EVACUATE	SHELTER
0-2			
2-5			
5-10			
> 10			

CDE (Thyroid) DOSE

Use the following terms in this table: NONE, ALL, ALL REMAINING or fill in the letters of the sectors affected.

Miles	NO ACTION	EVACUATE	SHELTER
0-2			
2-5			
5-10			
> 10			

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 6 of 13)

6. Selecting the Most Conservative PAR

   A. Fill out the TSC PAR WORKSHEET below by evaluating the PARs from the PAR flowchart just completed.

   B. Write the most conservative in the section titled Protective Actions Recommended by FPL (using only the words NONE, ALL, ALL REMAINING or by listing the letters of the sectors affected).

   C. Obtain approval and signature of the HP Supervisor or Chemistry Supervisor.

   D. The completed form should be used to transfer approved PARs to the Florida Nuclear Plant Emergency Notification Form.

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 7 of 13)

TSC PAR WORKSHEET

Time / Date _____ Emergency Class: ☐ **SAE** ☐ **GE**

A. PAR Comparison

After comparing the possible recommendations from the PARs flowchart, the most conservative PARs are based on: (check one)

☐ PLANT CONDITIONS ☐ OFF-SITE DOSE

Sectors affected _____

B. Protective Actions Recommended by FPL:

Use the following terms in this table: **NONE, ALL, ALL REMAINING Or fill in the letters of the sectors affected.**

	NO ACTION SECTORS	EVACUATE SECTORS	SHELTER SECTORS
0-2 miles			
2-5 miles			
5-10 miles			
10-TBD miles*			

*If necessary, add to State Notification Form.

Signature _____ _____
TSC EC Assistant / Logkeeper HP Supervisor or Chemistry Supervisor

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 8 of 13)

INITIAL

7. Off-site Communication Protocol

CAUTION

- ¶1 If erroneous information is transmitted to off-site agencies and the error is discovered prior to event termination, a correction should be provided in an update. The need for and urgency of providing the update is dependent upon the importance of the error.
- ¶1 If erroneous information is transmitted to off-site agencies, and the error is discovered after event termination, the Licensing Department should be consulted to determine the need and method for contacting the off-site agencies with corrected information.
- ¶3 A new Florida Nuclear Plant Emergency Notification Form shall be completed for all updates.

NOTE

§ Time Limits for Notification of State and Local Agencies

Notifications shall be made as soon as practicable within 15 minutes of Emergency classification.

A. **Obtain the Emergency Coordinator (EC) Approval signature prior to any off-site communication.** _____

B. Using the State HOT RING DOWN (HRD) Phone, dial 100. _____

C. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State answers, announce "This is St. Lucie Nuclear Plant Technical Support Center with an emergency declaration. I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy." Allow the State Warning Point to contact St. Lucie County, Martin County and the Bureau of Radiation Control prior to transmitting the information from the Florida Nuclear Plant Emergency Notification Form. When the parties are on line, provide the information slowly and deliberately with time for the duty officers to write the data. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 9 of 13)

INITIAL

7. (continued)

D. Alternate Communications if Hot Ring Down is not Available (If HRD is used, skip to section E, Follow-up Information Requests from State and Local Agencies). _____

1. Alternate 1 – Commercial Phone

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

a. Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration. My callback number is _____." _____

b. Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

c. ¶2 Request callback from the State Warning Point to verify that they notified St. Lucie County, Martin County and the Bureau of Radiation Control. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 10 of 13)

INITIAL

7. D. (continued)

2. Alternate 2 - ESATCOM

NOTE
Use ESATCOM only if Alternate 1 – commercial phone is not available.

a. Hold down the "push-to-talk" button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk. _____

b. Announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration." Then release the "push-to-talk" button in order to listen. _____

c. When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] declaring an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Announce "St. Lucie clear" at the end of the conversation. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 11 of 13)

INITIAL

7. D. (continued)

3. Alternate 3 – Local Government Radio

NOTE
Use local government radio only if Alternate 1 and Alternate 2 are both unavailable. LGR communications can be made with St. Lucie County and Martin County Emergency Operations Centers (EOCs) who will relay to the State Warning Point and they relay to the Bureau of Radiation Control.

a. On channel 2, contact the county EOCs by holding down the push-to-talk button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration. Over." Then release the "push-to-talk" button in order to listen. When St. Lucie County replies, direct them to standby while you contact Martin County. _____

b. When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] declaring an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. Over." _____

c. When the counties give the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Request St. Lucie County (if they are unable, Martin County) callback to verify that they notified the State Warning Point and the Bureau of Radiation Control. _____

e. End the conversation by announcing "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)], KNGR 874, over and out." _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 12 of 13)

7. (continued)

E. Emergency Follow-up Information Requests from State and Local Agencies

1. Incoming calls should come via the State Warning Point (SWP) over the HOT RING DOWN (HRD) phone. If the HRD is inoperable, the SWP may use commercial telephone or ESATCOM. If an off-site authority contacts the Plant without going through the SWP, request that they contact the SWP. SWP shall verify that the agency calling is a risk county or the Department of Health (DOH) and shall notify other county and state agencies of the updated information, thus reducing the number of calls that may be directed to the Plant.

2. Long, detailed explanations of plant systems or reactor theory should be avoided. If prompted for this kind of information by the State Duty Officer, refer him to the Nuclear Division Duty Officer (NDDO).

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 13 of 13)

INITIAL

7. (continued)

F. § NRC Notification

NOTE
Notification of the NRC is expected immediately after notification of State and local agencies. The one-hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

1. The initial contact with the NRC will include use of the NRC Reactor Plant Event Notification Worksheet (Attachment 3). The Duty Call Supervisor (DCS), or other personnel in the Control Room, may have performed this function. The Communicator will need to ensure that an initial NRC Reactor Plant Event Notification Worksheet has been completed. If not yet done, request that the TSC EC Assistant / Logkeeper, or TSC OPS Coordinator, complete one prior to establishing the open line with the NRC. Once the open line is established the Communicator will log questions but not generate more NRC Reactor Plant Event Notification Worksheets. _____

2. Obtain EC approval of worksheet, as applicable. _____

3. Notify the NRC via the Emergency Notification System (ENS) telephone immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes (10 CFR 50.72 (a)(3)). The NRC Emergency Notification System (ENS) is the primary communications pathway to the NRC. Initiate contact by dialing (direct, no access code needed) one of the phone numbers provided on the phone or in the ERD. This will become an open line of communication at the Alert or higher emergency class. _____

/R2

END OF APPENDIX B

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 1 of 13)

- When the EOF becomes operational the Recovery Manager has responsibility for notifications and PARs. An EOF RM OPS Advisor should prepare the notification forms and the EOF Communicator makes calls to complete notifications.

- An EOF Communicator should receive documentation from the TSC of any notifications that were made from the Control Room and TSC. These documents can be received by FAX.

- An EOF Communicator will take the lead on the open line with the NRC. The TSC Communicator should remain on the line to provide information from sources available in the TSC.

- The EOF RM OPS Advisor should make a mental note of the time when the notification is due and ensure that it is done within 15 minutes of classification.

- Off-site Communication Content and Protocol

  1. Prepare the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet, per the instructions of this procedure.

  2. ¶4 After the State Coordinating Officer arrives in the EOF, this individual can transfer "NET Control" to the EOF. When this occurs the Recovery Manager's briefings become the primary notification method for the State and Counties. The Florida Nuclear Plant Emergency Notification Form (including Supplemental Data Sheet) should still be completed and provided to the State Coordinating Officer or his / her designee in the EOF. Calls by FPL personnel over the Hot Ring Down telephone would no longer be made.

  3. It should be clear from the "Reason For Emergency Declaration" which Emergency Action Level (EAL) required the emergency declaration. Wording should be non-technical with no acronyms or abbreviations (e.g., reactor coolant pump instead of RCP).

  4. Determining "Downwind Sectors Affected"

     A. Wind direction can be obtained from the EOF ERDADS Operator or directly from ERDADS by depressing the "EPIP" key on the top row of the keyboard. If ERDADS is unavailable, the information can be obtained from the TSC.

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NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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4. (continued)

   B. If the indication is greater than 360° the wind direction is determined by subtracting 360° from the indicated number. Wind direction should be rounded to the nearest whole number.

   C. Wind direction is always given as "wind from." (An easterly wind, or wind direction 90°, means that the wind is blowing from east to west).

   D. When determining the sectors affected, the adjacent sectors on both sides of the actual downwind sector are included. Three sectors will typically be listed.

   E. If the wind is located on the edge of a sector (i.e., 11°, 33°, etc.), an additional (fourth) sector should be added.

Wind From	Sectors Affected	Wind From	Sectors Affected	Wind From	Sectors Affected
348-11	HJK	123-146	PQR	236-258	CDE
11-33	JKL	146-168	QRA	258-281	DEF
33-56	KLM	168-191	RAB	281-303	EFG
56-78	LMN	191-213	ABC	303-326	FGH
78-101	MNP	213-236	BCD	326-348	GHJ
101-123	NPQ	There is no "O" sector		There is no "I" sector	

5. PARs Based on Plant Conditions

NOTE

Initial notification from the Control Room may utilize PARs based on plant conditions. Once dose assessment begins, (PARs) should be made utilizing all of the available data including plant conditions, field monitoring data or off-site dose projections. **Both plant conditions AND off-site doses shall be considered for PARs.** The most conservative recommendations should be made. If it is anticipated that a threshold for a PAR will be exceeded, it is neither necessary nor desirable to wait until the threshold is exceeded to make that PAR.

   A. Beginning at the top left of the PAR flowchart below, answer the General Emergency question.

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NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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5. (continued)

B. If the emergency is not a General Emergency (GE), and there is no release, "Utility Recommended Protective Actions" are NONE.

C. If it is a GE, or there is a release involved, continue using the flowchart.

D. Use the appropriate answer to each question until you reach one of the two boxes that provide PAR information based on plant conditions.

E. If there is no release, go to the EOF PAR Worksheet and fill it out based on plant conditions PARs.

F. If a release has occurred, get the information about the release from the EOF HP Manager or Dose Assessor.

NOTE

If the Class A Model printout is available it should be used, then

- Determine PARs based on Plant Conditions.
- Compare the dose-based PARs, from the Class A Model printout, to the PARs based on Plant Conditions.

Write the more conservative PARs on the EOF PAR Worksheet.

1. Obtain the TEDE Dose (NOT dose rate) and the CDE Dose (NOT dose rate) forecasts for your use.

2. Follow the directions below, PARs Based On Off-Site Dose, and compare the results to find the most conservative PARs recommendations.

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NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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6. PARs Based On Off-Site Dose

CAUTION
Evaluate each dose separately. Use the actual dose at each mile value and move right to the corresponding distance. The PAR is at the intersection. Do NOT use the 1 Mile Value (dose) to attempt finding PARs for 2-5, 5-10 or 10 mile distances.

A. Follow these steps to determine PARs Based on off-site Dose:

1. PARs are based on the Total Dose (TEDE) and/or the Thyroid Dose (CDE) from the Dose Calculation Worksheet in EPIP-09, Off-Site Dose Calculations. This same information is available, when using the Class A Model dose program, on the 10 Mile Standard Report in the Forecast Mode.

2. Using the information acquired in Step 1, start by finding the box, on the PARs flowchart, that corresponds with the projected TEDE dose at 1 mile.

3. Move across right to the first column, which indicates the 0-2 Mile PAR for that dose.

4. Write that PAR in the corresponding 0-2 Mile block on the TEDE DOSE table.

5. Complete the process for both TEDE and CDE.

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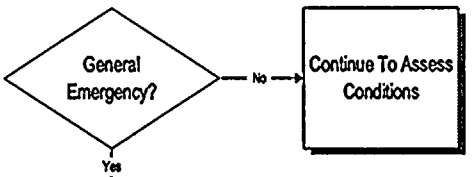
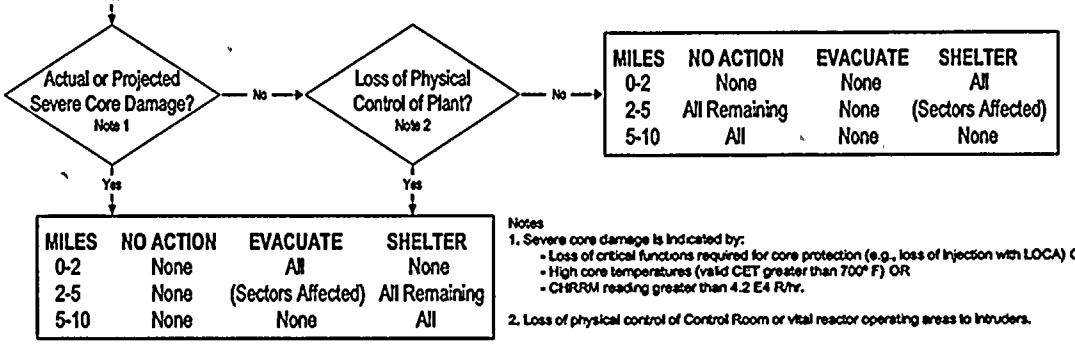
PARs Based on Plant Conditions



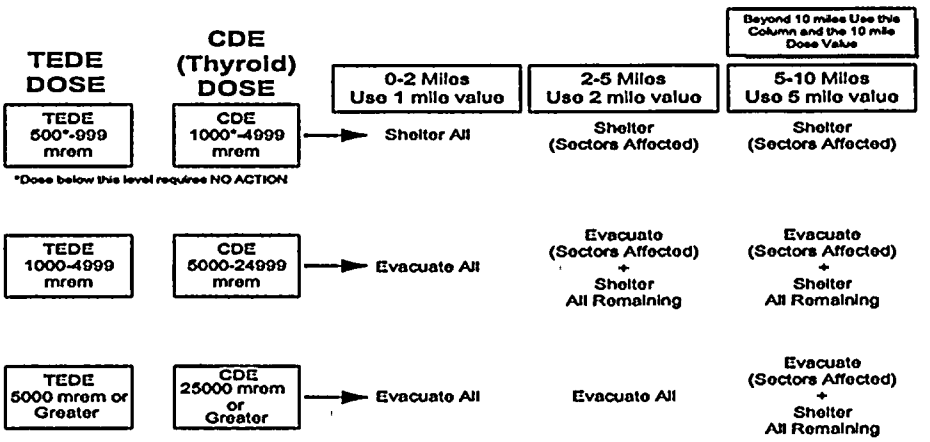


MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	None	All
2-5	All Remaining	None	(Sectors Affected)
5-10	All	None	None

MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	All	None
2-5	None	(Sectors Affected)	All Remaining
5-10	None	None	All

Notes
1. Severe core damage is indicated by:
   - Loss of critical functions required for core protection (e.g., loss of injection with LOCA) OR
   - High core temperatures (valid CET greater than 700° F) OR
   - CHRRM reading greater than 4.2 E4 R/hr.
2. Loss of physical control of Control Room or vital reactor operating areas to intruders.

PARs Based on Off-Site Dose
(Not to be completed when Class A Model is used)



TEDE DOSE

Use the following terms in this table: NONE, ALL, ALL REMAINING or fill in the letters of the sectors affected.

Miles	NO ACTION	EVACUATE	SHELTER
0-2			
2-5			
5-10			
> 10			

CDE (Thyroid) DOSE

Use the following terms in this table: NONE, ALL, ALL REMAINING or fill in the letters of the sectors affected.

Miles	NO ACTION	EVACUATE	SHELTER
0-2			
2-5			
5-10			
> 10			

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NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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7. Selecting the Most Conservative PAR

   A. Fill out the EOF PAR WORKSHEET below by evaluating the PARs from the PAR flowchart just completed.

   B. Write the most conservative in the section titled Protective Actions Recommended by FPL (using only the words NONE, ALL, ALL REMAINING or by listing the letters of the sectors affected).

   C. Obtain approval and signature of the HP Manager.

   D. The completed form should be used to transfer approved PARs to the Florida Nuclear Plant Emergency Notification Form.

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NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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EOF PAR WORKSHEET

Time / Date _____ Emergency Class: ☐ SAE ☐ GE

A. PAR Comparison

After comparing the possible recommendations from the PARs flowchart, the most conservative PARs are based on: (check one)

☐ PLANT CONDITIONS ☐ OFF-SITE DOSE

Sectors affected _____

B. Protective Actions Recommended by FPL:

Use the following terms in this table: **NONE, ALL, ALL REMAINING Or fill in the letters of the sectors affected.**

	NO ACTION SECTORS	EVACUATE SECTORS	SHELTER SECTORS
0-2 miles			
2-5 miles			
5-10 miles			
10-TBD miles*			

*If necessary, add to State Notification Form.

Signature _____ _____
RM OPS Advisor / Logkeeper HP Manager

C. Protective Actions Implemented by the State / Counties:

Areas _____ Time Sirens Sounded: _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 8 of 13)

INITIAL

8. Off-site Communication Protocol

CAUTION

- ¶1 If erroneous information is transmitted to off-site agencies and the error is discovered prior to event termination, a correction should be provided in an update. The need for and urgency of providing the update is dependent upon the importance of the error.
- ¶1 If erroneous information is transmitted to off-site agencies, and the error is discovered after event termination, the Licensing Department should be consulted to determine the need and method for contacting the off-site agencies with corrected information.
- ¶3 A new Florida Nuclear Plant Emergency Notification Form shall be completed for all updates.

NOTE

§ Time Limits for Notification of State and Local Agencies

Notifications shall be made as soon as practicable within 15 minutes of Emergency classification.

A. **Obtain the Recovery Manager (RM) Approval signature prior to any off-site communication.** _____

B. ¶4 If the State Coordinating Officer has transferred NET Control to the EOF, the RM shall do the communication face-to-face. The Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 2) and the Supplemental Data Sheet (form similar to Attachment 2A) should still be completed and provided to the State Coordinating Officer or his / her designee in the EOF. Calls by FPL personnel over Hot Ring telephone should no longer be made. _____

C. If NET Control has <u>not</u> been transferred to the EOF, then, using the State HOT RING DOWN (HRD) phone, dial 100. _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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8. (continued)

D. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State answers, announce "This is St. Lucie Nuclear Plant Emergency Operations Facility with an emergency declaration. I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy." Allow the State Warning Point to contact St. Lucie County, Martin County and the Bureau of Radiation Control prior to transmitting the information from the Florida Nuclear Plant Emergency Notification Form. When the parties are on line, provide the information slowly and deliberately with time for the duty officers to write the data. _____

E. Alternate Communications if Hot Ring Down is not Available (If HRD is used or NET Control has been transferred to the EOF, skip to section F, NRC Notification). _____

1. Alternate 1 – Commercial Phone

NOTE

Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

a. Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration. My callback number is _____." _____

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8. E. 1. (continued)

b. Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

c. ¶2 Request callback from the State Warning Point to verify that they notified St. Lucie County, Martin County and the Bureau of Radiation Control. _____

2. Alternate 2 - ESATCOM

NOTE
Use ESATCOM only if Alternate 1 – commercial phone is not available.

a. Hold down the "push-to-talk" button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk. _____

b. Announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration." Then release the "push-to-talk" button in order to listen. _____

c. When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] declaring an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy." When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Announce "St. Lucie clear" at the end of the conversation. _____

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NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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8. E. (continued)

3. Alternate 3 – Local Government Radio

NOTE
Use local government radio only if Alternate 1 and Alternate 2 are both unavailable. LGR communications can be made with St. Lucie County and Martin County Emergency Operations Centers (EOCs) who will relay to the State Warning Point and they relay to the Bureau of Radiation Control.

a. On channel 2, contact the county EOCs by holding down the push-to-talk button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] with an emergency declaration. Over." Then release the "push-to-talk" button in order to listen. When St. Lucie County replies, direct them to standby while you contact Martin County. _____

b. When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)] declaring an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. Over." _____

c. When the counties give the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Request St. Lucie County (if they are unable, Martin County) callback to verify that they notified the State Warning Point and the Bureau of Radiation Control. _____

e. End the conversation by announcing "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2, TSC or EOF)], KNGR 874, over and out." _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
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8. (continued)

F. § NRC Notification

NOTE
Notification of the NRC is expected immediately after notification of State and local agencies. The one-hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

1. The initial contact with the NRC will include use of the NRC Reactor Plant Event Notification Worksheet (Attachment 3). Control Room or TSC personnel may have performed this function. The Communicator will need to ensure that an initial NRC Reactor Plant Event Notification Worksheet has been completed. The EOF Communicator should request documentation of any notification(s), state or NRC, made prior to this point if they have not yet been received. If NRC notification has not been made, the EOF RM OPS Advisor shall complete a Worksheet, prior to establishing the open line with the NRC. Once the open line is established the Communicator will log questions but not generate more Worksheets. _____

2. Obtain RM approval of worksheet, as applicable. _____

/R2

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)

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INITIAL

8. F. (continued)

3. Notify the NRC via the Emergency Notification System (ENS) telephone immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes (10 CFR 50.72 (a)(3)). The NRC Emergency Notification System (ENS) is the primary communications pathway to the NRC. Initiate contact by dialing (direct, no access code needed) one of the phone numbers provided on the phone or in the ERD. This becomes an open line of communication at the Alert or higher emergency class. The TSC is likely to have already established this open line. The EOF Communicator should call the NRC and request to be put on the conference bridge with the NRC and St. Lucie Technical Support Center. The EOF should take the lead and log questions from the NRC. _____

END OF APPENDIX C

ATTACHMENT 1
PRIMARY EMERGENCY COMMUNICATIONS SYSTEMS
(Page 1 of 3)

1. COMMUNICATIONS SYSTEMS

   A. State Warning Point (SWP) Hot Ring Down Phone (HRD)

      1. **This is the primary communications pathway to the State Warning Point, St. Lucie County, Martin County and the Bureau of Radiation Control.**

      2. A self-verifying phone system which is initiated by entering the 3 digit code corresponding to the desired location of contact. The codes appear on a list in a pull-out drawer attached to the base of the phone or in the St. Lucie Plant Emergency Response Directory (ERD). A confirmation ring-back (double tone) will be heard if the dialed terminal is successfully contacted. When the party answers, begin transmission by depressing the "push-to-talk" bar in the handset. Release the "push-to-talk" bar to receive response.

   B. NRC Emergency Notification System (ENS)

      1. **This is the primary communications pathway to the NRC.**

      2. Initiate contact by dialing (direct, no access code needed) one of the phone numbers provided on the phone or in the ERD. This will become an open line of communication at the Alert or higher emergency class. The EOF will join the conference bridge if it becomes operational.

   C. Direct-line Telephone

      1. **This is a direct line between the TSC and the EOF.** Initiate contact by removing the handset from the cradle, which will cause the phone to ring in the other facility. When the phone is answered you can begin transmission.

ATTACHMENT 1
PRIMARY EMERGENCY COMMUNICATIONS SYSTEMS
(Page 2 of 3)

1. (continued)

D. Sound-powered Phone

1. **This is a link between the Control Room and the TSC.** These phone (headsets) are powered by sound.

2. In the TSC the Unit 1 phone jack is located near the Dose Assessment Status Board; the Unit 2 phone jack is located next to the Chronology Status Board in the rear of the room.

3. Once the headsets have been connected in both the affected Control Room and the TSC, transmission can begin by speaking into the mouthpiece.

E. Commercial Telephone

1. **This is the first alternate communications pathway to the State Warning Point, St. Lucie County, Martin County, the Bureau of Radiation Control and the NRC.**

2. Dial 9 for a Fort Pierce exchange; dial 8-1-Area Code for all other numbers. An authorization code is needed for long distance calls.

F. Emergency Satellite Communications System (ESATCOM)

1. **This is a second alternate communications pathway to the State Warning Point, St. Lucie County, Martin County and the Bureau of Radiation Control.**

2. To initiate transmission, lift the handset and depress the "push-to-talk" bar in the handset. Wait 3-5 seconds to hear a beep before starting to talk. The red light on the phone is a power indicator, when lit, power is available.

ATTACHMENT 1
PRIMARY EMERGENCY COMMUNICATIONS SYSTEMS
(Page 3 of 3)

1. (continued)

   G. Local Government Radio (LGR) – Call Sign: Kilo November Golf Romeo 8-7-4 (KNGR874).

      1. **This is the third alternate communications pathway to the State Warning Point, St. Lucie County, Martin County and the Bureau of Radiation Control.**

      2. The LGR serves as a backup communications system to the counties and indirectly to State agencies. A table radio, Motorola Command Series, provides two channels, the primary F2 (39.180 MHz, State Channel 1) and the secondary F1 (39.100 MHz, State Channel 2). Channel selection can be made by depressing the "F1 / F2" button (the radio is set to monitor F2). The radio can be operated either by depressing the "transmit" button on the console or by removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. (Preference should be given to using the handset).

   H. Satellite Telephone

      1. Instructions for use of the satellite telephone are provided in the phone's briefcase.

      2. The phone is stored in a supply cabinet in the TSC.

END OF ATTACHMENT 1

ATTACHMENT 2
FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 1 of 1)

1. A. ☐ THIS IS A DRILL B. ☐ THIS IS AN ACTUAL EVENT

2. A. Time / Date contact made_____ B. Reported by: (Name / Title)_____
   C. Message Number_____ D. Reported from: ☐ Control Room ☐ TSC ☐ EOF

3. Site: A. ☐ Crystal River Unit 3 B. ☐ St. Lucie Unit 1 C. ☐ St. Lucie Unit 2
   D. ☐ Turkey Point Unit 3 E. ☐ Turkey Point Unit 4

4. Accident Classification A. ☐ Notification of Unusual Event C. ☐ Site Area Emergency
   B. ☐ Alert D. ☐ General Emergency

5. Current Emergency Declaration: Time:_____ Date:_____

6. Reason for Emergency Declaration:*_____

7. Additional Information or Update:_____

8. Injuries Requiring Offsite Support: A. ☐ No ☐ Yes ☐ Unknown B. Contaminated: ☐ No ☐ Yes ☐ Unknown

9. Weather Data: A. Wind direction from _____ degrees
   B. Downwind Sectors Affected (minimum of 3): _____, _____, _____, _____

10. Release Status: A. ☐ No Release (Go to Item 12) C. ☐ A Release occurred, but stopped
    B. ☐ A Release is occurring

11. Offsite Release Significance Category (at the Site Boundary):
    A. ☐ Information not available at this time.
    B. ☐ Release within normal operating limits (≤ 3.5 E-1 ci/sec noble gas, ≤ 4.6 E-5 ci/sec iodine)
    C. ☐ Non-Significant Fraction of PAG Range (release is > normal limits and < 500 mR TEDE and 1000 mR CDE)
    D. ☐ PAG Range (≥ 500 mR TEDE or ≥ 1000 mR CDE)

12. Utility Recommended Protective Actions:
    A. ☐ None B. ☐ Shelter Zones / Areas:_____
    Evacuate Zones / Areas:_____
    OR C. ☐

Miles	No Action Sectors	Evacuate Sectors	Shelter Sectors
0 – 2			
2 – 5			
5 – 10			

13. Has Event Been Terminated?: A. ☐ No B. ☐ Yes: Time:_____ Date:_____

14. Supplemental Form is Attached?: A. ☐ No B. ☐ Yes:

    EC or RM Approval Signature:_____ Time:_____ Date:_____

15. Message Received By: Name:_____ Time:_____ Date:_____

* If emergency class escalation is known to be necessary and a new notification form will be transmitted within 15 minutes, then you may go to line 15.

END OF ATTACHMENT 2

ATTACHMENT 2A
SUPPLEMENTAL DATA SHEET
(Page 1 of 1)

The following supplemental data is to be completed after the TSC or EOF is declared operational at Alert or higher.

Supplement to Message Number _____

PLANT CONDITIONS INFORMATION

Critical Safety Functions:

A. Reactor Shutdown? ☐ Yes ☐ No

B. Core Adequately Cooled? ☐ Yes ☐ No

C. Adequate Emergency Power Available (Diesels)? ☐ Yes ☐ No

Fission Product Barrier Status: (Check one condition for each barrier)

BARRIER	√	INTACT	√	CHALLENGED	√	LOST	√	REGAINED
Fuel Cladding		No indication of clad damage		Clad is intact but losing subcooling, water level, etc.		Clad has failed, indicated by high temps., high containment rad, etc.		Cooling restored, no further degradation expected
Pri. Reactor Coolant System		Leakage is within normal charging or makeup pump capacity		Leakage is within safety injection capacity		Leakage exceeds safety injection capacity		Leakage reduced to within injection capacity (system repaired)
Containment		No evidence of containment leakage or tube rupture release is only through condenser		No leakage but containment pressure is at or above safety system actuation points		Evidence of containment leakage (known release path or rad surveys)		Repair efforts have isolated leak or containment pressure has reduced to stop leakage

Completed by:_____ Time:_____ Date:_____

RADIOLOGICAL DOSE ASSESSMENT DATA

1. Release Status: A. ☐ No Release (no further data required) C. ☐ A Release occurred, but stopped
   B. ☐ A Release is occurring

2. Release Rate:
   A. ☐ Noble Gases: _____ Curies per second ☐ Measured ☐ Default
   B. ☐ Iodines: _____ Curies per second ☐ Measured ☒ Default

3. Type of Release:
   A. ☐ Airborne Time / Date Started:_____ B. ☐ Liquid Time / Date Started:_____
   Time / Date Stopped:_____ Time / Date Stopped:_____

4. Projected Off-Site Dose Rate:

Distance	Thyroid Dose Rate (CDE)	Total Dose Rate (TEDE)
1 Mile (Site Boundary)	A._____mrem/hr	B._____mrem/hr
2 Miles	C._____mrem/hr	D._____mrem/hr
5 Miles	E._____mrem/hr	F._____mrem/hr
10 Miles	G._____mrem/hr	H._____mrem/hr

5. Weather Data (used for the above data):
   A. Wind Direction from _____ degrees
   B. Wind Speed _____ MPH
   C. Stability Class _____

Completed By:_____ Time:_____ Date:_____

Emergency Coordinator or Recovery Manager Approval_____

END OF ATTACHMENT 2A

¶6 ATTACHMENT 2B
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 1 of 6)

ITEM ENTRY

1. Check appropriate box for drill or actual emergency as the case may be. During exercises, drills, or tests, each message shall be checked **THIS IS A DRILL.**

2A. Enter the time (using the official time, normally synchronized with ERDADS) when contact is made with the State Warning Point or the State Coordinator Officer (SCO). For initial notification of classification, this shall be within 15 minutes of the "Current Emergency Declaration" time in item 5. /R2

2B. Enter the name and title of person making the notification call (e.g., John Doe, Duty Call Supervisor).

2C. Enter the message number beginning with #1 and following sequentially in all facilities (e.g., if the Control Room transmitted two messages the TSC would start with #3).

2D. Check the box for the facility from which the notification is being made.

3. Site
Check the box for the appropriate plant site for the emergency declaration (both St Lucie boxes might need to be checked for dual unit events such as approach of a hurricane).

4. Accident Classification
Check the box corresponding to current accident classification declared by the EC.

5. Current Emergency Declaration
Enter the emergency declaration **time** and **date** (as determined by the EC) for the current accident classification.

6. Reason for Emergency Declaration
Enter wording like that found in the Emergency Action Level (EAL) information in EPIP-01, Classification Of Emergencies. Wording should be brief yet descriptive enough for the off-site agencies to gain an understanding of the event. It should be clear from the incident description which EAL has necessitated the emergency declaration. Wording should be as non-technical as possible with no acronyms or abbreviations. This information should remain the same throughout update messages, unless there is a classification change. (The EC has this information.)

ATTACHMENT 2B
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 2 of 6)

7. Additional Information or Update

Enter additional information, if necessary, or reason for update here. For example:

- Protective Action Recommendations (PARs) change
- An occurrence that would otherwise result in a lower emergency classification, on other unit
- Weather changes affecting public safety
- Radiation level changes
- Loss of off-site power, etc.

8. Injuries Requiring Off-site Support

NOTE

Keep checking the same boxes, in item 8, on subsequent notifications unless a first injury occurs, status of contamination becomes known or erroneous data is being corrected. The checked box is to alert the County that patient transport is involved in the emergency. That fact does not change even though the transport may have already occurred during a previous notification.

/R2

A. Check the appropriate box. Check box for "Yes" only if injuries occurred that involve off-site support (EMS, hospital). Check "Unknown" if the extent of the injuries are unknown at this time or if it is not yet known if off-site treatment is necessary.

B. Check the appropriate box. Check box for "Unknown" only if the nature of the injuries have prevented thorough monitoring on-site or if there is any doubt whether contamination is present.

NOTE

If the Class A Model is being used, a 'State Notification Form Summary Sheet' is available which provides information for completion of items 9-12. The information is in a format similar to that found on the Florida Nuclear Plant Emergency Notification Form.

/R2

ATTACHMENT 2B
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 3 of 6)

9. Weather Data

A. Enter the wind direction (wind from) in degrees in item "A."

NOTE
The wind direction can be obtained from ERDADS by depressing the "EPIP" key, on the top row of the keyboard, or by checking the Met Tower Indicator Panel on Unit 1. If the indication is greater than 360° the wind direction would be determined by subtracting 360° from the indicated number. Wind direction can be rounded to the nearest whole number.

B. Enter the Downwind Sectors in item "B."

Wind From	Sectors Affected	Wind From	Sectors Affected	Wind From	Sectors Affected
348-11	HJK	123-146	PQR	236-258	CDE
11-33	JKL	146-168	QRA	258-281	DEF
33-56	KLM	168-191	RAB	281-303	EFG
56-78	LMN	191-213	ABC	303-326	FGH
78-101	MNP	213-236	BCD	326-348	GHJ
101-123	NPQ	There is no "O" sector		There is no "I" sector	

10. Release Status

A. If there are no indications of a radioactive release, check box "A" and go to item 12.

A release (during any declared emergency) is defined as:

- Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values

OR

- Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

B. If a release is occurring, even though it may be less than normal operating limits, check box "B."

ATTACHMENT 2B
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 4 of 6)

10. (continued)

C. If a release has occurred but stopped, check box "C."

Specific dose information should be supplied on the supplemental data sheet after the TSC is declared operational at an Alert or higher classification.

Dose Assessment personnel in the TSC or EOF will have this information. The TSC Chemistry Supervisor, TSC HP Supervisor or EOF HP Manager should be contacted for the data.

11. Offsite Release Significance Category
Do Not Check Any Box in Item 11 if you Checked Box 10 "A" No Release

A. If a release is occurring or has occurred and dose information is not available at the time of notification, check box "A" and follow up as soon as information becomes available.

B. Check box "B" if both noble gas and iodine release rates are less than or equal to the following:

Noble Gas release ≤ 3.5 E+5 uci/sec (3.5 E-1 ci/sec)
Iodine release ≤ 4.6 E+1 uci/sec (4.6 E-5 ci/sec)

C. Check box "C" if either noble gas or iodine release rates exceed the values in "B" (above) but forecasted 1 mile doses are less than either 500 mrem TEDE or 1000 mrem Thyroid CDE. These doses are less than the state's Protective Action Guide (PAG) levels.

D. Check box "D" if forecasted 1 mile doses are greater than or equal to either 500 mrem TEDE or 1000 mrem Thyroid CDE. These PAG levels require state and county action.

ATTACHMENT 2B
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 5 of 6)

12. Utility Recommended Protective Actions

A. If there are no protective action recommendations (PARs), check Box "A."

B. This box pertains to Crystal River or may be used by off-site agencies and should not be used by FPL.

C. If PARs are necessary, then check Box "C." Determine appropriate PARs using the guidance in your facility's appendix in this procedure. Copy the PARs into item 12 "C." Indicate PARs using only the words NONE, ALL, ALL REMAINING or by listing the letters of the sectors affected. Protective Action Recommendations shall be approved by the Emergency Coordinator (EC) or the Recovery Manager (RM).

13. Has Event Been Terminated?

A. Check box "A" if the event has not been terminated. DO NOT ENTER A TIME OR DATE.

B. Check box "B" if the event has been terminated and enter the time and date of termination. The EC has this information.

14. Supplemental Form Is Attached?

A. Check box "A" unless a Supplemental Form has been completed for this particular message.

B. Check box "B" if a Supplemental Form is accompanying this message.

The Emergency Coordinator (EC) or Recovery Manager (RM) shall sign to indicate approval to transmit the information contained on the form unless the second page (Supplemental Data Sheet) is signed for a two-page notification. The EC or RM Approval Signature line is not numbered because the state and counties do not need this information. DO NOT ATTEMPT TO TRANSMIT THIS INFORMATION VIA HOT RING DOWN. The state and county forms, to which they are copying data, do not contain this signature line.

ATTACHMENT 2B
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 6 of 6)

15. Message Received By

Enter the name of the State Warning Point Duty Officer or the individual that receives the notification. Enter the time at the State Warning Point (request it from the Duty Officer) and indicate the date the call is completed.

END OF ATTACHMENT 2B

ATTACHMENT 2C
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 1 of 3)

"Supplement to Message Number" is the same number recorded in 2. "C" on the Florida Nuclear Plant Emergency Notification Form associated with this Supplemental Data Sheet.

Plant Conditions Information

Critical Safety Functions
Answer the three questions "yes" or "no" by checking the appropriate box.
A. Is the reactor shutdown?
B. Is the core adequately cooled?
C. Is there adequate emergency power available (diesels)?

Fission Product Barrier Status
Check one condition for each barrier – intact, challenged, lost, or regained.

"Completed By" should be filled in by the person recording the information on this form by printing their name on this line.

Radiological Dose Assessment Data (To Be Obtained from Dose Assessment Personnel)

> **NOTE**
> If the Class A Model is being used, a 'Supplemental Data Sheet – Radiological Dose Assessment Data' form is available which provides information for completion of items 1-5. The information is in a format similar to that found on the Supplemental Data Sheet.

/R2

1. Release Status

   A. If there are no indications of a radioactive release, check box "A."

   B. If a release is occurring, even though it may be less than normal operating limits, check box "B."

   C. If a release has occurred but stopped, check box "C."

   A release (during any declared emergency) is defined as:

   - Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values

   OR

   - Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

ATTACHMENT 2C
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 2 of 3)

2. Release Rate
This section requires the completed results of dose assessment.

   A. Check the noble gas box for a noble gas release. Write the release rate (in curies per second) in the space provided. Check either "Measured" or "Default" to indicate how the release rate was determined.

   B. Check the iodines box for an iodine release. Write the release rate (in curies per second) in the space provided. Check either "Measured" or "Default" to indicate how the release rate was determined.

3. Type of Release
Check the type of release – either airborne or liquid. Enter the time and date that the release started and stopped.

4. Projected Off-Site Dose Rate
This section requires the completed results of dose assessment. Enter the projected Thyroid Dose Rate (CDE) and the Total Dose Rate (TEDE) in mrem/hr for the site boundary, 2, 5, and 10 mile distances.

5. Weather Data

   A. Wind Direction From – Enter the wind direction used by Dose Assessor.

> **NOTE**
> The wind direction can be obtained from ERDADS by depressing the "EPIP" key, on the top row of the keyboard, or by checking the Met Tower Indicator Panel on Unit 1. If the indication is greater than 360° the wind direction would be determined by subtracting 360° from the indicated number. Wind direction can be rounded to the nearest whole number.

   B. Wind Speed – Enter the wind speed used by Dose Assessor. The wind speed can be read from ERDADS (or the MET Tower Indicator Panel on Unit 1).

   C. Stability Class – Enter the stability class determined by Dose Assessor. Figure below shows the Delta-T (60 meter temperature minus 10 meter temperature) used to find stability class.

ATTACHMENT 2C
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 3 of 3)

5. (continued)

If Delta – T is	Then Stability Class is
Is less than or equal to -1.7	A
-1.6 To -1.5	B
-1.4	C
-1.3 To -0.5	D
-0.4 To +1.4	E
+1.5 To +3.6	F
greater than +3.6	G

Completing the Supplemental Data Sheet

Completed By: The person completing the form should print their name on this line.

Approval needs to be signed by the EC or RM who approves the forms. The EC or RM shall sign to indicate approval to transmit the information contained on the forms. The Supplemental Data Sheet signature, for a two-page notification, indicates approval of both the first and second pages. On a two-page notification the EC or RM only need sign the second page to approve both the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet. The "Emergency Coordinator or Recovery Manager Approval" lines are not numbered because the state and counties do not need this information. DO NOT ATTEMPT TO TRANSMIT THIS INFORMATION VIA HOT RING DOWN. The state and county forms, to which they are copying data, do not contain these lines.

END OF ATTACHMENT 2C

ATTACHMENT 3
¶8 NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 1 of 2)

NRC FORM 361 (12-2000)

U.S. NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

REACTOR PLANT EVENT NOTIFICATION WORKSHEET

EN #

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	NAME OF CALLER	CALL BACK #

EVENT TIME & ZONE	EVENT DATE	POWERMODE BEFORE	POWERMODE AFTER

EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)			(v)(A) Safe S/D Capability	AINA
GENERAL EMERGENCY	GEN/AAEC		TS Deviation	ADEV	(v)(B) RHR Capability	AINB
SITE AREA EMERGENCY	SIT/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)			(v)(C) Control of Rad Release	AINC
ALERT	ALE/AAEC	(i)	TS Required S/D	ASHU	(v)(D) Accident Mitigation	AIND
UNUSUAL EVENT	UNU/AAEC	(iv)(A)	ECCS Discharge to RCS	ACCS	(xii) Offsite Medical	AMED
50.72 NON-EMERGENCY	(see next columns)	(iv)(B)	RPS Actuation (scram)	ARPS	(xiii) Loss Comm/Asmt/Resp	ACOM
PHYSICAL SECURITY (73.71)	DDDD	(xi)	Offsite Notification	APRE	60-Day Optional 10 CFR 50.73(a)(1)	
MATERIAL/EXPOSURE	B???	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)			Invalid Specified System Actuation	AINA
FITNESS FOR DUTY	HFIT	(ii)(A)	Degraded Condition	ADEG	Other Unspecified Requirement (Identify)	
OTHER UNSPECIFIED REQMT.	(see last column)	(ii)(B)	Unanalyzed Condition	AUNA		NONR
INFORMATION ONLY	NNF	(iv)(A)	Specified System Actuation	AESF		NONR

DESCRIPTION

Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc. (Continue on back)

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT			
STATE(s)			
LOCAL			
OTHER GOV AGENCIES			
MEDIA/PRESS RELEASE			

ANYTHING UNUSUAL OR NOT UNDERSTOOD? ☐ YES (Explain above) ☐ NO

DID ALL SYSTEMS FUNCTION AS REQUIRED? ☐ YES ☐ NO (Explain above)

MODE OF OPERATION UNTIL CORRECTED:

ESTIMATED RESTART DATE:

ADDITIONAL INFO ON BACK ☐ YES ☐ NO

ATTACHMENT 3
¶8 NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 2 of 2)

RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS (specific details/explanations should be covered in event description)												
☐	LIQUID RELEASE	☐	GASEOUS RELEASE	☐	UNPLANNED RELEASE	☐	PLANNED RELEASE	☐	ONGOING	☐	TERMINATED	
☐	MONITORED	☐	UNMONITORED	☐	OFFSITE RELEASE	☐	T.S. EXCEEDED	☐	RM ALARMS	☐	AREAS EVACUATED	
☐	PERSONNEL EXPOSED OR CONTAMINATED			☐	OFFSITE PROTECTIVE ACTIONS RECOMMENDED			☐	*State release path in description			

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium and dissolved noble gases)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS					
% T.S. LIMIT (if applicable)					

RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS: (specific details/explanations should be covered in event description)

LOCATION OF THE LEAK (e.g., SG #, valve, pipe, etc.)

LEAK RATE	UNITS: gpm/gpd	T.S. LIMITS	SUDDEN OR LONG-TERM DEVELOPMENT
LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS:	PRIMARY / SECONDARY

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL

EVENT DESCRIPTION (Continued from front)

END OF ATTACHMENT 3

/R2

¶7 ATTACHMENT 3A
DIRECTIONS FOR COMPLETING THE NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 1 of 2)

/R2

A. Contact information - to be completed following contact

1. Name of the person contacting the NRC or other designated FPL contact.
2. NRC Contacts Name - will be provided upon contact. Also obtain the event number and notification time as received from the HOO should be recorded on the top of the worksheet.

B. Reactor Plant Event Notification Worksheet, Page 1 /R2

> **NOTE**
> The "EN #" is provided by the NRC. /R2

1. Notification Time - enter the time contact is made.
2. Unit - enter the appropriate unit number: Enter "0" for a classification common to both units.
3. Callers Name - enter the name of the person making the call.
4. Call back # - enter the number of the ENS phone that you are calling from and the commercial phone number at which you can be reached.
5. Event time and Zone - enter the military time, the zone will be "EST" for Easter Standard Time or "EDT" for Eastern Daylight-savings Time.
6. Event Date - enter the date the event is occurring.
7. Power / Mode Before & Power / Mode After - enter the power in percent and the mode number (1-6) before and after the event.

> **NOTE**
> Abbreviations/acronyms (e.g., UNU/AAEC, SIT/AAEC, etc.) are for NRC use only. /R2

8. Event Classifications - check one of the four blocks for General Emergency, Site Area Emergency, Alert, or Notification of Unusual Event.

¶7 ATTACHMENT 3A
DIRECTIONS FOR COMPLETING THE NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 2 of 2)

/R2

B. (continued)

> **NOTE**
> No other blocks in the upper half of the form are required.

9. Description - provide a written description of the event.

> **NOTE**
> Check the blocks in the lower portion of the form based on current conditions.

10. Mode of operation until corrected - provided if known.

11. Estimate for restart date - enter "unknown".

12. Additional info on Page 2 - enter yes or no.

C. Reactor Plant Event Notification Worksheet, Page 2 /R2

1. Fill in as much of the information on the form as is immediately available - do not create undue delay in making the notification. This information can be gained once the open line of communication is established.

END OF ATTACHMENT 3A

FPL

ST. LUCIE PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-09
Current Revision No.
4
Effective Date
03/09/01

Title:

OFF-SITE DOSE CALCULATIONS

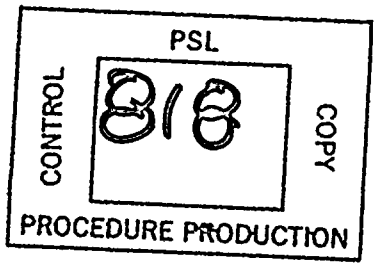
Responsible Department: **EMERGENCY PREPAREDNESS**

REVISION SUMMARY:

Revision 4 – Revised fan flow rates to accommodate for maintenance acceptance criteria and included minor correction to a number used in an example. (Steve Knapp, 02/02/01)

Revision 3 - Made human factors improvements; identified applicable unit, relocated note and caution messages, changed table, revised instructions for changing date and time on Class A computer, and changed responsible department from Training to Emergency Preparedness. (Steve Knapp, 09/11/00)

Revision 2 - Revised procedure number to address QA comment from periodic review (Appendix J). (J. R. Walker, 03/18/99)



Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
4	02/01/01	R. G. West Plant General Manager	02/02/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS	
DATE	
DOCT	PROCEDURE
DOCN	EPIP-09
SYS	
COM	COMPLETED
ITM	4

TABLE OF CONTENTS

1.0 PURPOSE

1.1 Discussion

1. This procedure is applicable to both Unit 1 and Unit 2. Should both units be affected, provisions have been made on the worksheets to sum the release rates.

2. The Chemistry Department, as directed by the Emergency Coordinator (EC) or his designee, shall perform off-site dose calculations in accordance with this procedure until the Technical Support Center (TSC) or Emergency Operations Facility (EOF) is manned and operational.

3. Off-site dose calculations and assessment shall be performed in the EOF when it is manned and operational. The TSC may continue to perform dose assessment and compare results with the dose assessment group in the EOF.

4. The off-site dose estimates, release rates and radiation levels in containment are used by the EC for emergency classification or off-site Protective Action Recommendations (PARs).

5. This procedure has an Attachment 4, TSC/EOF Dose Assessment Guidance for Responding to an Unmonitored Containment Burp, for use by TSC and/or EOF dose assessment personnel to assess unmonitored releases resulting from rapid containment depressurization events.

6. Attachment 5, Estimate of Containment Volume Loss, addresses a rapid depressurization (i.e., greater than design basis) of containment through an estimate of containment volume loss.

7. Attachment 6, Release Rate from Field Team Measurements, is also included which provides a method to back calculate a release rate from Field Monitoring Team survey results.

8. A computer dose calculation model is available for use by dose assessment personnel in both the TSC and EOF. This model estimates off-site dose rates and cumulative doses. The model parallels this procedure. Instructions for use of the computer model are provided in Attachment 7, Off-site Dose Calculations - Class A Computer Method.

2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on an attachment.

2.1 References

1. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR), Unit 1 and Unit 2
2. St. Lucie Plant Radiological Emergency Plan (E-Plan)
3. E-Plan Implementing Procedures (EPIP-00 - 13)
4. HP-2, FP&L Health Physics Manual
5. QI-17-PSL-1, Quality Assurance Records
6. Bases for Accident Dose Calculations for St. Lucie Nuclear Power Plant (Bases prepared by HMM Associates of Waltham, Massachusetts)
7. NUREG-0654, Rev. 1, FEMA Rep-1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November, 1980
8. NUREG/BR-150, Vol. 1, Response Technical Manual
9. EPA-400-R-92-001, EPA Manual of Protection Action Guides and Protective Actions for Nuclear Incidents, October, 1991.
10. ¶2 FPL Engineering Calculation PSL-BFJM-93-032, March, 1994.

2.2 Records Required

1. All completed data/worksheets or computer generated forms providing similar information, shall be maintained in the plant files in accordance with QI-17-PSL-1.

2.3 Commitment Documents

1. ¶1 Condition Report 96-2609 (ERDADS Data/Fan Status) /R4
2. ¶3 PMAI PM99-09-016 (PARs Based on FMT Data)
3. ¶4 Condition Report 00-1426 Supplement 1 (Fan Flowrates) /R4

3.0 RESPONSIBILITIES

3.1 The Chemistry Department shall be responsible for performing off-site dose calculations, when directed by the Emergency Coordinator.

3.2 The EOF Dose Assessor shall take primary responsibility for dose assessment when the EOF is operational.

4.0 DEFINITIONS

4.1 Abbreviations/Acronyms

1. **PAR** - Protective Action Recommendation - designation used on the Dose Calculation Worksheet that refers to data that should be used when determining Protective Action Recommendations.

2. **SNF** - State Notification Form - designation used on the Dose Calculation Worksheet that refers to data that should be transferred to the State Notification Form.

4.2 **Affected Unit** - (for purposes of this procedure) - a reactor unit that has activated the Emergency Plan and has a **release**.

4.3 **Iodine Removal System** - is defined as any one Containment Spray occurring with its chemical addition system injecting the chemicals:

Unit 1 - Sodium Hydroxide

Unit 2 - Hydrazine

4.4 **Particulate Factor (PF)** - a factor used when core melt or overheat is under way to account for the particulate in the release pathway.

4.5 **Release** - during any declared emergency, one of the following is true:

1. Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values

OR

2. Health Physics detecting airborne radioactivity levels in excess of 25 percent Derived Air Concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

4.6 Symbols - the following symbols are used in this procedure:

1. < = less than
2. ≤ = less than or equal to
3. > = greater than
4. ≥ = greater than or equal to
5. E =stands for exponent and indicates the power to which 10 is raised, "or times 10 to the power of", e.g.:

   A. E + 04 = 10^4 = 10,000

   B. E - 04 = 10^{-4} = 0.0001

/R4

5.0 INSTRUCTIONS

CAUTION

1. Large errors may result if the ERDADS computer is NOT addressing the affected unit's database.

¶1 2. "No data" after a parameter name means that this input is NOT available from ERDADS for this unit.

5.1 Data Acquisition

1. ERDADS - Emergency Response Data Acquisition and Display System, the following information is available on the display screens indicated.

   A. Meteorological Data -

   Display: **SMD** (Site Meteorological Data)

   B. Plant Parameter Data -

CAUTION

¶1 Certain parameters (e.g., fan status) available on Unit 2 are NOT available on Unit 1.

Display: in the TSC - **SF (1/2)** (Safety Functions and Equipment Status)

in the EOF - **EF (1/2)**

C. Radiological Data -

Display: **RG (1/2)** (Radiation Gaseous Source Term)

RBS (Health Physics Evaluation Screen - containment radiation levels and trends)

R11 (Area Radiation Monitors, Unit 1)

R21 (Area Radiation Monitors, Unit 2)

5.1 Data Acquisition (continued)

1. (continued)

D. Chemistry Data -

Display: **R12** (S/G Blowdown, Steam Jet Air Ejector, Unit 1)

R22 (S/G Blowdown, Steam Jet Air Ejector, Unit 2)

E. To access data -

1. Press "CLEAR"
2. Type in "Pup Unit (1/2)"
3. Press "EXEC"ute, top of screen will read "Unit change is complete" or "Current Unit is same as entered Unit"
4. Press "EPIP"
5. The "PAGE UP" and "PAGE DOWN" keys will cause the following display sequence:

SMD - RG(1/2) - SF(1/2) - RBS - EF(1/2) - SMD

F. To go directly to a screen -

1. Press "CLEAR"
2. Type in screen designation, e.g., "**RG1**"
3. Press "DISPLAY"

2. Sound-powered Phone Talker - the Sound-powered Phone Talker can be utilized as a primary source of information or as an alternate method to ERDADS.

A. Primary source - status of fans needed for dose assessment exhaust fans 6, 7, 8, 9, 10, 15, 16 and 17.

5.1 Data Acquisition (continued)

3. Unit 1 determine gross Noble gas concentrations via Eberline Control Terminal A or B:

A. Enter the following sequence on the keypad for each applicable channel number:

1. Press 10 MIN HIST
2. Determine the applicable pathway channel number from the table below:
3. Enter the applicable pathway channel number
4. Press ENTER (value appears in window)
5. Press PRINT
6. Press FILE
7. Press ENTER
8. Enter the next to last point from the lowest non-alarming range into the applicable Data column in step 6.

NOTE
Use a steamline channel ONLY if the Safeties and/or Atmospheric Steam Dumps are releasing steam. Monitors have one range.

Path	Range Low	Mid	Hi
Plant Vent	1-5	1-7	1-9
ECCS – A	2-5	2-7	2-9
ECCS – B	3-5	3-7	3-9
Fuel Bldg.	4-5	4-7	4-9
Steamline A	N/A	5-1	N/A
Steamline B	N/A	5-2	N/A

5.1 Data Acquisition (continued)

4. Unit 2 determine gross Noble gas concentrations via the PC-11, Radiation Monitoring Console. Use the following keystroke sequence for each applicable channel number:

   A. Press Key F8 to display Control Menu

   B. Use the ARROW Key to highlight the RM-80 Utility Task under the status display

   C. Press ENTER key

   D. Press Key F1 to select Historical Display

   E. Press Key F4 to select Graph 10 Minute

> **NOTE**
> Start with lowest scale not in alarm.

   F. Determine the applicable pathway channel number, from the table below:

   G. At prompt, type **M** and the Channel Number (see below)

   H. Press ENTER

   I. Record Top #1 reading in applicable DATA column.

   J. Press Key F10

   K. Press Key F10

5.1 Data Acquisition (continued)

4. (continued)

L. Press Key F1 to display All Monitor Schematic

Applicable Pathway Channel Number

NOTE
Use a steamline channel only if the Safeties and/or Atmospheric Steam Dumps are releasing steam. Monitors have one range. Use NET value (Channel - Background).

Path	Range Low	Mid	Hi
Plant Vent	621	622	623
ECCS – A	601	602	603
ECCS – B	611	612	613
Fuel Bldg. (If NOT diverted)	413	N/A	N/A
Steamline A	N/A	631	N/A
Steamline B	N/A	632	N/A
Background (Steamline)	N/A	633	N/A

END OF SECTION 5.1

CAUTION

Wind speed, wind direction and Delta temperature values should vary with time, i.e., chart recorders in the Unit 1 Control Room and A1A Site Tower Shack should NOT be straight-lining. If initial efforts to correct straight-lining fail, alternate sources of data (described below) may be used in lieu of straight-lining data.

NOTE

Section 5.2 through 5.5 provide a method for estimating Total Dose (TEDE) and Thyroid Dose (CDE) dose rates and projected Total Dose (TEDE) and Thyroid Dose (CDE) doses via hand calculations. The Class A computer method may be used in lieu of hand calculations in accordance with Attachment 7.

5.2 Complete ONE Data Sheet from Attachment 1, Meteorological Data, selected from one of the three prioritized methods listed below.

Primary Method — Data Sheet 1 - SITE TOWER
The ERDADS terminals, Unit 1 Control Room and site tower chart recorders provide 15 minute average data.

OR

1st alternate — Data Sheet 2 - NOAA/NWS
This primary back up is for use if site tower data is NOT available.

OR

2nd alternate — Data Sheet 3 - DEFAULT
For use if both site tower and NOAA/NWS data are NOT available.

5.3 The DOSE CALCULATION WORKSHEET is determined as part of completing one of the Meteorological Data Sheets. The Dose Calculation Worksheet will be used to determine doses after the Release Rate Worksheet is completed.

NOTE

If both units are in a declared emergency and both units have or had a release, then the site release rate is the sum of both units' release rates.

NOTE TO TSC / EOF DOSE ASSESSMENT PERSONNEL

A rapid, unexplained containment pressure reduction (NOT due to operation of spray, additional coolers, etc.) may indicate an unmonitored release. For guidance in responding to this event, refer to Attachment 4.

5.4 Determine the site release rate by completing ONE Data Sheet from Attachment 2, Release Rate Data, for each affected unit. For the accident type, select the Data Sheet(s) from the four prioritized methods listed below.

Primary method, All accidents	CHEMISTRY GRAB SAMPLING for Unit 1: Data Sheet 1A for Unit 2: Data Sheet 2A
	OR
1st alternate, All accidents	EFFLUENT MONITORS for Unit 1: Data Sheet 1B for Unit 2: Data Sheet 2B
	OR
2nd alternate, LOCA Only	CONTAINMENT HI-RANGE RADIATION MONITOR either Unit: Data Sheet 3
	OR
	POST LOCA MONITORS, either Unit: Data Sheet 4
	OR
3rd alternate, All accidents	DEFAULT, only if no other source of data is available either Unit: Data Sheet 5

5.5 Calculate the offsite dose rates and projected doses by following the instructions on the selected Data Sheet of Attachment 3, DOSE CALCULATION WORKSHEET.

5.6 The Emergency Coordinator shall be provided with dose calculation results as they are prepared in the TSC.

5.7 The Recovery Manager (RM) shall be provided with dose calculation results as they are prepared in the EOF.

5.8 The TSC Chemistry Supervisor (EOF HP Manager when EOF operational) should monitor release rates and meteorological conditions to determine how frequently to update the dose rate estimates.

1. Release and dose estimates shall be revised at least hourly for the first 8 hours after the accident unless it is determined that releases of radioactivity have been terminated.

2. When doing hand calculations, If any of the following averages change by the amounts indicated below, over a period of 30 minutes or less, Then dose estimates shall be updated.

A. Release rates increase by more than 25 percent.

OR

B. Wind speed decreases to less than one half of previous value.

OR

C. Atmospheric stability becomes more stable by more than one class (e.g., change from stability D to F).

OR

D. Wind direction changes by more than 22.5 degrees (i.e., plume centerline is more than one sector away from prior location).

END OF SECTION 5.0

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 1 of 10)

DATA SHEET 1 SITE TOWER
(Page 1 of 3)

1. Gather Data:

   A. Date & Time of meteorological observations_____/_____

   B. Enter 10 Meter (alternate 60 Meter) **WIND SPEED:**_____**mph**

   C. Enter 10 Meter (alternate 60 Meter) **WIND DIRECTION (from)**_____**deg.**

   D. Enter Delta-T (60 Meter minus 10 Meter temperatures)_____deg. F

2. Using Delta-T (ΔT) and the guide below, determine and enter the Stability Class _____.

If DELTA-T is	Then Stability Class is
less than or equal to -1.7	A
-1.6 to -1.5	B
-1.4	C
-1.3 to -0.5	D
-0.4 to +1.4	E
+1.5 to +3.6	F
greater than +3.6	G

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 2 of 10)

DATA SHEET 1 SITE TOWER
(Page 2 of 3)

3. Using the guide below, determine and circle the **AFFECTED SECTORS.**

NOTE
If the wind direction is directly on the edge of two sectors (e.g., 11°, 33°, 56°, etc.), an additional sector should be added to the Protective Action Recommendation (PAR). For example, if the wind direction is from 78°, then the affected sectors for the PAR should be L, M, N and P.

Wind From	Affected Sectors	Wind From	Affected Sectors	Wind From	Affected Sectors
348 - 11	HJK	123 - 146	PQR	236 - 258	CDE
11 - 33	JKL	146 - 168	QRA	258 - 281	DEF
33 - 56	KLM	168 - 191	RAB	281 - 303	EFG
56 - 78	LMN	191 - 213	ABC	303 - 326	FGH
78 - 101	MNP	213 - 236	BCD	326 - 348	GHJ
101 - 123	NPQ	there is no	O sector	there is no	I sector

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 3 of 10)

DATA SHEET 1 SITE TOWER
(Page 3 of 3)

4. Check for Sea Breeze effect:

   Only if All of the following conditions are met, then the Sea Breeze effect is YES

   If one or more conditions are not met, then the Sea Breeze effect is NO

   - Stability Class A, B or C
   - Time of day 6 AM to 7PM
   - Wind Direction (from) is between 0 through EAST to 180 degrees
   - 10 meter air temperature greater than HISTORICAL AVERAGE SURFACE WATER, listed below:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
69	65	69	73	76	79	80	81	81	79	74	71

   Sea Breeze Impact (Yes or No) _____

5. Using the guide below, select a DOSE CALCULATION WORKSHEET:

Stab. Class	Seabreeze Impact	Dose Calc Worksheet	Stab. Class	Seabreeze Impact	Dose Calc Worksheet	Stab. Class	Dose Calc Worksheet
A	YES	1				D	7
A	NO	2	C	YES	5	E	8
B	YES	3	C	NO	6	F	9
B	NO	4				G	10

6. Copy information to the selected DOSE CALCULATION WORKSHEET:

   A. **WIND DIRECTION** and the **AFFECTED SECTORS** to line A

   B. **WIND SPEED** to line 2

7. This data sheet is completed, proceed to release rate determination.

END OF DATA SHEET 1

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 4 of 10)

DATA SHEET 2 NOAA / NWS
(Page 1 of 6)

1. Gather Data: Call NOAA/National Weather Service (NWS) station (phone number in the St. Lucie Plant Emergency Response Directory, Section 4.0, Off-site Support. When the NOAA person answers, identify FPL - St. Lucie Plant as calling party and obtain:

   A. Date/Time of observation: _____/_____ Eastern Standard Time
   Daylight Savings Time
   (circle eastern or daylight)

   B. **WIND DIRECTION** (From): _____Degrees

   C. **WIND SPEED:** _____Knots

   D. Sunrise: _____ am Sunset: _____ pm

   E. Sky Condition: Clear Scattered Overcast Broken
   (circle)

   F. If sky condition is overcast or broken, then enter Ceiling Height

   _____ ft.

   G. Estimated air temperature for Ft. Pierce area _____°F

   H. If time permits, ask for a weather forecast for the area: _____

   _____

2. Determine and circle the Solar Radiation Characteristic (nil, weak, slight, etc.):

   A. IF Daytime (1 hour after sunrise to 1 hour before sunset), THEN

      1. Determine Solar Altitude from Figure 1 (at the end of this data sheet), using time and date.

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 5 of 10)

DATA SHEET 2 NOAA/NWS
(Page 2 of 6)

2. A. (continued)

2. Circle the Solar Radiation Characteristic on the table below, using Sky Condition, Ceiling Height and Solar Altitude.

Day Sky Condition	Ceiling, Feet	Solar Altitude			
		< 15 deg	15 to < 35 deg	35 to 60 deg	> 60 deg
Overcast	< 7000	Nil	Nil	Nil	Nil
	7K to 16K	Weak	Weak	Weak	Slight
	> 16000	Weak	Weak	Slight	Moderate
Broken	< 7000	Weak	Weak	Weak	Slight
	7K to 16K	Weak	Weak	Slight	Moderate
	> 16000	Weak	Slight	Moderate	Strong
Clear Scattered	not applicable	Weak	Slight	Moderate	Strong

B. IF NOT Daytime, circle the Solar Radiation Characteristic on the table below, using Sky Condition and Ceiling Height (Solar Altitude is not applicable).

Night Sky Condition	Ceiling, Ft.	Solar Radiation Characteristic
Overcast	less than 7000	Nil
	7000 or higher	Weak Loss
Broken	not applicable	Weak Loss
Clear or scattered	not applicable	Strong Loss

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 6 of 10)

DATA SHEET 2 NOAA/NWS
(Page 3 of 6)

3. Using the Wind Speed in Knots and the Solar Radiation Characteristic, find in the table below and circle the Stability Class.

Solar Radiation	Wind Speed in KNOTS								
	0-1	> 1-3	> 3-5	> 5-6	> 6-7	> 7-9	> 9-10	> 10-11	> 11
Strong	A	A	A	B	B	B	C	C	C
Moderate	A	B	B	B	B	C	C	C	D
Slight	B	B	C	C	C	C	C	D	D
Weak	C	C	C	D	D	D	D	D	D
Nil	D	D	D	D	D	D	D	D	D
Weak Loss	F	F	E	E	D	D	D	D	D
Strong Loss	G	G	F	F	E	E	E	D	D

4. Using the guide below, determine and circle the **AFFECTED SECTORS**.

NOTE

If the wind direction is directly on the edge of two sectors (e.g. 11°, 33°, 56°, etc.), an additional sector should be added to the Protective Action Recommendation (PAR). For example, if the wind direction is from 78°, then the affected sectors for the PAR should be L, M, N and P.

Wind From	Affected Sectors	Wind From	Affected Sectors	Wind From	Affected Sectors
348 - 11	HJK	123 - 146	PQR	236 - 258	CDE
11 - 33	JKL	146 - 168	QRA	258 - 281	DEF
33 - 56	KLM	168 - 191	RAB	281 - 303	EFG
56 - 78	LMN	191 - 213	ABC	303 - 326	FGH
78 - 101	MNP	213 - 236	BCD	326 - 348	GHJ
101 - 123	NPQ	there is no	O sector	there is no	I sector

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 7 of 10)

DATA SHEET 2 NOAA/NWS
(Page 4 of 6)

5. Check for Sea Breeze effect:

   Only if ALL of the following conditions are met, then the Sea Breeze effect is YES.

   If one or more conditions are not met, then the Sea Breeze effect is NO.

   - Stability Class A, B or C
   - Time of day 6 AM to 7 PM
   - Wind Direction (from) is between 0 through East to 180 degrees
   - 10 meter air temperature greater than HISTORICAL AVERAGE SURFACE WATER, listed below:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
69	65	69	73	76	79	80	81	81	79	74	71

   Sea Breeze Impact (Yes or No) _____

6. Using the guide below, select a DOSE CALCULATION WORKSHEET (Attachment 3):

Stab. Class	Seabreeze Impact	Dose Calc Worksheet	Stab. Class	Seabreeze Impact	Dose Calc Worksheet	Stab. Class	Dose Calc Worksheet
A	YES	1				D	7
A	NO	2	C	YES	5	E	8
B	YES	3	C	NO	6	F	9
B	NO	4				G	10

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 8 of 10)

DATA SHEET 2 NOAA/NWS
(Page 5 of 6)

7. Copy information to the selected DOSE CALCULATION WORKSHEET:

   A. From line 1B, copy the **WIND DIRECTION** to line A of Dose Calculation Worksheet.

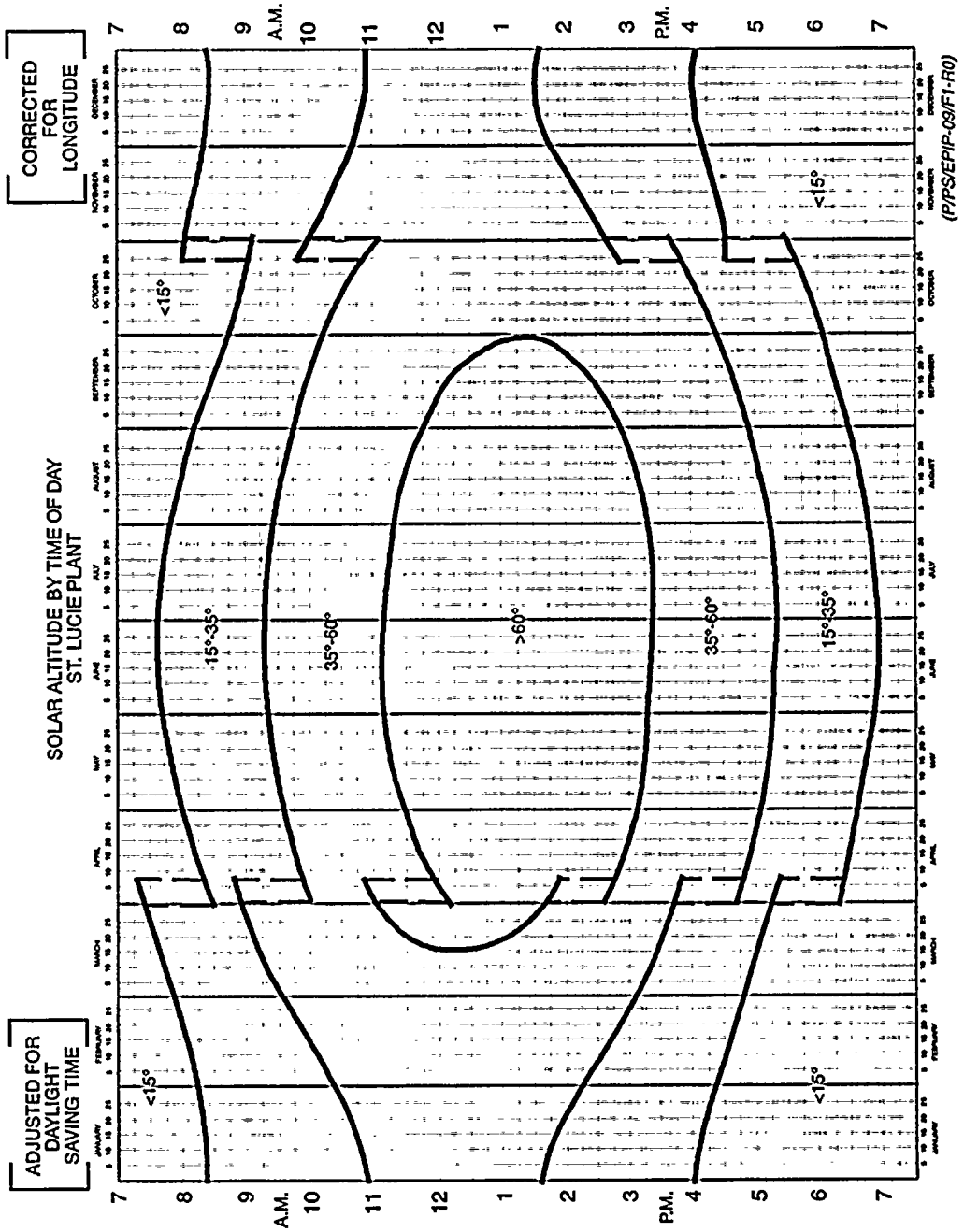
   B. 1. From line 1C, multiply the wind speed in knots by 1.15 to obtain the **WIND SPEED:** _____ mph

      2. Copy **WIND SPEED** in mph to line 2 of Dose Calculation Worksheet.

   C. From line 4, copy the **AFFECTED SECTORS** to line A of Dose Calculation Worksheet.

8. This data sheet is completed, proceed to release rate determination.

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 9 of 10)
DATA SHEET 2 NOAA/NWS
(Page 6 of 6)
FIGURE 1. SOLAR ALTITUDE



END OF DATA SHEET 2

ATTACHMENT 1
METEOROLOGICAL DATA
(Page 10 of 10)

DATA SHEET 3 DEFAULT
(Page 1 of 1)

NOTE
This method is to be used only if Site Met Tower and NOAA/NWS data are not available.

1. If Daytime Hours (1 hour after sunrise to 1 hour before sunset)

   Then select DOSE CALCULATION WORKSHEET 7 and

   A. Enter **AFFECTED SECTORS** = ALL in line A

   B. Check Default method in line A

   C. Enter **WIND SPEED** = 5 mph in line 2.

2. If Not Daytime

   Then select DOSE CALCULATION WORKSHEET 9 and

   A. Enter **AFFECTED SECTORS** = ALL in line A

   B. Check Default method in line A

   C. Enter **WIND SPEED** = 3 mph in line 2.

   This data sheet is completed, proceed to release rate determination.

END OF DATA SHEET 3

END OF ATTACHMENT 1

ATTACHMENT 2
RELEASE RATE DATA
(Page 1 of 19)

DATA SHEET 1A UNIT 1 CHEMISTRY GRAB SAMPLING
(Page 1 of 3)

1

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type_____

   B. Is core overheating or melting (yes/no)_____

      1. If the core IS overheating or melting PF = 4.4,
         If not, PF = 1.0; Enter PF = _____

   C. Potential **DURATION** of release (if unknown, use 2): _____ hours

3. Enter sample assay data of gross Noble gas and DEQ Iodine-131 µCi/cc concentration in the step 5 table below under µCi/cc.

4. Choose and calculate the applicable pathway(s):

   A. Check the ON fans and line thru the SCFM of the fans NOT running.

   B. Add up the flows in the spaces provided.

   C. Enter total pathway SCFM in the SCFM column in step 5.

PLANT VENT

Fan		√on	¶4 SCFM
1-HVE-6A	Shield Bldg	____	6600
1-HVE-6B		____	6600
1-HVE-7A	H_2 Purge	____	950
1-HVE-7B		____	950
1-HVE-8A	RCB Exhaust	____	52500
1-HVE-8B		____	52500
1-HVE-10A	RAB Exhaust	____	92563
1-HVE-10B		____	92563

(Add) Plant Vent Total = _____

FUEL BUILDING

Fan		√on	¶4 SCFM
1-HVE-15	New Fuel	____	10563
1-HVE-16A	Fuel Pool	____	11385
1-HVE-16B		____	11385
1-HVE-17	H&V Room	____	6250

(Add) Fuel Bldg. Total = _____

ECCS AREA

Fan	¶4 SCFM
1-HVE-9A	33000
1-HVE-9B	33000

/R4

ATTACHMENT 2
RELEASE RATE DATA
(Page 2 of 19)

DATA SHEET 1A UNIT 1 CHEMISTRY GRAB SAMPLING
(Page 2 of 3)

1

5. Calculate Release Rates by completing the table below:
µCi/cc x SCFM x factor = Ci/sec

Pathway	TYPE	µCi/CC	¶4 SCFM	factor	Noble Gas, Ci/sec	Iodine, Ci/sec
Plant Vent	Noble Gas			4.72 E -04		
	Iodine					
Fuel Bldg.	Noble Gas			4.72 E -04		
	Iodine					
ECCS - A	Noble Gas		33,000	4.72 E -04		
	Iodine					
ECCS - B	Noble Gas		33,000	4.72 E -04		
	Iodine					

/R4 /R4 /R4

6. Calculate the Site Release Rate, Ci/sec, by completing the table below.

		Noble Gas, Ci/sec	Iodine, Ci/sec
A.	Total the Unit 1 release rates determined above		
B.	IF Unit 2 is AFFECTED, enter its release rates		
C.	Add A and B to obtain the SITE RELEASE RATES		

7. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

A. On line B, check Grab Sample under Unit 1

B. Enter the **NOBLE GAS RELEASE RATE** into line 8

C. Enter the **IODINE RELEASE RATE** into line 1

D. Enter the **DURATION** (if 2 affected units, use longest) into line 6

E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11

ATTACHMENT 2
RELEASE RATE DATA
(Page 3 of 19)

DATA SHEET 1A UNIT 1 CHEMISTRY GRAB SAMPLING
(Page 3 of 3)

8. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

1

END OF DATA SHEET 1A

ATTACHMENT 2
RELEASE RATE DATA
(Page 4 of 19)

DATA SHEET 2A UNIT 2 CHEMISTRY GRAB SAMPLING
(Page 1 of 3)

2

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type_____

   B. Is core overheating or melting (yes/no)_____

      1. If the core IS overheating or melting PF = 4.4,
         If not, PF = 1.0; Enter **PF** = _____

   C. Potential **DURATION** of release (if unknown, use 2): _____ hours

3. Enter sample assay data of gross Noble gas and DEQ Iodine-131 µCi/cc concentration in the step 5 table below under µCi/cc.

4. Choose and calculate the applicable pathway(s):

   A. Check the ON fans.

   B. Add up the flows in the spaces provided.

   C. Enter total pathway SCFM in the SCFM column in step 5.

PLANT VENT

Fan		√on	¶4 SCFM
2-HVE-6A	Shield Bldg	____	6600
2-HVE-6B		____	6600
2-HVE-7A	H_2 Purge	____	2500
2-HVE-7B		____	2500
2-HVE-8A	RCB Exhaust	____	52500
2-HVE-8B		____	52500
2-HVE-10A	RAB Exhaust	____	105625
2-HVE-10B		____	105625

(Add) Plant Vent Total = _____

FUEL BUILDING
If NOT Diverted to Plant Vent, Use Stated Flow

Fan		√on	¶4 SCFM
2-HVE-15	New Fuel	____	12125
2-HVE-16A	Fuel Pool	____	12500
2-HVE-16B	Fuel Pool	____	12500
2-HVE-17	Bldg H&V	____	7500

(Add) Fuel Bldg. Total = _____

ECCS AREA

Fan	¶4 SCFM
2-HVE-9A	33000
2-HVE-9B	33000

/R4

ATTACHMENT 2
RELEASE RATE DATA
(Page 5 of 19)

DATA SHEET 2A UNIT 2 CHEMISTRY GRAB SAMPLING
(Page 2 of 3)

2

5. Calculate Release Rates by completing the table below:
µCi/cc x SCFM x factor = Ci/sec

Pathway	TYPE	µCi/CC	¶4 SCFM	factor	Noble Gas, Ci/sec	Iodine, Ci/sec
Plant Vent	Noble Gas			4.72 E -04		
	Iodine					
Fuel Bldg.	Noble Gas			4.72 E -04		
	Iodine					
ECCS - A	Noble Gas		33,000	4.72 E -04		
	Iodine					
ECCS - B	Noble Gas		33,000	4.72 E -04		
	Iodine					

/R4 /R4 /R4

6. Calculate the Site Release Rate, Ci/sec, by completing the table below.

	Noble Gas, Ci/sec	Iodine, Ci/sec
A. Total the Unit 2 release rates determined above		
B. IF Unit 1 is AFFECTED, enter its release rates		
C. Add A and B to obtain the SITE RELEASE RATES		

7. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

A. On line B, check Grab Sample under Unit 2

B. Enter the **NOBLE GAS RELEASE RATE** into line 8

C. Enter the **IODINE RELEASE RATE** into line 1

D. Enter the **DURATION** (if 2 affected units, use longest) into line 6

E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11

ATTACHMENT 2
RELEASE RATE DATA
(Page 6 of 19)

DATA SHEET 2A UNIT 2 CHEMISTRY GRAB SAMPLING
(Page 3 of 3)

8. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

2

END OF DATA SHEET 2A

ATTACHMENT 2
RELEASE RATE DATA
(Page 7 of 19)

DATA SHEET 1B UNIT 1 EFFLUENT MONITORS
(Page 1 of 3)

1

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type_____

   B. Is core overheating or melting (yes/no) _____

      1. If the core IS overheating or melting PF = 4.4,
      If not, PF = 1.0; Enter **PF** = _____

   C. Potential **DURATION** of release (if unknown, use 2): _____ hours

3. Determine Noble Gas (NG) concentrations and enter into data column in step 6.

4. Choose and calculate the applicable pathway(s):

   A. Check the ON fans.

   B. Add up the flows in the spaces provided.

   C. Enter total pathway SCFM in the SCFM column in step 6.

PLANT VENT

Fan		√on	¶4 SCFM
1-HVE-6A	Shield Bldg	___	6600
1-HVE-6B		___	6600
1-HVE-7A	H_2 Purge	___	950
1-HVE-7B		___	950
1-HVE-8A	RCB Exhaust	___	52500
1-HVE-8B		___	52500
1-HVE-10A	RAB Exhaust	___	92563
1-HVE-10B		___	92563

(Add) Plant Vent Total = _____

FUEL BUILDING

Fan		√on	¶4 SCFM
1HVE-15	New Fuel	___	10563
1-HVE-16A	Fuel Pool	___	11385
1-HVE-16B		___	11385
1-HVE-17	H&V Room	___	6250

(Add) Fuel Bldg. Total = _____

ECCS AREA

Fan	¶4 SCFM
1-HVE-9A	33000
1-HVE-9B	33000

/R4

ATTACHMENT 2
RELEASE RATE DATA
(Page 8 of 19)

1

DATA SHEET 1B UNIT 1 EFFLUENT MONITORS
(Page 2 of 3)

5. Select Pathways IODINE FACTOR (IF) for the accident type below and enter under **IF** Column in step 6.

PATHWAY	LOCA	SGTR	MSLB	WASTE GAS TR	FUEL HANDLING	CASK DROP
Plant Vent	**0.01**	**1. E-06**	**1.0**	**4. E-05**	0	0
ECCS	**0.01**	0	0	0	0	0
Fuel Bldg.	0	0	0	0	**0.04**	**1.3**
Steamline	0	**1. E-03**	0	0	0	0

6. Calculate Release Rates by completing the table below:
DATA x SCFM x factor = N.G. Ci/sec x IF = Iodine Ci/sec

Pathway	DATA	¶4 SCFM	factor	Noble Gas, Ci/sec	IF	Iodine Ci/sec
Plant Vent	uCi/cc		4.72 E-04			
ECCS-A	uCi/cc	33,000	4.72 E-04			
ECCS-B	uCi/cc	33,000	4.72 E-04			
Fuel Bldg.	uCi/cc		4.72 E-04			
Steamline A	mr/hr	1.0	1.24 E-02			
Steamline B	mr/hr	1.0	1.24 E-02			

/R4 /R4 /R4

7. Calculate the Site Release Rate, Ci/sec, by completing the table below.

	Noble Gas, Ci/sec		Iodine, Ci/sec
A. Enter the Unit 1 release rates determined from this worksheet			
B. IF Unit 2 is AFFECTED, enter its release rates			
C. Add A and B to obtain the SITE RELEASE RATES			

ATTACHMENT 2
RELEASE RATE DATA
(Page 9 of 19)

DATA SHEET 1B UNIT 1 EFFLUENT MONITORS
(Page 3 of 3)

1

8. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

   A. On line B, check Effluent Monitor under Unit 1

   B. Enter the **NOBLE GAS RELEASE RATE** into line 8

   C. Enter the **IODINE RELEASE RATE** into line 1

   D. Enter the **DURATION** (if 2 affected units, use longest) into line 6

   E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11.

9. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

END OF DATA SHEET 1B

ATTACHMENT 2
RELEASE RATE DATA
(Page 10 of 19)

DATA SHEET 2B UNIT 2 EFFLUENT MONITORS 2
(Page 1 of 3)

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type

   B. Is core overheating or melting (yes/no)_____

      1. If the core IS overheating or melting PF = 4.4,
         If not, PF = 1.0; Enter **PF** = _____

   C. Potential **DURATION** of release (if unknown, use 2): _____ hours

3. Determine Noble Gas (NG) concentrations and enter into data column in step 6.

4. Choose and calculate the applicable pathway(s):

   A. Check the ON fans.

   B. Add up the flows in the spaces provided.

   C. Enter total pathway SCFM in the SCFM column in step 6.

PLANT VENT

Fan		√on	¶4 SCFM
2-HVE-6A	Shield Bldg	___	6600
2-HVE-6B		___	6600
2-HVE-7A	H_2 Purge	___	2500
2-HVE-7B		___	2500
2-HVE-8A	RCB Exhaust	___	52500
2-HVE-8B		___	52500
2-HVE-10A	RAB Exhaust	___	105625
2-HVE-10B		___	105625

(Add) Plant Vent Total = _____

FUEL BUILDING
IF NOT DIVERTED

Fan		√on	¶4 SCFM
2HVE-15	New Fuel	___	12125
2-HVE-16A	Fuel Pool	___	12500
2-HVE-16B		___	12500
2-HVE-17	H&V Room	___	7500

(Add) Fuel Bldg. Total =_____

ECCS AREA

Fan	¶4 SCFM
2-HVE-9A	33000
2-HVE-9B	33000

/R4

ATTACHMENT 2
RELEASE RATE DATA
(Page 11 of 19)

2

DATA SHEET 2B UNIT 2 EFFLUENT MONITORS
(Page 2 of 3)

5. Select Pathways IODINE FACTOR (IF) for the accident type below and enter under **IF** Column in step 6.

PATHWAY	LOCA	SGTR	MSLB	WASTE, GAS TR	FUEL HANDLING	CASK DROP
Plant Vent	**0.01**	**1. E-06**	**1.0**	**4. E-05**	**0.04**	**1.3**
ECCS	**0.01**	0	0	0	0	0
Fuel Bldg.	0	0	0	0	**0.04**	**1.3**
Steamline	0	**1. E-03**	0	0	0	0

6. Calculate Release Rates by completing the table below:
DATA x SCFM x factor = N.G. Ci/sec x IF = Iodine Ci/sec

Pathway	DATA	¶4 SCFM	factor	Noble Gas, Ci/sec	IF	Iodine Ci/sec
Plant Vent	uCi/cc		4.72 E-04			
ECCS-A	uCi/cc	33,000	4.72 E-04			
ECCS-B	uCi/cc	33,000	4.72 E-04			
Fuel Bldg.	uCi/cc		4.72 E-04			
Steamline A	mr/hr	1.0	1.24 E-02			
Steamline B	mr/hr	1.0	1.24 E-02			

/R4 /R4 /R4

7. Calculate the Site Release Rate, Ci/sec, by completing the table below.

	Noble Gas, Ci/sec		Iodine, Ci/sec
A. Enter the Unit 2 release rates determined from this worksheet			
B. IF Unit 1 is AFFECTED, enter its release rates			
C. Add A and B to obtain the SITE RELEASE RATES			

ATTACHMENT 2
RELEASE RATE DATA
(Page 12 of 19)

DATA SHEET 2B UNIT 2 EFFLUENT MONITORS
(Page 3 of 3)

2

8. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

   A. On line B, check Effluent Monitor under Unit 2.

   B. Enter the **NOBLE GAS RELEASE RATE** into line 8.

   C. Enter the **IODINE RELEASE RATE** into line 1.

   D. Enter the **DURATION** (if 2 affected units, use longest) into line 6.

   E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11.

9. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

END OF DATA SHEET 2B

ATTACHMENT 2
RELEASE RATE DATA
(Page 13 of 19)

DATA SHEET 3 CONTAINMENT HI-RANGE RADIATION MONITORS
(Applicable to Unit 1 and Unit 2)
(Page 1 of 3)

NOTE
If both units are using this method, then complete one worksheet for each unit.

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type

   B. Is core overheating or melting (yes/no)_____

      1. If the core IS overheating or melting PF = 4.4,
         If not, PF = 1.0; Enter **PF** = _____

   C. Potential **DURATION** of release (if unknown, use 2): _____ hours

3. Obtain highest CHRRM reading and time since trip:

   A. Highest CHRRM reading: _____ R/hr,

   B. Hours since Reactor Trip: _____ hours;

   C. Copy the CHRRM R/hr to step 6 and 8.

4. Find in the table below and enter into step 6 and 8, the Core Fraction factor (CF).

Hours Since Reactor Trip	CF	Hours Since Reactor Trip	CF
0	5.00 E - 07	> 2.0 to ≤ 4.0	6.25 E - 06
> 0 to ≤ 0.5	1.00 E - 06	> 4.0 to ≤ 8.0	1.25 E - 05
> 0.5 to ≤ 1.0	1.67 E - 06	> 8.0	2.22 E - 05
> 1.0 to ≤ 2.0	3.33 E - 06		

ATTACHMENT 2
RELEASE RATE DATA
(Page 14 of 19)

DATA SHEET 3 CONTAINMENT HI-RANGE RADIATION MONITORS
(Applicable to Unit 1 and Unit 2)
(Page 2 of 3)

5. Find in the table below and enter into step 6 the Noble Gas Reduction Factor (NGRF).

Hours Since Rx Trip	NGRF	Hours Since Rx Trip	NGRF	Hours Since Rx Trip	NGRF	Hours Since Rx Trip	NGRF
0	1.0	> 4 to ≤ 5	0.44	> 9 to ≤ 10	0.26	> 14 to ≤ 15	0.16
> 0 to ≤ 1	0.90	> 5 to ≤ 6	0.39	> 10 to ≤ 11	0.23	> 15 to ≤ 16	0.16
> 1 to ≤ 3	0.70	> 6 to ≤ 7	0.35	> 11 to ≤ 12	0.21	> 16 to ≤ 17	0.14
> 2 to ≤ 3	0.60	> 7 to ≤ 8	0.32	> 12 to ≤ 13	0.19	> 17 to ≤ 18	0.14
> 3 to ≤ 4	0.50	> 8 to ≤ 9	0.28	> 13 to ≤ 14	0.18	> 18	0.13

6. Calculate the NOBLE GAS RELEASE RATE, N.G. Ci/sec:
_____R/hr **x** _____ (CF) **x** _____ (NGRF) **x** 40 = _____ N.G. Ci/sec

7. If the Iodine Removal System IS in use then Iodine Conversion Value (ICV) = 0.6, if NOT in use then ICV = 1.6. Copy the selected ICV into step 8.

8. Calculate the IODINE RELEASE RATE, Iod. Ci/sec:
_____R/hr **x** _____ (CF) **x** _____ (ICV) = _____ Iod. Ci/sec

9. Calculate the Site Release Rate, Ci/sec, by completing the table below.

	Noble Gas	Iodine
A) Enter the release rates determined from this worksheet		
B) IF the other Unit is AFFECTED, enter its release rates		
C) Add A and B to obtain the SITE RELEASE RATES		

ATTACHMENT 2
RELEASE RATE DATA
(Page 15 of 19)

DATA SHEET 3 CONTAINMENT HI-RANGE RADIATION MONITORS
(Applicable to Unit 1 and Unit 2)
(Page 3 of 3)

10. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

A. On line B, check CHRRM under the Unit(s) using the CHRRM method.

B. Enter the **NOBLE GAS RELEASE RATE** into line 8.

C. Enter the **IODINE RELEASE RATE** into line 1.

D. Enter the **DURATION** (if 2 affected units, use longest) into line 6.

E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11.

11. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

END OF DATA SHEET 3

ATTACHMENT 2
RELEASE RATE DATA
(Page 16 of 19)

DATA SHEET 4 POST LOCA MONITORS
(Applicable to Unit 1 or Unit 2)
(Page 1 of 2)

NOTE
If both units are using this method, then complete one worksheet for each unit.

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type_____

   B. Is core overheating or melting (yes/no)_____

      1. If the core IS overheating or melting PF = 4.4,
         If not, PF = 1.0; Enter **PF** = _____

   C. Potential **DURATION** of release (if unknown, use 2): _____ hours

3. For the Reactor Unit(s), using this method, obtain the Highest POST LOCA reading _____ mR/hr

4. For the applicable Unit(s), find the release rates in the table below and enter them in step 5A.

Post Loca Monitor Reading (mR/hr)	Noble Gas Release Rate (Ci/sec)	Iodine Release Rate, (Ci/sec) with Iodine Removal System	
		In Use	Not in Use
≤ 60	Negligible	Negligible	Negligible
> 60 ≤ 100	2.0	0.03	0.1
> 100 ≤ 1000	10.0	0.14	0.4
> 1000	40.0	0.60	1.6

ATTACHMENT 2
RELEASE RATE DATA
(Page 17 of 19)

DATA SHEET 4 POST LOCA MONITORS
(Applicable to Unit 1 or Unit 2)
(Page 2 of 2)

5. Calculate the Site Release Rate, Ci/sec, by completing the table below.

	Noble Gas	Iodine
A) If used, enter the AFFECTED Unit's release rates determined from this worksheet		
B) IF the other Unit is AFFECTED enter its release rates		
C) Add A and B to obtain the SITE RELEASE RATES		

6. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

   A. On line B, check Post LOCA under the Unit(s) using the Post LOCA method.

   B. Enter the **NOBLE GAS RELEASE RATE** into line 8.

   C. Enter the **IODINE RELEASE RATE** into line 1.

   D. Enter the **DURATION** (if 2 affected units, use longest) into line 6.

   E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11.

7. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

END OF DATA SHEET 4

ATTACHMENT 2
RELEASE RATE DATA
(Page 18 of 19)

DATA SHEET 5 DEFAULT
(Applicable to Unit 1 or Unit 2)
(Page 1 of 2)

CAUTION
Use this method only if there is no data to use in other methods.

1. Date and time of data: _____/_____

2. Ask Emergency Coordinator:

   A. Accident Type_____

   B. Is core overheating or melting (yes/no)_____

      1. If the core IS overheating or melting PF = 4.4,
         If not, PF = 1.0; Enter PF = _____

   C. Potential **DURATION** of release (if unknown, use Default Duration from the table below):

      _____ hours

3. For the affected Unit(s) and the accident type, select and circle the Noble Gas and Iodine Release Rates in the table below.

Accident Type	Default Duration	Release Rates, Ci/sec	
		Noble Gas	Iodine
LOCA WITHOUT Iodine Removal System in use	2 hours	37	1.6
LOCA WITH Iodine Removal System in use	2 hours	37	0.6
Steam Generator Tube Rupture	0.5 hours	2.0	4.0 E - 05
Main Steam Line Break	0.5 hours	0.04	0.01
Fuel Handling	0.5 hours	11	4.0 E - 03
Cask Drop	0.5 hours	2.0	0.03
Waste Gas Decay Tank Rupture	0.5 hours	2.0	2.0 E - 06

ATTACHMENT 2
RELEASE RATE DATA
(Page 19 of 19)

DATA SHEET 5 DEFAULT
(Applicable to Unit 1 or Unit 2)
(Page 2 of 2)

4. Calculate the Site Release Rate, Ci/sec, by completing the table below.

	Noble Gas	Iodine
A) Enter the release rates determined from this worksheet		
B) IF the other Unit is AFFECTED enter its release rates		
C) Add A and B to obtain the SITE RELEASE RATES		

5. Enter the SITE RELEASE RATES in the selected DOSE CALCULATION WORKSHEET:

   A. On line B, check Default under the Unit(s) using the default method.

   B. Enter the **NOBLE GAS RELEASE RATE** into line 8.

   C. Enter the **IODINE RELEASE RATE** into line 1.

   D. Enter the **DURATION** (if 2 affected units, use longest) into line 6.

   E. Enter the **PF** (Particulate Factor) (if 2 affected units, use largest) into line 11.

6. This data sheet is completed, follow the instructions on the DOSE CALCULATION WORKSHEET (Attachment 3).

END OF DATA SHEET 5

END OF ATTACHMENT 2

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 1 of 10)

DATA SHEET 1
Stability Class = A Seabreeze Impact = YES

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the Instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	2.3 E + 04	8.1 E + 03	2.3 E + 03	8.0 E + 02	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 mile	2 miles	5 miles	10 miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	5.0	2.6	0.73	0.26	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose Calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 1

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 2 of 10)

DATA SHEET 2
Stability Class = A Seabreeze Impact = NO

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	3.8 E + 03	1.8 E + 03	7.9 E + 02	4.0 E + 02	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	0.82	0.57	0.25	0.13	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 2

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 3 of 10)

DATA SHEET 3
Stability Class = B Seabreeze Impact = YES

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	3.0 E + 04	1.1 E + 04	3.0 E + 03	1.1 E + 03	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	9.6	3.4	0.97	0.36	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 3

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 4 of 10)

DATA SHEET 4
Stability Class = B Seabreeze Impact = NO

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	2.3 E + 04	6.0 E + 03	1.1 E + 03	5.7 E + 02	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	7.4	1.9	0.36	0.18	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 4

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 5 of 10)

DATA SHEET 5
Stability Class = C Seabreeze Impact = YES

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	6.0 E + 04	1.7 E + 04	3.9 E + 03	1.5 E + 03	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	19.0	5.3	1.2	0.48	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 5

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 6 of 10)

DATA SHEET 6
Stability Class = C Seabreeze Impact = NO

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	6.0 E + 04	1.7 E + 04	3.3 E + 03	9.5 E + 02	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	19.0	5.3	1.0	0.30	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 6

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 7 of 10)

DATA SHEET 7
Stability Class = D Seabreeze Impact = N/A

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	1.7 E + 05	6.0 E + 04	1.7 E + 04	5.7 E + 03	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	53.0	19.0	5.3	1.8	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 7

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 8 of 10)

DATA SHEET 8
Stability Class = E Seabreeze Impact = N/A

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	3.0 E + 05	1.2 E + 05	3.8 E + 04	1.4 E + 04	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for **TOTAL DOSES (TEDE)**	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	94.0	39.0	12.0	4.5	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 8

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 9 of 10)

DATA SHEET 9
Stability Class = F Seabreeze Impact = N/A

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	5.3 E + 05	2.5 E + 05	7.9 E + 04	3.5 E + 04	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	1.7 E + 02	7.8 E + 01	2.5 E + 01	1.1 E + 01	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 9

ATTACHMENT 3
DOSE CALCULATION WORKSHEET
(Page 10 of 10)

DATA SHEET 10
Stability Class = G Seabreeze Impact = N/A

A. Met Summary: **WIND DIRECTION** (from) _____ **AFFECTED SECTORS** _____
check method used: _____Tower _____NOAA/NWS _____Default

B. Release Rate Method:

Unit 1		Unit 2
_____	Grab Sample	_____
_____	Effluent Monitor	_____
_____	CHRRM	_____
_____	POST LOCA	_____
_____	Default	_____
_____	Attachment 4/6	_____

Date and time of data from release rate determination: _____/_____

Follow the instructions to calculate doses @						
line	Instruction for THYROID DOSES (CDE)	1 Mile	2 Miles	5 Miles	10 Miles	
1	Enter the **IODINE RELEASE RATE**, Ci/sec					SNF
2	Enter the **WIND SPEED**, mph					SNF
3	Divide line 1 by line 2					
4	Iodine Dose Factors,	9.1 E + 05	4.7 E + 05	1.8 E + 05	7.9 E + 04	
5	Multiply line 3 by line 4 to obtain **THYROID DOSE RATE (CDE)**, mrem/hr					SNF
6	Enter **DURATION** of release, hours					SNF
7	Multiply line 5 by line 6 to obtain **PROJECTED THYROID DOSE (CDE)**, mrem					PAR
line	Instructions for TOTAL DOSES (TEDE)	1 Mile	2 Miles	5 Miles	10 Miles	
8	Enter **NOBLE GAS RELEASE RATE**, Ci/sec					SNF
9	Enter **WIND SPEED** from line 2, above					
10	Divide line 8 by line 9					
11	Enter the **PARTICULATE FACTOR**					
12	Multiply line 10 by line 11					
13	Dose Factors	2.9 E + 02	1.5 E + 02	5.7 E + 01	2.5 E + 01	
14	Multiply line 12 by line 13					
15	Enter (Line 5 multiplied by 0.04)					
16	Add line 14 and 15 to obtain **TOTAL DOSE RATE (TEDE)**, mrem/hr					SNF
17	Enter **DURATION** from line 6, above					
18	Multiply line 16 by line 17 to obtain **TOTAL DOSE (TEDE)**, mrem					PAR
19	Forward this worksheet (or a copy) to the Emergency Coordinator {RM if done in EOF}					

C. Dose calculations completed; continue monitoring releases and assessing doses.

END OF DATA SHEET 10

END OF ATTACHMENT 3

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP

(Page 1 of 8)

1. Purpose

This attachment provides methods for TSC and/or EOF Dose Assessment personnel to define release rates from a containment burp and includes NRCs RTM-91 methods for estimating dose rates based on plant/reactor conditions.

2. Discussion

A. A containment burp is any suspected release from the containment that may be indicated by a rapid decrease of the containment pressure or rapid decrease in the Containment High Range Radiation Monitor that is determined, by operations or engineering, not due to changes in equipment operation (e.g., additional containment spray, additional containment coolers, etc.).

B. It must be remembered and understood that the methodology provided in this appendix includes conservative assumptions and is intended to provide the means to estimate an upper bound to the release, not an exact release rate.

3. Contents

Section 1: Provides guidance in estimating release rates during a LOCA resulting from rapid containment depressurizations; that is, an unmonitored burp release. The guidance is further sub-divided into three cases:

Case 1 - Rapid decrease in CHRRM reading during burp

Case 2 - No change in CHRRM reading during burp

Case 3 - Increase in CHRRM reading during burp

Section 2: Provides guidance in estimating doses based on plant/reactor conditions following the methodology in NRC RTM-91.

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE
FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 2 of 8)

4. Basis

Section 1:

Assumes CHRRM is responding only to Noble Gases
Assumes Curies in.(from core) < < Curies lost
2 E + 06 R/hr = 100% Core Inventory of Noble Gas (1 ÷ $CF_{T=0}$, CF from EPIP-09)
6.43 E + 08 Curies of Noble Gas is 100% Core Inventory (PSL2 UFSAR)
322 = 6.43 E + 08 Curies ÷ 2 E + 06 R/hr

Section 2:

NRC's Response Technical Manual RTM-91 Vol. 1, Rev. 1, pg. C-2.

5. Percent Mass Loss

A. Use Attachment 5, Estimate of Containment "% Mass Loss", to determine the values required in the following calculations.

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 3 of 8)

DATA SHEET 1
(Applicable to Unit 1 or Unit 2)
(Page 1 of 5)

Case 1: Rapid Decrease in CHRRM Reading

NOTE

1. A CHRRM drop of about 3 percent per hour may be due to radiological decay.
2. The CHRRM may drop by as much as 10 percent very quickly if containment spray is actuated due to Iodine washout.

METHOD:

1. Date and time of data: _____/_____

2. Calculate Delta-CHRRM:

   Start CHRRM _____ - End CHRRM _____ = _____ Delta-CHRRM, R/hr

3. Calculate Duration:

   A. Clock Time End _____ - Clock Time Start _____ = _____ Delta-Clock

   B. Convert Delta-Clock to Delta-Seconds: _____ Δ sec

4. Estimate Curies Lost:

   Delta CHRRM _____ x 322 Ci N.G. per R/hr = _____ Noble Gas Curies Lost

5. Estimate Noble Gas Release Rate (loss rate):

   Noble Gas Curies lost _____ ÷ _____ Δ sec = _____ Noble Gas Ci/sec

6. Estimate the Iodine Release Rate:

   N.G. Ci/sec _____ x 0.01 (Iodine Factor) = _____ Iodine Ci/sec

7. Utilize the current meteorological conditions and appropriate Dose Calculation Worksheets (circle 4 next to Attachment as method) or enter as Direct if using the computer, to estimate Offsite Doses.

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 4 of 8)

DATA SHEET 1
(Applicable to Unit 1 or Unit 2)
(Page 2 of 5)

Case 2: Constant CHRRM Reading

NOTE
Engineering may be requested to evaluate the percent mass lost in the burp.

METHOD:

1. Date and time of data: _____/_____

2. Estimate Noble Gas Curies in the containment:

   CHRRM R/hr _____ x 322 Ci N.G. per R/hr = _____ Noble Gas Curies in can

3. Calculate Duration:

   A. Clock Time End _____ - Clock Time Start _____ = _____ Delta-Clock

   B. Convert Delta-Clock to Delta-Seconds: _____ Δ sec

4. Estimate Curies Lost:

   A. Determine "% Mass Loss"

   B. N.G. Curies in can _____ x _____ % mass lost ÷ 100 = _____ Noble Gas Curies lost

5. Estimate Noble Gas Release Rate (loss rate):

   Noble Gas Curies lost _____ ÷ _____ Δ sec = _____ Noble Gas Ci/sec

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE
FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 5 of 8)

DATA SHEET 1
(Applicable to Unit 1 or Unit 2)
(Page 3 of 5)

Case 2: Constant CHRRM Reading

6. Estimate the Iodine Release Rate:

   N.G. Ci/sec _____ x 0.01 (Iodine Factor) = _____ Iodine Ci/sec

7. Utilize the current meteorological conditions and appropriate Dose Calculation Worksheets (circle 4 next to Attachment as method) or enter as Direct if using the computer, to estimate Offsite Doses.

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE
FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 6 of 8)

Section 1
(Applicable to Unit 1 or Unit 2)
(Page 4 of 5)

Case 3: Increasing CHRRM Reading

NOTE
Engineering may be requested to evaluate the percent mass lost in the burp.

METHOD:

1. Date and time of data: _____/_____

2. Calculate average CHRRM reading

   (Start CHRRM _____ + End CHRRM _____) ÷ 2 = _____ Avg CHRRM, R/hr

3. Estimate Noble Gas Curies in the containment:

   Avg. CHRRM R/hr_____x 322 Ci N.G. per R/hr =_____Noble Gas Curies in can

4. Calculate Duration:

   A. Clock Time End _____ - Clock Time Start _____ = _____ Delta-Clock

   B. Convert Delta-Clock to Delta-Seconds: _____ Δ sec

5. Estimate Curies Lost:

   A. Determine "% Mass Loss"

   B. N.G. Curies in can _____x_____% mass lost ÷ 100 = _____Noble Gas Curies lost

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE
FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 7 of 8)

DATA SHEET 1
(Applicable to Unit 1 or Unit 2)
(Page 5 of 5)

Case 3: Increasing CHRRM Reading

6. Estimate Noble Gas Release Rate (loss rate):

   Noble Gas Curies lost _____ ÷ _____ Δ sec = _____ Noble Gas Ci/sec

7. Estimate the Iodine Release Rate:

   N.G. Ci/sec _____ x 0.01 (Iodine Factor) = _____ Iodine Ci/sec

8. Utilize the current meteorological conditions and appropriate Dose Calculation Worksheets (circle 4 next to Attachment as method) or enter as Direct if using the computer, to estimate Offsite Doses.

END OF DATA SHEET 1

ATTACHMENT 4
TSC/EOF DOSE ASSESSMENT GUIDANCE FOR RESPONDING TO AN UNMONITORED CONTAINMENT BURP
(Page 8 of 8)

TABLE 1
(Applicable to Unit 1 or Unit 2)

Use this method IF there is not radiological data (e.g., CHRRM, containment grab sample, etc.) AND the accident has progressed past gap failure AND the containment has undergone catastrophic failure (e.g., know there should be pressure and there is none).

NOTE
The following method provides DOSES, not release rates. Doses based on stability class D and four m.p.h. wind speed.

REACTOR ACCIDENT CONSEQUENCE OVERVIEW
Containment Leakage

Core Condition	Containment Status	Mitigating System Status (A)	Acute Dose (rem) 1 hour Release @ 1 mile(B) WB	THY
MELT Release From Core 4500°F	Early total Failure (< 1 hr)	No Mitigation	1000+	10^5+
		Mitigated	250	10^4
	Late total failure (2 - 12 hr)	N/A	250	10^4
	Major Leakage (100% / day)	N/A	10	10^3
	Design leakage	N/A	10^{-2}	1
Gap Release From Core 1500°F	Early total Failure (< 1 hr)	No Mitigation	50	10^4
		Mitigated	10	10^3
	Late total failure (2 - 12 hr)	N/A	5	10^3
	Major Leakage (100% / day)	N/A	10^{-1}	10
	Design Leakage	N/A	10^{-4}	10^{-2}

Notes: (A) Sprays, filters
(B) 1 hour cloud immersion and inhalation plus 3 hours of ground shine

END OF TABLE 1

END OF ATTACHMENT 4

ATTACHMENT 5
¶2 ESTIMATE OF CONTAINMENT "% MASS LOSS"
(Page 1 of 2)

(Applicable to Unit 1 or Unit 2)

1. Purpose

The purpose of this calculation is to provide a method to estimate containment % mass release to the environment during a post-LOCA containment depressurization transient (containment "burp").

2. Discussion

A. The scope of this calculation is St. Lucie Units 1 and 2.

B. The dose assessment group can use the containment mass release data to estimate the radiation release to the environment (using Attachment 4, TSC/EOF Dose Assessment Guidance for Responding to an Unmonitored Containment Burp) provided the containment radiological conditions are known.

C. The containment de-pressurization event should be large (greater than 5.0 psi change), over a short period of time since the methodology does not accurately credit the effect of containment heat removal systems.

3. Acquire the following data:

NOTE
The "time span" for data observation should be the same as used for the calculation on Attachment 4, Case 2 or 3.

A. Containment Pressure just before blowdown transient:_____ psig {Pstart}

B. Containment Temperature just before blowdown transient:_____ deg F {Tstart}

C. Containment Pressure just after blowdown transient:_____ psig {Pend}

D. Containment Temperature just after blowdown transient:_____ deg F {Tend}

ATTACHMENT 5
ESTIMATE OF CONTAINMENT "% MASS LOSS"
(Page 2 of 2)

(Applicable to Unit 1 or Unit 2)

4. Estimate Initial Containment Atmosphere Density:

$$\frac{144 \times (14.7 + ...Pstart)}{53.3 \times (460 + ...Tstart)} = \_\_\_ \; Initial\ Density$$

5. Estimate End Containment Atmosphere Density:

$$\frac{144 \times (14.7 + ...Pend)}{53.3 \times (460 + ...Tend)} = \_\_\_ \; End\ Density$$

6. Estimate % Mass Lost:

$$\left(1 \text{ minus } \left(\frac{.....End\ Density}{.....Initial\ Density}\right)\right) x\,100 = \_\_\_\_\_ \%\ mass\ lost$$

END OF ATTACHMENT 5

ATTACHMENT 6
FIELD TEAM MEASUREMENTS ASSESSMENT
(Page 1 of 3)

¶3 This attachment provides methods to estimate a release rate from Field Monitoring Team survey meter measurements and provides guidance on comparing field measurements to dose projections.

NOTE
Survey meter Gamma (closed window) results must be from plume centerline; that is, the maximum value from a lateral transverse of the plume.

1. DATE:_____, TIME:_____, Unit:_____

2. If the survey meter measurement was at 1 mile value, Then go to Step 4.

3. Estimate the 1 mile value:

   Estimated 1 mile value = Survey meter results x (downwind distance, miles)^{Z}
   Where the exponent **Z** = 2 for Stability Class A, B
   1.5 for Stability Class C, D
   1.0 for Stability Class E, F, G

   ____(Z)
   _____mr/hr x_____(miles) =_____Estimated 1 mile mr/hr
   meter results downwind distance

4. For the met conditions at time of sampling, select the Dose Calculation Worksheet (DCW).

   A. Use Wind Speed in Miles Per Hour, mph

   B. Copy from Line 13, the 1 mile Dose factor as the DF for use in Step 5.

5. Estimate Noble Gas Release Rate: Estimated 1 mile mr/hr ÷ DF x Wind Speed

   _____mr/hr ÷_____(DF) x_____mph = _____Noble Gas Ci/sec

ATTACHMENT 6
FIELD TEAM MEASUREMENTS ASSESSMENT
(Page 2 of 3)

6. Estimate Iodine Release Rate (IF = Iodine Factor, see the affected units' Effluent Monitor Worksheet):

_____N.G. Ci/sec x _____(IF) = _____Iodine (131 Deq) Ci/sec

7. Utilize the current meteorological conditions and appropriate Dose Calculation Worksheets (circle 6 next to Attachment as method), or enter release rates as Direct if using the computer, to estimate Offsite Doses from this attachment.

Comparing Field Measurements To Dose Projections

NOTE

1. "Reasonable comparison" between Field Measurements & Dose Calculations is if the two are within an order of magnitude. Too many assumptions preclude better precision.

2. A survey team measurements `off centerline' will yield a low estimated release rate. The Field Monitoring Coordinator (EOF) has a method for estimating centerline values for these situations.

Survey Meter DDE Readings

The computerized dose calculation program estimates the `survey meter reading' DDE and for the pre-designated sampling locations (refer to Field Survey Map for descriptions of the locations). This Survey Meter Estimate is sum of immersion in plume of Noble Gas, and plume shine from iodine & particulates. The noble gasses are the majority of the exposure source. The program adjusts for gap versus core mix of noble gasses in response to the Core Damage Situation question.

The manual method does not calculate a DDE from immersion in noble gas. Referring to a Dose Calculation Worksheet apropos to the met conditions, a value could be estimated by multiplying the value calculated on line 10 by the Dose Factors listed on line 13. These Dose Factors are based on a core mix of noble gasses, and include the X/Q for the prevailing meteorological conditions.

ATTACHMENT 6
FIELD TEAM MEASUREMENTS ASSESSMENT
(Page 3 of 3)

Thyroid CDE

Thyroid dose projections, both procedure & computer, are based on a release of I-131 Deq Ci/sec. The field teams measure I-131 in the plume; their procedure has a time dependent factor to account for the dose from the other iodines. The factor starts at about 1.4 and decays to 1 (one) over about 24 hours. Dividing projected thyroid dose rate, mr/hr by 1.3 E + 9 will estimate the Iodine 131(Deq) concentration uCi/cc.

Time of Sample v. Time of Release

Time of field measurement minus (downwind distance, miles / wind speed, m.p.h.) will yield the `time' of the release rate estimated. The computerized calculations use a time window 15 or 30 minutes long. Select the latest printout that has a Release Observation Time before the time estimated above.

Estimating Dose Rates Or Concentrations At Other Distances (e.g., 1, 2, 5, 10 miles)

Estimated Value @ Dist x = Measured value times $(DWD/Dist\ x)^Z$

Where: DWD = Measurement downwind distance, miles

Dist x = other distance, miles

Z = exponent based on stability class

(ref EPA-520 Rev. 6/79, page 5.10.)

END OF ATTACHMENT 6

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 1 of 7)

Discussion

The computer-based Class A Model dose calculation program utilizes inputs and processes similar to the manual procedure. However, the refinements available in the computer based process allow for a wider range of input information and mathematical complexity than available in the manual method. These instructions provide the guidance for using the computer based process to derive calculated off-site doses in a manner similar to that discussed for the manual calculation. Not all input screens available in the computer program are needed by the general user and are, therefore not discussed in these instructions. These screens may be utilized by personnel familiar with their intended use.

The computerized Class A Model provides two (2) types of dose calculations. The "Actual Dose Calculation" which is accomplished in advection steps of fifteen (15) or thirty (30) minutes and is a cumulative dose determination and the "Forecast Dose Calculation" which is a projected dose determination based on a given time period such as two (2) hours. Personnel having expertise in dose calculation methodology may utilize that expertise in combination with the advanced methods available through the screen driven menus to modify and refine these basic calculations.

NOTE
If the Technical Support Center (TSC) and Emergency Operations Facility (EOF) are manned and operational, dose assessment personnel at these locations should coordinate their efforts in order to calculate the most accurate available off-site dose projections.

Computer Startup

1. Ensure the uninterruptible power supply to the computer is energized to prevent data loss if a power interruption occurs.

2. Ensure that the floppy disk drive is empty.

3. Turn on the display monitor, the printer and the computer.

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 2 of 7)

4. Following system startup, check the date and time on the computer.

> **NOTE**
> Correcting the date and time should be done prior to using a stand-alone computer. When using a computer on the LAN, contact a LAN administrator if the date and/or time need to be changed.

A. If the dose calculation program starts, Then the date and time is shown in the upper left of the monitor.

B. Correct the date and time as necessary (time should match ERDADS).

Changing the date/time.

1. Depress Function Key F5 (to quit the Class A software).
2. Type "Y".
3. Depress the "ENTER" key.
4. At the system prompt, type "TIME" (or "DATE" as required).
5. Depress the "ENTER" key.
6. Type correct data and depress "ENTER" key.

C. If the dose calculation program does not start, Then the date and time is checked at the system prompt using Steps 4-6 above.

5. When the computer displays the system prompt, and has correct date/time, type "FPL" and depress "ENTER" key to return to Class A software.

Pre-use QC Check

1. If time and manpower permits, Then perform a pre-use verification QC check following the instructions in the FPL Class A Emergency Offsite Dose Calc Program User Guide.

2. At the completion of the pre-use QC check, exit to the Main Menu, and proceed to step 3 of Performing Calculations, below.

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 3 of 7)

NOTE
If editing is required, edit the information in accordance with the displayed instructions.

Performing Calculations

CAUTION
Changing "Advection time step" after a calculation step can cause the Class A model to generate errors.

1. When the plant site menu is displayed, Then depress the Function Key (i.e., F1-Unit 1 or F2-Unit 2) to select the affected St. Lucie Plant Unit.

2. When the program asks, "Is this an exercise [Y/N]?", Then answer appropriately and depress the "ENTER" key.

3. When the Main Menu is displayed, Then select the F1 Function Key to start calculations.

4. When prompted by the program, "Warning - Start calculations will destroy previous dose values. OK [Y/N]?", Then depress "Y" and the "ENTER" key to reinitialize the data files.

NOTE
1. Thirty minute advection steps are normally used except for fuel handling accidents, for which fifteen minutes advection time steps should be used.

2. Once advection time is selected it should not be changed while running the program to prevent generating errors.

5. Select from the screen functions displayed on the General Accident Information Worksheet to edit the type of accident, reactor trip time, release start time, and advection step in the format shown on the screen by depressing the corresponding Function Keys, F1, F2, F3 or F4 respectively, Then depress "ENTER" after each new entry.

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 4 of 7)

6. When the correct type of accident, reactor trip time, release start time, and the advection time step have been entered, Then depress the F5 Function Key to accept the inputs.

7. When the Input Menu is displayed, Then depress the F1 Function Key to bring up the Meteorological Data menu.

8. When the Meteorological Data Summary Menu is displayed, Select the data sheet corresponding to the source of the data (i.e., Site Tower (ERDADS, chart recorder), Airport (NOAA, NWS), Default).

9. Enter the meteorological data gathered in the format shown using the displayed Function Keys, Then depress the "ENTER" key after each new entry.

10. When all necessary meteorological data has been entered, Then depress the F5 Function Key to accept the data and go to the Meteorological data Summary Menu.

11. Review the entered meteorological data, Depress the F5 Function Key to accept the data and Then return to the Input Menu.

12. When the Input Menu is displayed, Then depress the F2 Function Key to bring up the Source Term Data menu.

13. If the accident type is a LOCA or SGTR, Respond appropriately to the question about the Core Damage Situation.

14. If the accident type is a LOCA, Respond appropriately to the question about the Iodine Removal System Status.

15. When the Source Term Summary Menu is displayed, Select the data sheet corresponding to the source of the data (i.e., Grab Sampling, Effluent Monitors, CHRRM, Post LOCA Monitors, Default).

16. Enter the source term data gathered in the format shown using the displayed Function Keys, Then depress the "ENTER" key after each new entry.

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 5 of 7)

17. When the input of source term information has been completed, Then depress the appropriate Function Key to accept the data and return to the Input Menu.

18. If a final check of data accuracy is needed, Then depress the F3 Function Key to review a summary of the meteorological and source term data, Depress the F1 Function Key to print or the F2 Function Key to exit.

19. If the meteorological or source term data need to be revised, Go to step 7 or step 12 above, respectively.

20. Depress the F4 Function Key at the screen prompt, "Proceed with calculations [Y/N]?", and answer "Y", Depress the "ENTER" key to begin calculations.

NOTE
"CRT Displays" may be used instead of "Print Reports".

21. When the Output Menu is displayed, Then depress the F3 Function Key to select "Print Reports".

22. When the Printed Report Menu is displayed, Then depress the displayed Function Keys to select the desired reports.

CAUTION
Ensure that the printer and print buffer are on line and ready for use prior to proceeding with the printing task. If either device is not ready for use, the computer will exit the dose calculation program.

23. Depress any key to begin printing.

24. When the Output Menu is displayed, Then depress the F6 Function Key to select the Run Mode Menu.

25. When the Run Mode Menu is displayed, Then depress the F1 Function Key to select the Actual Calculation Mode and perform the next advection step (cumulative dose calculation) or depress the F2 Function Key to select the Forecast Calculation Mode.

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 6 of 7)

NOTE

1. Forecast periods are typically two (2) hours.
2. Forecast doses assume release rates and meteorological conditions remain constant during the forecasting period chosen.
3. Consider the reasonableness of assuming constant meteorological conditions and release rates for forecasting periods exceeding two (2) hours.

26. Edit the forecast period as desired using the displayed instructions.

27. When the forecast period has been accepted, the Input Menu: Forecast Calculation Mode will be displayed, Then depress the displayed Function Keys to review and/or edit the inputs as necessary.

28. When all inputs are acceptable, Then depress the F4 Function Key to perform calculations, at the screen prompt, "Proceed with calculations [Y/N]?", and answer "Y", and Depress the "ENTER" key to begin calculations.

NOTE

"CRT Displays may be used instead of "Print Reports".

29. When the Output Menu - Forecast Calculations mode is displayed, Then depress the F3 Function Key to select "Print Reports".

30. When the Printed Report Menu is displayed, Then depress the displayed Function Keys to select the desired reports.

ATTACHMENT 7
OFF-SITE CALCULATIONS - CLASS A COMPUTER METHOD
(Page 7 of 7)

CAUTION
The printer and print buffer must be on line and ready!

NOTE
1. The Emergency Coordinator should be provided with a printout of actual calculated doses, Protective Action Recommendations (PARs), and as requested, forecasted doses.

2. The Emergency Coordinator should be updated every thirty minutes during periods of actual or potential off-site release.

31. When the reports have been printed, Then return to the Run Mode Menu to update information and repeat the dose calculation process as needed due to release rate or meteorological changes.

32. Depress the F1 Function Key for the Actual Calculation Mode or the F2 Function Key for the Forecast Calculation Mode or the F3 Function Key to return to the Main Menu and quit.

33. Review the Summary of Met and Source Data displays for all subsequent calculations even if the inputs do not change so that they can be reviewed and accepted. Also ensure that the Noble Gas Reduction Factor is reset to its proper value.

END OF ATTACHMENT 7

5D-335 Superseded Per Rev's To EPIP's Dtd 11/29/01 # ML013390532

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No. **EPIP-10**

Current Rev. No. **4**

Effective Date: **09/26/00**

Title:

OFF-SITE RADIOLOGICAL MONITORING

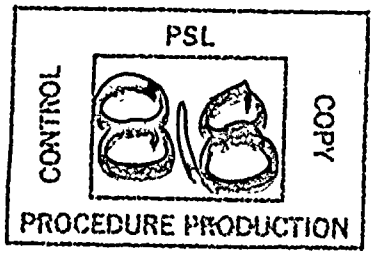
Responsible Department: **EMERGENCY PREPAREDNESS**

Revision Summary

Revision 4 - Corrected sample location designation on Attachment 5, added dose rate or concentration estimating capability, made administrative and editorial changes, and revised the dose and survey data worksheet. (J. R. Walker, 09/21/00)

Revision 3 - Added on-site monitoring points, made administrative changes, and incorporated new attachment. (J.R. Walker, 09/21/99)

Revision 2 - Improved status board update instructions, corrected procedure number to address QA comment from periodic review (Appendix J), and added editorial changes. (J. R. Walker, 03/18/99)



Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
4	09/21/00	R. G. West Plant General Manager	09/21/00
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS
DATE
DOCT PROCEDURE
DOCN EPIP-10
SYS
COMP COMPLETED
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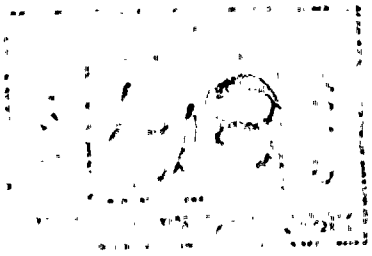


TABLE OF CONTENTS

1.0 PURPOSE

1.1 Discussion

1. This procedure provides instructions for tabulating off-site monitoring data and calculating doses of the Field Monitoring Team (FMT) personnel based on data resulting from off-site radiological monitoring.

2. Field monitoring activities are directed by the Technical Support Center (TSC) initially and later by the Emergency Operations Facility (EOF), once it goes operational.

3. This procedure is to be used by the FMT Comm/Coord in the TSC and the FMT Coord in the EOF.

4. Field monitoring activities are governed by two procedures:

   A. This procedure provides instructions for direction and control of the FMTs, and

   B. HP-202, Environmental Monitoring During Emergencies, provides instructions for personnel on FMTs.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 References

§$_1$ 1. St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)

2. St. Lucie Plant Radiological Emergency Plan (E-Plan)

§$_2$ 3. Florida Power and Light Topical Quality Assurance Report (TQAR)

4. Florida Radiological Emergency Management Plan for Nuclear Power Plants

5. E-Plan Implementing Procedures (EPIP-00-13)

6. HP - 200 Series Procedures

7. St. Lucie Plant Emergency Response Directory (ERD)

8. QI-17-PSL-1, Quality Assurance Records

9. EPA-400-R-92-001, EPA Manual of Protection Action Guides and Protective Actions for Nuclear Incidents, October, 1991.

10. FPL Environmental Survey Team Map (10 mile EPZ)

¶$_1$ 11. HP Form 100, Emergency Response Personnel Dose Monitoring

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.2 Records Required

1. Data collected and generated by this procedure should be recorded.

§1 2. Recorded information shall be forwarded to the Emergency Preparedness Supervisor following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 Commitment Documents

¶2 1. Nuclear Energy Policy on Exposure Limits for Emergency Response Personnel, Revision to Policy Statement, Ltr. No. JNO-HP-94-056, 26 October, 1994.

3.0 RESPONSIBILITIES

3.1 Technical Support Center Health Physics Supervisor (TSCHPS)

1. The TSCHPS or his designee is responsible for the activation, staffing, and direction of the Field Monitoring Team(s).

2. Directions for the TSCHPS are found in the HP-200 Series procedures.

3.2 EOF Health Physics Manager

1. The EOF HP Manager is responsible for field monitoring activities when the EOF is operational and a turnover has occurred with the TSCHPS.

2. Directions for the EOF HP Manager are found in EPIP-06, Activation and Operation of the Emergency Operations Facility.

3.0 RESPONSIBILITIES (continued)

3.3 Field Monitoring Team Communicator/Coordinator (FMT Comm/Coord)

1. In the TSC, the FMT Comm/Coord, with the concurrence of the TSCHPS, determines the monitoring points based upon meteorological conditions and population zones.

2. Communicates with the Field Monitoring Teams (FMTs) via the FPL radio system or telephone.

3. Informs the FMTs of all changes in pertinent meteorological and radiological data as well as in the status of the emergency and conditions at the plant.

4. Provides all survey results to the TSCHPS.

5. Tracks exposure levels of all members of the FMTs.

NOTE

When the EOF is operational, responsibility for determining sampling locations for the FMTs transfers to the EOF. The TSC retains the communication interface with the FMTs.

6. Provides all accumulated monitoring data to the EOF once it is manned.

7. Conducts a turnover with the FMT Coord in the EOF.

3.4 Field Monitoring Team Coordinator (FMT Coord)

1. In the EOF, FMT Coord, with the concurrence of the EOF Health Physics Manager, determines the monitoring points based upon meteorological conditions, population zones, and previous sampling locations.

2. Coordinates field monitoring activities with the Florida Bureau of Radiation Control.

3. Provides all survey results to the EOF HP Manager.

4.0 DEFINITIONS

4.1 **Florida Bureau of Radiation Control** - a division of the State of Florida Department of Health, responsible for off-site radiological monitoring and operating the Mobile Emergency Radiological Laboratory (MERL).

4.2 **Release** (during any declared emergency) -

1. Any effluent monitor of (approximately) ten times or one decade above pre-transient values

OR

2. Health Physics detecting airborne radioactivity levels in excess of 25 percent Derived Air Concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

5.0 INSTRUCTIONS

5.1 This section provides general information and instructions for members of the Emergency Response Organization (ERO).

5.2 Position specific checklists are included as attachments to this procedure.

5.3 Individuals specifically designated as members of the ERO are identified in the ERD.

5.4 When notified, ERO members are to report to their Emergency Response Facility (ERF) as quickly as possible if available and able to do so.

5.5 Reporting to Assigned Facility

1. Upon arrival at the TSC:

   A. Sign in on the status board on the South (rear) wall of the facility in the space corresponding to your position (TSC HP Communicator - one of two).

   B. Obtain a "Player" badge and place your name (and position title, if necessary) on the badge with a dry erase marker or in any other non-permanent manner.

   C. Make your workstation/location operational.

   D. Notify your supervisor or the TSC Supervisor of your readiness status.

   E. Assist Security in establishing accountability by signing in on a form similar to Attachment 3A, TSC ERO Shift Staffing and Accountability Roster, to procedure EPIP-04, Activation and Operation of the Technical Support Center.

5.0 INSTRUCTIONS (continued)

5.5 Reporting to Assigned Facility (continued)

2. Upon arrival at the EOF:

A. Present Security with a form of picture identification.

B. Inform Security of your "fitness for duty" status.

C. Obtain and wear a position specific access badge provided by Security.

1. Place your name on the badge with a dry erase marker or in any other non-permanent manner.

D. Sign in on the Staffing Board located on the south wall of the "bullpen" (room 101).

E. Make your workstation/location operational.

F. Notify your supervisor of your readiness status.

§2 **5.6** Only controlled copies of nuclear safety-related procedures, drawings, and other available plant information shall be used. Non-controlled documents or drawings should be verified with a controlled copy prior to use.

5.7 During facility briefings, stop what you are doing, pay attention, and contribute, as requested.

5.8 Upon termination of the event:

1. Return workstation/location to a normal state and assist in restoring the facility to a ready condition.

2. Collect all significant information and documentation, such as notes and completed data sheets (not bound in the procedure notebooks), and forward this material to the supervisor/manager of the facility.

3. The emergency facility supervisor/manager will forward this paperwork to the Emergency Preparedness Supervisor.

END OF SECTION 5.0

ATTACHMENT 1
(TSC) FMT COORD/COMM CHECKLIST
(Page 1 of 4)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in position package) and review the general instructions. _____

2. Verify operability of HP radio, refer to Attachment 3, Communications Guidelines, to this procedure. _____

B. OPERATION

1. Review Attachment 4, Field Monitoring Guidelines, to this procedure.

NOTE
Field Monitoring Teams may be activated at the discretion of the EC, but usually are dispatched based on emergency classification as follows:

Alert - dispatch one team to survey on-site/near-site

Site Area Emergency - dispatch three teams, one for on-site/near-site surveys and two teams for off-site surveys

General Emergency - same as for Site Area Emergency

2. Determine status of FMTs from the TSCHP. _____

3. Review areas to be surveyed with the TSCHPS with the aid of Attachment 5, Preselected On-site Monitoring Points, and Attachment 6, Preselected Off-site Monitoring Points. _____

4. Establish radio contact with FMTs. _____

ATTACHMENT 1
(TSC) FMT COORD/COMM CHECKLIST
(Page 2 of 4)

B. OPERATION (continued) INITIAL

NOTE

When the EOF is operational, responsibility for determining sampling locations for the FMTs transfers to the EOF. The TSC retains responsibility for:

1. Communications interface with the FMTs.
2. Exposure controls for FMTs.
3. Updating the FMTs on current conditions.

5. Steps to occur continually while this activity is underway:

   a. Communicate with the FMTs via the HP Off-site Channel, refer to Attachment 3, Communications Guidelines.

   b. Provide FMTs with sample locations.

   c. Provide FMTs with sampling instructions (e.g., open and close window readings, air sample, etc.).

   d. Record field survey data, use Attachment 7, Field Monitoring Teams Survey Results, to this procedure, refer to Attachment 7A, Field Monitoring Teams Survey Results - Instructions.

      1. Using carbon paper, make a copy as the data is entered into the form. Retain the original, provide the copy to the TSC Administrative Staff to update the status board.

ATTACHMENT 1
(TSC) FMT COORD/COMM CHECKLIST
(Page 3 of 4)

B. OPERATION (continued) INITIAL

5. (continued)

NOTE

¶2 1. The TSCHPS shall control the exposure for the FMT members to within FPL Administrative Exposure Limits of:

A. 5 rem Total Effective Dose Equivalent (TEDE)

OR

B. 50 rem committed Dose Equivalent (CDE) to the thyroid from the inhalation of radioiodine.

¶1 2. FMT member exposures will be controlled by monitoring their Deep Dose Equivalent (DDE) and they shall be recalled from further exposure before exceeding 5 rem DDE.

e. Track exposure levels of FMT members, use Attachment 8, Dose and Survey Data Worksheet, to this procedure, refer to Attachment 8A, Dose and Survey Data Worksheet - Instructions.

f. Inform the FMTs of all changes in pertinent meteorological and radiological data as well as in the status of the emergency and conditions at the plant.

g. Provide all survey results and FMT exposure levels to the TSCHPS.

1. To estimate dose, dose rate, or concentration, refer to Attachment 9, Estimating Dose, Dose Rate, or Concentration At Other Distances. /R4

6. Provide all accumulated monitoring data to the EOF. _____

7. Conduct a turnover with the FMT Coord in the EOF. _____

ATTACHMENT 1
(TSC) FMT COORD/COMM CHECKLIST
(Page 4 of 4)

C. CLOSEOUT		INITIAL
1.	Terminated all field sampling.	_____
2.	Recalled all FMTs to the site.	_____
3.	Instructed FMTs to return all equipment to footlockers at the Site Assembly Station.	_____
4.	Closed out the log.	_____
5.	Provided all completed paperwork (not bound in the position notebook) to the TSCHPS.	_____
6.	Returned position notebook to storage cabinet.	_____

/R4

END OF ATTACHMENT 1

ATTACHMENT 2
(EOF) FMT COORD CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. ACTIVATION — INITIAL

1. Refer to Section 5.0 of this procedure (included in position package) and review the general instructions. _____

2. Establish communications with the FMT Coord/Comm in the TSC. _____

3. Conduct turnover with the FMT Coord/Comm in the TSC. _____

B. OPERATION

1. Review Attachment 4, Field Monitoring Guidelines, to this procedure.

2. Review FMT results received from the TSC with the EOF HP Manager. _____

3. Take responsibility for selection of sampling locations for FMTs. _____

4. Review areas to be surveyed with the EOF HP Manager with the aid of Attachment 5, Preselected On-site Monitoring Points, and Attachment 6, Preselected Off-site Monitoring Points. _____

ATTACHMENT 2
(EOF) FMT COORD CHECKLIST
(Page 2 of 3)

B. OPERATION (continued) INITIAL

5. Steps to occur continually while this activity is underway:

> **NOTE**
> The FMT Coord/Comm in the TSC maintains responsibility for:
>
> 1. Communications interface with the FMTs.
> 2. Exposure controls for FMTs.
> 3. Updating the FMT on current conditions.

a. Coordinate field monitoring activities with the TSC.

b. Provide FMTs with sampling instructions (e.g., open and closed window readings, air samples, etc.).

c. Coordinate field monitoring activities with the Florida Bureau of Radiation Control.

d. Record field survey data, use Attachment 7, Field Monitoring Teams Survey Results, refer to Attachment 7A, Field Monitoring Teams Survey Results - Instructions.

1. Using carbon paper, make a copy as the data is entered into the form. Retain the original, provide the copy to the EOF Rad Status Board Keeper to update the status board.

e. Provide all survey results to the EOF HP Manager.

1. To estimate dose, dose rate or concentration, refer to Attachment 9, Estimating Dose, Dose Rate or Concentration At Other Distances. /R4

f. Post field monitoring locations and results on the EPZ map.

ATTACHMENT 2
(EOF) FMT COORD CHECKLIST
(Page 3 of 3)

C. CLOSEOUT	INITIAL
1. Terminated all field sampling.	_____
2. Provided all completed paperwork (not bound in the position notebook) to the EOF HP Manager.	_____
3. Returned position notebook to the Recovery Manager's office.	_____

/R4

END OF ATTACHMENT 2

ATTACHMENT 3
COMMUNICATIONS GUIDELINES
(Page 1 of 3)

NOTE
If communications are associated with drill or exercise, the statement "This is a drill" should precede and follow the actual message.

A. HP OFF-SITE RADIO CHANNEL

A unique 900 MHz channel for communications with the off-site FMTs. The table radio, labeled "Off-site Radio" can be operated either by depressing the "transmit" button on the console or by removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. (Preference should be given to using the handset.)

B. GENERAL GUIDELINES

1. Always speak clearly, firmly, and with normal tone when using any communication system.

2. The sender and receiver shall be clearly identified.

3. Message text:

   a. Communication must be free of ambiguity. Slang terms shall not be used. Avoid the use of words that sound alike; for example, avoid increase and decrease, use raise and lower instead.

   b. Communications must be specific. Use noun names for plant equipment, not acronyms; for example use low pressure safety injection pump instead of LPSI.

ATTACHMENT 3
COMMUNICATIONS GUIDELINES
(Page 2 of 3)

B. GENERAL GUIDELINES (continued)

3. (continued)

c. The phonetic alphabet should be used to identify specific train, bus, channel, or equipment designations, not just letter identifier; for example, refer to the 1Alpha heater drain pump, not the 1A heater drain pump. The following is the phonetic alphabet to be used:

A Alpha	J Juliet	S Sierra
B Bravo	K Kilo	T Tango
C Charlie	L Lima	U Uniform
D Delta	M Mike	V Victor
E Epsilon	N November	W Whiskey
F Foxtrot	O Oscar	X X-Ray
G Golf	P Papa	Y Yankee
H Hotel	Q Quebec	Z Zulu
I India	R Romeo	

d. The phonetic alphabet should not be used for stringed letter references, acceptable acronyms, or location symbols; for example, AB bus, AC or DC, TSC, respectively.

4. Acknowledgement and confirmation (3-way communication) - messages shall be comprised of proper transmission, acknowledgement, and confirmation.

a. The message is properly transmitted from the originator to the receiver.

b. The message receiver shall acknowledge the communication by giving functional repeat-back to the message originator. The repeat-back can be provided by either paraphrasing or explaining the message in one's own words, or by verbatim repeat-back. In all cases, verbatim repeat-back shall be used for equipment identifiers.

ATTACHMENT 3
COMMUNICATIONS GUIDELINES
(Page 3 of 3)

B. GENERAL GUIDELINES (continued)

4. (continued)

   c. If the message receiver does not understand the message, he/she shall ask for the message to be repeated.

   d. If an incorrect repeat-back is given, the message originator shall immediately correct the miscommunication with a statement such as, "WRONG", followed by restating the correct message.

   e. The message originator shall confirm the acknowledgement (repeat-back) with a statement such as, "That is correct".

5. Use of the Call Sign is not necessary when communicating with the HP Off-site Channel radio (station ID occurs every 30 minutes automatically).

6. Prior to transmission, ensure that information has been verified and approved by the appropriate authority, as necessary.

7. Ensure that any incoming pertinent information is provided to the TSCHPS.

8. Maintain documentation of any significant information provided or received.

END OF ATTACHMENT 3

ATTACHMENT 4
FIELD MONITORING GUIDELINES
(Page 1 of 1)

Purpose

The purpose of field monitoring is to detect and characterize an airborne plume of radioactive material. This could be the only source of information for an unmonitored release.

Strategy

1. Disperse teams as follows:

   - Owner Controlled Area, one team

   - Left and right of the plume centerline at some distance (e.g., 2-5 miles), two teams

2. Determine if a release is in progress (i.e., has any FMT reported survey meter readings greater than background).

3. Estimate plume location by using wind speed, wind direction, and time of release.

4. If doses or projections are not limiting, attempt to characterize plume width and location of plume centerline (= highest reading on a transverse path across the plume).

5. To assess radiological composition, obtain and analyze an air sample to establish an iodine to noble gas ratio.

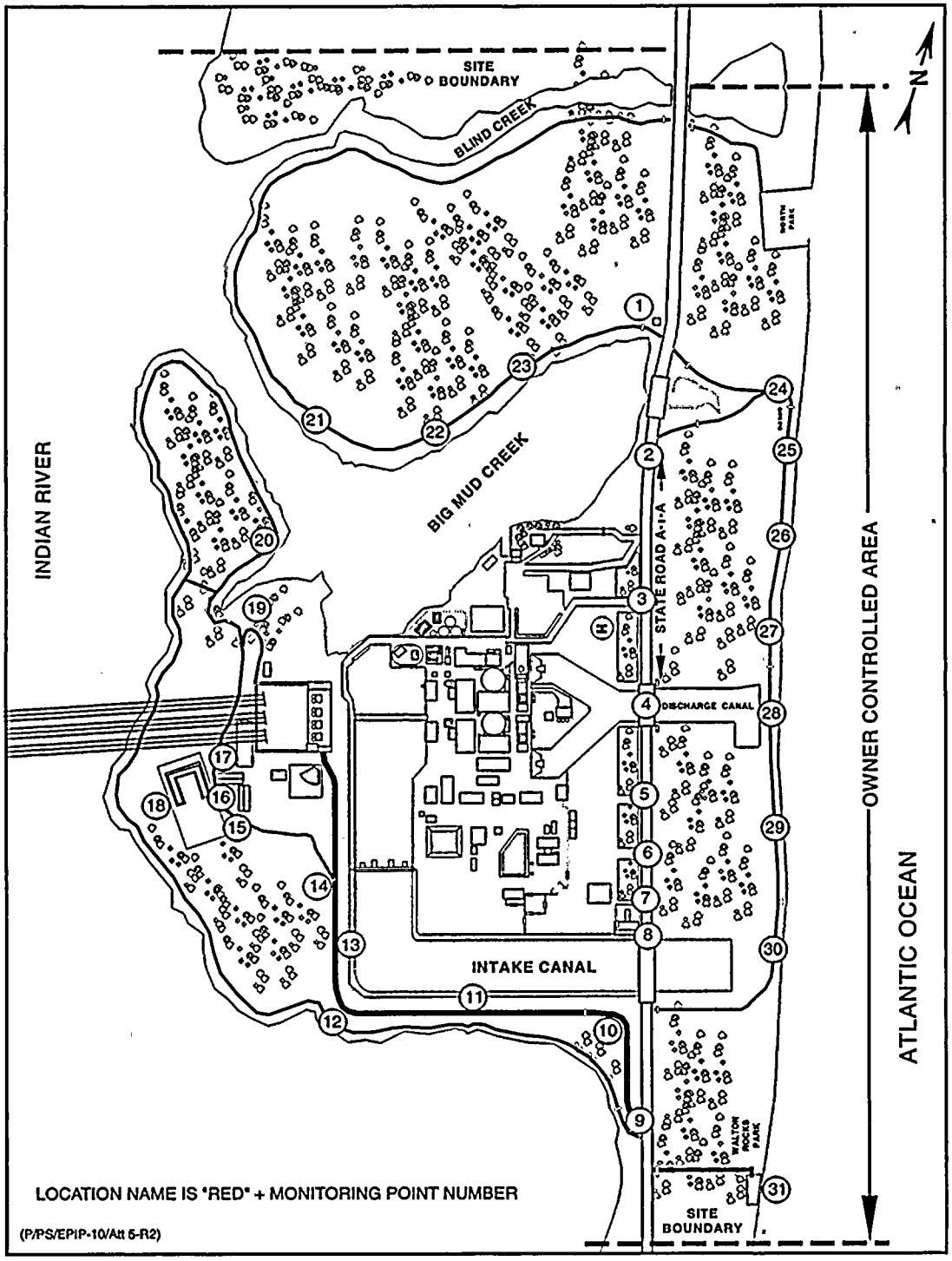
6. Attempt to determine actual plume boundaries, use predesignated monitoring locations as reference points, to ensure appropriate Protective Actions are in place (or recommended) for areas impacted by the plume.

7. Collaborate with State teams to increase data collected and maximize resources (cover as large an area as possible or needed).

8. Results of field monitoring provide feedback to dose calculations/assessment; SURVEY DOSE RATES SHOULD NEVER EXCEED PROJECTED DOSE RATES.

END OF ATTACHMENT 4

ATTACHMENT 5
PRESELECTED ON-SITE MONITORING POINTS
(Page 1 of 4)



ATTACHMENT 5
PRESELECTED ON-SITE MONITORING POINTS
(Page 2 of 4)

MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
Red-1	Met Tower, Site Assembly Sta.	0.5	A
Red-2	Gate A & Rte A1A	0.3	B
Red-3	Gate B & Rte A1A	0.25	B
Red-4	Discharge Canal Bridge @ Rte A1A	0.2	D
Red-5	Gate C & Rte A1A	0.25	E
Red-6	Gate D & Rte A1A	0.3	F
Red-7	Gate E & Rte A1A	0.33	F
Red-8	Gate F & Rte A1A (north side of intake canal)	0.45	G
Red-9	Gate G & Rte A1A	0.6	G
Red-10	Ball Park Road (first north to westbound corner)	0.5	G
Red-11	Ball Park Road (@ mile marker on berm)	0.46	G, H
Red-12	Ball Park Road (@ corner turning north)	0.5	H, J
Red-13	Ball Park Road (post in berm, midway between monitoring points Red 12 & 14)	0.38	J

ATTACHMENT 5
PRESELECTED ON-SITE MONITORING POINTS
(Page 3 of 4)

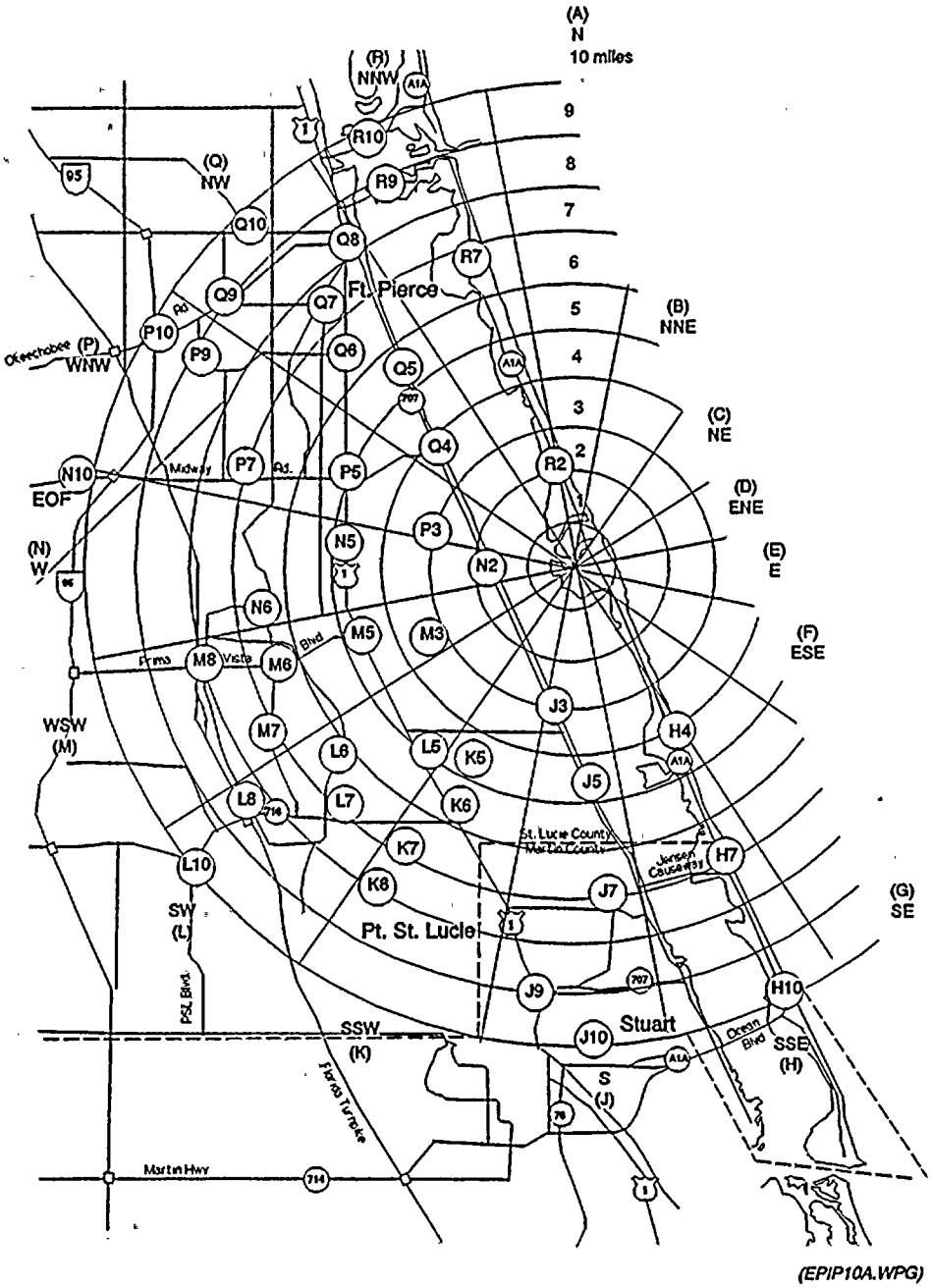
MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
Red-14	Ball Park Road (@ left turn towards Gun Range/ Picnic Pavilion)	0.3	K
Red-15	Gate W-25 (east side of Gun Range)	0.4	L
Red-16	Picnic Pavilion	0.33	L
Red-17	Intersection of Boat Ramp turnoff & road to Fire Training Area	0.32	L
Red-18	Gate W-26 (west side of Gun Range)	0.5	L
Red-19	Boat Ramp	0.36	M, N
Red-20	Fitness Trail (@ .5 mi. sign)	0.5	N
Red-21	Road, north side of Big Mud Creek (opposite Boat Ramp)	0.35	P
Red-22	Road, north side of Big Mud Creek (opposite City Water Storage Tanks)	0.30	Q
Red-23	Road, north side of Big Mud Creek (opposite Barge Slip)	0.4	R
Red-24	Turtle Beach Parking Lot	0.62	B
Red-25	Large foot bridge	0.54	B, C
Red-26	Small foot bridge	0.51	C

ATTACHMENT 5
PRESELECTED ON-SITE MONITORING POINTS
(Page 4 of 4)

MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
Red-27	Concrete power pad	0.5	C
Red-28	Discharge Canal Header	0.5	D
Red-29	Halfway between Discharge & Intake Canal Headers	0.52	E
Red-30	Intake Canal Header	0.6	F
Red-31	Walton Beach entrance road (@ fork in the road)	0.8	G

END OF ATTACHMENT 5

ATTACHMENT 6
PRESELECTED OFF-SITE MONITORING POINTS
(Page 1 of 5)



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ATTACHMENT 6
PRESELECTED OFF-SITE MONITORING POINTS
(Page 2 of 5)

MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
R2	S.R. A1A, NNW of plant site (Little Mud Creek Bridge)	2.3	R
R7	Intersection of S.R. A1A and Clipper Blvd. (Entrance to Ocean Village)	6.7	R
R9	S.R. A1A, NNW of plant site (West of Fire Dept. at Siren)	8.6	R
R10	East side of North Bridge (S.R. A1A)	9.6	R
Q4	Intersection of Indian River Dr. (S.R. 707) and White Rd., East of White City and South of Fort Pierce	3.7	Q
Q5	Intersection of Indian River Dr. (S.R. 707) and Rio Vista Dr.	5.4	Q
Q6	Intersection of U.S. 1 and Edwards Rd. (S.R. 611.B), South side of Ft. Pierce near railroad crossing	6.4	Q
Q7	Intersection of Oleander Blvd. (S.R. 605) and Virginia Ave.	7.4	Q
Q8	Intersection of U.S. 1 and Delaware Ave.	8.1	Q
Q9	Intersection of Okeechobee Rd. (S.R. 70) and Hartman Rd. (S. 41st St. near siren)	9.1	Q
Q10	Intersection of Orange Ave. (S.R. 68) and Angle Rd.	9.6	Q

ATTACHMENT 6
PRESELECTED OFF-SITE MONITORING POINTS
(Page 3 of 5)

MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
P3	Intersection of Bartow St. and Yucca Dr.	3.2	P
P5	Intersection of U.S. 1 and Midway Rd. (S.R. 712) White City	5.2	P
P7	Intersection of Midway Rd. (S.R. 712) and Christiansen Rd. (at siren)	7.1	P
P9	Intersection of McNeil Rd. and Edwards Rd. (611B)	8.7	P
P10	Intersection of Okeechobee Rd. (S.R. 70) and I-95	9.7	P
N2	S.R. 707 West of plant site (at siren)	2.0	N
N5	Intersection of U.S. 1 and Saeger Rd. (south of White City)	4.8	N
N6	Intersection of St. James Dr. and Airoso Blvd.	6.4	N
N10	St. Lucie's EOF, Intersection of S.R. 712 and I-95	10.2	N
M3	East end of N. Mediterranean Blvd.	3.4	M
M5	Intersection of U.S. 1 and Prima Vista Blvd., Port St. Lucie	4.8	M
M6	Intersection of Prima Vista Blvd. and Airoso Blvd.	6.5	M

ATTACHMENT 6
PRESELECTED OFF-SITE MONITORING POINTS
(Page 4 of 5)

MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
M7	Intersection of Airoso Blvd. and Whitmore Dr.	7.3	M
M8	Intersection of Prima Vista Blvd. and Bayshore Blvd.	7.8	M
L5	Intersection of U.S. 1 and Walton Rd., Port St. Lucie	4.8	L
L6	Intersection of Floresta Dr. and Thornhill Dr.	6.4	L
L7	Intersection of Whitmore Drive and Port St. Lucie Blvd.	7.2	L
L8	Intersection of Port St. Lucie Blvd. and Fla. Turnpike	8.4	L
L10	Intersection of Port St. Lucie Blvd. and Cairo Ave.	10	L
K5	Intersection of Lennard Rd. and Blossom Rd.	4.7	K
K6	Intersection of U.S. 1 and Port St. Lucie Blvd., Port St. Lucie	5.7	K
K7	Intersection of Morningside Blvd. and Westmoreland Blvd.	7.1	K
K8	Intersection of Morningside Blvd. and River Vista Dr.	8.0	K
J3	Intersection of Walton Rd. and Indian River Dr. (S.R. 707)	3.4	J

ATTACHMENT 6
PRESELECTED OFF-SITE MONITORING POINTS
(Page 5 of 5)

MONITORING POINT	LOCATION	DISTANCE FROM PLANT (MILES)	EPZ SECTOR
J5	Intersection of Indian River Dr. (S.R. 707) and Mockingbird Hill Rd. (near siren)	4.7	J
J7	Intersection of Jensen Beach Blvd. (S.R. 707A) and Savannah Rd. (S.R. 723)	7.0	J
J9	Intersection of Wright Blvd. (S.R. 723) and U.S. 1	9.2	J
J10	Martin Memorial Hospital	10.0	J
H4	S.R. A1A, south of plant (at siren) North to entrance to Nettle's Island	4.0	H
H7	Intersection of S.R. A1A and the Jensen Beach turnoff (A1A Alt.) (at siren)	6.9	H
H10	Intersection of S.R. A1A and Ocean Blvd. (Elliott Museum)	9.8	H

END OF ATTACHMENT 6

ATTACHMENT 7
FIELD MONITORING TEAMS SURVEY RESULTS
(Page 1 of 1)

Date: ____/____/____

1 Time of Survey	2 Wind Direction (from)	3 Affected Sectors	4 Team (R, O, B)	5 Miles from Plant	6 Survey Location	7 Survey Results		8 Survey Greater Than Projected (Y/N)	9 Comments
						a. Plume DDE (mrm/hr)	b. Thyroid CDE (mrem/hr)		

END OF ATTACHMENT 7

ATTACHMENT 7A
FIELD MONITORING TEAMS SURVEY RESULTS - INSTRUCTIONS
(Page 1 of 2)

The following instructions are provided for the completion of Attachment 7. The columns in Attachment 7 have been numbered from 1-9. An explanation of the data expected in each column is provided below. Prior to entering data into the table, place the date at the top of the page. Use multiple forms as necessary and number sequentially. Print your name at the bottom of each form and initial.

1. Time of Survey - This is the time that survey data was gathered in the field, time should be based on a 24 hour clock (e.g., 2 a.m. = 0200 hours and 7 p.m. = 1900 hours).

2. Wind Direction - This is the direction FROM which the wind is blowing, this information is posted on and should be obtained from the dose assessment status board.

3. Affected Sectors - The affected sectors are determined by the wind direction, 3 (or possibly 4) sectors are affected, this information is posted on and should be obtained from the dose assessment status board.

4. Team - There are 3 FPL FMTs, usually designated R = red, O = orange, and B = blue, the R team is usually the first dispatched and conducts surveys on-site/near-site, the other two teams go off-site.

5. Miles from Plant - This is determined by the sampling location.

   A. On-site/near-site Team (=Red Team) - Monitoring locations within the Owner Controlled Area are given in Attachment 5, Preselected On-site Monitoring Points. Each location is designated as "Red - monitoring point number" (e.g., Red-25). The distance from the plant as well as a description of the location of each monitoring point is provided as part of the attachment.

   B. Off-site Teams (=Orange and Blue Teams) - Monitoring locations within the 10 mile EPZ, outside the Owner Controlled Area, are given in Attachment 6, Preselected Off-site Monitoring Points. If a preselected monitoring point is used, the designation gives both sector and distance (e.g., point R9 is approximately 9 miles from the plant in Sector R). The preselected monitoring points can also be used to estimate distances.

ATTACHMENT 7A
FIELD MONITORING TEAMS SURVEY RESULTS - INSTRUCTIONS
(Page 2 of 2)

6. Survey Location - If a preselected monitoring location is used, a location designation is provided for each point in both Attachments 5 and 6. If other points are used, the FMT should provide a clear location (e.g., distance from and name of closest intersection or landmark).

7. Survey Results -

   a. Plume DDE (mrem/hr) - This is a measure of external exposure, measured by a survey meter (dose rate meter). The recorded value is the closed window reading in millirem per hour.

   b. Thyroid CDE (mrem/hr) - This is a measure of thyroid dose rate due to inhalation of radioiodines. The thyroid dose rate is calculated using Attachment 7B, Estimate of Thyroid Dose Rate, to this procedure. The recorded value is in millirem per hour.

8. Survey Greater Than Projected (Y/N) - Field monitoring results provide important feedback on the accuracy of dose projections. Field readings should be compared to projected doses and dose rates and reviewed with the TSCHPS or EOF HP Manager, as appropriate. Example: compare the measured dose rate at 5 miles at 1045 with the dose rate at 5 miles from the 0830 2 hour projection, field readings should never exceed projections.

9. Comments - Record any significant extra or useful information.

END OF ATTACHMENT 7A

ATTACHMENT 7B
ESTIMATE OF THYROID DOSE RATE
(Page 1 of 1)

Field Monitoring Teams will take direct radiation readings and air samples and analyze air samples for radioiodine (I-131) concentration.

1. Radioiodine (I-131) analysis should normally be performed using portable analyzers with scintillation detectors.

2. Thyroid Dose (CDE) Rate, from the inhalation of iodines, is estimated using the following equation:

   ___A___ (mrem/hr) = 1.3 E+9 x ___B___ x ___C___ (uCi/ml)

   Where A = Thyroid Dose (CDE) Rate

   B = Factor from table below

   C = Iodine 131 concentration measured in the field (from HP 202.1, Environmental Airborne Activity Calculation Form.)

Time is Hours since Reactor Trip

Time (hour)	Factor	Time (hour)	Factor
0	1.45	9	1.32
1	1.43	10	1.30
2	1.41	11	1.29
3	1.40	12	1.28
4	1.38	13	1.28
5	1.37	14	1.27
6	1.35	15	1.26
7	1.34	24	1.19
8	1.33	36	1.13

3. Plug in values for B and C to calculate the Thyroid Dose (CDE) Rate.

   _____ (mrem/hr) = 1.3 E+9 x _____ x _____ (uCi/ml)

END OF ATTACHMENT 7B

ATTACHMENT 8

DOSE AND SURVEY DATA WORKSHEET

(Page 1 of 1)

NOTE

Recall a Field Monitoring Team from further exposure before either member exceeds 5,000 mrem (DDE).

Member A:__________________

Team: ______________ Member B:__________________ Date:____/____/____

1 Survey Location	2 Sector	3 Time of Survey	4 Measured Gamma Dose Rate (mrem/hr)	5 Measured Iodine -131 (µCi/ml)	6 Time in Plume (minutes)	7 DRD Reading (mrem)	8 Thyroid Dose (mrem)
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		
			OPEN		A		
			CLOSED		B		

/R4

END OF ATTACHMENT 8

ATTACHMENT 8A
DOSE AND SURVEY DATA WORKSHEET - INSTRUCTIONS
(Page 1 of 2)

The following instructions are provided for the completion of Attachment 8. The columns in Attachment 8 have been numbered from 1-7. An explanation of the data expected in each column is provided below. One data sheet is to be used for each FMT (red, orange, blue). The team and the names of the two members of each team are to be filled-in at the top of the form. Prior to entering data into the table, place the date at the top of the page. Use multiple forms for each team as necessary and number sequentially. Print your name at the bottom of each form and initial.

1. Survey Location - If a preselected monitoring location is used, a location designation is provided for each point in both Attachment 5, Preselected On-site Monitoring Points, and Attachment 6, Preselected Off-site Monitoring Points. If other points are used, the FMT should provide a clear location (e.g., distance from and name of closest intersection or landmark).

2. Sector - The 10 mile Emergency Planning Zone (EPZ) around St. Lucie Plant is divided into 16 sectors which are labeled A-R (I and O are not used). Identify the sector in which the field data was collected. Refer to the FPL Environmental Survey Map (10 mile EPZ) posted in the TSC. The 10 mile EPZ is also shown on Page 1 of Attachment 6.

3. Time of Survey - This is the time that survey data was gathered in the field, time should be based on a 24 hour clock (e.g., 2 a.m. = 0200 hours and 7 p.m. = 1900 hours).

4. Measured Gamma Dose Rate (mrem/hr) - This is direct radiation measure of dose rate from a survey meter, recorded in millirem per hour. Both an open and closed window reading should be recorded. The open window reading allows for an estimate of beta dose.

5. Measured Iodine - 131 (uCi/ml) - This is an air sample in which the concentration of Iodine - 131 is measured in a certain volume, recorded in microcuries per milliliter.

ATTACHMENT 8A
DOSE AND SURVEY DATA WORKSHEET - INSTRUCTIONS
(Page 2 of 2)

6. Time in Plume (Minutes) - This is the time the FMT members actually spent in the plume. It is recorded as a separate measure for each team member. The value is recorded in minutes.

7. DRD Reading (mrem) - This is a Direct Reading Dosimeter (DRD) reading that should be recorded each time the FMT member exits the plume. The DRD records a cumulative dose. The value is recorded in millirem. Electronic Personal Dosimeters (EPDs) may also be used with the DRDs.

8. Thyroid Dose (mrem) - Thyroid dose is determined by multiplying the dose rate calculated in Attachment 7B, Estimate of Thyroid Dose Rate, times the time in the plume (column 6). The value is recorded in millirem. /R4

END OF ATTACHMENT 8A

ATTACHMENT 9
ESTIMATING DOSE, DOSE RATE OR CONCENTRATION AT OTHER DISTANCES
(Page 1 of 1)

CAUTION
As with any approximation, caution and judgement should be applied when using an estimated value.

1. To estimate dose, dose rate or concentration at a distance other than where surveys were taken, use the following equation:

$$E = M * (MD/ED)^z$$

Where E = estimated dose, dose rate or concentration

ED = distance at which an estimated dose, dose rate or concentration is desired

M = actual measured dose, dose rate or concentration

MD = distance at which the actual measured dose, dose rate or concentration was taken

Z = exponent based on stability class

Stability Class	Z Value
A, B	2.0
C, D	1.5
D, E, F	1.0

(based on EPA-400, Chapter 5)

/R4

END OF ATTACHMENT 9

FPL

ST. LUCIE PLANT HEALTH PHYSICS PROCEDURE

SAFETY RELATED

Procedure No. **HP-90**

Current Rev. No. **37**

Effective Date: **12/20/00**

Title:

EMERGENCY EQUIPMENT

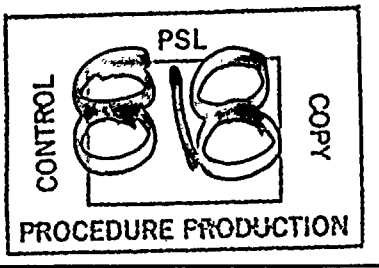
Responsible Department: **HEALTH PHYSICS**

Revision Summary

Revision 37 - Deleted references to STA, revised TSC commo survey referent to EPIP-13, revised replacement time for failed major equipment within the OCA to 24 hours, made editorial changes, and revised attachments/forms from HP-206 to be included in e-kits. (J. R. Walker, 12/07/00)

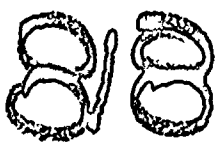
Revision 36 - Added check of fax machines and copy machines and deleted unnecessary letter references to specific copies of ERD. (Steve Knapp, 10/28/99)

Revision 35 - Revised references to delete C-111 and added COP-06.11. Revised text and checklists to delete C-111 and added COP-06.11. Updated EP Supervisor information. Made administrative changes. (Rick Walker, 06/30/99)



Revision	FRG Review Date	Approved By	Approval Date
0	06/24/75	K. N. Harris Plant General Manager	09/11/75
37	12/07/00	R. G. West Plant General Manager	12/07/00
		N/A Designated Approver	
		N/A Designated Approver (minor correction)	

S___OPS
DATE
DOCT PROCEDURE
DOCN HP-90
SYS
COMP COMPLETED
ITM 37



ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

1.0 TITLE:

EMERGENCY EQUIPMENT

2.0 REVIEW AND APPROVAL:

See cover sheet.

3.0 PURPOSE:

This procedure gives the instructions to be used when conducting inventories and maintenance of HP Emergency Kits.

4.0 PRECAUTIONS AND LIMITATIONS:

4.1 Item substitution is authorized only if the substituted item is comparable/equivalent to the original equipment.

4.2 All emergency equipment shall be checked and inventoried once each month and within five (5) working days following each use.

4.3 Items found in Emergency Kits which do not appear on the inventory sheets shall be removed and relocated in accordance with the instructions of a Health Physics Supervisor. This does not apply at hospitals, where FPL and non-FPL supplies may be collocated in accordance with hospital staff preferences.

4.4 In years ending in zero (0) or five (5), all inventoried equipment should be evaluated with respect to age, wear and need for replacement or upgrade.

4.5 Kit check sources used to test instrument operability should NOT be stored near the kit TLDs.

4.6 Silver impregnated zeolite cartridges may be properly stored for a period of five years from the date of manufacture.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

4.0 PRECAUTIONS AND LIMITS: (continued)

4.7 Electronic Personnel Dosimeters (EPD) stored in the Control Rooms and offsite monitoring team kits shall be programmed to:

1. Display both Dose and Dose Rate.

2. Activate by pushing the pushbutton.

3. Alarm on a dose of 4.5R and a Dose Rate of 10R/hr.

¶1 4.8 When notified by Emergency Planning that a revision to a procedure contained in the HP Emergency Kits has been issued, HP should update the procedure with the new revision within five (5) working days.

4.9 Full face respirators in the Emergency Kits shall be visually inspected in accordance with the requirements of HPP-62, Inspection and Maintenance of Respiratory Protection Equipment.

5.0 RELATED SYSTEM STATUS:

NONE

6.0 REFERENCES:

6.1 St. Lucie Plant Radiological Emergency Plan (E-Plan)

6.2 E-Plan Implementing Procedures (EPIP 00-13)

6.3 St. Lucie Plant Emergency Response Directory (ERD)

6.4 Florida Power & Light Company, St. Lucie Plant Recovery Plan

6.5 HPP-62, "Inspection and Maintenance of Respiratory Protection Equipment."

6.6 HPP-70, "Personnel Contamination Monitoring and Decontamination Procedure."

6.7 HPP-101, "Identification and Reporting of Radiological Events."

6.8 Health Physics Procedures, HP-200 Series

6.9 COP-06.06, "Guidelines for Collecting Post Accident Samples."

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

6.0 REFERENCES:

6.10 COP-06.11, "Establishing Remote Laboratory for Analyses of Accident Samples."

6.11 OP 1-0010125, "Schedule of Periodic Tests, Checks and Calibrations."

6.12 OP 2-0010125, "Schedule of Periodic Tests, Checks and Calibrations." /R37

6.13 NRC Generic Letter 91-14, Emergency Telecommunications.

6.14 NRC Administrative Letter 94-04, Change of the NRC Operations Center Commercial Telephone and Facsimile Numbers.

6.15 OSHA 1926.404(b)(iii), Assured Equipment Grounding Conductor Program.

¶1 6.16 PMAI number PM 97-04-006, EPIP Updates in HP EKits

¶2 6.17 PMAI number PM 97-04-147, Shaving Supplies in HP EKits

¶3 6.18 PMAI number PM 97-07-142, First-aid Kit in Site Assembly Station

¶4 6.19 PMAI number PM 99-09-076, Fax and Copy Machine Tests

7.0 RECORDS REQUIRED:

7.1 Inventory sheets for each of the locations listed in 8.2 below (HP-90) - Attachments #1-7 shall be maintained in the plant files in accordance with QI-17-PSL-1 "Quality Assurance Records."

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

8.0 INSTRUCTIONS:

8.1 Prior to conducting inventories of the kits:

1. Ascertain the current revision number of Emergency Planning documents.

   A. Contact the Nuclear Records Vault for 1, 2 and 3 below.

   B. Access the Controlled Electronic Procedure Index (in Lotus Notes) for all other documents (4-10 below).

> NOTE
> Kits designating that full sets of EPIPs and/or HP-200 series procedures are available, shall contain all the procedures in Table 1 and/or Table 2, as applicable.

1. St. Lucie Plant Radiological Emergency Plan (E-Plan) /R37
2. St. Lucie Plant Emergency Response Directory (ERD)
3. Florida Power & Light Company, St. Lucie Plant Recovery Plan
4. EPIPs (see Table 1)
5. HP-200 Series (see Table 2)
6. HPP-70, "Personnel Contamination Monitoring," (Form HPP-70.1, Personnel Skin and Clothing Contamination Report)
7. HP-90, "Emergency Equipment"
8. HPP-101, "Identification and Reporting of Radiological Events," (Form HPP-101.1, Radiological Event Report)
9. COP-06.06, "Guidelines for Collecting Post Accident Samples"
10. COP-06.11, "Establishing Remote Laboratory for Analyses of Accident Samples."

The procedure distribution is listed on the inventory sheet.

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EMERGENCY EQUIPMENT

8.0 INSTRUCTIONS: (continued)

8.1 (continued)

2. Contact Emergency Planning to determine if any procedure revisions are available to be added to the emergency kits.

3. Contact Land Utilization to arrange for access to the Emergency Operations Facility (EOF), if necessary (i.e., not on the access list).

8.2 Inventory all items, verifying that the proper supplies are present. Use the appropriate inventory list.

1. Attachment 1 - Unit 1 Control Room/Technical Support Center Emergency Kit

2. Attachment 2 - Unit 2 Control Room Emergency Kit

3. Attachment 3 - Operational Support Center Emergency Kit

4. Attachment 4 - Site Assembly Station Emergency Kit

5. Attachment 5 - Site Assembly Station - Field Monitoring Team Emergency Kit (complete 1 attachment for each kit)

6. Attachment 6 - Emergency Operations Facility Emergency Kit

7. Attachment 7 - Hospital Emergency Kit (complete one attachment for each hospital)

8.3 Any equipment which is out of calibration, fails the operability check, or appears to be unusable shall be replaced.

1. An asterisk designates a major piece of equipment. If a major piece of equipment is found to be deficient, the equipment must be replaced as follows:

A. For Emergency Kits located within the Owner Controlled Area - within 24 hours. /R37

B. For Emergency Kits located outside the Owner Controlled Area - within 48 hours.

ST. LUCIE PLANT
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EMERGENCY EQUIPMENT

8.0 INSTRUCTIONS: (continued)

8.4 Quantities of non-asterisked inventory items may be exceeded, but shall not be less than that indicated on the attachment. An item found to be in a quantity less than that listed on the attachment shall be replenished by the time of the next inventory.

8.5 Perform operability checks of instruments in accordance with Appendix A, Operability Instructions.

8.6 Verify that dosimetry is current.

NOTE
Not all dosimetry is required in each Emergency Kit.

1. Direct Reading Dosimeter (DRD). DRDs are calibrated every six (6) months.

   A. 0-500 mR

   B. 0-5 R

   C. 0-20 R

   D. 0-100 R

2. Electronic Personal Dosimeter (EPD)

   A. Alarm Setpoint, Dose: 4.5 R

   B. Alarm Setpoint, Dose Rate: 10 R/hr

3. Thermoluminescent Dosimeter (TLD). TLDs are changed out in the kits on a semi-annual basis.

   A. Whole Body

   B. Extremity

   C. Finger Rings

8.0 INSTRUCTIONS: (continued)

8.7 Verify that respirators are visually inspected as prescribed in HPP-62, Inspection and Maintenance of Respiratory Protection Equipment.

8.8 Verify that silver zeolite cartridges are current. Inform the Health Physics Technical Supervisor when the posted shelf life of the cartridges is within three (3) months of expiring.

8.9 Extension cords stored in the Emergency Kits shall be tested or replaced with tested extension cords after use.

1. A testing device is available in each kit which has extension cords.

2. Record test results or cord replacement in the "Remarks" section (e.g., all extension cords passed; one extension cord replacement due to test failure).

NOTE
The portable count rate instruments (friskers) and the dual channel analyzers are exempt from this instruction because they require re-chargeable batteries. Spare instruments are available as backups should one of these instruments (friskers) experience battery failure.

8.10 Verify that there is a sufficient supply of spare batteries available for all instruments and equipment requiring batteries.

1. Replace any battery or package of batteries which is approaching (within one (1) month) or exceeds its expiration date or shelf life.

2. Every January and July, inspect batteries in all instruments and equipment for signs of deterioration or leaks and replace, as necessary.

8.11 Verify that the procedures contained in the kit are the current revisions, if not, replace procedure with a **controlled copy** of the current revision.

8.12 Perform monthly test of communications equipment with state and local governments and the NRC in accordance with Appendix B, Instructions for Testing Emergency Communications Equipment.

8.0 INSTRUCTIONS: (continued)

8.13 Complete the inventory form as follows:

1. Indicate the results of the operability checks of the kit instruments by marking "Pass" or "Fail" on the appropriate attachment. Record any discrepancy in the "Remarks" section.

2. Dosimetry, dress-out supplies, and other equipment should be evaluated against the "Minimum Quantity" requirements as listed on the inventory form. Record the "As Found" condition as either "Pass" or "Fail". Indicate any discrepancy in the "Remarks" section.

3. Review all documents, procedures, and logs and show whether they are "Available" or "Unavailable". Record any discrepancy in the "Remarks" section.

4. Indicate the results of the communications tests by marking "Pass" or "Fail" on the appropriate attachment. Record any discrepancy in the "Remarks" section.

5. Upon completion of the inventory, close and lock the kit and sign and date the attachment in the blanks labeled "Inventoried by" and "Date".

8.14 A copy of each completed inventory (attachment) is required.

1. Conspicuously post the copy of the inventory on the front of the Emergency Kit for ready reference by the next user of the kit.

2. Provide the original to an HP Supervisor for review.

8.15 An HP Supervisor shall review all completed inventories.

1. A PMAI is to be issued by the reviewing HP Supervisor for each item which is not addressed in 8.3 or 8.4 above and can not be resolved within five (5) working days of identification.

   The PMAI number is to be recorded in the "Remarks" section of the affected attachment.

8.0 INSTRUCTIONS: (continued)

8.15 (continued)

2. Sign and date the reviewed inventories in the "Reviewed by" and "Date" blanks on each attachment.

3. A copy of each reviewed attachment is to be forwarded to Emergency Planning.

4. The originals of all reviewed attachments are to be sent to the Nuclear Records Vault.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

TABLE 1
EMERGENCY PLAN IMPLEMENTING PROCEDURES

EPIP-00 -	"Discovery & Identification of an Emergency Condition (Including Chemical, Fire and Natural Emergencies)"	
EPIP-01 -	"Classification of Emergencies"	
EPIP-02 -	"Duties and Responsibilities of the Emergency Coordinator"	
EPIP-03 -	"Emergency Response Organization Notification/Staff Augmentation"	
EPIP-04 -	"Activation and Operation of the Technical Support Center"	
EPIP-05 -	"Activation and Operation of the Operational Support Center"	
EPIP-06 -	"Activation and Operation of the Emergency Operations Facility"	
EPIP-07 -	"Conduct of Evacuations/Assembly"	
EPIP-08 -	"Off-site Notifications and Protective Action Recommendations"	/R37
EPIP-09 -	"Off-site Dose Calculations"	
EPIP-10 -	"Off-site Radiological Monitoring"	
EPIP-11 -	"Core Damage Assessment"	
EPIP-12 -	"Maintaining Emergency Preparedness - Radiological Emergency Plan Training"	
EPIP-13 -	"Maintaining Emergency Preparedness - Emergency Exercises, Drills, Tests and Evaluations"	

ST. LUCIE PLANT
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TABLE 2
HP-200 SERIES PROCEDURES

HP-200 - "Health Physics Emergency Organization"

HP-201 - "Emergency Personnel Exposure Control"

HP-202 - "Environmental Monitoring During Emergencies"

HP-203 - "Personnel Access Control During Emergencies"

HP-204 - "In-Plant Radiation and Contamination Surveys During Emergencies"

HP-205 - "Emergency In-Plant Air Sampling"

HP-206 - "Analysis of Emergency In-Plant Air Samples"

HP-207 - "Monitoring Evacuated Personnel During Emergencies"

HP-208 - "Personnel Decontamination During Emergencies"

ST. LUCIE PLANT
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EMERGENCY EQUIPMENT

ATTACHMENT 1
UNIT 1 CONTROL ROOM/TECHNICAL SUPPORT CENTER EMERGENCY KIT
(Sheet 1 of 4)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS	Pass	Fail
*	1. Portable Dose Rate Instrument (≥ 5R/hr)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	2. Portable Count Rate (Frisker) Instrument		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	3. Portable Count Rate (Frisker) Instrument		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	4. Dual Channel Analyzer		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		

	DOSIMETRY		Minimum Quantity	As** Found
*	1. TLD, Whole Body	Semi-annual:	53	
*	2. TLD, Finger Ring	Semi-annual:	16	
*	3. TLD, Multibadge	Semi-annual:	50	
*	4. DRD, 0-500 mR	Calib. Due Date:	50	
*	5. DRD, 0-5R	Calib. Due Date:	10	
*	6. DRD, 0-100R	Calib. Due Date:	5	
***	7. Electronic Dosimeter	Calib. Due Date:	10	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks
*** Alarm Setpoint: Dose - 4.5R; Dose Rate 10R/hr.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 1
UNIT 1 CONTROL ROOM/TECHNICAL SUPPORT CENTER EMERGENCY KIT
(Sheet 2 of 4)

NOTE
Inspect all batteries during January and July inventories.

DRESS-OUT SUPPLIES	Minimum Quantity	As** Found
1. Coveralls	20	
2. Cloth Hood	20	
3. Cotton Liners (pr.)	20	
4. Rubber Gloves (pr.)	20	
5. Surgical Gloves (pr.)	20	
6. Rubber Shoe Covers (pr.)	20	
7. Plastic Booties (pr.)	20	
8. T-Cuts (pr.)	20	
9. Whirl-Pack	50	
10. Tape (2" roll)	5	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 1
UNIT 1 CONTROL ROOM/TECHNICAL SUPPORT CENTER EMERGENCY KIT
(Sheet 3 of 4)

NOTE
Inspect all batteries during January and July inventories.

	OTHER EQUIPMENT	Minimum Quantity	As** Found
*	1. SCBA	5	
*	2. Air Sampler Model No.: Serial No.: Calib. Due Date:	1	
	3. Silver Zeolite Cartridges Exp. Date:	5	
	4. Particulate Filters	6	
	5. Whirl-Packs (labeled Air Sample Data)	6	
	6. Full-Face Respirator (perform visual inspection, update card)	8	
	7. Charcoal Canister Exp. Date:	16	
	8. Dosimeter Charger	2	
	9. Contamination Smears and Envelopes/Folders	500	
	10. Radiation Barrier Tape/Rope/Ribbon	N/A	
	11. Radiation Sign and Assorted Inserts	5	
	12. Step-off Pads	10	
	13. Poly Bags (yellow)	10	
	14. Extension Cord (HD)	3	
	15. Extension Cord Adapter - White	3	/R37
	16. Extension Cord Adapter - Red	3	
	17. Plastic Rainsuits	20	
	18. Batteries - complete set of replacement batteries, both type and number, available for all equipment requiring batteries; check shelf life.	N/A	
	19. Telephone Headset	1	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 1
UNIT 1 CONTROL ROOM/TECHNICAL SUPPORT CENTER EMERGENCY KIT
(Sheet 4 of 4)

NOTE
Inspect all batteries during January and July inventories.

DOCUMENTS, PROCEDURES, LOGS	Avail.	Unavail.
1. PSL Emergency Plan (check for current revision)		
2. EPIPs (full set) (check for current revisions)		
3. Emergency Response Directory (check for current revision)		
4. HP-90 (check for current revision)		
5. HP-200 Series (full set) (check for current revisions)		
6. HP-206: Attachments 1, 2, 3 and Forms HP-206.1 and HP-206.2 (10 copies each) (check for current revision)		
7. COP-06.06 (check for current revision)		
8. COP-06.11, "Establishing Remote Laboratory for Analyses of Accident Samples" (check for current revision)		
9. Radiation Exposure Summary Report		
10. Control Room Rad Survey Maps (10 copies)		
11. Laminated Floor Plan Maps with Index for Rad Survey (full set)		
12. Field Monitoring Maps		

/R37

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 2
UNIT 2 CONTROL ROOM EMERGENCY KIT
(Sheet 1 of 4)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS			Pass	Fail
*	1. Portable Dose Rate Instrument (≥5 R/hr)				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	2. Portable Count Rate (Frisker) Instrument				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	3. Portable Count Rate (Frisker) Instrument				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	4. Dual Channel Analyzer				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				

	DOSIMETRY		Minimum Quantity	As** Found
*	1. TLD, Whole Body	Semi-annual:	10	
*	2. TLD, Finger Ring	Semi-annual:	12	
*	3. TLD, Multibadge	Semi-annual:	50	
*	4. DRD, 0-500 mR	Calib. Due Date:	10	
*	5. DRD, 0-5R	Calib. Due Date:	10	
*	6. DRD, 0-100R	Calib. Due Date:	5	
***	7. Electronic Dosimeter	Calib. Due Date:	10	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks
*** Alarm Setpoints: Dose - 4.5R; Dose Rate 10R/hr.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 2
UNIT 2 CONTROL ROOM EMERGENCY KIT
(Sheet 2 of 4)

NOTE
Inspect all batteries during January and July inventories.

DRESS-OUT SUPPLIES	Minimum Quantity	As** Found
1. Coveralls	10	
2. Cloth Hood	10	
3. Cotton Liners (pr.)	10	
4. Rubber Gloves (pr.)	10	
5. Surgical Gloves (pr.)	10	
6. Rubber Shoe Covers (pr.)	10	
7. Plastic Booties (pr.)	10	
8. T-Cuts (pr.)	10	
9. Whirl-Pack	50	
10. Tape (2" roll)	3	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 2
UNIT 2 CONTROL ROOM EMERGENCY KIT
(Sheet 3 of 4)

NOTE
Inspect all batteries during January and July inventories.

	OTHER EQUIPMENT	Minimum Quantity	As** Found	
*	1. SCBA	5		
*	2. Air Sampler Model No.: Serial No.: Calib. Due Date:	1		
	3. Silver Zeolite Cartridges Exp. Date:	5		
	4. Particulate Filters	6		
	5. Whirl-Packs (labeled Air Sample Data)	6		
	6 Full-Face Respirator (perform visual inspection, update card)	8		
	7 Charcoal Canister Exp. Date:	16		
	8 Dosimeter Charger	1		
	9 Contamination Smears and Envelopes/Folders	500		
	10. Radiation Barrier Tape/Rope/Ribbon	N/A		
	11. Radiation Sign and Assorted Inserts	5		
	12. Step-off Pads	10		
	13. Poly Bags (yellow)	10		
	14. Extension Cord (HD)	N/A		
	15. Extension Cord Adapter - White	3		/R37
	16. Extension Cord Adapter - Red	3		
	17. Plastic Rainsuits	10		
	18. Batteries - complete set of replacement batteries, both type and number, available for all equipment requiring batteries; check shelf life	N/A		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 2
UNIT 2 CONTROL ROOM EMERGENCY KIT
(Sheet 4 of 4)

NOTE
Inspect all batteries during January and July inventories.

DOCUMENTS, PROCEDURES, LOGS	Avail.	Unavail.
1. PSL Emergency Plan (check for current revision)		
2. EPIPs (full set) (check for current revisions)		
3. Emergency Response Directory (check for current revision)		
4. HP-200 Series (full set) (check for current revisions)		
5. HP-206: Attachments 1, 2, 3 and Forms HP-206.1 and HP-206.2 (10 copies each) (check for current revision)		
6. Radiation Exposure Summary Report		
7. Control Room Rad Survey Maps (10 copies)		

/R37

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 3
OPERATIONAL SUPPORT CENTER EMERGENCY KIT
(Sheet 1 of 4)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS			Pass	Fail
*	1. Portable Dose Rate Instrument (≥5 R/hr)				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	2. Portable Dose Rate Instrument (≥5 R/hr)				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	3. Portable Dose Rate Instrument (≥5 R/hr)				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	4. Portable Count Rate (Frisker) Instrument				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	5. Portable Count Rate (Frisker) Instrument				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	6. Portable Count Rate (Frisker) Instrument				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	7. Portable Count Rate (Frisker) Instrument				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	8. Dual Channel Analyzer				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				
*	9. Scaler and Detector				
	Model No.:	Serial No.:	Calib. Due Date:		
	Perform operability check in accordance with Appendix A				

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 3
OPERATIONAL SUPPORT CENTER EMERGENCY KIT
(Sheet 2 of 4)

NOTE
Inspect all batteries during January and July inventories.

	DOSIMETRY	Minimum Quantity	As** Found
*	1. TLD, Whole Body Semi-annual:	46	
*	2. TLD, Finger Ring Semi-annual:	22	
*	3. TLD, Multibadge Semi-annual:	50	
*	4. DRD, 0-500 mR Calib. Due Date:	40	
*	5. DRD, 0-5R Calib. Due Date:	20	
*	6. DRD, 0-100R Calib. Due Date:	10	
	DRESS-OUT SUPPLIES		
	1. Coveralls	50	
	2. Cloth Hood	50	
	3. Cotton Liners (pr.)	50	
	4. Rubber Gloves (pr.)	50	
	5. Surgical Gloves (pr.)	50	
	6. Rubber Shoe Covers (pr.)	50	
	7. Plastic Booties (pr.)	50	
	8. T-Cuts (pr.)	50	
	9. Whirl-Pack	100	
	10. Tape (2" roll)	10	
½	11. Shaving Cream (can)	1	
½	12. Disposable Razors	6	
	OTHER EQUIPMENT		
*	1. SCBA	2	
*	2. Air Sampler Model No.: Serial No.: Calib. Due Date:	1	
	3. Silver Zeolite Cartridges Exp. Date:	20	
	4. Particulate Filters	20	
	5. Whirl-Packs (labeled Air Sample Data)	20	
	6. Full-Face Respirator (perform visual inspection, update card)	12	
	7. Charcoal Canister Exp. Date:	24	
	8. Dosimeter Charger (electric)	1	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 3
OPERATIONAL SUPPORT CENTER EMERGENCY KIT
(Sheet 3 of 4)

NOTE
Inspect all batteries during January and July inventories.

OTHER EQUIPMENT (continued)	Minimum Quantity	As** Found
9. Dosimeter Charger (battery)	2	
10. Contamination Smears and Envelopes/Folders	1500	
11. Radiation Barrier Tape/Rope/Ribbon	N/A	
12. Radiation Sign and Assorted Inserts	20	
13. Step-off Pads	20	
14. Poly Bags (yellow)	50	
15. Portable Fluorescent Lights	3	
16. Flashlights	24	
17. Rope (manila)	N/A	
18. Insect Repellent (spray can)	10	
19. Decontamination Agent	1	
20. Bull Horn	1	
21. Plastic Rainsuits	50	
22. Clipboards (regular)	5	
23. Lined Tablets	10	
24. Note Pads	10	
25. Felt-Tip Pens (black)	24	
26. Ink Pens (black)	24	
27. Pencils	24	
28. Scissors	3	
29. Calculator	1	
30. Stapler with staples	1	
31. Bolt Cutters	1	
32. Batteries - Complete set of replacement batteries, both type and number, available for all equipment requiring batteries; check shelf life.	N/A	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 3
OPERATIONAL SUPPORT CENTER EMERGENCY KIT
(Sheet 4 of 4)

NOTE
Inspect all batteries during January and July inventories.

	DOCUMENTS, PROCEDURES, LOGS	Avail.	Unavail.
1.	EPIPs (full set) (check for current revision)		
2.	Emergency Response Directory (5 copies) (check for current revision)		
3.	HPP-70 (check for current revision)		
4.	HP-90 (check for current revision)		
5.	HP-200 (full set) (check for current revision)		
6.	COP-06.06 (check for current revision)		
7.	COP-06.11, "Establishing Remote Laboratory for Analyses of Accident Samples" (check for current revision)		
8.	Radiation Exposure Summary Report		
9.	HP Blank Survey Forms (Unit 1 and Unit 2)		
10.	Field Monitoring Map		
11.	Assembly Area Kit		
	Emergency Response Directory (1 copy) (check for current revision)		
	HP-207 (check for current revision)		
	HP-208 (check for current revision)		
12.	Decon Log Notebook including:		
	Form HP207.1 (25 copies) (check for current revision)		
	Form HPP-70.1 (25 copies) (check for current revision)		
	COMMUNICATIONS TEST	Pass	Fail
1.	Videolink Check		
	Perform check in accordance with Appendix B		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 4
SITE ASSEMBLY STATION EMERGENCY KIT
(Sheet 1 of 3)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS	Pass	Fail
*	1. Portable Count Rate (Frisker) Instrument (Decon)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	2. Portable Count Rate (Frisker) Instrument (Field Team)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	3. Portable Count Rate (Frisker) Instrument (Field Team)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	4. Portable Count Rate (Frisker) Instrument (Field Team)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	5. Portable Count Rate (Frisker) Instrument (Field Team)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 4
SITE ASSEMBLY STATION EMERGENCY KIT
(Sheet 2 of 3)

NOTE
Inspect all batteries during January and July inventories.

DRESS-OUT SUPPLIES	Minimum Quantity	As** Found
1. Coveralls	10	
2. Cloth Hood	10	
3. Cotton Liners (pr.)	10	
4. Rubber Gloves (pr.)	10	
5. Surgical Gloves (pr.)	10	
6. Rubber Shoe Covers (pr.)	10	
7. Plastic Booties (pr.)	10	
8. T-Cuts (pr.)	10	
9. Whirl-Pack	50	
10. Tape (2" roll)	3	
OTHER EQUIPMENT		
1. Paper PCs	10	
2. Radiation Barrier (Tape/Rope/Ribbon)	N/A	
3. Radiation Sign and Assorted Inserts	3	
4. Step-off Pads	10	
5. Poly Bags (yellow)	50	
6. 5 Gallon Jug of Water	1	
7. Waterless Hand Cleaner (can)	2	
8. Hand Rags	50	
9. Towels	6	
10. Shaving Cream (can)	1	
11. Disposable Razors	6	
12. First Aid Kit	1	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 4
SITE ASSEMBLY STATION EMERGENCY KIT
(Sheet 3 of 3)

NOTE
Inspect all batteries during January and July inventories.

DOCUMENTS, PROCEDURES, LOGS	Avail.	Unavail.
1. Emergency Response Directory (check for current revision)		
2. HP-200 Series (full set) (check for current revision)		
3. Notebook		
4. Decon Log Clipboard with:		
Form HP 207.1 (25 copies) (check for current revision		
5. Decon Log Clipboard with:		
Form HPP-70.1 (25 copies) (check for current revision)		
COMMUNICATIONS TEST	**Pass**	**Fail**
1. Wall Phone		
Perform communications test in accordance with Appendix B		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

_____

_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 5
SITE ASSEMBLY STATION-FIELD MONITORING TEAM EMERGENCY KIT
(Sheet 1 of 2)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS	Pass	Fail
*	1. Portable Dose Rate Instrument (≥ 5R/hr)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	2. Dual Channel Analyzer		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
	DOSIMETRY	**Minimum Quantity**	**As** Found**
*	1. TLD, Whole Body Semi-annual:	2	
*	2. EPD *** Calib. Due Date:	2	
*	3. DRD, 0-5 R Calib. Due Date:	2	
	OTHER EQUIPMENT		
*	1. Air Sampler (auto battery-powered)	1	
	Model No.: Serial No.: Calib. Due Date:		
	2. Silver Zeolite Cartridges Exp. Date:	6	
	3. Particulate Filters	6	
	4. Whirl-Packs (labeled "Air Sample Data")	6	
	5. Surgical Gloves (pr.)	6	
	6. Portable Radio	1	
	7. Power Cord with Cigarette-Lighter Plug	1	
	8. DC Power Receptacle with Battery Clips	1	
	9. Microphone with Cable	1	
	10. Magnetic-Mount Antenna	1	
	11. Full Face Respirator (perform visual inspection, update card)	2	
	12. Charcoal Canister Exp. Date:	2	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks
*** Alarm setpoints: Dose - 4.5R, Dose Rate 10R/hr.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 5
SITE ASSEMBLY STATION-FIELD MONITORING TEAM EMERGENCY KIT
(Sheet 2 of 2)

NOTE
Inspect all batteries during January and July inventories.

OTHER EQUIPMENT (continued)		Minimum Quantity	As** Found
13.	Stopwatch	1	
14.	Calculator	1	
15.	Dosimeter Charger	1	
16.	Tweezers	1	
17.	Flashlight	1	
18.	Batteries - Complete set of replacement batteries, both type and number, available for all equipment requiring batteries; check shelf life.	N/A	
	DOCUMENTS, PROCEDURES, LOGS	Avail.	Unavail.
1.	Emergency Response Directory (check for current revision)		
2	HP-202 (check for current revision)		
3	(Form) Table 1 of HP-202 (2 copies) (check for current revision)		
4	Form HP-202.1 (6 copies) (check for current revision)		
5	Field Monitoring Log		
6.	Field Monitoring Maps		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

_____

_____

_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 6
EMERGENCY OPERATIONS FACILITY EMERGENCY KIT
(Sheet 1 of 3)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS	Pass	Fail
*	1. Portable Dose Rate Instrument (≥ 5R/hr)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	2. Portable Count Rate (Frisker) Instrument		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	3. Portable Count Rate (Frisker) Instrument		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
	DOSIMETRY	**Minimum Quantity**	**As** Found**
*	1. TLD, Whole Body Semi-annual:	6	
*	2. DRD, 0-500 mR Calib. Due Date:	10	
*	3. DRD, 0-5 R Calib. Due Date:	5	
	DRESS-OUT SUPPLIES		
	1. Coveralls	20	
	2. Cloth Hood	20	
	3. Cotton Liners (pr.)	20	
	4. Rubber Gloves (pr.)	20	
	5. Surgical Gloves (pr.)	20	
	6. Rubber Shoe Covers (pr.)	20	
	7. Plastic Booties (pr.)	20	
	8. T-Cuts (pr.)	20	
	9. Whirl-Pack	50	
	10. Tape (2" roll)	5	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 6
EMERGENCY OPERATIONS FACILITY EMERGENCY KIT
(Sheet 2 of 3)

NOTE
Inspect all batteries during January and July inventories.

	OTHER EQUIPMENT	Minimum Quantity	As** Found
1.	Full Face Respirator (perform visual inspection, update card)	6	
2.	Charcoal Canister Exp. Date:	12	
3.	Dosimeter Charger (electric)	1	
4.	Dosimeter Charger (battery)	1	
5.	Silver Zeolite Cartridges Exp. Date:	50	
6.	Contamination Smears and Envelopes/Folders	500	
7.	Radiation Barrier (Tape/Rope/Ribbon)	N/A	
8.	Radiation Sign and Assorted Inserts	10	
9.	Step-off Pads	10	
10.	Poly Bags (yellow)	10	
11.	Plastic Rainsuits	20	
12.	Batteries - Complete set of replacement batteries, both type and number, available for all equipment requiring batteries; check shelf life.	N/A	
	DOCUMENTS, PROCEDURES, LOGS	Avail.	Unavail.
1.	PSL Emergency Plan (check for current revision)		
2.	EPIPs (full set) (check for current revision)		
3.	Emergency Response Directory (check for current revision)		
4.	Florida Power & Light Company St. Lucie Plant Recovery Plan		
5.	HP-90 (check for current revision)		
6.	HP-200 Series (full set) (check for current revision)		
7.	COP-06.06 (check for current revision)		
8.	COP-06.11, "Establishing Remote Laboratory for Analyses of Accident Samples" (check for current revision)		
	COMMUNICATIONS TEST	Pass	Fail
1.	NRC Emergency Notification System (ENS)		
	Perform communications test in accordance with Appendix B		
2.	NRC Health Physics Network (HPN)		
	Perform communications test in accordance with Appendix B		
3.	NRC Reactor Safety Counterpart Link (RSCL)		
	Perform communications test in accordance with Appendix B.		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 6
EMERGENCY OPERATIONS FACILITY EMERGENCY KIT
(Sheet 3 of 3)

NOTE
Inspect all batteries during January and July inventories.

	COMMUNICATIONS TEST - EMERGENCY OPERATIONS FACILITY (EOF) (continued)	Pass	Fail
	4. NRC Protective Measures Counterpart Link (PMCL)		
	Perform communications test in accordance with Appendix B.		
	5. NRC Management Counterpart Link (MCL)		
	Perform communications test in accordance with Appendix B.		
	6. NRC Local Area Network (LAN)		
	Perform communications test in accordance with Appendix B		
	7. Local Government Radio (LGR) Channel 2 (39.18 MHz)		
	Perform communications test in accordance with Appendix B; ☐ Unit 1, ☐ Unit 2, ☐ TSC (All 3 ok to pass)		
	8. Local Government Radio (LGR) Channel 1 (39.10 MHz)		
	Perform communications test in accordance with Appendix B; ☐ Unit 1, ☐ Unit 2, ☐ TSC (All 3 ok to pass)		
	9. Spectra Radio, HP Offsite Channel		
	Perform communications test in accordance with Appendix B		
	10. State Warning Point (SWP) Hot Ring Down Phone (HRD)		
	Perform communications test in accordance with Appendix B		
	11. Videolink check		
	Perform check in accordance with Appendix B		
¶4	12. Test fax machines in rooms 102, 108 and 130 (send fax to EP at ext. 7514). Send using form similar to Appendix C.		
¶4	13. Test copy machines in rooms 102 and 131. Run copy using form similar to Appendix D.		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 7
HOSPITAL EMERGENCY KIT
(Sheet 1 of 2)

NOTE
Inspect all batteries during January and July inventories.

	INSTRUMENTS	Pass	Fail
*	1. Portable Dose Rate Instrument (≥ 5R/hr)		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	2. Portable Count Rate (Frisker) Instrument		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		
*	3. Portable Count Rate (Frisker) Instrument		
	Model No.: Serial No.: Calib. Due Date:		
	Perform operability check in accordance with Appendix A		

	DOSIMETRY	Minimum Quantity	As** Found
*	1. TLD, Whole Body Semi-annual:	12	
	2. DRD, 0-20 R Calib. Due Date:	5	
*	3. DRD, 0-500 mR Calib. Due Date:	12	
	OTHER EQUIPMENT		
	1. Dosimeter Charger	1	
	2. Contamination Smears and Envelopes/Folders	500	
	3. Radiation Barrier Tape/Rope/Ribbon	N/A	
	4. Radiation Sign and Assorted Inserts	5	
	5. Step-off Pads	10	
	6. Poly Bags (yellow)	20	
	7. Herculite (may be precut)	N/A	
	8. Decontamination Table and Accessories	1	
	9. Tape (2" roll)	5	
	10. Radioactive Material Tags	25	

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

ATTACHMENT 7
HOSPITAL EMERGENCY KIT
(Sheet 2 of 2)

NOTE
Inspect all batteries during January and July inventories.

OTHER EQUIPMENT (continued)	Minimum Quantity	As** Found
11. Lined Tablets	2	
12. Note Pads	2	
13. Ink Pens (black)	12	
14. Batteries - Complete set of replacement batteries, both type and number, available for all equipment requiring batteries; check shelf life.	N/A	
DOCUMENTS, PROCEDURES, LOGS	**Avail.**	**Unavail.**
1. Emergency Response Directory (check for current revision)		
2. HPP-70 (check for current revision)		
3. HPP-101 (check for current revision)		
4. HP-207 (check for current revision)		
5. HP-208 (check for current revision)		
6. Form HPP-101.1 (5 copies) (check for current revision)		
7. Form HPP-70.1 (5 copies) (check for current revision)		

* Major Equipment
** Codes: P=Pass, F=Fail, R=See Remarks

Remarks:_____

_____

_____

Inventoried by:_____ Reviewed by:_____

Date:_____ Date:_____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX A
OPERABILITY INSTRUCTIONS
(Sheet 1 of 5)

1. Portable Dose Rate Instrument - Check calibration sticker, battery test and response to supplied check source.

> NOTE
> Kit check sources should not be stored near the kit TLDs.

2. Portable Count Rate Instrument - Check calibration sticker, battery test (unplug line cord) and response to supplied check source.

3. Battery and Operational Checks of the Ludlum Model 2218.

> NOTE
> - Should it be necessary to use Channel 2, items contained within parentheses are settings to be used for Channel 2.
> - A layout of the Ludlum Model 2218 is provided in Figure 1 to this Appendix.

Verify that the RECYCLE knob is OFF. The knob is labeled and located on the rear panel of the instrument.

3.1 Check the battery as follows:

> NOTE
> If an instrument fails the battery check, it can be used only if it is connected to AC power and therefore should be replaced with an instrument capable of passing this operability check.

1. Turn the POWER knob to "BAT".
2. Unplug the AC line cord.
3. Depress the BAT testbutton.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX A
OPERABILITY INSTRUCTIONS
(Sheet 2 of 5)

3. (continued)

3.1 (continued)

4. Observe the condition below the RATE SCALE.

5. If battery condition is not within the acceptable BAT TEST range, plug in the AC line cord and turn the POWER knob to CHARGE. Attach a label to the instrument stating "Instrument is charging, started charge at _____ AM/PM on_____19____".

6. If the battery condition is acceptable, then continue with the steps below.

3.2 Set the STABILIZER toggle switch to OFF.

NOTE
Steps 3.3 through 3.15.4 are initially performed on Channel 1.

3.3 Ch1 (Ch2), set the ADD-OFF-SUBTRACT knob to ADD.

3.4 Ch2 (Ch1), set the ADD-OFF-SUBTRACT knob to OFF

3.5 Ch1 and Ch2, set the ON-BYPASS toggle switch to BYPASS.

3.6 Ch1 (Ch2), set the WINDOW and the THRESHOLD dials IAW (in accordance with) settings on the side of the 2218 cabinet.

3.7 Set the unused Channel's WINDOW and THRESHOLD dials to 10.0.

3.8 Ch1 (Ch2), set the IN-OUT toggle switch to IN.

3.9 Ch2 (Ch1), set the IN-OUT toggle switch to OUT.

3.10 Set the MINUTES knob to X1.

3.11 Set the LIVE-CLOCK toggle switch to LIVE.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX A
OPERABILITY INSTRUCTIONS
(Sheet 3 of 5)

3. (continued)

3.12 Set the F-S (Fast-Slow) toggle switch to S.

3.13 Set the Ch1-Ch2-Scaler knob to SCALER.

3.14 Set the MINUTES thumbwheel to 01.

3.15 Perform a source check as follows:

1. Place the Ba-133 check source in the shield under the detector.
2. Depress the COUNT-RESET button to start counting.
3. When counting stops, compare the displayed counts with the acceptance range that is located on the side of the instrument.
4. If the displayed counts are within the acceptance range then go to step 3.17. If the displayed counts are not within the acceptance range then go to step 3.16.

3.16 High voltage (HV) adjustments are performed as follows:

1. Set the MINUTES knob to EXT.
2. Place the Ba-133 check source in the shield under the detector.
3. Depress the COUNT-RESET button to start counting.
4. Observe the COUNTS/MINUTE (Count Rate Meter) scale while making small adjustments in voltage to obtain the **maximum** count rate achievable.
5. Increase or decrease the voltage with the HV (High Voltage) dial.
6. Set the MINUTES knob to X1.
7. Depress the COUNT-RESET button to start counting.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX A
OPERABILITY INSTRUCTIONS
(Sheet 4 of 5)

3. (continued)

3.16 (continued)

8. When counting stops, compare the displayed counts with the acceptance range that is located on the side of the instrument.

9. If the displayed counts are within the acceptance range then go to step 3.17. If the displayed counts are not within the acceptance range then repeat steps 3.3 through 3.15.4 using channel 2.

3.17 If the instrument successfully completed the operational response check, record the results on the appropriate Attachment.

3.18 If the instrument did not successfully complete the operational check, using channel 2:

1. Tag the instrument OUT OF SERVICE, give the reason.

2. Record the results in the appropriate Attachment.

3. Give the reason for failure in the Remarks section.

3.19 If the instrument successfully completed the operational response check using channel 2, record the results on the appropriate Attachment and label the instrument "use channel 2".

3.20 Turn the power knob to CHARGE.

4. Scaler and Detector - check the calibration sticker and response to supplied check source. This is a response check only; use the supplied kit check source used for dose rate instruments.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX A
OPERABILITY INSTRUCTIONS
(Sheet 5 of 5)

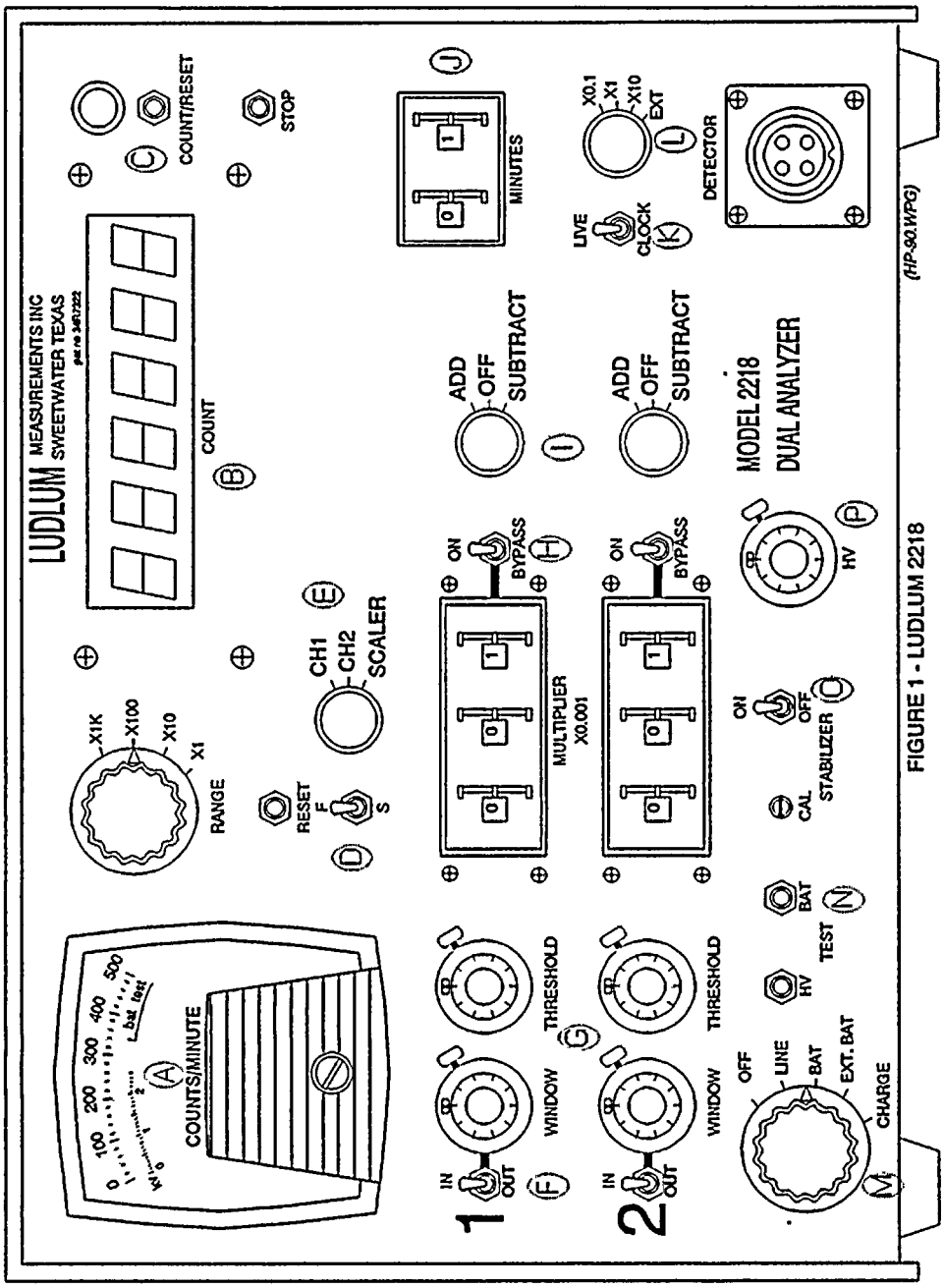

FIGURE 1 - LUDLUM 2218

Battery Check
M - set to "BAT"
N - depress testbutton to check battery condition
A - Indicates battery condition on "BAT TEST" scale

HV Adjustment
L - set to "EXT"
C - depress button to start count
P - adjust voltage
A - observe maximum count rate

Count Verification
L - set to "X1"
C - depress button to start count
B - compare counts with acceptance range for the instrument

Operational Check (Ch1)
O - toggle to "OFF"
I - Ch1 to "ADD;" Ch2 to "OFF"
H - toggle to "BYPASS" for Ch1 and Ch2
G - Ch1 set WINDOW and THRESHOLD in accordance with settings on side of instrument; Ch2 set WINDOW and THRESHOLD to "10.0"
F - toggle to "IN" for Ch1 and "OUT" for Ch2
L - set to "X1"
K - toggle to "LIVE"
D - toggle to "S"
E - set to "SCALER"
J - set to "01"
C - depress button to start count

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 1 of 15)

I. Control Rooms /R37

A. Unit 1 Control Room emergency communications equipment is tested in accordance with plant Operating Procedure 1-0010125, "Schedule of Periodic Tests, Checks and Calibrations."

B. Unit 2 Control Room emergency communications equipment is tested in accordance with plant Operating Procedure 2-0010125, "Schedule of Periodic Tests, Checks and Calibrations."

II. Technical Support Center (TSC)

A. Technical Support Center emergency communications equipment is tested in accordance with EPIP-13, "Maintaining Emergency Preparedness - Emergency Exercises, Drills, Tests and Evaluations". /R37

III. Operational Support Center (OSC)

A. "Videolink" - the "Videolink" is a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the Emergency Operations Facility.

1. Instructions for Testing

a. Contact someone to go to the TSC to assist with the test of the "Videolink", if not previously arranged.

b. Turn on the television sets in both Rooms 2200 and 2300.

c. Set the channel selector to channel 9 and adjust volume.

d. Request the person in the TSC to provide a test broadcast.

e. Operability is verified if both the video picture and audio output are received on the television sets in both rooms. The picture must be clear and the audio free from static.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 2 of 15)

III. (continued)

A. (continued)

1. (continued)

f. Record operability status on the inventory form (Attachment 3).

g. If the "Videolink" is inoperable (one or both television sets), notify Emergency Planning.

h. Following completion of the tests, turn off the television sets in rooms 2200 and 2300.

IV. Emergency Operations Facility (EOF)

Testing the NRC Emergency Telecommunications System (FTS 2000).

A. Emergency Notification System (ENS)

1. Phone number: (700) 821-0005

2. 3 extensions

a. Room 101, NRC Table

b. Room 101, Recovery Manager Table

c. Room 114

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 3 of 15)

IV. (continued)

A. (continued)

3. Test

a. Check all three phones for dial tone by lifting the handset of the telephone and listening for a dial tone.

b. Using one of the phone extensions, call the NRC Operation Center (NRCOC) by lifting the handset and dialing the first number listed on the sticker located on the telephone cradle. No access code is necessary, just dial all ten digits of the number. If the main number is busy, dial the backup number. Alternate numbers until contact is made.

c. After the NRCOC Duty Officer answers, inform him as follows: "This is the St. Lucie Emergency Operations Facility. I am conducting a check of the ENS, how do you receive me?" Ask the NRCOC Duty Officer if he wishes to call back, if so give him the telephone number and await the call.

d. The test is passed if (1) all phones have dial tone, (2) the link is operable, and (3) the NRCOC is successfully contacted.

e. Record the test result on the inventory form (Attachment 6).

f. If the test is a failure, see information under Trouble Notification.

B. Health Physics Network (HPN)

1. Phone number: (700) 821-0003

2. 3 extensions

a. Room 101, NRC Table

b. Room 103 (2)

3. Go to step F, Test Procedure

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HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 4 of 15)

IV. (continued)

C. Reactor Safety Counterpart Link (RSCL)

1. Phone number: (700) 821-0008
2. 2 extensions
   a. Room 101, NRC Table
   b. Room 114
3. Go to step F, Test Procedure

D. Protective Measures Counterpart Link (PMCL)

1. Phone number: (700) 821-0006
2. 2 extensions
   a. Room 101, NRC Table
   b. Room 114
3. Go to step F, Test Procedure.

E. Management Counterpart Link (MCL)

1. Phone number: (700) 821-0004
2. 2 extensions
   a. Room 101, NRC Table
   b. Room 114
3. Go to step F, Test Procedure

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 5 of 15)

IV. (continued)

F. Test Procedure for HPN, RSCL, PMCL and MCL.

1. For each communication link, do the following:

a. Check all extensions for dial tone by lifting the handset of the telephone and listening for a dial tone.

b. Check link operability by using the phones on the NRC Table in Room 101. Each link must be able to call-out and receive a call to pass. Use the following call scheme:

HPN: Dial 700-821-0008

RSCL: Dial 700-821-0006

PMCL: Dial 700-821-0004

MCL: Dial 700-821-0003

c. The test is passed if (1) all phones have dial tone and (2) the link is operable.

d. Record the test result on the inventory form (Attachment 6) for each communication link.

e. If the test is a failure, see information under Trouble Notification.

G. Local Area Network (LAN)

1. Phone number: (700) 821-0007.

2. 1 extension

a. Room 114

3. Test

a. Check the telephone line by plugging in a telephone, lifting the handset and listening for a dial tone.

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 6 of 15)

IV. (continued)

H. Trouble Notification

1. If any aspect of the Emergency Telecommunications System is inoperable notify the NRC Operations Center in Rockville, Maryland by using a commercial telephone and dialing one of the following numbers:

   (301) 951-0550

   (301) 816-5100

2. Provide the following information (per IN 86-97):

   a. Name of contact - Donna Calabrese, Rick Walker or Steve Knapp

   b. Phone number of contact - Donna Calabrese
   (561) 467-7185

   Rick Walker
   (561) 467-7170

   Steve Knapp
   (561) 467-7246

   c. Location of contact - FPL/PSL
   6501 S. Ocean
   Jensen Beach, Florida
   34957

   d. Any other information that would expedite repair, if known or as requested.

3. Notify Donna Calabrese, Rick Walker or Steve Knapp.

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 7 of 15)

IV. (continued)

I. The Local Government Radio (LGR) has two low band radio frequencies utilized by St. Lucie County, Martin County, the St. Lucie Plant Control Rooms, the Technical Support Center and the Emergency Operations Facility. This is a backup to the State Hot Ring Down Phone Circuit.

There are two Motorola Command Series radios, one set to the primary channel, F2 (39.180 MHz, State channel 1) and the other set to the secondary channel, F1 (39.100 MHz, State channel 2). The test includes testing both channels with the Unit 1 Control Room, the Unit 2 Control Room, and the Technical Support Center.

CAUTION
To safeguard against potential damage resulting from lightning striking the EOF, power cords for the LGR and HP Off-Site Channel Radios are left disconnected when not in use. The phone cables to each radio are NOT to be disconnected.

1. Powering Up the Radio:

   a. Plug the power cord from each radio unit into the wall outlets behind the table. The F2 light will illuminate.

   b. Ensure the phone cable from each radio is plugged into one of the 3 phone jacks on the wall behind the table. All the jacks are wired for all 3 radios (LGR F1, LGR F2, and Department of Health (DOH)). (The DOH radio is NOT included in this test).

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HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 8 of 15)

IV. (continued)

I. (continued)

NOTE
Prior to commencing the testing with the Control Rooms, contact someone at the plant to go to the TSC to assist with testing of the TSC radios.

2. Instructions for Testing:

Control Rooms

a. Call one of the Plant St. Lucie Control Rooms and ask them to standby for testing the LGR.

b. Begin by testing the radio which is set to channel F2, the channel normally monitored by the Control Rooms.

c. The radio may be operated either by depressing the "transmit" button on the console or by removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. Transmit the following: "St. Lucie Unit 1 or 2 (whichever you arranged to test with), this is St. Lucie EOF, come in please, over." Following acknowledgement from the Control Room, continue with: "St. Lucie Plant, this is the St. Lucie EOF conducting a communications test, how do you read, over?" If the Control Room confirms clear transmission and you can confirm clear reception of the response, then have the radio switched to channel F1, following termination of the message, and standby for a test. End the transmission with: "This is St. Lucie EOF, out." If transmission is unsuccessful, call the Control Room and have the radio switched to channel F1. Proceed to the next step.

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APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 9 of 15)

IV. (continued)

I. (continued)

2. (continued)

d. Now test the radio which is set to channel F1. Transmit the following: "St. Lucie Plant, this is St. Lucie EOF, come in please, over." Following acknowledgement from the Control Room, continue with: "St. Lucie Plant, this is the St. Lucie EOF conducting a communications test, how do you read, over?" If the Control Room confirms a clear transmission and you can confirm clear reception of the response, then end the transmission with: "This concludes this communications test, reset the radio to channel F2, this is St. Lucie EOF, KNGR 874 over and out." If transmission is unsuccessful, call the Control Room and have the radio reset to channel F2. Proceed to the next step.

e. Record operability status on the inventory form (Attachment 6).

f. If one or both channels of the system is/are inoperable, then notify an Emergency Preparedness Coordinator or the Emergency Preparedness Supervisor.

g. Repeat the test procedure in Steps c - f above with the other Control Room.

Technical Support Center

a. Contact someone at the plant to go to the TSC to assist with the radio test, if not previously arranged.

b. Begin by testing the radio which is set to channel F2, the channel the radio in the TSC is set on.

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APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 10 of 15)

IV. (continued)

I. (continued)

2. (continued)

c. Transmit the following: "St. Lucie TSC, this is St. Lucie EOF, come in please, over." Following acknowledgement from the TSC, continue with: "St. Lucie TSC, this is the St. Lucie EOF conducting a communications test, how do you read, over?" If the TSC confirms clear transmission and you can confirm clear reception of the response, then have the radio switched to channel F1 (by depressing the "F1/F2" button), following termination of the message, and standby for a test. End the transmission with: "This is St. Lucie EOF, out." If transmission is unsuccessful, call the TSC and have the radio switched to channel F1. Proceed to the next step.

d. Now test the radio which is set to channel F1. Transmit the following: "St. Lucie TSC, this is St. Lucie EOF, come in please, over." Following acknowledgement from the TSC, continue with: "St. Lucie TSC, this is St. Lucie EOF conducting a communications test, how do you read, over?" If the TSC confirms a clear transmission and you can confirm clear reception of the response, then end the transmission with: "This concludes this communications test, reset the radio to channel F2, this is St. Lucie EOF KNGR 874 over and out." If transmission is unsuccessful, call the TSC and have the radio reset to channel F2. Proceed to the next step.

e. Record operability status on the inventory form (Attachment 6).

f. If one or both channels of the system is/are inoperable, then notify an Emergency Preparedness Coordinator or the Emergency Preparedness Supervisor.

3. Powering Down the Radio:

a. Unplug the phone cables from both radios from the wall phone jacks.

b. Unplug both radios from the wall outlets.

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APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 11 of 15)

IV. (continued)

J. HP Off-site Channel is a unique 900 MHz channel (TX 939.9375 - RX 900.9375) for communications with the off-site Field Monitoring Teams. The radio is a Motorola Spectra which has been set up so that the HP Off-site Channel is the "home" channel, but it has also been programmed for other channels of the plant 900 MHz trunking system.

1. Powering Up the Radio:

a. Plug the power cord into the wall outlet behind the table.

b. Press the red button on the speaker box (Astron RS-12S) to the up position, button will illuminate.

c. Depress the "pwr" button on the Spectra radio.

2. Instructions for Testing:

a. Contact someone at the plant to go to the TSC to assist with the radio test, if not previously arranged.

b. The home channel is "off-site," if this channel is not selected (on the LED), then depress the "sel" button until "off-site" shows in the display.

c. Press the transmit side (with the lightning bolt) of the microphone base and announce: "St. Lucie TSC, this is the St. Lucie EOF, come in please, over." Following acknowledgement from the TSC, continue with: "St. Lucie TSC, this is the St. Lucie EOF conducting a communications test, how do you read?" If the TSC confirms clear transmission and you can confirm clear reception of the response, then end the transmission with: "This concludes this communications test, this is St. Lucie EOF, WMIF 540 over and out."

d. Record operability status on the inventory form (Attachment 6).

e. If the radio is inoperable, then notify an Emergency Preparedness Coordinator or the Emergency Preparedness Supervisor.

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EMERGENCY EQUIPMENT

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 12 of 15)

IV. (continued)

J. (continued)

3. Powering Down the Radio:

a. Depress the "pwr" button on the Spectra radio.

b. Press red button of the speaker box to the down position (light will extinguish).

c. Unplug the power cord from the wall outlet.

K. The State Warning Point (SWP) Hot Ring Down (HRD) circuit is a dedicated phone system linking the State agencies, St. Lucie County and Martin County with the Plant Control Rooms, Technical Support Center and the Emergency Operations Facility.

1. Instructions for Testing.

a. Go to the Division of Emergency Management's office Room 108, in the EOF and locate the phone labeled Hot Ring Down (HRD).

b. Pick up the handset and dial the State Warning Point (SWP) in Tallahassee. This is done by dialing 100. The State Warning Point Duty Officer will acknowledge by saying, "This is State Warning Point, go ahead." You in turn will announce "This is St. Lucie EOF, I am conducting a communications check, how do you receive me? The State will acknowledge. Request the State Warning Point to call you back on Station number 123.

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APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 13 of 15)

IV. (continued)

K. (continued)

1. (continued)

c. Self test procedure for additional extensions.

(1) Conduct a self test on 2 extensions.

A. Extension 120 in the conference room

B. Extensions 122 and 124 in the bull pen /R37

(2) To perform the self test, adjust the volume control to the mid-range position. Lift the handset and press the push to talk bar while speaking into the handset mouthpiece. You should hear yourself in the handset earpiece (this is called sidetone). Now locate the black button on the rear of the telephone next to the power connector. Activate the test mode by holding this button down while simultaneously depressing the push to talk bar and speaking into the handset mouthpiece. Voice should now be heard in the speaker.

Satisfactory completion of the self test is determined when the presence of sidetone is detected while pressing the push to talk bar and speaking into the handset, and when a loopback of the speaker's voice is heard in the loudspeaker while pressing the test switch located on the rear of the terminal. The self test is a complete audio loopback of the terminal's audio circuits up to, but not including, the line matching transformers. As such, this test is a good method to evaluate instrument performance.

d. Record operability status on the inventory form (Attachment 6).

e. If the system is inoperable, notify an Emergency Preparedness Coordinator or the Emergency Preparedness Supervisor.

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 14 of 15)

IV. (continued)

L. "Videolink" - the "Videolink" is a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF.

1. Instructions for Testing

a. Contact someone at the plant to go to the TSC to assist with the test of the "Videolink", if not previously arranged.

b. Obtain key #14 from the keybox in room 107. The key to the keybox is located on the wall next to the box.

c. Use key #14 to unlock room 132.

d. Turn on the master video switch located in the rack mount cabinet.

e. In the "Bullpen", room 101, turn on the two television sets using the remote controls (one for each television set) on the Recovery Manager's table.

f. Set the channel selector to channel 7 and adjust volume.

g. Request the person in the TSC to provide a test broadcast.

h. Operability is verified if both the video picture and the audio output are received on both television sets. The picture must be clear and the audio free from static.

i. Record operability status on the inventory form (Attachment 6).

j. If the "Videolink" is inoperable (one or both television sets), notify Emergency Planning.

APPENDIX B
INSTRUCTIONS FOR TESTING EMERGENCY COMMUNICATIONS EQUIPMENT
(Sheet 15 of 15)

IV. (continued)

L. (continued)

1. (continued)

k. Following the completion of the test:

1. Turn off both television sets in room 101.

2. Turn off the master video switch in room 132.

3. Lock room 132.

4. Return key #14 to the keybox.

V. Site Assembly Station

A. Conduct functional check of the Site Assembly Station (SAS) telephone located on the west wall.

1. Place a local call and request a call back to ensure that the phone works properly.

2. Record operability status on the inventory form (Attachment 4).

3. If the phone is inoperable, notify Emergency Planning.

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EMERGENCY EQUIPMENT

APPENDIX C
FAX TEST FOR EOF MACHINES

TO: EP DEPT

467-7514

THIS IS A TEST FROM:_____

DATE:____/____/____

ST. LUCIE PLANT
HEALTH PHYSICS OPERATING PROCEDURE NO. HP-90, REVISION 37
EMERGENCY EQUIPMENT

APPENDIX D
COPIER TEST FOR EOF MACHINES

TEST DATE ____/____/____

TEST PERFORMED BY _____

FPL	ST. LUCIE PLANT HEALTH PHYSICS PROCEDURE SAFETY RELATED	Procedure No. **HP-200** Current Rev. No. **16** Effective Date: **03/27/01**

Title:

HEALTH PHYSICS EMERGENCY ORGANIZATION

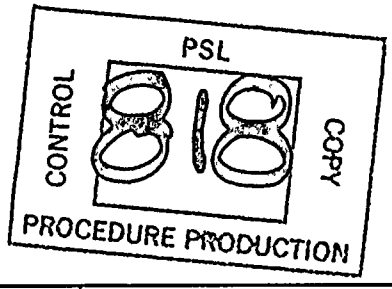
Responsible Department: **HEALTH PHYSICS**

Revision Summary

Revision 16 - Added step to TSC HP Supervisor checklist to assist EC with radiological conditions and evaluations of PARs. Made editorial/administrative changes. (J.R. Walker, 03/22/01)

Revision 15 - Deleted low vol air sample from OSC checklist and included checklist for HPN Communicator. (Don Reisinger, 11/30/99)

Revision 14 - Clarified radiation protection technologist and health physics technician positions. Added EAL triggers to TSCHPS Checklist, OSC relocation threshold dose rate information to HPOSC Checklist and editorial changes. (J. R. Walker, 3/2/99)



Revision	FRG Review Date	Approved By	Approval Date
0	02/01/82	J. H. Barrow (for) Plant General Manager	02/04/82
16	03/22/01	R. G. West Plant General Manager	03/22/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS
DATE
DOCT PROCEDURE
DOCN HP-200
SYS
COMP COMPLETED
ITM 16

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

1.0 TITLE:

HEALTH PHYSICS EMERGENCY ORGANIZATION

2.0 REVIEW AND APPROVAL:

See cover page

3.0 PURPOSE:

This procedure defines areas of responsibility and provides general guidelines for action to be taken by Health Physics Department personnel upon implementation of the St. Lucie Plant Radiological Emergency Plan (E-Plan). It also references those Health Physics (HP) procedures necessary to carry out specific HP activities during a declared radiological emergency (Alert, Site Area Emergency and General Emergency).

4.0 PRECAUTIONS AND LIMITATIONS:

4.1 The Health Physics Department is responsible for protecting all personnel from excessive radiological exposures during accident conditions. In order to effectively carry out this responsibility, it is necessary that all HP personnel quickly man their emergency stations and assemble and check their equipment and await directions from the Technical Support Center Health Physics Supervisor (TSCHPS) or his designee.

4.2 The TSCHPS is responsible for the procedures to be implemented and when implementation is to be effected.

4.3 Complete all procedural steps if applicable or indicate as non-applicable by writing N/A in the provided blank.

4.4 When Health Physics normal operating procedures and emergency procedures differ, the emergency procedures take precedence.

4.5 Delegation of duties and watch reliefs shall be authorized only by the TSCHPS or his designee with approval of the Emergency Coordinator.

4.6 It is the responsibility of all personnel to limit their own exposure and to assist others in limiting their exposures.

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HEALTH PHYSICS EMERGENCY ORGANIZATION

5.0 RELATED SYSTEM STATUS:

None

6.0 REFERENCES:

6.1 St. Lucie Plant Radiological Emergency Plan (E-Plan)

6.2 E-Plan Implementing Procedures (EPIP 00-13)

6.3 HP-2, "FP&L Health Physics Manual"

6.4 NRC I&E Information Notice No. 86-97: Emergency Communications System

6.5 HP-201, "Emergency Personnel Exposure Control"

6.6 HP-202, "Environmental Monitoring During Emergencies"

6.7 HP-203, "Personnel Access Control During Emergencies"

6.8 HP-204, "In-Plant Radiation and Contamination Surveys During Emergencies"

6.9 HP-205, "Emergency In-Plant Air Sampling"

6.10 HP-206, "Analysis of Emergency In-Plant Air Samples"

6.11 HP-207, "Monitoring Evacuated Personnel During Emergencies"

6.12 HP-208, "Personnel Decontamination During Emergencies"

¶1 6.13 PMAI PM97-04-148, OSC Merlins

7.0 RECORDS REQUIRED:

7.1 Completed copies of the below listed documents shall be maintained in the plant files in accordance with QI-17-PSL-1, "Quality Assurance Records."

Forms similar to:

1. Form HP200.1, Technical Support Center Health Physics Supervisor Checklist

2. Form HP200.2, Health Physics OSC Supervisor (HPOSC) Checklist

3. Form HP200.3, HPN Communicator Checklist

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

8.0 INSTRUCTIONS:

8.1 Health Physics Emergency Organization

1. TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR (TSCHPS)

   The Health Physics (HP) Supervisor or his alternate (see the St. Lucie Plant Emergency Response Directory (ERD)) shall assume duties as the TSCHPS in the Technical Support Center (TSC). He is responsible for all HP activities and reports to the Emergency Coordinator (EC). A TSCHPS Checklist, Form HP-200.1 is provided in this procedure. See Section 8.2 for instructions to be followed prior to activation of the TSC and/or prior to arrival of the TSCHPS. /R16

2. HEALTH PHYSICS OSC SUPERVISOR (HPOSC)

   The senior HP Operations Supervisor shall assume duties as the HP Supervisor in the Operational Support Center (HPOSC). He reports to the TSCHPS in the TSC. He is responsible for coordinating all HP activities from the Operational Support Center (OSC). A HPOSC Supervisor Checklist, Form HP-200.2 is provided in this procedure. /R16

3. HEALTH PHYSICS TECHNICAL STAFF

   The Health Physics Technical Staff shall report immediately to the TSCHPS for assignment.

4. HEALTH PHYSICS TECHNICIAN (HPT)

   Radiation Protection Technologists (RPTs) assume the role of Health Physics Technicians (HPTs = OSCHP Tech) and shall immediately report to or be in contact with the OSC. They will be assigned duties by the HPOSC. /R16

8.2 ON-SHIFT HEALTH PHYSICS RESPONSE TO EMERGENCIES /R16

1. An Emergency Class declaration of an Alert or higher during off-normal working hours will require additional HP staffing. The senior HP representative on-site will implement the HP emergency procedures. It is expected that this initial period will last for about one hour. /R16

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

8.0 INSTRUCTIONS: (continued)

8.2 (continued)

2. The senior HP representative on-site shall notify the Emergency Coordinator and apprise him of HP assistance available on-site. He will take his orders directly from the Emergency Coordinator and should assume his duties in the plant or OSC and not in the TSC unless otherwise directed by the Emergency Coordinator. He should attempt to remain in a position to be reached by the Emergency Coordinator if necessary. /R16

3. Since there will be only limited health physics coverage available, it is very important for the senior HP representative on-site to discuss with the Emergency Coordinator (or his designee) the coverage which each feels is necessary and to prioritize that coverage. The following list may be used to assist in the decision of assigning priorities: (in order of preference) /R16

   A. Radiological coverage necessary to allow expedient entry to areas when required to place the plant in a safe condition

   B. Treatment of contaminated personnel

   C. Radiological coverage during high activity sampling

   D. Preparations for extensive in-plant monitoring and surveillance

4. When the additional HP support arrives, the initial period will have passed. In order to maintain continuity and to effect a smooth transfer from the interim to the fully staffed mode it is necessary that the HP command function not change hands more than is absolutely necessary. Therefore, even though the senior HP representative on-site can be relieved by a more senior Technologist or Supervisor, he should not be relieved by anyone except the HP Supervisor or his alternate. /R16

   HP personnel shall report to the OSC when they arrive on-site and should contact the senior HP representative on-site for assignments. /R16

5. The senior HP representative on-site shall initiate the TSCHPS's Checklist, Form HP-200.1. /R16

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

8.0 INSTRUCTIONS: (continued)

8.3 Health Physics Emergency Operations Areas

1. Operations HP personnel will assemble in and work out of the OSC. HP Technical Staff personnel will assemble and work primarily in the TSC.

2. The TSCHPS will determine if the affected unit Reactor Auxiliary Building (RAB) Control Point is to be manned and will inform the EC and the HPOSC.

3. If the affected unit RAB Control Point becomes untenable, the TSCHPS will direct the HPOSC to man the RAB Control Point of the unaffected unit or designate an alternate Control Point. The TSCHPS will inform the EC of the alternate location.

8.4 Logistics and Supplies

1. Records and logs specified in the specific HP emergency procedures shall be kept up to date and shall be reviewed by the TSCHPS.

2. Emergency radiation protection supplies are located for use in the following places:

    1. RAB Control Points (Unit 1 & Unit 2)

    2. Operational Support Center (OSC)

    3. Site Assembly Station (SAS)

    4. Unit 1 Control Room (for use by TSC and Unit 1 C.R. personnel)

    5. Unit 2 Control Room

3. The HPOSC will ensure that materials and equipment are provided to operating areas as needed.

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

8.0 INSTRUCTIONS: (continued)

8.5 Emergency Personnel Exposure Control (HP-201)

1. The TSCHPS shall ensure that all personnel on-site during emergency operations wear proper dosimetry. He shall determine when special dosimetry is required. /R16

2. The HPTs through the HPOSC will provide radiological surveys and/or coverage for all areas in which personnel access is required.

3. If personnel exposures are likely to exceed plant guidelines, the guidelines in Health Physics Procedure HP-201, "Emergency Personnel Exposure Control," shall be followed.

4. All personnel exposures during emergency operations will be maintained As Low As Reasonably Achievable - ALARA.

8.6 Off-site and On-Site Environmental Monitoring (HP-202)

1. The Emergency Coordinator is responsible for ensuring that the TSCHPS initiates off-site radiological monitoring, in accordance with the E-Plan, within a 10 mile radius of the plant. Off-site field monitoring activities will be coordinated with the State of Florida.

2. The TSCHPS will direct the HPOSC to dispatch the Field Monitoring Teams to the Site Assembly Station.

NOTE
If the Field Monitoring Team communicator/control has not been activated, the Field Monitoring Teams should make contact with the OSC and report their status.

3. The Field Monitoring Teams will assemble their equipment, check it for operability and establish contact with the TSC. The TSCHPS in the TSC provides supervision for the Field Monitoring Teams as per EPIP-10, "Off-site Radiological Monitoring," and HP-202, "Environmental Monitoring During Emergencies."

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

8.0 INSTRUCTIONS: (continued)

8.7 Personnel Access Control (HP-203)

1. No re-entry into areas affected by the emergency shall be made unless authorized by the Emergency Coordinator.

2. The initial entry of the Re-entry Team and all subsequent entries, until radiation areas have been properly marked, shall take place under the supervision of the TSCHPS as per EPIP-05, "Activation and Operation of the Operational Support Center."

3. Following re-entry procedures, the TSCHPS will direct the HPOSC to establish the access control point(s). The HPTs shall maintain access control to all affected areas of the plant for the purpose of controlling personnel exposures as per HP-203, "Personnel Access Control During Emergencies."

8.8 Radiation and Contamination Surveys (HP-204)

NOTE
In the event of a Steam Generator Tube Rupture (SGTR), the following areas should initially be posted as contaminated:

A. Steam Trestle
B. Condenser Air Ejector
C. Condensate Polisher

1. The Emergency Coordinator and TSCHPS will determine the extent of surveys required.

2. The TSCHPS will direct the HPOSC to establish survey teams utilizing the buddy system. The HPOSC will direct the conduct of all in-plant surveys, ensure data is properly recorded and posted and keep the TSCHPS informed of the results.

3. Surveillance for emergency situation shall include as a minimum:

    1. Radiation surveys

    2. Contamination surveys

8.0 INSTRUCTIONS: (continued)

8.8 (continued)

3. (continued)

3. Airborne activity surveys

4. Radiological monitoring of potentially high activity chemistry sample operations

5. Surveys as called for in the Emergency Operating Procedures (EOPs).

6. Special surveys as determined by the TSCHPS.

8.9 In-Plant Air Sampling and Counting (HP-205, HP-206)

1. During an emergency, higher than normal radiation levels and airborne concentrations can be expected. It is important that sampling be commenced as expeditiously as possible to support rapid re-entry if necessary.

2. All in-plant air sampling will be performed in such a manner as to ensure personnel exposures are ALARA.

3. The procedures HP-205, "Emergency In-Plant Air Sampling" and HP-206, "Analysis of Emergency In-Plant Air Samples," should be followed in sampling and analyzing samples.

8.10 Personnel Monitoring Following Evacuation (HP-207)

1. In the event it becomes necessary to evacuate personnel from the plant and a release has occurred or is in progress, check points will be established immediately to allow monitoring of these personnel. The check points will be at Jaycee Park, unless alternate routes and assembly locations are specified by the EC.

8.0 INSTRUCTIONS: (continued)

8.11 Personnel Decontamination (HP-208)

1. Personnel decontamination following an accident can pose special problems not encountered in everyday situations including extremely high levels of contamination and/or large numbers of personnel being contaminated at the same time.

2. Personnel decontamination at the Off-site Assembly Area will be under the cognizance of the TSCHPS and will be directed by his designee at that area. HP-208, "Personnel Decontamination During Emergencies," addresses off-site personnel decontamination. /R16

3. Personnel decontamination on-site will be under the direction of the HPOSC and should be conducted in the hot shower area of the unaffected unit or at a location specified by the TSCHPS.

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.1
TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR CHECKLIST

INITIAL

1. Contact the OSC and assess available HP resources on site: _____

   a. TSC

      HP Network Communicator _____

      Field Monitoring Team Communicator _____

   b. OSC

      Number of HP Techs _____

      Number of Dosimetry Techs _____

      Number of Utility Workers _____

      HPOSC Supervisor _____

   c. Number of HPTs assigned to Unit 1 Control Room _____

   d. Number of HPTs assigned to Unit 2 Control Room _____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.1
TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR CHECKLIST
(continued)

INITIAL

CAUTION
Be aware of the following conditions. These Emergency Action Levels (EALs) are associated with Initiating Conditions (ICs) used in the classification of emergencies (EPIP-01, Classification of Emergencies) the Emergency Coordinator needs to know if any of these conditions exist.

1. Measured dose rates from off-site surveys at the site boundary (1 mile) exceed either of the following:

   a. 1000 mrem/hr (total dose rate)

   b. 5000 mrem/hr (thyroid dose rate)

2. Contact Emergency Coordinator (EC)

   a. Inform EC of HP Department status in the TSC and OSC. _____

   b. Determine and prioritize immediate HP coverage needs:

NOTE
Operations will require that radiation surveys be conducted to support the EOPs.

Priority	Job/Location	# HPs Required	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	_____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.1
TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR CHECKLIST
(continued)

2. (continued) INITIAL

c. Event Classification Date/Time

a) UNUSUAL EVENT _____/_____
b) ALERT _____/_____
c) SITE AREA EMERGENCY _____/_____
d) GENERAL EMERGENCY _____/_____

3. OSC Considerations

a. Establish communications with the OSC (if activated). _____

b. Appoint HPOSC Supervisor Name:_____

Phone:_____ _____

c. Inform HPOSC to complete HPOSC Checklist HP-200.2. _____

d. Exchange information on plant status, event classification, available personnel and prioritize jobs requiring HP coverage. Also, discuss planning strategies and personnel allocations. _____

e. Direct HPOSC to dispatch Field Monitoring Teams according to the following classification schedule:

ALERT - On-site, out of plant - 1 Team (RED)

SITE AREA OR GENERAL EMERGENCY - On-site, out of plant - 1 Team (RED) and off-site - 2 Teams (ORANGE,BLUE)

_____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.1
TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR CHECKLIST
(continued)

3. (continued) INITIAL

> NOTE
> It is possible for the TSC and OSC to be in operation for weeks following a plant accident. It is the TSCHPS responsibility to determine when to activate frisking stations for those facilities and the locations of those stations. Once frisking is initiated all personnel entering these facilities shall be monitored for contamination.

f. Direct HPOSC to establish RCA/RAB access control points if portions of the RCA were evacuated or RAB re-entry is planned.

CONTROL POINT LOCATIONS _____
_____ _____

g. If a Site Evacuation has been ordered and a release has occurred or is in progress, direct the HPOSC to dispatch two HPTs to the Off-Site Assembly Area to monitor the evacuees. _____

h. If additional HP personnel resources may be needed, consider requesting assistance through:

- PTN
- Industry (through INPO)
- Department of Energy (through NRC) _____

4. TSC Considerations

a. In conjunction with the TSC Chemistry Supervisor, advise the EC and/or TSC EC Assist/Logkeeper on radiological conditions and Protective Action Recommendations, as necessary. _____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.1
TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR CHECKLIST
(continued)

4. (continued) INITIAL

b. Assign person to continuously man the Health Physics Network (HPN) phone.

(Ref. I&E Notice 86-97) _____

c. Contact the TSC Chemistry Supervisor to determine if accident samples are required (yes/no). _____

d. Assign person to direct field monitoring teams and evaluate the data as it becomes available. _____

e. Confer with chemistry and/or the EOF on dose projections and effected EPZ sectors. _____

f. Establish communications between the TSC Field Monitoring Team and the EOF Field Monitoring Coordinator (when activated).

1. Exchange names and phone numbers

Name(s)_____ Phone # _____

2. Relay field monitoring results as available. _____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.1
TECHNICAL SUPPORT CENTER HEALTH PHYSICS SUPERVISOR CHECKLIST
(continued)

4. (continued) INITIAL

   g. Direct that habitability surveys of the following areas are performed. _____

   * 1. Control Room No. 1

   * 2. Control Room No. 2

   * 3. TSC (turn on CAM)

     4. OSC

     5. RAB Control Points (if inhabited)

   * Surveys of TSC and Control Rooms should be completed by personnel assigned to those areas.

5. Additional Comments by TSCHPS:

Completed by:_____

Date Completed:____/____/____

NOTE
File this Checklist in accordance with QI-17-PSL-1, "Quality Assurance Records."

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.2
HPOSC SUPERVISOR CHECKLIST

INITIAL

1. Perform accountability of HPTs and provide to OSC Supervisor: _____

> NOTE
> Consult the Radiation Exposure Summary Report for selection of respirator qualified field monitoring team members.

2. Dispatch on-site Field Monitoring Team to Site Assembly Station when directed by TSCHPS. _____

   1 HPT, 1 driver and vehicle. _____

3. Dispatch off-site Field Monitoring Teams to Site Assembly Station when directed by TSCHPS. _____

   2 HPTs, 2 drivers, 2 vehicles.

4. If RCA is NOT EVACUATED start preparations for accumulating supplies and instruments in the event of RCA evacuation. _____

5. If RCA is NOT EVACUATED perform necessary job coverage for OPS or maintenance personnel attempting to mitigate the problem. _____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.2
HPOSC SUPERVISOR CHECKLIST
(continued)

INITIAL

6. If RCA evacuation is necessary, perform the following:

1. Dispatch HPT to each Control Room _____

2. Remove Instruments to OSC _____

¶1 3. Take boxes of Electronic Dosimeters from RAB entrance stations to OSC. _____

4. Determine H.P. Personnel available in OSC Report to the TSCHPS and OSC Supervisor _____

5. Establish OSC access control points(s) _____

6. Establish Dosimetry Section in OSC. _____

7. Establish Contamination Control for OSC. _____

8. Inform TSCHPS _____

9. Setup a Continuous Monitoring Count Rate Meter In OSC _____

> CAUTION
> The OSC affords limited protection against a release of radioactive material. During the time that a radioactive release is occurring, the habitability of the OSC is to be monitored. A measured dose rate of 50 mrem/hr, in the facility, is established as the threshold for relocation of the OSC.

10. Perform habitability surveys of the OSC and, if inhabited, RAB Control Point and provide survey results to TSCHPS. _____

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200, REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP200.2
HPOSC SUPERVISOR CHECKLIST
(continued)

INITIAL

7. If directed by the TSCHPS, dispatch two HPTs to the offsite assembly area:

   Name:_____ Dispatch Time:_____

   Name:_____ Dispatch Time:_____ _____

8. Ensure all Reentry Teams are adequately briefed in accordance with HP-203.1 prior to being dispatched from the OSC. _____

9. Advise and assist the OSC Supervisor as necessary in actions to mitigate accident. _____

10. HPOSC Supervisor Comments:

Completed by:_____

Date Completed:____/____/_____

NOTE
File this Checklist in accordance with QI-17-PSL-1, "Quality Assurance Records."

ST. LUCIE PLANT
HEALTH PHYSICS PROCEDURE NO. HP-200; REVISION 16
HEALTH PHYSICS EMERGENCY ORGANIZATION

HP 200.3
HPN COMMUNICATOR CHECKLIST

		INITIAL
1.	Report / Sign in / Obtain ID Badge.	_____
2.	Get status from TSC HPS.	_____
3.	Get HP supply case & procedures.	_____

NOTE
Typical HPN Questions:

A. Meteorological Data
B. Release data
C. Plant radiological inquiries
D. Field team data
E. Assist FMT Coordinator

4.	Activate HPN phone:	_____
	A. Call NRC - Identify self & activity.	_____
	B. Request to be coupled to the HPN bridge network.	_____
5.	Review ERDADS (Plant Rad Monitor Data).	_____
6.	Review off-site Dose Rad Assessment Board.	_____ /R16
7.	Review off-site monitoring field team status board.	_____ /R16
8.	Provide data to TSC HPS.	_____
9.	Assist TSC HPS as needed (dispense dosimetry, set-up air monitor, TSC Rad Surveys, provide rad monitor data, etc.).	_____

NOTE
File this Checklist in accordance with QI-17-PSL-1, Quality Assurance Records.

50-335 Superseded Per Rev 5 To EPIP's Dtd 10/28/01 # ML013550113

FPL

ST. LUCIE PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-04

Current Revision No.
8

Effective Date
06/15/01

Title:

ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER

PSL CONTROL COPY 63 PROCEDURE PRODUCTION

Responsible Department: **EMERGENCY PREPAREDNESS**

REVISION SUMMARY:

Revision 8 – Reduced paperwork required to request re-entry teams, streamlined re-entry, and streamlined problem solving team paperwork. (Donna Calabrese, 04/26/01)

Revision 7 – Revised mandatory functions to include classification and PARs, removed references to STA, revised responsibilities of the TSC EC Assist/Logkeeper and TSC Chemistry Supervisor, and made editorial and administrative changes. (J. R. Walker, 12/07/00)

Revision 6 - Changed responsibility for filling in the State Notification Form from the TSC HRD Communication to the TSC EC Assist/Logkeeper. Made editorial and administrative changes. Revised TSC briefing guidance IAW CR 00-0429. Added new PST Tracking form. (Donna Calabrese, 05/31/00)

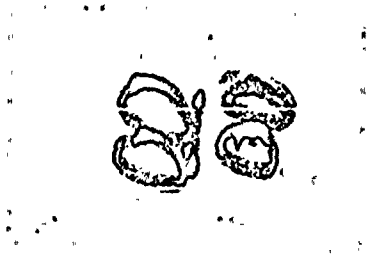
Revision 5 - Changed Chemistry minimum staff position from TSC Chem Supv to TSC Dose Assessor, addressed PMAI by providing alternate notification methods, added instruction to produce list of EPIPs with current rev. numbers, revised re-entry worksheet, added instruction to create conf. bridge for OPS, and made editorial and administrative changes. (J. R. Walker, 11/18/99)

Revision 4 - Removed reference to the rotating maintenance shift supervisor filling the position of TSC coordinator with OSC. (J. R. Walker, 07/01/99)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
8	04/26/01	R. G. West Plant General Manager N/A Designated Approver N/A Designated Approver (Minor Correction)	04/26/01

S___OPS

DATE	
DOCT	PROCEDURE
DOCN	EPIP-04
SYS	
COM	COMPLETED
ITM	8



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(continued)

SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

1.1 Discussion

This procedure provides instructions for the activation and operation of the Technical Support Center (TSC).

1.2 Location and Description

The TSC is on the 62 foot elevation of the Unit 1 Reactor Auxiliary Building (RAB). The TSC is located adjacent to the Unit 1 Control Room and is enclosed in the same habitability envelope. The TSC has emergency communications equipment, precalculated emergency data, pertinent reports, plans, procedures and drawings available for use. Should the Unit 1 Control Room envelope require evacuation, alternate locations for the TSC have been identified as follows:

1. South Service Building
2. Nuclear Training Center

1.3 TSC Functions

1. Mandatory Functions

   A. Classification of emergencies in accordance with EPIP-01, Classification of Emergencies.

NOTE
The following tasks become the responsibility of the Emergency Operations Facility (EOF) when manned and fully operational.

   B. Relief to the Control Room for off-site communications to the State and local agencies and the NRC in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations.

   C. Performance of off-site dose calculations in accordance with EPIP-09, Off-site Dose Calculations, or the Class A computer model.

   D. Protective Action Recommendations (PARs) in accordance with EPIP-08.

1.3 TSC Functions (continued)

2. Additional Functions

A. Management of emergency mitigation activities.

B. Technical support in determining current and projected plant status and providing in-depth diagnostic and engineering assistance to the Control Room.

C. Direct the re-entry activities of the Operational Support Center (OSC).

D. Coordination with the Emergency Operations Facility (EOF) regarding emergency status, corrective and protective actions, off-site interface, radiological conditions, core damage assessment, etc.

1.4 Minimum Staffing

1. The following is the list of the minimum positions needed for TSC operation:

- Emergency Coordinator
- TSC Supervisor
- TSC Dose Assessor
- TSC Reactor Engineer
- TSC Elec Rep - PST (Problem Solving Team)
- TSC Mech Rep - PST
- (3) TSC Communicator (HRD, ENS, EOF)

1.5 $§_2$ Activation

Activation of the TSC is the responsibility of the Emergency Coordinator (EC) and is required for an Alert or higher declared emergency. Arrangements have been made to staff the TSC in a timely manner.

1.6 Operations

The TSC has sufficient space to accommodate the Florida Power & Light Company (FPL) response organization and designated representatives of the Nuclear Regulatory Commission (NRC) Site Team. Arrangements have been made which allow for continuous operation, as necessary.

2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on an attachment.

2.1 References

1. §1 St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)
2. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2
3. §2 St. Lucie Plant Radiological Emergency Plan (E-Plan)
4. §3 St. Lucie Plant Topical Quality Assurance Report (TQAR)
5. E-Plan Implementing Procedures (EPIP 00-13)
6. HP-200 Series Procedures
7. ADM-17.09, Invoking 10 CFR 50.54(x)
8. ADM-17.11, 10 CFR 50.59 Screening
9. St. Lucie Plant Emergency Response Directory (ERD)
10. QI-17-PSL-1, Quality Assurance Records
11. ERDADS Reactor Operator's Manual (8770-12058)
12. St. Lucie Plant Severe Accident Management Guidelines (SAMGs)

2.1 References (continued)

13. §4 Fitness for Duty Rule, 10 CFR 26

14. NUREG 1394, Emergency Response Data System (ERDS)

15. Condition Report 01-0169 (TSC / Unit 1 CR HVAC Charcoal Filtration Change Out) /R8

2.2 Records Required

1. The following shall be retained following a plant emergency:

   - Checklists, data and paperwork generated per this procedure.
   - Log books maintained during the plant emergency.

2. §1 Recorded information shall be forwarded to Emergency Planning following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 Commitment Documents

1. ¶1 PMAI PM97-04-142, Training Drill Critique 1/24/97, (ERDADS screen mimics and full staffing guidance)

2. ¶2 Condition Report 97-1389, (Emergency Supplies)

3. ¶3 PMAI PM99-09-017, Training Drill Critique 7/22/99, (Alternate Notification Methods)

4. ¶4 PMAI PM96-09-185, Condition Report CR 96-1750 (Off-site Notification Using Commercial Phone)

5. ¶5 Condition Report 00-0429 (TSC Briefing)

6. ¶6 Condition Report 01-0078 (Re-entry Paperwork and Response Time Expectations) /R8

3.0 RESPONSIBILITIES

3.1 Emergency Coordinator (EC)

1. The responsibilities for this position are provided in EPIP-02, Duties and Responsibilities of the Emergency Coordinator.

3.2 TSC EC Assist/Logkeeper

1. Initiates and maintains the EC Logbook.
2. Provides assistance to the EC to ensure EC responsibilities are met, particularly off-site notifications and Protective Action Recommendations (PARs).
3. Performs duties as directed/assigned by the EC.

3.3 TSC Supervisor

1. Provides command and control of TSC activities.
2. Supervises the TSC staff particularly the communicators and administrative personnel.
3. Coordinates activities to ensure adequate support of the EC.
4. Ensures communications are performed with off-site agencies until the EOF is activated.
5. Ensures the communication flow is maintained within the facility and with the Control Room, OSC and EOF.
6. Coordinates facility briefings.
7. Arranges for long term operation of the TSC.

3.4 TSC Coordinator with the OSC

1. Serves as the coordinator with the OSC.
2. Provides the OSC with requests for Re-entry Teams.
3. Tracks the re-entry activities of the OSC.
4. Updates the TSC regarding OSC team status and corrective actions.

3.5 TSC OPS Coordinator

NOTE
This position is filled by two persons, one located in the affected unit's Control Room, the other in the TSC.

1. Provides expertise in plant operations to the EC in the TSC.
2. Provides communications assistance to the NPS in the affected Control Room.
3. Ensures the unaffected unit's Control Room is kept apprised of the status of the emergency.
4. Maintains communication flow between the TSC and the affected Control Room concerning status of operations.
5. Serves as primary Severe Accident Management Guidelines (SAMG) decision maker.

3.6 TSC Reactor Engineer

1. Monitors critical safety functions for indications of core status.
2. Assists Nuclear Fuels personnel in the EOF in assessment of core damage.
3. Assists in Severe Accident Management Guidelines (SAMG) evaluation.

3.7 TSC Chemistry Supervisor

1. Directs dose assessment activities in the TSC.
2. Assists the EC with Protective Action Recommendations (PARs).
3. Keeps the EC apprised of chemistry related issues.
4. Assists the Chemistry Supervisor in the OSC.

3.8 TSC HP Supervisor (TSCHPS)

1. The responsibilities for this position are provided in HP-200, Health Physics Emergency Organization.

3.9 TSC Security Supervisor

1. Establishes and maintains site accountability.
2. Arranges site access for the NRC Site Team.
3. Controls on-site security operations throughout the emergency.

3.10 TSC Problem Solving Team (PST)

1. Evaluates plant conditions and provides recommendations to the EC.
2. Anticipates component failures and accident consequences.
3. Researches affected systems and components.
4. Develops mitigation strategies and/or countermeasures.
5. Performs Severe Accident Management Guidelines (SAMG) evaluation.

4.0 DEFINITIONS

4.1 Facility Status

1. **Activation** - the request to staff and establish an Emergency Response Facility (ERF).
2. **Operational** - when sufficient personnel (i.e., minimum staff) are available to accomplish mandatory facility functions such as off-site notifications and dose calculations.
3. **Fully Staffed** - the complete complement of personnel is present in the facility.

4.2 **FPL Emergency Recall System (ERS)** - the call-out system used as a means of off hours call-out, as described in EPIP-03, Emergency Response Organization/Staff Augmentation.

4.3 **Videolink** - a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF allowing the EC briefings to be available in all the Emergency Response Facilities (ERFs).

5.0 INSTRUCTIONS

NOTE

- This section provides general information and instructions for all TSC responders.
- Position specific checklists are included as attachments to this procedure.
- Individuals specifically designated as members of the TSC Emergency Response Organization (ERO) are identified in the ERD.

5.1 When notified, TSC emergency responders are to report to the facility as quickly as possible.

5.2 The initial responder to the TSC should do the following:

1. Unlock the facility with a key from the NPS or Assistant Nuclear Plant Supervisor (ANPS). If these persons are unavailable, break the glass to the keybox next to the door and remove the key.
2. Turn on the facility lights.
3. Open all facility equipment / document storage cabinets.

5.3 Upon arrival at the facility, each TSC emergency responder should perform the following:

1. Sign-in on:
   - **A.** the status board on the South (rear) wall of the facility in the space corresponding to your position and
   - **B.** the TSC ERO Shift Staffing and Accountability Roster.
2. Obtain your specific position notebook from the storage cabinet.
3. Place your name on your position (player) badge (located in the position notebook) with a dry erase marker or in any other non permanent manner.
4. Make your workstation/location operational.
5. Notify your supervisor or the TSC Supervisor of your readiness status.

5.4 §3 Only controlled copies of nuclear safety-related procedures, drawings and other available plant information shall be used. Non-controlled documents or drawings should be verified with a controlled copy prior to use in the TSC.

5.5 During facility briefings, stop what you are doing, pay attention and contribute, as requested.

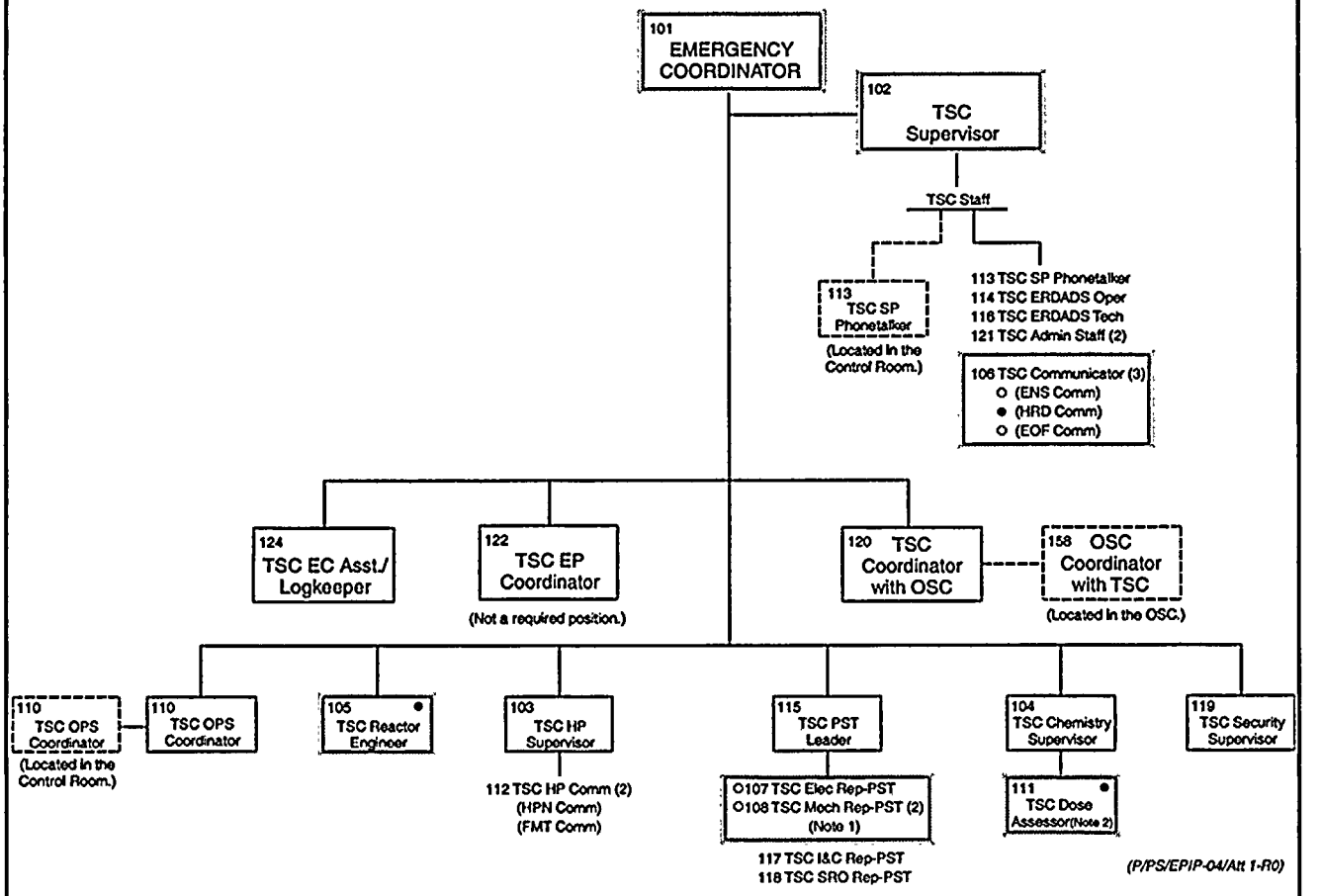
5.6 Upon termination of the event:

1. All TSC personnel should return their workstations/locations to a normal state and assist in restoring the facility to a ready condition.

2. Collect all significant information and documentation, such as completed EPIPs and attachments, logs, notification forms and other notes and data sheets (not bound in the position notebooks), and provide this material to the TSC Supervisor.

END OF SECTION 5.0

ATTACHMENT 1
TSC EMERGENCY RESPONSE ORGANIZATION AND SHIFT STAFFING
(Page 1 of 1)



Autodialer position numbers are listed with position titles.
- • 30 minute response goal, per NUREG 0654, Table B-1
- o 60 minute response goal, per NUREG 0654, Table B-1

Note 1- Only one person in the TSC Mech Rep-PST position is required as minimum staff.

Note 2- The Dose Assessor function will be performed by the on-shift Chemist.

▭ Indicates minimum staffing positions that must be filled in order to declare the facility operational.

END OF ATTACHMENT 1

ATTACHMENT 2
TSC EC ASSIST / LOGKEEPER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Remove the EC Logbook from the EC position notebook and initiate the EC Log (use Attachment 2A, Typical Information to be Included in the EC Logbook). _____

2. Review the requirements of EPIP-02, Duties and Responsibilities of the Emergency Coordinator. _____

3. Steps to occur continually while the facility is in operation:

   a. Maintain the EC Logbook.

   b. Assist the EC in the completion of the requirements of EPIP-02.

   c. Prior to the Emergency Operations Facility going operational, assist the EC in completion of the State Notification Form, including determination of Protective Action Recommendations (PARs), as necessary in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations.

   d. Verify that the EC approves all off-site notification forms.

   e. Remind the EC of time limits for notification of off-site agencies.

   f. Ensure checklists/paperwork are properly completed.

   g. Provide EC a summary of recent log entries for facility briefings.

ATTACHMENT 2
TSC EC ASSIST / LOGKEEPER CHECKLIST
(Page 2 of 2)

B. 3. (continued) INITIAL

h. Support EC as needed or requested.

i. Assist the Emergency Notification System (ENS) Communicator in responding to requests for information from the NRC.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Ensured all facility activities closed out. _____

2. Closed out the EC Log, returned the Logbook to the EC position notebook and returned the notebook to the storage cabinet. _____

3. Ensured all paperwork collected. _____

4. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

5. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 2

ATTACHMENT 2A
TYPICAL INFORMATION TO BE INCLUDED IN THE EC LOGBOOK
(Page 1 of 1)

Maintaining concise, detailed logs during an emergency event is important. Following the event, all information recorded will be needed to provide a clear picture of actions taken.

A. The following information should be included in the EC Logbook:

1. Key events (e.g., classification changes, injuries, etc.).
2. Status changes in equipment, radiological conditions, personnel, etc.
3. Decisions made or actions taken.
4. Other items of significance.

B. Log entry requirements:

1. Time of entry.
2. Use ink.
3. Write/print legibly.
4. Use concise and accurate wording.
5. Strike through and initial changes.
6. Do not remove pages from the log.

END OF ATTACHMENT 2A

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 1 of 4)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Determine operational readiness of the TSC by verifying the following:

NOTE
Attachment 3B, TSC Minimum Staffing Requirements, should be used to determine staff and suitable alternates.

a. Minimum staff available (use to Attachment 3A, TSC ERO Shift Staffing and Accountability Roster). _____

b. Communications equipment, procedures and other supplies are available, checked and ready to use. _____

- Commercial phone as backup to State/County and NRC Notifications (DO NOT test call HRD or ENS).
- Extension phones in TSC.
- Procedure, drawing, tech manual cabinets unlocked.
- Instruct personnel to verify their position notebook procedures against the posted revision numbers.

c. Minimum staff prepared to accomplish mandatory facility functions. _____

3. Recommend to the EC that the TSC should be declared operational. Operational at_____ _____

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 2 of 4)

A. (continued) INITIAL

NOTE

¶1 Unless authorized by the EC, facility staffing should be in accordance with Attachment 3A, TSC ERO Shift Staffing and Accountability Roster.

4. Review additional staffing status with the EC. _____

5. TSC fully staffed. _____

6. Ensure that the EC log, completed notification forms and checklists and any other pertinent information have been faxed to the EOF. _____

B. FACILITY OPERATION

1. Initiate the TSC Logbook. _____

NOTE

The TSC Reactor Engineer is responsible for establishing the communication between the St. Lucie Plant's Emergency Response Data Acquisition and Display System (ERDADS) and the NRC's Emergency Response Data System (ERDS).

2. Ensure ERDADS Link with the NRC (ERDS) established/ attempted. _____

3. ¶2 Obtain food and water supply for the Unit 1 Control Room/TSC personnel. _____

4. ¶2 Obtain food and water supply for the Unit 2 Control Room personnel. _____

5. Arrange for long term staffing (use Attachment 3A, TSC ERO Shift Staffing and Accountability Roster). _____

6. As directed by the EC, initiate steps for relocation of the TSC (use Attachment 3D, Guidelines for Relocation of the TSC). _____

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 3 of 4)

B. (continued) INITIAL

7. Steps to occur continually while the facility is in operation:

a. Maintain the TSC Logbook.

b. Manage/supervise activities of TSC Communicators (HRD, ENS, EOF, HPN, Sound-Powered Phonetalker, FMT).

c. Manage/supervise activities of the TSC Administrative Staff.

d. Maintain low noise levels in the facility.

e. Coordinate overall support functions of the TSC.

f. Conduct briefings in accordance with Attachment 3C, TSC Facility Briefings.

g. Ensure the OSC is kept well informed regarding emergency status and plant conditions (an audio/video link may be used for this purpose).

h. Ensure the EOF is kept well informed regarding emergency status and plant conditions (an audio/video link may be used for this purpose).

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All communications links terminated. _____

2. All communications paperwork collected. _____

3. All facility activities closed out. _____

4. All documents, equipment and supplies returned to pre-activation condition and/or location. _____

ATTACHMENT 3
TSC SUPERVISOR CHECKLIST
(Page 4 of 4)

C. (continued) INITIAL

5. Closed out TSC Logbook. _____

6. Provided all completed paperwork (not bound in the position notebook(s)) to Emergency Planning. _____

7. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 3

ATTACHMENT 3A
TSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 1 of 1)

Shift[1,2] _____, Hours _____ To _____

POSITION (Minimum Staff in Bold)[3]	NAME	BADGE NO.	POSITION (Minimum Staff in Bold)[3]	NAME	BADGE NO.
Emergency Coordinator			TSC HP Supervisor		
TSC Supervisor			TSC HP Comm		
TSC Reactor Engineer			TSC HP Comm		
TSC Dose Assessor[5]			TSC Chem Supervisor		
TSC Communicator[4]			TSC OPS Coord (TSC)		
TSC Communicator[4]			TSC OPS Coord (CR)		
TSC Communicator[4]			TSC SP Phonetalker (TSC)		
TSC Elec Rep-PST			TSC SP Phonetalker (CR)		
TSC Mech Rep-PST			TSC Coordinator with OSC		
TSC Mech Rep-PST			TSC ERDADS Operator		
TSC Mech Rep-PST			TSC ERDADS Tech		
TSC I&C Rep-PST			TSC Admin Staff		
TSC SRO Rep-PST			TSC Admin Staff		
TSC PST Leader			TSC Security Supv		
TSC EC Assist / Logkeeper			TSC EP Coord (not required)		

1 Long term staffing, refer to the St. Lucie Plant Emergency Response Directory (ERD) for position alternates.

2 Long term staffing includes the Control Rooms, attach list to this sheet.

3 Refer to Attachment 3B, TSC Minimum Staffing Requirements, to this attachment for temporary alternates for minimum staff positions.

4 TSC Communicator position fills the following positions:
- a. TSC ENS Communicator
- b. TSC HRD Communicator
- c. TSC EOF Communicator

5 Position may be relieved when the EOF goes operational and takes the lead for dose assessment.

END OF ATTACHMENT 3A

/R8

ATTACHMENT 3B
TSC MINIMUM STAFFING REQUIREMENTS
(Page 1 of 1)

Major Functional Area[1]	Position Title and ID No.[2]	# in Position	Qualifications/ Temporary Alternate
Senior Mgmt. Rep.	Emergency Coordinator, 101	1	Senior Manager with Emergency Coordinator qualifications
Off-site Dose Assessment	TSC Dose Assessor, 111	1	Member of Chemistry Department
Core/Thermal Hydraulics	TSC Reactor Engineer, 105	1	Member of the Reactor Engineering Department or current or prior STA
Notification/Communication	TSC Communicator, 106	3	TSC responder with -STA or equivalent background for ENS Communicator -Technical/operational background for HRD or EOF Communicator
Electrical	TSC Elec Rep - PST, 107	1	Electrical Engineer or Electrical Maintenance Supervisor
Mechanical	TSC Mech Rep - PST, 108	1	Mechanical Engineer or Mechanical Maintenance Supervisor
Facility Command and Control	TSC Supervisor, 102	1	TSC Coordinator with OSC

1 This function(s) may be accomplished during the first 75 minutes of an emergency by an individual(s) meeting the corresponding listed qualifications.

2 These Emergency Response Organization (ERO) positions were established to accomplish the indicated function(s).

END OF ATTACHMENT 3B

¶5

ATTACHMENT 3C
TSC FACILITY BRIEFINGS
(Page 1 of 2)

NOTE
Briefings should be carried by the Videolink.

A. GENERAL GUIDELINES

1. Coordinated by the TSC Supervisor or his/her designee:

a. Establish a frequency (e.g., approximately every 30 minutes). Frequency of briefings may be changed (e.g., decreased during a protracted event or increased during rapidly changing conditions).

b. Set criteria (i.e., attendance, noise and activity level, collection and circulation of information, etc.).

2. TSC Supervisor should announce the start of the briefing and then turn the briefing over to the EC.

3. TSC Supervisor should assist the EC during the briefing.

a. Ensure that the EC receives any updated information. Coordinate this with the TSC EC Assistant/Logkeeper.

b. Ensure that the EC repeats any questions that are asked from the floor to ensure that the OSC and EOF members have heard them.

¶5

ATTACHMENT 3C
TSC FACILITY BRIEFINGS
(Page 2 of 2)

B. GENERAL FORMAT - the following information should be included in facility briefings.

NOTE
It is **not** necessary to have all department representatives participate in each briefing. Use discretion in this area to avoid unnecessary repetition of information.

1. Initial status and summary to include:
   - a. Time of the briefing.
   - b. Emergency Classification.
   - c. Plant status (affected unit, unaffected unit).
   - d. Radiological conditions (e.g., release in progress, contaminated areas, etc.).
   - e. Status of protective actions (e.g., site evacuation, actions underway by the public, etc.).
   - f. Status of activities underway in the facility.
   - g. Priority activities/primary focus.
2. Input/update information from other departments:
   - a. Operations (including EOP actions, discussion of SAMGs).
   - b. Health Physics (including field monitoring activities).
   - c. Reactor Engineering (including status of the reactor core).
   - d. Problem Solving Team (including SAMGs).
   - e. TSC Coordinator with the OSC (including re-entry activity status).
3. Major activities underway in other facilities.
4. Concerns or questions.

END OF ATTACHMENT 3C

ATTACHMENT 3D
GUIDELINES FOR RELOCATION OF THE TSC
(Page 1 of 3)

If habitability of the Unit 1 Control Room is challenged (e.g., due to fire/smoke) and evacuation is required, the TSC will need to be relocated. The following guidelines are provided to assist in this endeavor.

A. Emergency Coordinator

1. Transfer the responsibilities of the EC as follows:

a. Classification of the emergency - NPS

> **NOTE**
> The EOF, once operational, has responsibility for recommending protective actions and for off-site notifications.

b. Protective Action Recommendations (PARs) - NPS

c. Decision to notify off-site officials and the content of notification messages - NPS

d. Request the unaffected Control Room ANPS to support the NPS in off-site notifications.

2. Conduct a transfer of EC responsibilities with the NPS (via phone conversation) once the alternate TSC is prepared to go operational.

B. TSC Supervisor

1. In conjunction with the EC and the TSC HP Supervisor, determine the appropriate area to relocate the TSC. Choose one of the following:

a. South Service Building

b. Nuclear Training Center

2. Direct the evacuation by briefing TSC personnel on location, travel route, materials to take and any immediate actions prior to leaving the facility (e.g., formally terminate communications, turn off equipment, etc.)

ATTACHMENT 3D
GUIDELINES FOR RELOCATION OF THE TSC
(Page 2 of 3)

B. (continued)

3. Re-establish command and control of TSC functions as quickly as possible.

a. Transfer the responsibility for off-site notifications from the unaffected Control Room (if this responsibility has not been transferred to the EOF) to the communicators in the relocated TSC.

C. All TSC Personnel

1. Formally discontinue communications.

2. Gather position notebooks and other pertinent materials.

3. Travel per the prescribed route to the alternate TSC location.

4. Assist Security in re-establishing accountability as quickly as possible.

5. Re-establish TSC functions as quickly as possible.

ATTACHMENT 3D
GUIDELINES FOR RELOCATION OF THE TSC
(Page 3 of 3)

Suggested Arrangements and Equipment Availability at Alternate TSC Locations:

SOUTH SERVICE BUILDING NUCLEAR TRAINING CENTER

Communications		
HRD Phone	EP area fourth floor	Simulator
ENS Phone	Any commercial phone	Any commercial phone
HPN Phone	Any commercial phone	Any commercial phone
EOF Phone	Any commercial phone	Any commercial phone
FMT Radio	EP area fourth floor	Simulator
Dose Assessment		
Class A Model	EP area fourth floor	Technical Training area second floor
TSC Functions		
Command and Control	EP area fourth floor	Conference room and Supervisor offices second floor
Problem Solving Team	Engineering area third floor	Conference room second floor
Other	Cubicles second and fourth floor	Cubicles second floor

END OF ATTACHMENT 3D

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 1 of 4)

NOTE

1. This checklist applies to the following Communicator positions in the TSC:

   HRD Communicator — ENS Communicator
   EOF Communicator — Sound-powered Phonetalker (CR/TSC)

2. The responsibilities of the TSC HP Communicators are provided as follows:

   HPN Communicator - in HP-200, Health Physics Emergency Organization
   FMT Comm/Coord - in EPIP-10, Off-site Radiological Monitoring

3. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

NOTE

Communicator positions should be filled in the following order:

1. Hot Ring Down (HRD) Phone
2. Emergency Notification System (ENS)
3. EOF
4. Sound-powered Phone (CR)
5. Sound-powered Phone (TSC)

2. Filling the position of _____ _____

3. Review appropriate information in Attachment 4A, Communications Guidelines. _____

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

HRD Communications

a. Assist the EC with State and County notifications by:

1. Reviewing the State Notification Form for completeness.

2. As necessary, ensuring Protective Action Recommendations (PARs) match the PAR Worksheet (see Attachment 3, Determination of Protective Action Recommendation (PARs) in EPIP-08, Off-site Notifications and Protective Action Recommendations). /R8

3. Ensure the EC has approved the form.

b. Transmit the notification form in accordance with Appendix B, Notifications from the Technical Support Center (TSC), EPIP-08. /R8

c. Request the TSC EC Assist/Logkeeper log notification times.

d. Following turnover of notification responsibility to the EOF HRD Communicator, identify availability to the TSC Supervisor. Be prepared to provide assistance as requested.

ENS Communications

a. If necessary, transmit an initial NRC Notification Form in accordance with EPIP-08.

b. At an Alert or higher emergency classification, request the NRC to establish the ENS conference bridge.

c. Maintain an open line of communication and a transmission log.

d. Request the TSC EC Assist/Logkeeper:

1. Provide assistance in responding to requests for information from the NRC.

2. Log notification times, as appropriate.

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 3 of 4)

B. 1. (continued)

ENS Communications (continued)

e. Log all questions asked by NRC.

f. Obtain answers to questions from appropriate TSC staff member (e.g., HP, Chemistry, Reactor Engineering, etc.), as necessary.

g. Obtain EC approval prior to providing additional information to the NRC.

EOF Communications

a. Maintain an open line of communication with the EOF.

b. If ERDADS is out of service, use Attachment 4B, Safety Functions Equipment Status and Radioactive Gaseous Source Terms, to obtain plant parameter and radiological data (use Attachment 4B) via the Sound-powered Phonetalker and share the information with the EOF (via the TSC Communicator in the EOF).

c. Provide clarification of any discrepant information as requested by the EOF.

Sound-powered Phonetalker

a. Provide an open line of communication between the affected Control Room and the TSC.

b. Provide fan status for dose assessment.

c. Provide clarification of data and/or obtain additional data as requested by the TSC.

d. If ERDADS is out of service, use Attachment 4B, Safety Functions Equipment Status and Radioactive Gaseous Source Terms, to obtain plant parameter and radiological data.

ATTACHMENT 4
TSC COMMUNICATOR CHECKLIST
(Page 4 of 4)

C. FACILITY CLOSEOUT AND RESTORATION INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All communications links (HRD, ENS, EOF, Sound-powered phone) terminated. _____
2. All communications paperwork collected. _____
3. All phone equipment returned to pre-activation condition. _____
4. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____
5. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 4

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 1 of 7)

NOTE
If communications are associated with drill or exercise, the statement "This is a drill" should precede and follow the actual message.

A. GENERAL GUIDELINES

1. Always speak clearly, firmly and with normal tone when using any communication system.

2. The sender and receiver should be clearly identified.

3. Message text:

   a. Communication must be free of ambiguity. Slang terms should not be used. Avoid the use of words that sound alike; for example, avoid increase and decrease, use raise and lower instead.

   b. Communications must be specific. Use noun names for plant equipment, not acronyms; for example Low Pressure Safety Injection Pump instead of LPSI.

   c. The phonetic alphabet should be used to identify specific train, bus, channel or equipment designations, not just letter identifier; for example, refer to the 1Alpha heater drain pump, not the 1A heater drain pump. The following is the phonetic alphabet to be used:

A	Alpha	J	Juliet	S	Sierra
B	Bravo	K	Kilo	T	Tango
C	Charlie	L	Lima	U	Uniform
D	Delta	M	Mike	V	Victor
E	Echo	N	November	W	Whiskey
F	Foxtrot	O	Oscar	X	X-ray
G	Golf	P	Papa	Y	Yankee
H	Hotel	Q	Quebec	Z	Zulu
I	India	R	Romeo		

   d. The phonetic alphabet should not be used for stringed letter references, acceptable acronyms or location symbols; for example, AB bus, AC or DC, TSC, respectively.

/R8 /R8

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 2 of 7)

A. (continued)

4. Acknowledgement and confirmation (3-way communication) - messages shall be comprised of proper transmission, acknowledgement, and confirmation.

a. The message is properly transmitted from the originator to the receiver.

b. The message receiver should acknowledge the communication by giving functional repeat-back to the message originator. The repeat-back can be provided by either paraphrasing or explaining the message in one's own words, or by verbatim repeat-back. In all cases, verbatim repeat-back should be used for equipment identifiers.

c. If the message receiver does not understand the message he/she should ask for the message to be repeated.

d. If an incorrect repeat-back is given, the message originator should immediately correct the miscommunication with a statement such as, "WRONG", followed by restating the correct message.

e. The message originator should confirm the acknowledgement (repeat-back) with a statement such as, "That is correct".

5. The Call Sign should be used periodically when using the Local Government Radio (LGR).

6. Prior to transmission, ensure that information has been verified and approved by the appropriate authority, as necessary.

7. Ensure that any incoming pertinent information is provided to the TSC Supervisor and the Emergency Coordinator or designee.

8. Maintain documentation of any significant information provided or received.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 3 of 7)

B. COMMUNICATIONS SYSTEMS

1. State Warning Point (SWP) Hot Ring Down Phone (HRD)

a. **This is the primary communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

b. A self-verifying phone system which is initiated by entering the 3 digit code corresponding to the desired location of contact. The codes appear on a list in a pull-out drawer attached to the base of the phone or in the St. Lucie Plant Emergency Response Directory (ERD). A confirmation ring-back (double tone) will be heard if the dialed terminal is successfully contacted. When the party answers, begin transmission by depressing the "push-to-talk" bar in the handset. Release the "push-to-talk" bar to receive response.

2. NRC Emergency Notification System (ENS)

a. **This is the primary communications pathway to the NRC.**

b. Part of the NRC Emergency Telecommunications System (ETS). Initiate contact by dialing (direct, no access code needed) one of the phone numbers provided on the phone or in the ERD. This will become an open line of communication at the Alert or higher emergency class. The EOF will join the conference bridge.

3. EOF Direct-line Telephone

a. This is a direct line to the Emergency Operations Facility (EOF). Initiate contact by removing the handset from the cradle which will cause the phone in the EOF to ring. When the phone is answered, begin transmission. This link can also be initiated from the EOF.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 4 of 7)

B. (continued)

4. Sound-powered Phone

a. As the name implies, these phone (headsets) are powered by sound.

b. The Unit 1 phone jack is located near the Dose Assessment Status Board; the Unit 2 phone jack is located next to the Chronology Status Board in the rear of the room.

c. Once the headsets have been connected in both the affected Control Room and the TSC, transmission can begin by speaking into the mouthpiece.

5. Commercial Telephone

a. **This is the first alternate communications pathway to the State Warning Point and St. Lucie, Martin Counties, and NRC.**

b. Dial 9 for a Fort Pierce exchange; dial 8-1-Area Code for all other numbers. An authorization code is needed for long distance calls.

6. Emergency Satellite Communications System (ESATCOM)

a. **This is a second alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

b. To initiate transmission, lift the handset and depress the "push-to-talk" bar in the handset. Wait 3-5 seconds to hear a beep before starting to talk. The red light on the phone is a power indicator, when lit, power is available.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 5 of 7)

B. (continued)

7. Local Government Radio (LGR) - Call Sign: Kilo November Golf Romeo 8-7-4 (KNGR874).

   a. **This is the third alternate communications pathway to the State Warning Point.**

   b. A backup communication system to the Counties and indirectly to the State. A table radio, Motorola Command Series, provides two channels, the primary F2 (39.180 MHz, State Channel 1) and the secondary F1 (39.100 MHz, State Channel 2). Channel selection can be made by depressing the "F1/F2" button (the radio is set to monitor F2). The radio can be operated either by depressing the "transmit" button on the console or be removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. (Preference should be given to using the handset).

8. Satellite Telephone

   a. Instructions for use of the satellite telephone are provided in the phone's briefcase.

   b. The phone is stored in a supply cabinet in the TSC.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 6 of 7)

C. ¶3 Alternate State Warning Point Notification Methods (recommended format):

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

1. Alternate 1 - Commercial phone

   Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Unit ____ Nuclear Plant with an emergency declaration. My callback number is _____."

   Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the State of Florida Notification Message Form.

   ¶4 Request callback to verify that State Warning Point has notified St. Lucie and Martin Counties and the Bureau of Radiation Control.

2. Alternate 2 - ESATCOM

   Hold down the button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk.

   Announce "State Warning Point, this is St. Lucie Unit ____," then release the button in order to listen.

   When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Unit ____ (classification), repeat (classification)."

   When the State Warning Point gives go-ahead, provide the information from the State of Florida Notification Message Form.

   Announce "St. Lucie clear" at the end of the conversation.

ATTACHMENT 4A
COMMUNICATIONS GUIDELINES
(Page 7 of 7)

C. (continued)

3. Alternate 3 - Local Government Radio (LGR) communication to St. Lucie and Martin County Emergency Operations Centers (EOCs) with relay to the State Warning Point.

   On channel 2, contact the county EOCs by depressing the transmit button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Unit ____. Over." When St. Lucie County replies, direct them to standby while you contact Martin County.

   When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Unit ____ declaring a (classification), repeat (classification). I am standing by to transmit State of Florida Notification Message Form information when you are ready to copy. Over."

   When the counties give the go-ahead, provide the information from the State of Florida Notification Message Form.

   End the conversation by announcing "This is St. Lucie Unit ____, KNGR 874, over and out."

END OF ATTACHMENT 4A

ATTACHMENT 4B
SAFETY FUNCTIONS EQUIPMENT STATUS - UNIT 1
(Page 1 of 4)

1

¶1 ERDADS SF1 Screen Mimic

PLANT PARAMETERS	SAFEGUARDS	CONTAINMENT	BALANCE OF PLANT
REACTOR PWR (WR) _____%	PUMP STATUS (ON/OFF)	PRESSURE _____PSIG	ELECTRICAL PLANT
REACTOR VSL LEVEL _____%	HPSI A ON/OFF	LEVEL (NR) _____FEET ((-7) TO 0)	4.16 KV A3 _____VOLTS
RCS PRESSURE (NR) _____PSIA (1500-2500)	HPSI B ON/OFF	LEVEL (WR) _____FEET ((-1) TO 26)	4.16 KV B3 _____VOLTS
RCS PRESSURE (LR) _____PSIA (0-1600)	LPSI A ON/OFF	TEMPERATURE	DIESEL GENERATORS
PRESSURIZER LEVEL _____%	LPSI B ON/OFF	ATMOSPHERE _____DEG F	D/G A _____VOLTS
CET TEMPERATURE _____DEG F	CHRG A ON/OFF	SUMP _____DEG F	D/G A _____AMPS
HOT LEG A TEMP _____DEG F	CHRG B ON/OFF	RADIATION LEVEL	D/G B _____VOLTS
HOT LEG B TEMP _____DEG F	CHRG C ON/OFF	CHHRM _____R/HR	D/G B _____AMPS
COLD LEG A1 TEMP _____DEG F	CCW A ON/OFF	POST/LOCA _____MR/HR	TANK STATUS
COLD LEG A2 TEMP _____DEG F	CCW B ON/OFF	PARTICULATE _____CPM	RWT _____FEET
COLD LEG B1 TEMP _____DEG F	CCW C ON/OFF	GASEOUS _____CPM	CST _____FEET
COLD LEG B2 TEMP _____DEG F	AFW A ON/OFF	HYDROGEN CONCENTRATION	BAMT A _____%
LMTNG SBCOOL MRGN _____DEG F	AFW B ON/OFF	A ANALYSER _____%	BAMT B _____%
S/G A PRESSURE _____PSIG	AFW C ON/OFF	B ANALYSER _____%	HVAC STATUS (ON/OFF)
S/G A LEVEL (WR) _____%	AUX FEED FLOW (GPM)	CONTAINMENT COOLERS (ON/OFF)	HVE 4A ON/OFF
S/G B PRESSURE _____PSIG	A_____ B_____ C_____	CNTMT COOLER A ON/OFF	HVE 4B ON/OFF
S/G B LEVEL (WR) _____%	HPSI FLOW (GPM)	CNTMT COOLER B ON/OFF	HVE 8A ON/OFF
CNTMT PRESS (WR) _____PSIG	A1_____ A2_____	CNTMT COOLER C ON/OFF	HVE 8B ON/OFF
CONTAINMENT TEMP _____DEG F	B1_____ B2_____	CNTMT COOLER D ON/OFF	HVE 9A ON/OFF
	LPSI FLOW (GPM)		HVE 9B ON/OFF
	A1_____ A2_____		HVE 10A ON/OFF
	B1_____ B2_____		HVE 10B ON/OFF
	SIT'S LEVEL (%)		
	A1_____ A2_____		
	B1_____ B2_____		
	SIT'S PRESS (PSIA)		
	A1_____ A2_____		
	B1_____ B2_____		
	SAFEGUARDS SIGNALS		
	SIAS A YES / NO		
	SIAS B YES / NO		
	MSIS A YES / NO		
	MSIS B YES / NO		

ATTACHMENT 4B
RADIOACTIVE GASEOUS SOURCE TERMS - UNIT 1
(Page 2 of 4)

1

¶1 ERDADS RG1 Screen Mimic

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
AIR TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____	_____DEG F / 50 METER

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
05-01	A MAIN STM	_____	MR/HR	58	A HI RANGE	_____	R/HR
05-02	B MAIN STM	_____	MR/HR	59	B HI RANGE	_____	R/HR
		_____			PRESSURE	_____	PSIG
CHANNEL	ECCS 1A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
02-05	LOW RANGE	_____	uC/cc	01-05	LOW RANGE	_____	uC/cc
02-07	MID RANGE	_____	uC/cc	01-07	MID RANGE	_____	uC/cc
02-09	HI RANGE	_____	uC/cc	01-09	HI RANGE	_____	uC/cc
02-10	FLOW	_____	SCFM	01-10	FLOW	_____	SCFM
CHANNEL	ECCS 1B	VALUE	UNITS	CHANNEL	FUEL BLDG	VALUE	UNITS
03-05	LOW RANGE	_____	uC/cc	04-05	LOW RANGE	_____	uC/cc
03-07	MID RANGE	_____	uC/cc	04-07	MID RANGE	_____	uC/cc
03-09	HI RANGE	_____	uC/cc	04-09	HI RANGE	_____	uC/cc
03-10	FLOW	_____	SCFM	04-10	FLOW	_____	SCFM

ATTACHMENT 4B
RADIOACTIVE GASEOUS SOURCE TERMS - UNIT 2
(Page 3 of 4)

2

¶1 ERDADS SF2 Screen Mimic

PLANT PARAMETERS	SAFEGUARDS	CONTAINMENT	BALANCE OF PLANT
REACTOR POWER (WR) _____	PUMP STATUS (ON/OFF)	PRESSURE _____PSIG	ELECTRICAL PLANT
RX VSL HEAD LEVEL _____%	HPSI A ON/OFF	LEVEL (NR) _____FEET ((-7) TO 0)	4.16 KV A3 _____VOLTS
RX VSL PLENUM LEVEL _____%	HPSI B ON/OFF	LEVEL (WR) _____FEET ((-1) TO 26)	4.16 KV B3 _____VOLTS
RCS PRESSURE (NR) _____PSIA (1500-2500)	LPSI A ON/OFF	TEMPERATURE	DIESEL GENERATORS
RCS PRESSURE (LR) _____PSIA (0-750)	LPSI B ON/OFF	ATMOSPHERE _____DEG F	D/G A _____VOLTS
PRESSURIZER LEVEL _____%	CHRG A ON/OFF	SUMP _____DEG F	D/G A _____AMPS
CET TEMPERATURE _____DEG F	CHRG B ON/OFF	RADIATION LEVEL	D/G B _____VOLTS
HOT LEG A TEMP _____DEG F	CHRG C ON/OFF	CHHRM _____R/HR	D/G B _____AMPS
HOT LEG B TEMP _____DEG F	CCW A ON/OFF	POST/LOCA _____MR/HR	TANK STATUS
COLD LEG A1 TEMP _____DEG F	CCW B ON/OFF	PARTIC _____CPM	RWT _____FEET
COLD LEG A2 TEMP _____DEG F	CCW C ON/OFF	GASEOUS _____CPM	CST _____FEET
COLD LEG B1 TEMP _____DEG F	AFW A ON/OFF	HYDROGEN CONCENTRATION	BAMT A _____%
COLD LEG B2 TEMP _____DEG F	AFW B ON/OFF	A ANALYSER _____%	BAMT B _____%
LMTNG SBCOOL MRGN _____DEG F	AFW C ON/OFF	B ANALYSER _____%	HVAC STATUS (ON/OFF)
S/G A PRESSURE _____PSIG	AUX FEED FLOW (GPM)	CONTAINMENT COOLERS (ON/OFF)	HVE 4A ON/OFF
S/G A LEVEL (WR) _____%	A_____ B_____ C_____	CNTMT COOLER A ON/OFF	HVE 4B ON/OFF
S/G B PRESSURE _____PSIG	HPSI FLOW (GPM)	CNTMT COOLER B ON/OFF	HVE 8A ON/OFF
S/G B LEVEL (WR) _____%	A1_____ A2_____	CNTMT COOLER C ON/OFF	HVE 8B ON/OFF
CNTMT PRESS (WR) _____PSIG	B1_____ B2_____	CNTMT COOLER D ON/OFF	HVE 9A ON/OFF
CONTAINMENT TEMP _____DEG F	LPSI FLOW (GPM)		HVE 9B ON/OFF
	A1_____ A2_____		HVE 10A ON/OFF
	B1_____ B2_____		HVE 10B ON/OFF
	SIT'S LEVEL (%)		
	A1_____ A2_____		
	B1_____ B2_____		
	SIT'S PRESS (PSIA)		
	A1_____ A2_____		
	B1_____ B2_____		
	SAFEGUARDS SIGNALS		
	SIAS A YES / NO		
	SIAS B YES / NO		
	MSIS A YES / NO		
	MSIS B YES / NO		

ATTACHMENT 4B
RADIOACTIVE GASEOUS SOURCE TERMS - UNIT 2
(Page 4 of 4)

2

¶1 ERDADS RG2 Screen Mimic

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
CURRENT TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
631	A MAIN STM	_____	MR/HR	40	A HI RANGE	_____	R/HR
632	B MAIN STM	_____	MR/HR	41	B HI RANGE	_____	R/HR
633	BACKGROUND	_____	MR/HR		PRESSURE	_____	PSIG

CHANNEL	ECCS 2A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
601	LOW RANGE	_____	uC/cc	621	LOW RANGE	_____	uC/cc
602	MID RANGE	_____	uC/cc	622	MID RANGE	_____	uC/cc
603	HI RANGE	_____	uC/cc	623	HI RANGE	_____	uC/cc
604	EFFLUENT	_____	uC/SEC	624	EFFLUENT	_____	uC/SEC

CHANNEL	ECCS 2B	VALUE	UNITS
611	LOW RANGE	_____	uC/cc
612	MID RANGE	_____	uC/cc
613	HI RANGE	_____	uC/cc
614	EFFLUENT	_____	uC/SEC

END OF ATTACHMENT 4B

ATTACHMENT 5
TSC ERDADS OPERATOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

CAUTION
Ensure data is being collected for the affected unit. Each unit has predesignated ERDADS terminals.

1. Check out ERDADS terminals and determine operability status. _____

   If ERDADS is inoperable or printouts are not available, Then assist the Sound-powered Phonetalker in collecting plant parameter and radiological data by completing Attachment 4B, Safety Functions Equipment Status and Radioactive Gaseous Source Terms.

2. Steps to occur continually while the facility is in operation:

   a. Call up EPIP screens and additional data as requested, refer to Attachment 5A, ERDADS Data Acquisition.

   b. Provide the following printouts to the TSC Administrative Staff.

      1. Safety Functions Equipment Status (SF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

      3. Other screens as requested.

   c. Support dose assessment by providing requested data from ERDADS.

ATTACHMENT 5
TSC ERDADS OPERATOR CHECKLIST
(Page 2 of 2)

B. **2.** (continued) INITIAL

d. Observe ERDADS data during interval between report printing for significant changes and trends, report changes to appropriate members of the TSC staff.

e. Refer to Attachment 5B, ERDADS Data Points, for a description of ERDADS data points.

C. FACILITY CLOSEOUT AND RESTORATION

> **NOTE**
> All paperwork completed in the position notebook should remain in the position notebook.

1. ERDADS system returned to preactivation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 5

ATTACHMENT 5A
ERDADS DATA ACQUISITION
(Page 1 of 3)

I. DATA ACQUISITION

A. ERDADS - Emergency Response Data Acquisition and Display System, the following information is available on the display screens indicated.

1. Meteorological Data -

   Display: **SMD** (Site Meteorological Data)

2. Plant Parameter Data -

CAUTION
Certain parameters (e.g., fan status) available on Unit 2 are NOT available on Unit 1.

   Display: in the TSC - **SF (1/2)** (Safety Functions and Equipment Status)

3. Radiological Data -

   Display: **RG (1/2)** (Radiation Gaseous Source Terms) **RBS** (Health Physics Evaluation Screen - containment radiation levels and trends) **R11** (Area Radiation Monitors, Unit 1) **R21** (Area Radiation Monitors, Unit 2)

4. Chemistry Data -

   Display: **R12** (S/G Blowdown, Steam Jet Air Ejector, Unit 1) **R22** (S/G Blowdown, Steam Jet Air Ejector, Unit 2)

ATTACHMENT 5A
ERDADS DATA ACQUISITION
(Page 2 of 3)

I. DATA ACQUISITION (continued)

A. (continued)

5. To access data -

a. Press "CLEAR"

b. Type in "Pup Unit (1/2)"

c. Press "EXEC"ute, top of screen will read "Unit change is complete" or "Current Unit is same as entered Unit"

d. Press "EPIP"

e. The "PAGE UP" and "PAGE DOWN" keys will cause the following display sequence:

SMD - RG (1/2) - SF (1/2) - RBS - EF (1/2) - SMD

6. To go directly to a screen -

a. Press "CLEAR"

b. Type in screen designation, e.g., "**RG1**"

c. Press "DISPLAY"

B. Sound-powered Phonetalker - The Sound-powered Phonetalker can be utilized as a primary source of information or as an alternate method to ERDADS.

1. Primary source - status of fans needed for dose assessment exhaust fans 6, 7, 8, 9, 10, 15, 16 and 17.

ATTACHMENT 5A
ERDADS DATA ACQUISITION
(Page 3 of 3)

II. ERDADS - COLOR/SYMBOL CONVENTIONS

Color/Symbol	Explanation [1]
Numeric value in white on dark green background	Data value is valid and within the instrument range.
Numeric value blinking (yellow on blue/ red on white)	Value may be yellow on blue background (urgent alarm) or red on white background (critical alarm), indicates an alarm setting has been exceeded, the alarm must be acknowledged in the Control Room (operators are unable to acknowledge ERDADS alarms in the Simulator Control Room), the value will continue to blink until acknowledged; the value will continue to update.
"BAD" (blue on white)	Preceded by a numeric value in white on a blue background signifying a suspect value indicating that one or several inputs to this composite point is/are out of instrument range, when all inputs to the point are out of range the word "BAD" replaces the numeric value.
"FAILED"	Point is from a single instrument and the value is out of range.
"NO DATA"	Point does not have input to ERDADS, usually point available on one unit, but not the other.

[1]Based on Table 4.1 in the ERDADS Reactor Operator's Manual (8770-12058)

END OF ATTACHMENT 5A

¶2

ATTACHMENT 5B
ERDADS DATA POINTS
(Page 1 of 8)

The following data point descriptions for St. Lucie Plant correspond with the data normally tracked on the plant parameters status board. Consult ERDADS Manual, as necessary, for verification of point IDs, point names or description information.

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. RCS T Hot (HLA and HLB) (deg. F)	QTA541-1/2		Average	This parameter is the average of the "A" and "B" steam generator inlet temperature. It is also referred to as the average hot leg temperature. The individual "A" and "B" hot leg temperatures are derived by choosing between current narrow and wide range sensor values. The choice depends on the current values, qualities and direction of the rates of change of the instrumentation values, as well as two pairs of overlapping switching limits and the most recent range utilized. The outputs from the calculation consist of the choice of range, the associated value and rate of change together with the quality of each.
RCS Pressure WR (psia)	QA0501-1/2	RCS Pressure	Average	This parameter is a Reactor Coolant System (RCS) wide range instrument. It derived from Pressurizer Pressure signals PT1107-2 and PT1108-2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 2 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
RCS Pressurizer Level (%)	QA0001-1/2	PRZR LVL	Average	This parameter is pressurizer level. It is derived from Pressurizer Level control signals LT1110X-2 and LT1110Y-2 which are linear. These two signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. The top of the heaters is 73.98 inches above the lower top centerline.
Charging Flow to Regen Hx (GPM)	FT2212-1/2	RCS CHG/MU	N/A	This parameter is reactor coolant system makeup flow. It is converted to engineering units using a linear equation.
Subcooling Margin (deg. F)	QA0005-1/2	Submargin	Minimal	This parameter is derived from eight subcooled values, TMARHEAD-A-1/2, TMARRCS-B-1/2, TMARUR-A-1/2,TMARHEAD-B-1/2, TMARCET-A-1/2 TMARUR-B-1/2, TMARRCS-A-1/2 and TMARCET-B-1/2, which are provided by the Qualified Safety Parameter Display System (QSPDS). They are processed by a signal auctioneering minimum algorithm. This function finds the highest usable data value in a specified group. Each data value of the group and its quality is examined and the following quantities are obtained: 1. Lowest usable data value, 2. Point number of the lowest usable data value, 3. Number of usable data values, and 4. Lowest quality of the usable data. • For two or more usable data values, the result is the highest usable value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 3 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. Core Exit Temperature (deg. F)	QA0003-1/2	Temp. Core Ex.	Average	This parameter is derived from 45 Unit 1 detectors, or 56 Unit 2 detectors located just above the upper fuel alignment plate. The Qualified Safety Parameter Display System (QSPDS) provides the values. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, In this case the result is bad.
Reactor Vessel Level (%)	Unit 1: QA0004-1 Unit 2: RLEV H-2 RLEV P-2		Minimum	The reactor vessel level for Unit 1 QA0004-1 is derived from the reactor vessel levels RLEV-A-1 and RLEV-B-1 which are provided by the Qualified Safety Parameter Display System. The ERDADS select the lowest of the two values. For only one good data value, the result is set to that value and the quality is poor. The reactor vessel level for Unit 2 is displayed as reactor plenum level RLEVPB-2 and reactor head level RLEVHB-2 which is provided by the "B" side Qualified Safety Parameter Display System (QSPDS). These two parameters are displayed with no calculations being performed by the ERDADS computer system. The QSPDS obtains these values from the heated and unheated junction thermocouples located inside the reactor. They are positioned between the head and upper fuel alignment plate in the reactor internals.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 4 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Reactor Vessel Level % (continued)				Unit 1 Level Information: Head and Plenum together

Sensor	Location* (* in. to fuel) alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	186 ¼	20	80
2	144 3/8	19	61
3	108	18	43
4	71 5/8	14	29
5	50 5/8	10	19
6	29 5/8	7	12
7	19 5/8	5	7
8	10 5/8	7	0

Unit 2 Level Information: Head and Plenum together

Sensor	Location* (* in. to fuel) alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	170 ½	52	48
2	140 ¾	28	20
3	111 1/8	20	0
None			100
4	98 5/8	18	82
5	74 5/8	21	61
6	53 5/8	20	41
7	32 5/8	19	22
8	12 5/8	22	0

¶2

ATTACHMENT 5B
ERDADS DATA POINTS
(Page 5 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
HPSI Total Flow (GPM)	HSITTLF-1/2	HPSI Flow	Sum	This parameter measures total HPSI flow and is derived from HPSI Header Flow signals FT3311-1/2, FT3321-1/2, FT3331-1/2 and FT3341-1/2 which are square roots. The signals are processed with a sum of inputs algorithm. This function obtains the algebraic sum of values with a good status.
LPSI Total Flow (GPM)	QA0908-1/2	LPSI Flow	Sum	This parameter measures total LPSI flow and is derived from LPSI Header Flow signals FT3312-1/2, FT3322-1/2, FT3332-1/2 and FT3342-1/2 which are square roots. These signals are processed by an algorithm which provides a sum of the inputs. This function obtains the algebraic sum of values with a good status.
Containment Temp. (deg. F)	TE07-3B-1/2	Cntmnt Temp	N/A	This parameter is a containment temperature instrument. It is converted to engineering units using a linear equation.
Containment Pressure WR (psig)	QA0507-1/2	Cntmnt Press	Average	This parameter measures containment pressure and is a wide range indicator. It is derived from Wide Range Containment Pressure signals PT07-4A1-1/2 and PT07-4B1-1/2 which are linear. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 6 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Containment Sump Level WR (Ft.)	QA0008-1/2	Cntmnt Smp WR	Maximum	This parameter is a containment sump wide range instrument. It is derived from Containment Sump Level signals LT07-13A-1/2 and LT07-13B-1/2 which are linear. They are processed by a signal auctioneering maximum algorithm. This function finds the highest usable data value in the specified group. Each data value of the group and its quality is examined and the following rules are used. • For two or more usable data values, the result is the highest usable data value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.
Containment Hydrogen (%)	CH2-1/2	H2 Conc.	Average	This parameter is a containment hydrogen average concentration measurement. It is derived from Hydrogen Concentration signals A-HYDROGEN-1/2 and B-HYDROGEN-1/2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor.
SG Level A WR (%)	LT9012-1/2	SG Level A	N/A	This parameter is the "A" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 19.5 inches above the bottom of the U tubes.
SG Level B WR (%)	LT9022-1/2	SG Level B	N/A	This parameter is the "B" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 19.5 inches above the bottom of the U tubes.

¶2

ATTACHMENT 5B
ERDADS DATA POINTS
(Page 7 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
SG Pressure A (psig)	QA0021-1/2	SG Pres./A	Redundant Sensor Algorithm	This parameter is the "A" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8013A-1/2, PT8013B-1/2 and PT8013C-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
SG Pressure B (psig)	QA0022-1/2	SG Pres./B	Redundant Sensor Algorthim	This parameter is the "B" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8023A-1/2, PT8023B-1/2 and PT8023D-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
Refueling Water Tank Avg. Level (Ft.)	RWTAL-1/2	BWST Level	Average	This parameter measures refueling water tank level. It is derived from three inputs. They are LT07-2A-1/2, LT07-2B-1/2 and LT07-2C-1/2. These points are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. Tank bottom refers to zero gallons.

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ATTACHMENT 5B
ERDADS DATA POINTS
(Page 8 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
CHRRM. Channel (R/HR)	Unit 1: RE 26-58-1 (A Channel) RD 26-59-1 B Channel) Unit 2: RIM 26-40-2 (A Channel) RIM 26-41-1 (B Channel)	Cntmnt. Rad	Maximum	The high containment radiation instruments for Unit 1 are the "A" side monitor RE 26-58-1 and the "B" side monitor RE 26-59-1. These monitors are only range checked and flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees. The high containment radiation instruments for Unit 2 are the "A" side monitor RIM 26-40-2 and the "B" side monitor RIM 26-41-2. These monitors are only range checked and are flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees.

END OF ATTACHMENT 5B

ATTACHMENT 6
TSC ADMINISTRATIVE STAFF CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify procedures by posting revision numbers on the status board. Post all procedures (EPIP, HP, Chem.). Consult Control Copy 5 in the TSC document cabinets or follow the steps below to print out an EPIP list: _____

   a. In Lotus Notes, click on the PSL Procedures icon.

   b. On the Search line toolbar, click the far right button (with 2 circles and a down arrow).

   c. Select Group Search from the drop down menu.

   d. In the Search line type "EP" (where the "XX" is).

   e. Click Search or hit Enter.

   f. EPIP list is now displayed (not in any particular order).

   g. To print the list - Click File
      - Select Print from the drop down menu
      - Select View Options in the dialogue box
      - Click OK

3. Telecopy the EC Log, completed notification forms and checklists, and any other pertinent information to the EOF. _____

ATTACHMENT 6
TSC ADMINISTRATIVE STAFF CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION

NOTE
Information should be updated every 15-30 minutes and not longer than 60 minutes.

1. Synchronize the facility clock(s) with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.

2. Steps to occur continually while the facility is in operation:

   a. Obtain the following ERDADS data sheets (printouts) from the ERDADS Operator:

      1. Safety Functions Equipment Status (SF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

   b. Update status boards with new ERDADS data.

   c. Request the sound-powered phonetalker to obtain any information/data not provided by the ERDADS printouts.

   d. Verify all data has been accurately transferred to the status board.

   e. Update the sequence of events board following each facility briefing and as needed. Provide relevant information concerning items such as:

      1. Change in classification.

      2. Significant change in plant condition.

      3. Status of plant system(s) of concern.

      4. Injured personnel status.

      5. Other items of relevant interest.

   f. Update dose assessment and field monitoring data as information is provided by Chemistry and HP, respectively.

   g. Make corrections, when identified, by circling the corrected data.

ATTACHMENT 6
TSC ADMINISTRATIVE STAFF CHECKLIST
(Page 3 of 3)

B. 2. (continued) INITIAL

h. When all status board columns/blanks are filled, erase the first two columns/blanks, enter new data with a different colored marker leaving a space between the new and the old data.

i. Provide any incoming telecopy materials to the TSC Supervisor or as designated on the cover page.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Status boards have been cleaned and returned to preactivation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 6

ATTACHMENT 7
TSC COORDINATOR WITH OSC CHECKLIST
(Page 1 of 1)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Establish contact with the OSC Coordinator with the TSC (in the OSC). _____

2. Steps to occur continually while the facility is in operation:

   a. Track all requests for Re-entry Teams using Attachment 7A, Re-entry Log.

   b. Communicate re-entry requests to the OSC Coordinator with the TSC per Attachment 7A, Re-entry Log.

   c. Update the OSC Status Board with Re-entry Team information.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Closed out all Re-entry Teams entered in the Re-entry Team Log and the status board. _____

2. Status board has been cleaned and returned to preactivation condition. _____

3. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

4. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 7

/R8 /R8 /R8

¶6

ATTACHMENT 7A
RE-ENTRY LOG
(Page 1 of 1)

TASK REQUEST (TSC)
The TSC fills in this section and communicates the information to the OSC.

☐ Investigate ☐ Repair ☐ Other

A. Description

_____

_____

B. *Priority: ☐ 1 (target 10 mins) ☐ 2 (target 20 mins) ☐ 3 (target 30 mins)

C. TSC Contact: _____ Phone:_____

TEAM ASSIGNMENT (OSC)
The OSC fills in this section and communicates the information to the TSC.

D. Team No:_____ E. Re-entry Supv.:_____

F. Time Out:_____ G. Time In:_____

TASK REQUEST (TSC)
The TSC fills in this section and communicates the information to the OSC.

☐ Investigate ☐ Repair ☐ Other

A. Description

_____

_____

_____

B. *Priority: ☐ 1 (target 10 mins) ☐ 2 (target 20 mins) ☐ 3 (target 30 mins)

C. TSC Contact: _____ Phone:_____

TEAM ASSIGNMENT (OSC)
The OSC fills in this section and communicates the information to the TSC.

D. Team No:_____ E. Re-entry Supv.:_____

F. Time Out:_____ G. Time In:_____

* Assignment of Priorities / Re-Entry Team Dispatch Targets
(Assignment of priorities is made by the TSC. The dispatch times are targets that should be vigorously pursued.)

Priority 1 - Dispatch within 10 minutes (e.g., fire, injury, specific Operator actions such as App. X, etc)
Priority 2 - Dispatch within 20 minutes (e.g., Emergency Coordinator top priority, actions required to protect the health and safety of the public, etc.)
Priority 3 - Dispatch within 30 minutes (e.g., routine re-entry)

END OF ATTACHMENT 7A

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 1 of 4)

NOTE

1. This position is filled by two persons, one located in the affected Control Room, the other in the TSC. The position in the Control Room is also known as the NPS Communicator.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION INITIAL

NOTE

The first person to arrive at the TSC should report to the affected Control Room to relieve the Duty Call Supervisor.

1. Filling position in:_____

2. (TSC position only) Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Establish communications with counterpart. _____

2. In the TSC, establish the OPS Conference Bridge as follows:

a. Obtain contact phone numbers for:

1. OPS Coordinator in the Control Room _____

2. OSC OPS Re-entry Supervisor _____

3. Problem Solving Team _____

4. Other participant _____

b. Call the OPS Coordinator

1. State: "stay on the line"

2. Depress the conference button

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 2 of 4)

B. 2. (continued) INITIAL

c. Call the OSC OPS Re-entry Supervisor

1. State: "stay on the line"

2. Depress the conference button

d. Call the Problem Solving Team

1. State: "press handsfree/mute button"

2. Depress the conference button

e. Call any other participant

1. State: "stay on the line"

2. Depress the conference button

f. Hail all parties to verify bridge successfully established.

3. Initiate the OPS Logbook. (TSC only) _____

4. Steps to occur continually while the facility is in operation:

TSC

a. Provide expertise in plant operations to the EC.

b. Maintain communication flow between the TSC and the affected Control Room concerning status of operations.

c. Maintain OPS Logbook.

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 3 of 4)

B. 4. (continued) INITIAL

d. Severe Accident Management Guidelines (SAMG) actions

1. Perform evaluations in accordance with ADM-17.09, Invoking 10 CFR 50.54(x), as needed.

2. Review/approve actions as outlined in Attachment 12B, Problem Solving Team Worksheet. /R8

3. Communicate SAMG actions to the affected Control Room(s).

Control Room

a. Provide communications assistance to the NPS.

b. Monitor procedure use and keep the TSC informed.

c. Investigate questions/concerns as requested by the TSC.

d. Update the unaffected unit's Control Room with emergency status.

e. Gather Severe Accident Management Guidelines (SAMG) instructions/information from the TSC OPS Coordinator.

1. If the TSC is unable to telecopy, Then use Attachment 12B, Problem Solving Team Worksheet, to record SAMG instructions/ information. /R8

f. Communicate SAMG actions to the NPS.

g. Provide feedback to the TSC OPS Coordinator regarding SAMG actions.

ATTACHMENT 8
TSC OPS COORDINATOR CHECKLIST
(Page 4 of 4)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Phone connection terminated. _____
2. Closed out the OPS Logbook. _____
3. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____
4. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 8

ATTACHMENT 9
TSC REACTOR ENGINEER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps in this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions.	_____
B.	FACILITY OPERATION	
1.	Establish the ERDADS link with the NRC Emergency Response Data System (ERDS) (use Attachment 9A, Initiating and Terminating the ERDS Link).	_____

ATTACHMENT 9
TSC REACTOR ENGINEER CHECKLIST
(Page 2 of 3)

B. (continued) INITIAL

2. Steps to occur continually while the facility is in operation:

CAUTION

Be aware of the following conditions. These Emergency Action Levels (EALs) are associated with Initiating Conditions (ICs) used in the classification of emergencies (EPIP-01, Classification of Emergencies). The Emergency Coordinator needs to know if any of these conditions exist.

1. Dose Equivalent Iodine (DEQ) I-131 activity greater than 275 µCi/ml.
2. CHHRM readings greater than 7.3E+03 R/hr OR greater than 1.46E+05 R/hr.
3. Post LOCA Monitor readings greater than 100 mR/hr OR greater than 1000 mR/hr.
4. Step increase in radiation monitor readings in the Plant Vent and/or Fuel Handling Building.
5. Loss of subcool margin resulting in saturated conditions.
6. Highest Core Exit Thermocouple (CET) per core quadrant indicates greater than 10°F superheat or 700°F.
7. Damage to more than one irradiated fuel assembly.
8. Uncovering of one or more irradiated fuel assemblies in the Spent Fuel Pool.

a. Monitor critical plant parameters for indications of core status.

b. Assist Nuclear Fuels personnel in the EOF in the assessment of core damage in accordance with EPIP-11, Core Damage Assessment.

c. Assist in Severe Accident Management Guidelines (SAMG) activities as a SAMG Evaluator.

ATTACHMENT 9
TSC REACTOR ENGINEER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Core damage assessment activities terminated. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 9

ATTACHMENT 9A
INITIATING AND TERMINATING THE ERDS LINK
(Page 1 of 2)

This attachment provides the instructions for initiating and terminating the communications link between the St. Lucie Emergency Response Data Acquisition and Display System (ERDADS) and the NRC Emergency Response Data System (ERDS). This communications link must be activated not later than one hour after declaring an emergency class of ALERT or higher. If communications cannot be established then the accepted method of data transmission to the NRC will be through the Emergency Notification System (ENS).

INITIATING the ERDS communication link:

1. At any TSC ERDADS terminal clear the display screen by depressing the CLEAR key.

2. Log on to ERDADS by typing in PSW ## XXXXXXXX (the Xs stand for the password issued to Operations Support Engineering). Then depress the EXEC key.

3. Clear the screen with the CLEAR key and select the desired St. Lucie Unit by typing PUP UNIT X (the X will be either a 1 or 2 depending on the unit). Then depress the EXEC key.

4. Clear the screen by depressing the CLEAR key and type in ERD and depress the DSPLY key. This will display the ERDS link control picture on the terminal.

5. Depress the TAB + keys to place the cursor on the INITIATE action bar and then depress the ENTER key. The depressing of the ENTER key will initiate the communications link to the NRC ERDS.

6. After the communication link with the NRC ERDS has been established clear the terminal screen by depressing the CLEAR key and log off by typing in PSW 0 and depressing the EXEC key. The logging off of the terminal's screen will allow that terminal to be used in obtaining information for TSC activities without affecting the communication link with the NRC ERDS.

7. Periodically check the status of the ERDS link by typing in HLX (the X will be a 2 for Unit 1 or 3 for Unit 2) and depress the DSPLY key.

ATTACHMENT 9A
INITIATING AND TERMINATING THE ERDS LINK
(Page 2 of 2)

NOTE

- If the blinking message NOTIFY THE NRC appears after the CURRENT STATUS then the communications link has been lost and a reconnection is necessary when the NRC requests it through the established voice connection in the TSC. If this happens then it will be necessary to reinitiate the communications link beginning with step 1.
- Generally the ERDS link will be terminated by the NRC. The following steps are to be used if the link needs to be terminated from the TSC.

TERMINATING the ERDS communication link:

1. At any TSC ERDADS terminal clear the display screen by depressing the CLEAR key.
2. Log on to ERDADS by typing in PSW ## XXXXXXXX (the Xs stand for the password issued to Operations Support Engineering). Then depress the EXEC key.
3. Clear the screen with the CLEAR key and select the desired St. Lucie Unit by typing PUP UNIT X (the X will be either a 1 or 2 depending on the unit). Then depress the EXEC key.
4. Clear the screen by depressing the CLEAR key and type in ERD and depress the DSPLY key. This will display the ERDS link control picture on the terminal.
5. Depress the TAB - keys to place the cursor on the TERMINATE action bar and then depress the ENTER key. The depressing of the ENTER key will terminate the communications link to the NRC ERDS.
6. After the communication link with the NRC ERDS has been terminated clear the terminal screen by depressing the CLEAR key and log off by typing in PSW 0 and depressing the EXEC key.

END OF ATTACHMENT 9A

ATTACHMENT 10
TSC CHEMISTRY SUPERVISOR CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps in this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Initiate the Chemistry Logbook. _____

2. Steps to occur continually while the facility is in operation:

NOTE
Dose assessment shall be a primary responsibility of the EOF once it becomes operational.

a. Supervise dose assessment activities.

b. Review all dose projection printouts.

c. Advise the EC of dose projection results.

d. Assist the EC in evaluating off-site dose estimates for PARs.

e. Assist the TSC EC Assist/Logkeeper/EC in determining the "Off-site Release Significance Category" as called for on the State Notification Form, as necessary.

f. Provide technical support to the OSC Chemistry Supervisor.

ATTACHMENT 10
TSC CHEMISTRY SUPERVISOR CHECKLIST
(Page 2 of 3)

B. 2. (continued)

CAUTION

Be aware of the following conditions. These Emergency Action Levels (EALs) are associated with Initiating Conditions (ICs) used in the classification of emergencies (EPIP-01, Classification of Emergencies). The Emergency Coordinator needs to know if any of these conditions exist.

1. Dose Equivalent Iodine (DEQ) I-131 activity greater than 275 µCi/ml.
2. Result of analysis of a gaseous or liquid release is greater than ten (10) times the ODCM limit.
3. CHHRM readings greater than 7.3E+03 R/hr OR greater than 1.46E+05 R/hr.
4. Post LOCA Monitor readings greater than 100 mR/hr OR greater than 1000 mR/hr.
5. Step increase in radiation monitor readings in the Plant Vent and/or Fuel Handling Building.
6. Off-site dose calculation worksheet values at one (1) mile in excess of 50 mrem/hr (total dose – TEDE) or 250 mrem/hr (thyroid dose - CDE) for one half (1/2) hour OR 500 mrem/hr (total dose - TEDE) or 2500 mrem/hr (thyroid dose - CDE) for two (2) minutes.
7. Off-site dose calculation worksheet values indicate site boundary (one (1) mile) exposure levels have been exceeded as indicated by any of the following:
   a. 1000 mrem/hr (total dose rate)
   b. 1000 mrem (total dose - TEDE)
   c. 5000 mrem/hr (thyroid dose rate)
   d. 5000 mrem (thyroid dose - CDE)

g. Advise the EC on plant chemistry related matters.

h. Maintain chronological log of activities.

ATTACHMENT 10
TSC CHEMISTRY SUPERVISOR CHECKLIST
(Page 3 of 3)

B. 2. (continued) INITIAL

i. Review and verify radiological and protective action information entered on status boards.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Dose assessment activities terminated. _____

2. Closed out the Chemistry Logbook. _____

3. Provided all paperwork (not bound in the position notebook) to the TSC Supervisor. _____

4. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 10

ATTACHMENT 11
TSC DOSE ASSESSOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps in this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

NOTE
1. Initial operating instructions for use of the Class A Model are provided in EPIP-09, Off-site Dose Calculations.
2. If the computerized Class A Model is not available, dose projections shall be performed in accordance with EPIP-09.

1. Ensure all previous dose calculation paperwork is sent to the EOF. _____
2. Establish communication link with the EOF Dose Assessor. _____
3. Complete Class A Model QC Check. _____
4. Steps to occur continually while the facility is in operation:
   a. Obtain input data for the Class A Model from the ERDADS Operator (RG 1/2 Screen).
   b. Report dose projection results to the TSC Chemistry Supervisor.
   c. Coordinate dose assessment with the EOF unless directed otherwise by the TSC Chemistry Supervisor.

ATTACHMENT 11
TSC DOSE ASSESSOR CHECKLIST
(Page 2 of 2)

B. 4. (continued) INITIAL

d. Provide status board update information to the TSC Administrative Staff (use Attachment 11A and Attachment 11B).

1. Using carbon paper, make a copy as data is entered into the form in either Attachment 11A or 11B. Retain the original, provide the copy to the TSC Administrative Staff to update the status boards.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Dose projection activities terminated. _____

2. EOF communications linked terminated. _____

3. All documents, equipment and supplies returned to preactivation condition and/or location. _____

4. All paperwork collected. _____

5. Provided all completed paperwork (not bound in the position notebook) to the TSC Chemistry Supervisor. _____

6. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 11

ATTACHMENT 11A
OFF-SITE RADIOLOGICAL ASSESSMENT
(Page 1 of 1)

OFFSITE DOSE RADIOLOGICAL ASSESSMENT STATUS AND TRENDS									
PARAMETER	Unit	Highest Downwind Sector Dose Rates							
Day # of Month									
Time of Day	2400								
Downwind Sectors									
Dose Rate @		TEDE	CDE	TEDE	CDE	TEDE	CDE	TEDE	CDE
1 mile	mRem/hr								
2 miles	mRem/hr								
5 miles	mRem/hr								
10 miles	mRem/hr								
Wind Direction at 10 meter elev	Degrees								
Downwind Sector									
Wind Speed at 10 meter elev	mph								
60 meter - 10 meter delta T	Deg F								
Stability Class									
10 meter Temperature	Deg F								
Noble Gas Rel Rate	Ci/sec								
Iodine Rel Rate	Ci/sec								
Noble Gas Total Ci	Ci								
Iodine Total Ci	Ci								
Contain Hi Range	R/hr								
_____ Vent	Ci/sec								
ECCS A	Ci/sec								
ECCS B	Ci/sec								
Main Steam A	mR/hr								
Main Steam B	mR/hr								

TEDE = Total Dose CDE = Thyroid Dose

END OF ATTACHMENT 11A

ATTACHMENT 11B
PROTECTIVE ACTION RECOMMENDATIONS
(Page 1 of 1)

PROTECTIVE ACTION RECOMMENDATIONS			
REASON: ISSUED BY:		DATE/TIME:	
		S = SHELTER E = EVACUATE	
SECTOR	0 - 2 Miles	2 - 5 Miles	5 - 10 Miles
A (N)			
B (NNE)			
C (NE)			
D (ENE)			
E (E)			
F (ESE)			
G (SE)			
H (SSE)			
J (S)			
K (SSW)			
L (SW)			
M (WSW)			
N (W)			
P (WNW)			
Q (NW)			
R (NNW)			

ADDITIONAL COMMENTS: _____

END OF ATTACHMENT 11B

ATTACHMENT 12
TSC PROBLEM SOLVING TEAM CHECKLIST
(Page 1 of 2)

NOTE

1. This checklist applies to the following Problem Solving Team (PST) positions:

   TSC PST Leader (Engineering)
   TSC Elec Rep – PST TSC I&C Rep - PST
   TSC Mech Rep - PST (3) TSC SRO Rep - PST

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

NOTE

1. Refer to the Document Control Index for a listing of Tech Manuals available in the TSC.
2. The computer provides a LAN connection and access to the Total Equipment Database (TEDB).

1. Steps to occur continually while the facility is in operation:

   a. Problem Solving Team Leader

      1. Maintain command and control of all PST activities. The form provided in Attachment 12A, PST Activities List may be used by the PST to track and communicate the status of PST activities. /R8
      2. Ensure all PST members are aware of and understand the status of equipment.
      3. Maintain high level of inquiry and investigation by all PST members.
      4. Track progress of all requests for PST assistance. /R8

ATTACHMENT 12
TSC PROBLEM SOLVING TEAM CHECKLIST
(Page 2 of 2)

B. 1. a. (continued) INITIAL

5. Encourage development of multiple success paths.

6. Review all Worksheets (Attachment 12B). /R8

b. Problem Solving Team Member

1. Participate as a member of the Problem Solving Team by providing technical support in your area of expertise.

2. Evaluate system and equipment failures.

3. Propose mitigative and corrective action(s) as promptly as possible.

4. Document recommendations on a form similar to Attachment 12B, Problem Solving Team Worksheet. /R8

5. Serve as a Severe Accident Management Guidelines (SAMG) Evaluator.

6. Provide all recommendations to the EC.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Returned all documents, equipment and supplies to preactivation condition and/or location. _____

2. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

3. Returned position notebook to storage cabinet. _____

END OF ATTACHMENT 12

ATTACHMENT 12A
PST ACTIVITIES LIST
(Page 1 of 1)

Item	Problem Description	Probable Cause	PST Recommendation	Status

END OF ATTACHMENT 12A

/R8

¶6

ATTACHMENT 12B
PROBLEM SOLVING TEAM WORKSHEET
(Page 1 of 1)

TO:_____ PST -_____

SUBJECT:	
DATE & TIME RECEIVED:	REQUESTER:
REQUEST:	
RESPONSE:	

	50.59		50.54(x)		SAMG		N/A

BY:	VERIFIED:
PROBLEM SOLVING TEAM LEADER:	
DATE & TIME:	

Priority ☐ 1 (10 min)
Priority ☐ 2 (20 min)
Priority ☐ 3 (30 min)

PST Contact:_____ Ph. No.:_____

Status: Date:____/____/____, Time:_____ : _____

END OF ATTACHMENT 12B

/R8

ATTACHMENT 13
TSC SECURITY SUPERVISOR CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to Section 5 of this procedure (included in the position notebook) and review the general instructions.	_____
2.	Verify that the Energy Encounter has been notified of the emergency. (consult the ERD Section 3.6, other company numbers, for the phone number)	_____
B.	FACILITY OPERATION	
1.	Establish access control for the TSC.	_____
2.	Contact the Control Rooms and request a completed "Operations Department Accountability Aid" be forwarded to the TSC.	_____
3.	Initiate facility accountability by requesting a completed copy of Attachment 3A, TSC ERO Shift Staffing and Accountability Roster from the TSC Supervisor.	_____
4.	Telecopy the completed Attachment 3A, TSC ERO Shift Staffing and Accountability Roster, and the "Operations Department Accountability Aid" forms to Security.	_____
5.	Contact the EOF Emergency Security Manager (ESM).	_____
a.	Establish responsibility/protocol for notification of off-site authorities regarding the status of site evacuation.	_____

ATTACHMENT 13
TSC SECURITY SUPERVISOR CHECKLIST
(Page 2 of 3)

B. (continued) INITIAL

6. Upon declaration of a Site Area Emergency. _____

a. Start accountability at:_____ _____

b. Start sweeps at:_____ _____

1. Off-site work areas.

2. West forty and Fitness Center.

3. Owner Controlled Area.

a. Beach side.

b. River side.

4. On-site and Radiation Controlled Area.

5. Marine Research Center.

c. Accountability completed at_____. _____

d. Sweeps completed at_____. _____

7. Steps to occur continually while the facility is in operation:

CAUTION
Ensure the EC is aware of any actions required by the Security Plan (e.g., alert or emergency declaration, suspension of safeguards, etc.).

a. Advise the EC on Security related manners.

ATTACHMENT 13
TSC SECURITY SUPERVISOR CHECKLIST
(Page 3 of 3)

B. **7.** (continued) INITIAL

b. In conjunction with the ESM, provide liaison function between local law enforcement and rescue agencies and FPL for issues such as:

1. Bomb threats or acts of terrorism.

2. Member of the public or media arriving at the site.

3. Site egress and ingress.

4. Fire or rescue/medical response.

c. Coordinate safeguards suspension with the ESM and EC.

d. Maintain site accountability of all personnel throughout the emergency.

e. Follow Security Procedures.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Closed out with the local law enforcement agencies, as needed. _____

2. Closed out Security Logbook. _____

3. All paperwork collected. _____

4. Provided all completed paperwork (not bound in the position notebook) to the TSC Supervisor. _____

5. Returned position notebook to the storage cabinet. _____

END OF ATTACHMENT 13

FPL

ST. LUCIE PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-05
Current Revision No.
6
Effective Date
06/15/01

Title:

ACTIVATION AND OPERATION OF THE OPERATIONAL SUPPORT CENTER

Responsible Department: **EMERGENCY PREPAREDNESS**

REVISION SUMMARY:

Revision 6 – Streamlined paperwork required for re-entry teams, defined response times as targets, and streamlined re-entry paperwork down to a checklist. (Donna Galabrese, 04/26/01)

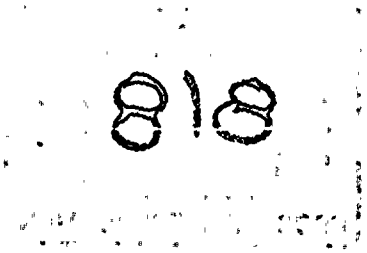
REVISION 5 – Eliminated OSC paramedic position, revised re-entry guidelines and made editorial and administrative changes. (G. Varnes, 08/08/00)

REVISION 4 - Clarified role of OPS Re-entry Supervisor per PM 99-04-122. Added guidelines for OSC command and control assistance per PM 99-04-143. Provided instructions for emergency access to restricted areas per PM 99-09-079. Revised the minimum staff position in Chemistry to the OSC Chemistry. Clarified facility sign-in and accountability instructions. Reinforced instructions for development of a contingency team. Made editorial changes. (Rick Walker, 10/05/99)

REVISION 3 - Added OSC information services rep position and responsibilities to procedure and added editorial changes. (J. R. Walker, 3/2/99)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
6	04/26/01	R. G. West Plant General Manager	04/26/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS	
DATE	
DOCT	PROCEDURE
DOCN	EPIP-05
SYS	
COM	COMPLETED
ITM	6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(continued)

SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

1.1 Discussion

This procedure provides instructions for activation and operation of the Operational Support Center. This procedure also provides instructions for the selection and deployment of Re-entry Teams.

1.2 Location and Description

The OSC is located on the second floor of the South Service Building in conference room 2200 and adjoining room 2300. Ample space is available for the assembly of auxiliary operators, Heath Physics technicians, Maintenance personnel, and other personnel needed for emergency response. Due to potential habitability concerns, alternate locations capable of supporting OSC operations have been identified as follows:

1. North Service Building, conference area or maintenance shops
2. Blowdown Building
3. Unaffected Reactor Auxiliary Building (RAB)

1.3 OSC Functions

1. Mandatory Functions
   - **A.** Provide a resource pool of personnel to assist the Control Room and TSC in accident assessment and mitigation.
   - **B.** Respond to requests for Re-entry Teams.
   - **C.** Maintain radiological exposure controls in accordance with the HP-200 series procedures.
2. Additional Functions
   - **A.** Provide the interface with the Off-site Assembly Area.
   - **B.** Serve as access control point following site evacuation.

1.4 Minimum Staffing

1. The following is the list of the minimum positions needed for OSC operation:

   - OSC Supervisor
   - OSC Chemist
   - OSC HP Technician (12)
   - OSC Electrician (2)
   - OSC Mechanic (2)
   - OSC I&C Specialist

1.5 §2 Activation

Activation of the OSC is the responsibility of the Emergency Coordinator (EC) and is required for an Alert or higher declared emergency. Arrangements have been made to staff the OSC in a timely manner.

1.6 Operations

The OSC has sufficient space available and radiation protection equipment and other supplies to support emergency response personnel conducting re-entry activities. The OSC has the capability to provide 24 hour continuous operation, as necessary.

Initial work activities directed by the OSC, at the Alert Level, are considered pre-re-entry and certain aspects of this procedure may be relaxed (e.g., HP coverage). Following a site evacuation order (evacuation of the Owner Controlled Area) or if radiological conditions exist outside the Radiation Controlled Area, all provisions of this procedure are required for re-entry into affected areas.

2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on an attachment.

2.1 References

1. §1 St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)
2. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2
3. §2 St. Lucie Plant Radiological Emergency Plan (E-Plan)
4. §3 St. Lucie Plant Topical Quality Assurance Report (TQAR)
5. E-Plan Implementing Procedures (EPIP 00-13)
6. HP-200 Series Procedures
7. ADM-17.09, Invoking 10 CFR 50.54(x)
8. St. Lucie Plant Emergency Response Directory (ERD)
9. QI-17-PSL-1, Quality Assurance Records
10. Fitness for Duty Rule, 10 CFR 26

2.2 Records Required

1. The following shall be retained following a plant emergency:

   - Checklists and paperwork generated per this procedure.
   - Logbooks maintained during the plant emergency.

2. §1 Recorded information shall be forwarded to Emergency Planning following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 Commitment Documents

1. ¶1 PMAI PM97-04-142, Training Drill Critique 1/24/97 (Definition of contingency team and full staffing guidance).
2. ¶2 PMAI PM98-04-144, Evaluated Exercise Critique 3/18/98 (Establish threshold dose rate for OSC relocation).
3. ¶3 PMAI PM98-09-006 (Control of NLOs Under E-Plan)
4. ¶4 PMAI PM99-04-122 (Ops Re-entry Supervisor Role)
5. ¶5 PMAI PM99-04-143 (OSC Command and Control Assistance)
6. ¶6 PMAI PM99-09-079 (Hot Tool Room Access During an Emergency)
7. ¶7 CR 01-0078, OSC Re-entry Team Improvements

/R6

3.0 RESPONSIBILITIES

3.1 OSC Supervisor

1. Provides command and control of OSC activities.
2. Coordinates activities to ensure adequate support to the TSC/EC.
3. Ensures that all Re-entry Teams are adequately briefed prior to leaving the OSC and thoroughly debriefed upon their return.
4. Ensures communications flow is maintained within the facility, with the Re-entry Teams, and with the TSC.
5. Coordinates facility briefings.
6. Arranges for long term operation of the OSC.

3.2 OSC Coordinator with TSC

1. Serves as the coordinator with the TSC for Re-entry Team requests.
2. Logs and tracks re-entry activities.
3. Keeps the OSC Supervisor abreast of the emergency conditions and plant status.

3.3 OSC Re-entry Supervisor

NOTE

- Each of the following areas has a Re-entry Supervisor: (1) Mechanical Maintenance, (2) Electrical Maintenance, (3) I&C Maintenance, (4) Operations, (5) Chemistry, and (6) Health Physics.
- Responsibilities for the Health Physics Re-entry Supervisor (HPOSC) are provided in HP-200, Health Physics Emergency Organization.

1. Ensures departmental Emergency Response Organization (ERO) personnel are available for re-entry activities.
2. Assists the OSC Supervisor in selection of Re-entry Team members.
3. Provides task specific briefings to their departmental re-entry personnel.
4. Conducts Re-entry Team debriefings.

3.4 OSC Departmental Representative

NOTE
The following departments have representatives in the OSC: (1) Nuclear Materials Management (NMM), (2) Safety, (3) Protection and Control, (4) Security and (5) Information Services.

1. Provides input to the OSC Supervisor, as requested in support of re-entry operations.

2. Participates in re-entries, as needed.

4.0 DEFINITIONS

4.1 Facility Status

1. **Activation** - the request to staff and establish an Emergency Response Facility (ERF).

2. **Operational** - when sufficient personnel (i.e., minimum staff) are available to accomplish the mandatory function of conduct of re-entry activities.

3. **Fully Staffed** - the complement of personnel is present in the facility.

4.2 **FPL Emergency Recall System (ERS)** - the call-out system used as a means of off-hours call-out, as described in EPIP-03, Emergency Response Organization/Staff Augmentation.

4.3 **Re-entry** - access to areas where evacuation (local or site) has been ordered constitutes a re-entry. Re-entry into an evacuated area is authorized only by the EC.

4.4 **Re-entry Team** - a group of qualified personnel who will enter an evacuated area under the authorization of the EC to accomplish an assigned task (e.g., repair damage control, rescue, etc.). The initial Re-entry Team shall consist of at least two qualified persons, one of whom shall be an OSC Health Physics Technician (HPT).

4.5 **Videolink** - a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF allowing the EC briefings to be available in all the Emergency Response Facilities (ERFs).

/R6

5.0 INSTRUCTIONS

NOTE

- This section provides general information and instructions for all OSC responders.
- Position specific checklists are included as attachments to this procedure.
- Individuals specifically designated as members of the OSC Emergency Response Organization (ERO) are identified in the ERD.

5.1 When notified, OSC emergency responders are to report to the facility as quickly as possible.

5.2 Upon arrival at the facility, each OSC responder should perform the following:

1. Sign-in instructions:

   A. Persons working in room 2300 (supervisors' area) of the OSC should sign in on the status board on the south wall in the space corresponding to their position.

   B. All OSC Re-entry Supervisors should ensure that the names of their department's Re-entry Team members and foreman are signed in on the status board in Room 2300.

   C. The OSC Administrative Tech/Logkeeper should ensure that all personnel in both Rooms 2200 and 2300 are signed in on the status board and that this information concurs with Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

2. Obtain a "Player" badge and place your name (and position title, if necessary) on the badge with a dry erase marker or in any other non-permanent manner.

3. Obtain specific position notebook (if applicable) with procedural checklists, forms and instructions.

4. Make your workstation/location operational, as necessary.

5. Notify your supervisor or the OSC Supervisor of your readiness status.

6. Assist in establishing accountability by signing in on a form similar to Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

5.3 §3 Only controlled copies of nuclear safety-related procedures, drawings, and other available plant information shall be used. Non-controlled documents or drawings should be verified with a controlled copy prior to use in the OSC.

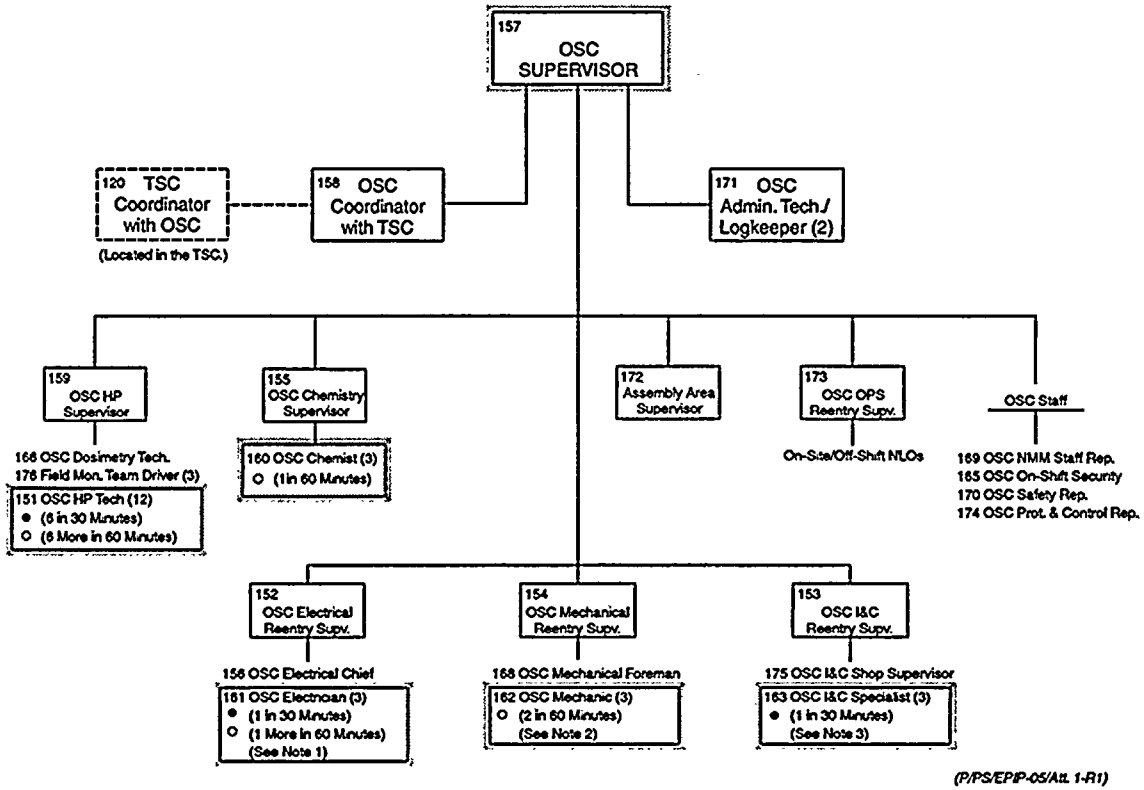
5.4 During facility briefings, stop what you're doing, pay attention, and contribute as requested.

5.5 Upon termination of the event:

1. All OSC personnel should return their workstations/locations to a normal state and assist in restoring the facility to a ready condition.

2. All OSC personnel should collect all significant information and documentation, such as notes and completed data sheets (not bound in position notebooks) and forward this material to the OSC Supervisor.

ATTACHMENT 1
OSC EMERGENCY RESPONSE ORGANIZATION AND SHIFT STAFFING
(Page 1 of 1)



(P/PS/EPIP-05/Att. 1-R1)

Autodialer position numbers are listed with position titles.

• 30 minute response goal, per NUREG 0654, Table B-1

○ 60 minute response goal, per NUREG 0654, Table B-1

Note 1- Minimum staffing requirements may be filled by Electrical Reentry Supervisor, Chief or Electrician.
Note 2- Minimum Staffing requirements may be filled by Mechanical Reentry Supervisor, Foreman or Mechanic.
Note 3- Minimum Staffing requirements may be filled by I&C Reentry Supervisor, Shop Supervisor or I&C Specialist.

☐ Indicates minimum staffing positions that must be filled in order to declare the facility operational.

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 1 of 4)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Determine operational readiness of the OSC by verifying the following:

   a. Communications established with the TSC. _____

   b. Minimum staff available (use Attachment 2A, OSC ERO Shift Staffing and Accountability Roster or refer to the sign in board). _____

   c. Communications equipment and other supplies are available and ready for use. _____

   d. Ensure Room 2200 set up is underway. If the OSC Safety Rep is not available, then reassign the responsibility. _____

   e. Minimum staff prepared to accomplish mandatory facility functions. _____

3. If Step 2 above is satisfied, Then declare the facility operational at _____. _____

4. Notified the EC/TSC Supervisor that the OSC is operational. _____

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION — INITIAL

NOTE

¶1 Unless authorized by the EC, facility staffing should be in accordance with Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

1. OSC fully staffed. _____

2. Instruct personnel to verify their position notebook procedures against the posted revision number. _____

3. ¶1 Direct the HPOSC to identify and prepare a representative from HP and each maintenance discipline for a rapid response contingency team. _____

4. Instruct the OSC Administrative Tech/Logkeeper to initiate the OSC Logbook. _____

5. Establish what team(s) or individual(s) is known to be working in the plant, the task/job, and the communications method/controlling facility. _____

6. ¶6 Identify the necessity and means for providing access to all tool rooms (including the Hot Tool Room) and any other area with restricted access. _____

7. Obtain food and water supply for the OSC. _____

8. Arrange for long term staffing (use Attachment 2A, OSC ERO Shift Staffing and Accountability Roster). _____

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 3 of 4)

B. (continued) INITIAL

CAUTION

¶2 The OSC affords limited protection against a release of radioactive material. During the time that a radioactive release is occurring, the habitability of the OSC is to be monitored. A measured dose rate of 50 mrem/hr, in the facility, is established as the threshold for relocation of the OSC.

9. If necessary, initiate steps for relocation of the OSC (use Attachment 2E, Guidelines for Relocation of the OSC). _____

10. Steps to occur continually while the facility is in operation:

    a. Oversee communications

    b. Maintain low noise level in the facility

    c. Conduct facility briefings (use Attachment 2F, OSC Facility Briefings).

    d. Ensure emergency status and plant conditions are routinely updated. (The videolink may be used for this purpose.)

    e. Re-entry Checklist - When requested by the OSC Coordinator with the TSC, complete the following in response to a request for a Re-entry Team:

        1) Review Attachment 2C, Re-entry Guidelines, to this attachment as necessary.

        2) Complete the Team Assignment section of Attachment 3A, Re-entry Log (letters D & E prior to team dispatch).

        3) Select the most appropriate Re-entry Supervisor based on the nature of the task.

/R6

ATTACHMENT 2
OSC SUPERVISOR CHECKLIST
(Page 4 of 4)

B. 10. e. (continued) INITIAL

4) Assign completion of Parts I, II and III of Attachment 5A, Re-entry Team Form, to the chosen Re-entry Supervisor.

5) Direct the HPOSC to assist in team development by satisfying the requirements of HP 203.1, Evacuated Area Re-entry Checklist, in HP-203, Personnel Access Control During Emergencies.

6) Review Attachment 2D, Briefing Guidelines, to this procedure, as necessary.

7) Verify Re-entry Team preparedness prior to dispatch.

/R6 /R6 /R6 /R6

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All Re-entry Teams are logged back in and accounted for. _____
2. All facility activities closed out. _____
3. All equipment and supplies returned to preactivation condition and/or location. _____
4. All paperwork collected. _____
5. Closed out the OSC Logbook. _____
6. Returned position notebook to storage shelf. _____
7. Provided all completed paperwork (not bound in position notebooks) to Emergency Planning. _____

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 1 of 4)

Shift[1] _____, Hours: _____ To _____

POSITION {Minimum staff in **bold**[2]}	NAME	BADGE NO.
OSC HP Supervisor:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC HP Tech [3]:		
OSC Dosimetry Tech:		
Field Mon Team Driver:		
Field Mon Team Driver:		
Field Mon Team Driver:		

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 2 of 4)

POSITION	NAME	BADGE NO.
OSC I&C Re-entry Supv:	_____	_____
OSC I&C Shop Supervisor:	_____	_____
OSC I&C Specialist:	_____	_____
OSC I&C Specialist:	_____	_____
OSC I&C Specialist:	_____	_____
OSC Mech Re-entry Supv:	_____	_____
OSC Mechanical Foreman:	_____	_____
OSC Mechanic:	_____	_____
OSC Mechanic:	_____	_____
OSC Mechanic:	_____	_____
OSC Elec Re-entry Supv:	_____	_____
OSC Electrical Chief:	_____	_____
OSC Electrician:	_____	_____
OSC Electrician:	_____	_____
OSC Electrician:	_____	_____

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 3 of 4)

POSITION	NAME	BADGE NO.
OSC Supervisor:		
OSC Coordinator with TSC:		
OSC Chemistry Supv.:		
OSC Chemist:		
OSC Chemist:		
OSC Chemist:		
OSC On-Shift Security:		
OSC On-Shift Security:		
OSC On-Shift Security:		
OSC OPS Re-entry Supv:		
OSC Prot and Control Rep:		
OSC NMM Staff Rep:		
OSC Safety Rep:		
OSC Information Services Rep:		
OSC Admin Tech/Logkeeper:		
OSC Admin Tech/Logkeeper:		
Assembly Area Supervisor:		

ATTACHMENT 2A
OSC ERO SHIFT STAFFING AND ACCOUNTABILITY ROSTER
(Page 4 of 4)

POSITION	NAME	BADGE NO.
Other: _____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

[1]Long term staffing, refer to the St. Lucie Plant Emergency Response Directory (ERD) for position alternates.

[2]Refer to Attachment 2B for temporary alternates for minimum staff positions.

[3]Position fills the following positions:

a. TSC HP Surveys
   1. Unit 1 Control Room/TSC
   2. Unit 2 Control Room
   3. OSC
   4. Access Control

b. HP Field Teams
   1. Red Team
   2. Orange Team
   3. Blue Team

ATTACHMENT 2B
OSC MINIMUM STAFFING
(Page 1 of 1)

Major Functional Area[1]	Position Title and ID No.[2]	# in Position	Qualifications/ Temporary Alternate
Health Physics Technician	OSC HP Tech, 151	12	Member of the Health Physics Department
Rad/Chem Technician	OSC Chemist, 160	1	Member of the Chemistry Department
Electrical Maintenance	OSC Electrician, 161	2	Electrical Maintenance Journeyman or Chief or Supervisor
Mechanical Maintenance/Radwaste Operator	OSC Mechanic, 162	2	Mechanical Maintenance Journeyman or Foreman or Supervisor
I&C Technician	OSC I&C Specialist, 163	1	I&C Maintenance Specialist or Supervisor
Facility Command and Control	OSC Supervisor, 157	1	OSC Coordinator with TSC

1 This function(s) may be accomplished during the first 75 minutes of an emergency by an individual(s) meeting the corresponding listed qualifications.

2 These Emergency Response Organization (ERO) positions were established to accomplish the indicated function(s).

ATTACHMENT 2C
RE-ENTRY GUIDELINES
(Page 1 of 3)

CAUTION
As specified in ADM-17.09, Invoking 10 CFR 50.54(x), the Emergency Coordinator (EC) may (with the concurrence of a licensed senior operator) waive re-entry requirements to place the plant in a safe shutdown condition or mitigate a release, if this immediate action is needed to protect the health and safety of the public.

1. Prior to evacuation and with the Operational Support Center (OSC) NOT operational.

   Re-entry guidelines do not apply.

2. Prior to evacuation and with the OSC operational.

   a. ¶3 Operators in the field should return to the Control Rooms and obtain an Electronic Personal Dosimeter (EPD) from the Health Physics Emergency Kit prior to returning to field.

   b. Since teams may be dispatched from the OSC prior to evacuation of any plant areas, the OSC Supervisor and Health Physics Supervisor in the OSC (HPOSC) should evaluate the event in progress and determine the most likely trends in radiological conditions. If the event is likely to result in evacuation(s), due to radiological concerns, the teams should be dressed, equipped, and briefed, similarly to Re-entry Teams.

3. ¶3 Evacuation ordered and with the OSC NOT operational.

   Operator actions in the field must be viewed as re-entry activities. Operators shall return to the Control Rooms following the evacuation order. Operators shall obtain an Electronic Personal Dosimeter (EPD) from the Health Physics Emergency Kit, if not done previously. Re-entry into the plant requires:

   a. The EC (initially the NPS) authorize the entry.

   b. Maintenance of appropriate radiological and safety measures.

   c. Tracking the whereabouts of the team.

ATTACHMENT 2C
RE-ENTRY GUIDELINES
(Page 2 of 3)

4. Evacuation ordered and with the OSC operational

   a. NLOs, from both Units, are to report to the OSC once it goes operational.

   b. All field activities are re-entries and shall be coordinated and controlled by the OSC.

   c. Re-entry into an evacuated area shall be made only when authorized by the EC and under the direction of the TSC HP Supervisor (TSCHPS) and the HPOSC for one or more of the following reasons:

      1) To ascertain that all personnel who were in the affected area have been evacuated and to search for unaccounted for personnel.

      2) To assist in evacuating injured or incapacitated personnel from the affected area.

      3) To perform operations which mitigate the effect of the emergency or hazardous condition.

      4) To determine the nature and extent of the emergency and/or radiological conditions.

      5) To establish definite personnel exclusion area boundaries.

ATTACHMENT 2C
RE-ENTRY GUIDELINES
(Page 3 of 3)

5. General Consideration

   a. The Re-entry Team members should be selected based on appropriate qualifications relevant to the purpose for the entry.

   b. A Re-entry Team shall consist of at least two qualified persons, one of whom shall be knowledgeable in Health Physics procedures.

   c. The most qualified (relative to the entry) person should be selected to serve as the Re-entry Team Leader. He/she should be fully briefed concerning the nature of the emergency and the expectations for the entry.

   d. All Re-entry Team members shall wear protective clothing, dosimeters, respiratory devices, and other protective devices as specified by the HPOSC.

   e. ¶1 A contingency Re-entry Team should be developed consisting of representatives from each of the maintenance disciplines and Health Physics. This team anticipates the need for a high priority, rapid response request from the EC/TSC.

ATTACHMENT 2D
BRIEFING GUIDELINES
(Page 1 of 1)

PRE-ENTRY

1. The Re-entry Team Form takes the place of a Nuclear Plant Work Order (NPWO) package, therefore, careful documentation is required.

2. Ensure that the Re-entry Team members are instructed as to what is required of them during the entry by the assigned Re-entry Supervisor.

3. Ensure that the Re-entry Team members are briefed concerning the nature of the emergency and the possible radiation hazards present by the HPOSC.

4. Verify that the Re-entry Team understands that they should not deviate from the planned route and task, unless due to unanticipated circumstances such as rescue, performing an operation which would minimize the emergency condition, etc. and only after acknowledgement from the OSC.

5. Verify that the Re-entry Team understands that if the monitored dose rates encountered during the entry exceed the limits set by the HPOSC that the Team should return to the OSC or, at a minimum, move to an area of low background and review conditions with the OSC.

6. If a Re-entry Team is to be assigned a new or additional task while still in the field, Part II, Task Assessment, of Attachment 5A, Re-entry Team Form, must be re-evaluated by an appropriate Re-entry Supervisor and the HPOSC consulted, prior to providing a field briefing.

POST ENTRY

1. Evaluate the success of the Re-entry Team in completing the re-entry task.

2. Ensure that Part V, Team Work Report, of the Re-entry Team Form (Attachment 5A) is completed by the Re-entry Team for documentation.

ATTACHMENT 2E
GUIDELINES FOR RELOCATION OF THE OSC
(Page 1 of 2)

A. OSC Supervisor

1. In conjunction with the Emergency Coordinator and the TSC HP Supervisor, obtain approval to relocate the OSC to one of the following locations: (not in any priority)

   a. North Service Building, conference area or maintenance shops

   b. Blowdown Building

   c. Unaffected Reactor Auxiliary Building (RAB)

   d. Other location deemed appropriate

2. Organize three relocation teams as follows:

   a. SETUP TEAM to prepare the alternate OSC location.

   b. EQUIPMENT AND SUPPLY TEAM to arrange for and transport equipment to the alternate OSC location.

   c. TURNOVER TEAM to maintain continuity with the TSC and communications with the Set Up Team.

3. Ensure that communications are established and checked at the alternate OSC.

4. Notify the TSC and Emergency Coordinator that the alternate OSC is operational and the primary OSC has been shutdown.

B. Maintenance Re-entry Supervisors

1. Identify tools and equipment for transfer.

2. Make vehicles available to transport equipment.

3. Maintain communications with Re-entry Teams.

ATTACHMENT 2E
GUIDELINES FOR RELOCATION OF THE OSC
(Page 2 of 2)

C. HP and Chemistry

1. Develop a relocation briefing regarding radiological conditions and travel route.

2. Chemistry assist HP in gathering Emergency Kit equipment, dosimetry, and exposure records and prepare for transport.

3. At the new location, reestablish:

   a. Access control

   b. Habitability surveys

   c. Decon location

D. Security

1. Reestablish accountability at the new location.

2. Ensure that the alternate location is identified to Security roadblocks.

E. Admin Tech and Logkeeper

1. Create a new layout for the OSC in the alternate location, as necessary.

2. Create a new call list of OSC phone numbers in the alternate location.

   a. A minimum of ten (10) phone lines should be identified, including one line for a telecopy machine, if a machine is available.

      1) Radio channels may need to be substituted for missing phone lines.

3. Ensure all status board information is recorded and transferred.

ATTACHMENT 2F
OSC FACILITY BRIEFINGS
(Page 1 of 1)

A. GENERAL GUIDELINES

1. Conducted by the OSC Supervisor or his/her designee.

2. Establish a frequency (e.g., every 30 minutes or directly following the EC portion of the TSC briefings via the "Videolink").

3. Set criteria (i.e., attendance, noise and activity level, circulation of information).

B. GENERAL FORMAT -the following information should be included in facility briefings.

1. Time of the briefing

2. Current emergency classification

3. Plant status (affected Unit, unaffected Unit)

4. Radiological conditions (e.g., release in progress, contaminated areas, etc.)

5. Status of protective actions (e.g., site evacuation, actions underway by the public, etc.)

6. Status of activities underway in the facility

7. Request input/update information from other representatives (e.g., OPS, HP, Chem, Maintenance, Engineering, Security, etc.)

8. Major activity(s) underway in other facilities (e.g., notifications, field monitoring, dose assessment, etc.)

9. Concerns or questions

ATTACHMENT 3
OSC COORDINATOR WITH TSC CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Establish communication link with the TSC Coordinator with OSC (in the TSC). _____

3. Synchronize OSC clocks with the TSC. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Ensure all requests for re-entry activities are documented on Attachment 3A, Re-entry Log.

      1) Complete the Task Request section of Attachment 3A (letters A - C) with information provided by the TSC Coordinator with OSC.

   b. Give the Re-entry Log to the OSC Supervisor for completion of the Team Assignment section.

   c. Upon return of the Re-entry Log form from the OSC Supervisor:

      1) Provide the information in the Team Assignment section of Attachment 3A, Re-entry Log (letters D - G) to the TSC.

      2) Instruct the OSC Administrative Tech/Logkeeper to update the OSC Status Board with Re-entry Team information.

/R6 /R6 /R6 /R6

ATTACHMENT 3
OSC COORDINATOR WITH TSC CHECKLIST
(Page 2 of 2)

B. 1. (continued) INITIAL

d. Inform the OSC Supervisor when the EC/TSC will be conducting a facility briefing.

e. Monitor information on the status board for accuracy.

f. Provide temporary coverage for the OSC Supervisor during Re-entry Team briefings and debriefings, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Phone connection to TSC terminated. _____

2. All Re-entry Log entries completed and closed out. _____

3. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

4. Returned position notebook to storage shelf. _____

¶7

ATTACHMENT 3A
RE-ENTRY LOG
(Page 1 of 1)

TASK REQUEST (TSC)
The TSC fills in this section and communicates the information to the OSC.

☐ Investigate ☐ Repair ☐ Other

A. Description

_____

_____

_____

B. *Priority: ☐ 1 (target 10 mins) ☐ 2 (target 20 mins) ☐ 3 (target 30 mins)

C. TSC Contact: _____ Phone:_____

TEAM ASSIGNMENT (OSC)
The OSC fills in this section and communicates the information to the TSC.

D. Team No:_____ E. Re-entry Supv.:_____

F. Time Out:_____ G. Time In:_____

TASK REQUEST (TSC)
The TSC fills in this section and communicates the information to the OSC.

☐ Investigate ☐ Repair ☐ Other

A. Description

_____

_____

_____

B. *Priority: ☐ 1 (target 10 mins) ☐ 2 (target 20 mins) ☐ 3 (target 30 mins)

C. TSC Contact: _____ Phone:_____

TEAM ASSIGNMENT (OSC)
The OSC fills in this section and communicates the information to the TSC.

D. Team No:_____ E. Re-entry Supv.:_____

F. Time Out:_____ G. Time In:_____

* Assignment of Priorities / Re-Entry Team Dispatch Targets
(Assignment of priorities is made by the TSC. The dispatch times are targets that should be vigorously pursued.)

Priority 1 - Dispatch within 10 minutes (e.g., fire, injury, specific Operator actions such as App. X, etc)
Priority 2 - Dispatch within 20 minutes (e.g., Emergency Coordinator top priority, actions required to protect the health and safety of the public, etc.)
Priority 3 - Dispatch within 30 minutes (e.g., routine re-entry)

ATTACHMENT 4
OSC ADMINISTRATIVE TECH/LOGKEEPER CHECKLIST
(Page 1 of 2)

NOTE

- Two persons serve in this position. A division of labor should be established that best supports the OSC Supervisor.
- When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Ensure status boards in the OSC are clean prior to facility activation. _____

3. Ensure the television sets in rooms 2200 and 2300 are turned on and set on channel 9 (for the "Videolink"). _____

B. FACILITY OPERATION

1. Ensure that all personnel in both Rooms 2200 and 2300 are signed in on the status board and that this information concurs with Attachment 2A, OSC ERO Shift Staffing and Accountability Roster.

2. Steps to occur continually while the facility is in operation:

   a. Maintain the OSC Supervisor Logbook once turned over from OSC Supervisor (use Attachment 4A, Log Keeping and Status Boards).

   b. Maintain the OSC Status Board (use Attachment 4A, Log Keeping and Status Boards).

   c. Review status board entries with the OSC Coordinator with TSC to ensure accuracy.

   d. Provide administrative assistance and supplies to the OSC Supervisor and Re-entry Supervisors (supplies are available in the HP Emergency Kit).

ATTACHMENT 4
OSC ADMINISTRATIVE TECH/LOGKEEPER CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. The status board has been cleared and returned to preactivation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

3. Returned position notebook to storage shelf. _____

ATTACHMENT 4A
LOGKEEPING AND STATUS BOARDS
(Page 1 of 1)

LOG KEEPING

1. Example of information to be documented
   a. Key events (e.g., classification changes, injuries, etc.)
   b. Status changes in equipment, radiological conditions, personnel, etc.
   c. Decisions or actions taken
   d. Status board entries
   e. Other items of significance
2. Log entry requirements
   a. Time of entry
   b. Use ink
   c. Write legibly
   d. Use concise and accurate wording
   e. Strike through and initial any changes
   f. Do not remove pages from the log

STATUS BOARDS

1. Information should be updated every 15-30 minutes and not longer than 60 minutes.
2. Review posted information for accuracy (e.g., review the Re-entry Team number against the Re-entry Log) and verify discrepancies with the OSC Coordinator with TSC.
3. Designate corrected information by circling the entry on the board.
4. When all available blanks are filled in for a given parameter/item, begin again with a different colored marker, erase the existing information (one blank/line at a time) and enter the new information.

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 1 of 4)

NOTE

1. This checklist applies to the following Re-entry Supervisor positions (responsibilities of the OSC HP Re-entry Supervisor (HPOSC) are provided in HP-200, Health Physics Emergency Organization):

   OSC Electrical Re-entry Supervisor
   OSC Mechanical Re-entry Supervisor
   OSC OPS Re-entry Supervisor
   OSC I&C Re-entry Supervisor
   OSC Chemistry Supervisor

2. This attachment also provides guidelines for the following Re-entry Team members:

   OSC Electrician
   OSC Mechanic
   OSC Non Licensed Operators
   OSC I&C Specialist
   OSC Chemist

3. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Assist in preparation and set-up of the OSC. _____

NOTE

- Initially, on-shift Non-Licensed Operators (NLOs) are under the control of the NPS and are accounted for on the Operations Accountability Aid. Following site evacuation, NLOs report to the OSC and are then considered part of the OSC staff.
- Extra (non on-shift) NLOs report to the OSC and are part of the OSC staff.

3. Ensure departmental Re-entry Team members are signed-in on a form similar to Attachment 2A, OSC ERO Shift Staffing and Accountability Roster. _____

4. Provide activation status of your group to the OSC Supervisor. _____

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION — INITIAL

1. All Re-entry Supervisors initiate a Logbook. _____

2. Steps to occur continually by all Re-entry Supervisors while the facility is in operation:

   a. Maintain documentation of activities in the Logbook.

   b. Re-entry Checklist - When directed by the OSC Supervisor complete the following in response to a request for a Re-entry Team:

      1) Complete Part I, Team Assignment, portion of Attachment 5A, Re-entry Team Form, as requested by the OSC Supervisor by selecting Re-entry Team members and a Re-entry Team Leader. Provide names and TLD numbers to the HP OSC Supervisor.

      2) Work with other members of the OSC staff to complete Part II, Task, of the Re-entry Team Form.

      3) Review Attachment 5B, Re-entry Team Guidelines, as necessary.

      4) Complete Part III, Team Briefing, of Attachment 5A, Re-entry Team Form.

      5) Provide the Re-entry Team Form to the OSC Supervisor for briefing verification.

      6) Once dispatched, communicate with the Re-entry Team and keep the OSC Supervisor informed of status/activities.

      7) Upon return to the OSC, direct the Re-entry Team to complete Part IV, Field Notes, of Attachment 5A, Re-entry Team Form, as appropriate.

      8) Retain completed copies of Attachment 5A, Re-entry Team Form.

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 3 of 4)

B. 2. (continued) INITIAL

c. Coordinate shift relief activities with the OSC Supervisor.

d. Perform shift turnover with an alternate Re-entry Supervisor, when directed.

1) Ensure shift turnover of other departmental re-entry personnel.

3. ¶4 OPS Re-Entry Supervisor

a. Establish link with OPS Conference Bridge (originated in the TSC). _____

NOTE
At site evacuation and at the direction of the EC, NLOs will report to the OSC.

b. Verify that on-shift NLOs are aware of the following (may be communicated through the Control Room or directly):

1) Emergency dosimetry (Electronic Personal Dosimeter (EPD)), in the Control Room HP Emergency Kits, must be used at ALERT or higher emergency class. _____

2) The EC will direct the NLOs to the OSC following a site evacuation. _____

3) Travel route to the OSC will be established by the HPOSC. _____

ATTACHMENT 5
OSC RE-ENTRY SUPERVISOR CHECKLIST
(Page 4 of 4)

B. 3. (continued) INITIAL

CAUTION
As specified in ADM-17.09, Invoking 10 CFR 50.54(x), the Emergency Coordinator (EC) may (with the concurrence of a licensed senior operator) waive re-entry requirements to place the plant in a safe shutdown condition or mitigate a release, if this immediate action is needed to protect the public health and safety.

c. Coordinate operator actions over the OPS Conference Bridge and in conjunction with the OSC Supervisor.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Directed departmental personnel to turn in documentation. _____

2. Closed out the Logbook. _____

3. Generate Nuclear Plant Work Orders (NPWOs), following termination of the emergency, to ensure all maintenance activities are recorded in plant maintenance program records, as necessary. _____

4. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

5. Returned position notebook to storage shelf. _____

¶7

ATTACHMENT 5A
RE-ENTRY TEAM FORM
(Page 1 of 1)

Part I. Team Assignment

A. Team No.:_____ B. Team Leader:_____

C. Team Members:

Name	TLD	Name	TLD
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Part II. Task ( ) Investigate ( ) Repair ( ) Other

A. Task Description:_____

_____

B. Assessment: (The Re-Entry Supervisor should ensure all applicable areas are considered.)
( ) Clearance (OPS) ( ) Security ( ) Safety / Heat Stress
( ) Radiological ( ) Tools ( ) Materials / Parts
( ) Procedures / Drawings
( ) Special Considerations_____

C. Communications:

Re-Entry Supervisor Name:_____

Primary: ( ) Radio channel _____ Alternate: ( ) Phone ext(s)_____

Part III. Team Briefing

Briefing Check-off: (The Re-Entry Supervisor should ensure all applicable areas have been reviewed during the briefing.)
( ) description of task ( ) team has necessary tools, etc
( ) HP briefing – radiological conditions / dress-out, etc ( ) communications
( ) Special considerations_____

Completed by:_____, Re-entry Supervisor or OSC Supervisor

Verified by:_____, OSC Supervisor

Part IV. Field Notes

The Re-Entry team may use this section for any notes about conditions found, work completed, etc.

_____
_____
_____
_____
_____
_____

Part V. De-Brief

A. Time returned to OSC:_____

B. Conditions found / Task Completed?:_____

C. Task De-brief completed by:_____

D. Team report to HP / Dosimetry:_____

ATTACHMENT 5B
RE-ENTRY TEAM GUIDELINES
(Page 1 of 1)

MEMBERS OF RE-ENTRY TEAMS:

1. Should obtain, as appropriate, tools, equipment, supplies, and communications equipment necessary to perform emergency repair/damage control activities.

2. Should report any equipment or supply problems to the Re-entry Supervisor.

3. Shall don personal protective equipment/clothing and dosimetry, if directed by the HPOSC.

4. Should proceed along the pre-planned route to the work location and perform emergency repair/damage control activities, as directed by the Re-entry Supervisor, HPOSC, and OSC Supervisor.

5. Should maintain communications with the Re-entry Supervisor.

6. Should request additional personnel/equipment, as necessary, through the Re-entry Supervisor.

7. Shall check dosimetry/monitor exposure. If the alarm of the Electronic Personal Dosimeter (EPD) sounds, follow the instructions provided by the HPOSC.

8. Should follow the self-monitoring and personnel decontamination procedures as specified by the HPOSC, when the re-entry is complete.

9. Should complete Part IV, Field Notes, in Attachment 5A, Re-Entry Team Form, and report to the OSC Supervisor for debrief on return to the OSC.

10. Should report to HP for exposure history update.

11. Should stand-by for further instructions from the Re-entry Supervisor.

/R6

ATTACHMENT 6
OSC RE-ENTRY FOREMAN CHECKLIST
(Page 1 of 2)

NOTE

1. This checklist applies to the following Re-entry Foreman positions:

   OSC Electrical Chief
   OSC Mechanical Foreman
   OSC I&C Shop Supervisor

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. Assist the Re-Entry Team Supervisor in identification of departmental journeyman. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Assist the Re-entry Supervisor in re-entry activities as follows:

      1) Evaluation of re-entry tasks.

      2) Selection of departmental personnel for re-entry tasks.

ATTACHMENT 6
OSC RE-ENTRY FOREMAN CHECKLIST
(Page 2 of 2)

B. 1. a. (continued) INITIAL

NOTE

- A computer provides a LAN connection and access to the Total Equipment Database (TEDB) in Passport.
- Procedures, Tech Manuals, and drawings are available across the hall from the OSC in the Maintenance Library (an Information Services representative is part of the OSC staff, if needed).

3) Determination of level of instruction needed by the Re-entry Team members.

4) Selection of tools, equipment, and supplies necessary to perform emergency repair/damage control activities.

b. Perform as a Re-entry Team Leader, as directed. _____

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Directed departmental personnel to evaluate status of equipment and supplies and report deficiencies. _____

2. Had departmental Re-entry Team members return all equipment and supplies to normal/storage locations. _____

3. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

4. Returned position notebook to storage shelf. _____

ATTACHMENT 7
OSC DEPARTMENTAL REPS CHECKLIST
(Page 1 of 3)

NOTE

1. This checklist applies to the following OSC Department Reps:
   - OSC Safety Rep
   - OSC NMM Staff Rep
   - OSC Information Services Rep
   - OSC Protection and Control Rep
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

2. OSC Information Services Rep

   a. Verify procedures by posting revision numbers on the status board. Post all procedures (EPIP, HP, Chem). Consult the control copy of procedures in the OSC HP Emergency Kit or follow the steps below to print out an EPIP list. _____

      1) In Lotus Notes, click on the PSL Procedures icon.

      2) On the Search line toolbar, click the far right button (with 2 circles and a down arrow).

      3) Select Group Search from the drop down menu.

      4) In the Search line type "EP" (where the "XX" is).

      5) Click Search or hit Enter.

      6) EPIP list is now displayed (not in any particular order).

ATTACHMENT 7
OSC DEPARTMENTAL REPS CHECKLIST
(Page 2 of 3)

A. 2. a. (continued) INITIAL

7) To print the list:

- Click the File.

- Select Print from the drop down menu.

- Select View Options in the dialogue box.

- Click OK.

b. Ensure copies of the Emergency Response Directory (ERD) are available for use by the OSC Supervisor and OSC Re-entry Supervisors. Copies of the ERD may be obtained from the HP Emergency Kit.

3. OSC Safety Rep (or as designated by the OSC Supervisor)

a. Initiate set up of Room 2200 in accordance with Attachment 7A, Room 2200 Guidelines, and 7B, Room 2200 Set Up. _____

B. FACILITY OPERATION

NOTE
Computers are available in Room 2300 for accessing the LAN, as needed.

1. Steps to occur continually while the facility is in operation:

a. OSC Safety Rep (or as designated by the OSC Supervisor)

1) Supervise activities in Room 2200. Follow the guidance provided in Attachment 7A, Room 2200 Guidelines.

ATTACHMENT 7
OSC DEPARTMENTAL REPS CHECKLIST
(Page 3 of 3)

B. 1. (continued) INITIAL

b. Each representative should be alert to assist the OSC Supervisor in advising Re-entry Teams or participating in re-entry as needed.

c. Provide support and/or expertise as follows:

1) OSC NMM Staff Rep - materials and equipment in Stores

2) OSC Protection and Control Rep - off-site power and switchyard issues

3) OSC Information Services Rep - obtain and/or produce copies of tech manuals, drawings, procedures, diagrams and other controlled documents, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

2. Returned position notebook to storage shelf. _____

ATTACHMENT 7A
ROOM 2200 GUIDELINES
(Page 1 of 3)

A. SET UP

1. Instruct personnel to arrange the tables and chairs in accordance with the facility layout shown in Attachment 7B, Room 2200 Set Up. Each department should ensure their area is properly located and arranged.

2. The OSC Supervisor should be advised when the room is set up.

B. STAFF AND ACCOUNTABILITY

1. Assist Security in establishing accountability by instructing all personnel to sign in on Attachment 2A, OSC ERO Shift Staffing and Accountability Roster. Instruct all foremen to ensure their personnel are signed in.

2. Ensure one completed copy of Attachment 2A is provided to the OSC Supervisor and another completed copy is given to one of the OSC Administrative Tech/Logkeepers.

C. CONDUCT OF FACILITY OPERATIONS

1. Identify and process personnel from HP, OPS, Chemistry and Maintenance to initially establish a rapid response/contingency Re-entry Team.

2. Review the rules:

   a. Orderly conduct is to be maintained at all times.

   b. Personnel are to listen to TSC briefings broadcast over the Videolink.

   c. Briefings will occur following the TSC briefings (approximately every 30 minutes) and will allow for questions.

   d. Personnel are allowed to leave Room 2200 (to use the bathroom, make copies, go the Maintenance Library, etc.), but must notify their foreman if appropriate, and in all instances, sign out on roster provided by Security.

   e. Personnel are NOT to enter Room 2300 unless instructed to do so.

ATTACHMENT 7A
ROOM 2200 GUIDELINES
(Page 2 of 3)

C. (continued)

3. Have personnel identify any tools, instruments or other supplies that are necessary for their response efforts. These requests need to be provided to the OSC Supervisor so that arrangements can be made to obtain this material.

D. HP BRIEFINGS

1. In addition to re-entry specific briefings, HP should routinely provide general HP briefings to personnel addressing the following:

   a. Location of the Access Control Point.

   b. Current dress out requirements.

   c. Dosimetry, alarm setpoints, and appropriate actions if an alarm should sound.

   d. General radiological conditions based on on-site survey data.

   e. Radiological conditions in the OSC.

   f. Release or dose concerns.

E. SAFETY BRIEFINGS

1. Safety considerations associated with re-entries should include:

   a. Clearance considerations.

   b. Caution in unknown environments, for example, be wary of steam leaks or other potentially dangerous conditions.

   c. Personal safety with respect to your physical condition, for example, remain sensitive to the dangers of Heat Stress.

   d. Be familiar with surroundings and alert to changing conditions.

ATTACHMENT 7A
ROOM 2200 GUIDELINES
(Page 3 of 3)

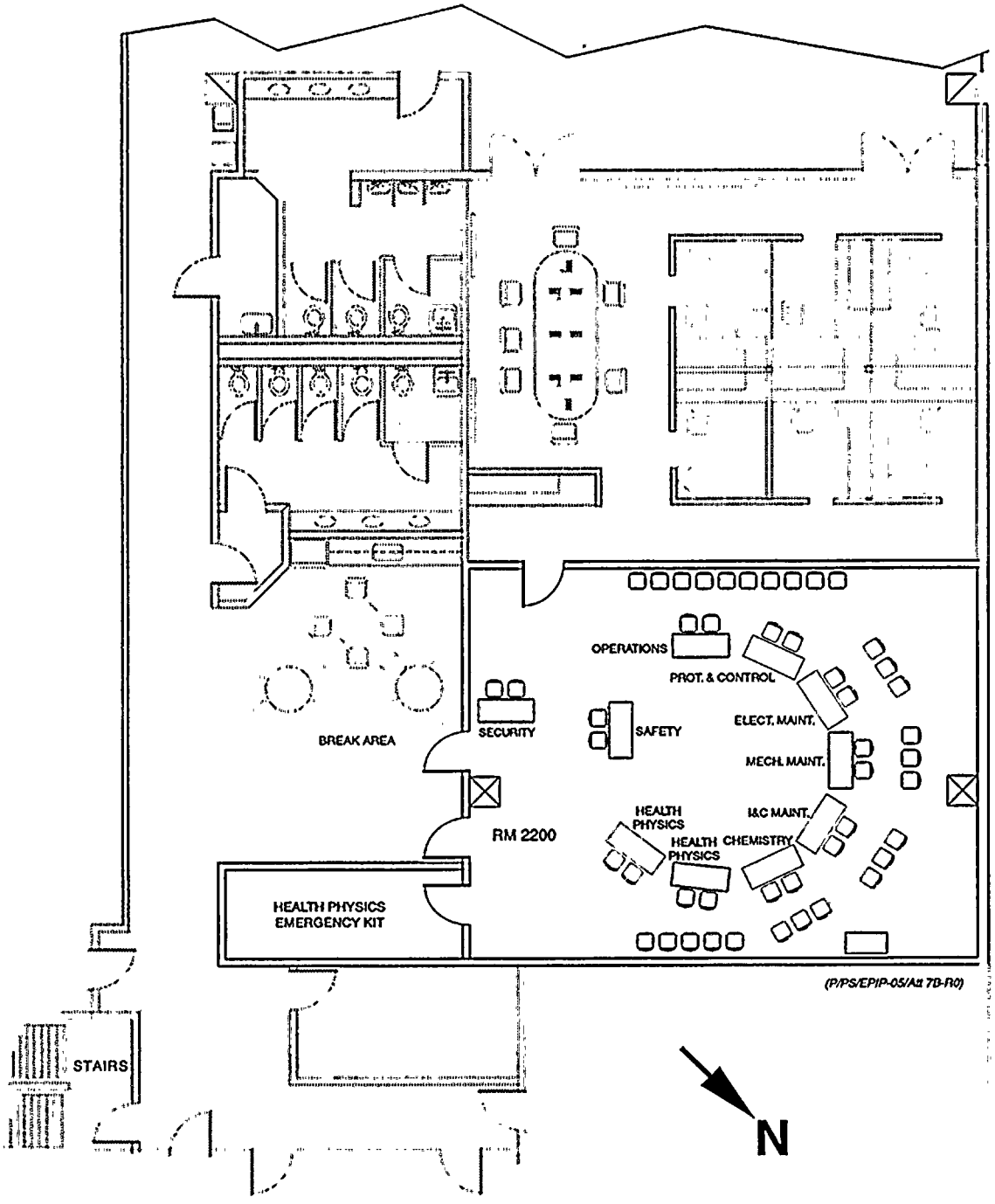
E. 1. (continued)

e. Keep in contact with the Re-entry Supervisor.

f. Perform the work as safely as possible.

2. When in the field, always review any proposed change in the re-entry plan (ingress, egress, or assigned task) with the Re-entry Supervisor.

ATTACHMENT 7B
ROOM 2200 SET UP
(Page 1 of 1)



ATTACHMENT 8
OSC SECURITY CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5 of this procedure (included in the position notebook) and review the general instructions. _____

NOTE
Priority is given to identifying the minimum staff (positions in bold on Attachment 2A) which allows the OSC Supervisor to declare the OSC operational. Accountability must be established for both Room 2200 and 2300. The facility head count must agree with the number of persons signed in on the accountability forms.

2. Using Attachment 2A, OSC ERO Shift Staffing and Accountability Roster, initiate the establishment of initial facility accountability. _____

B. FACILITY OPERATION

NOTE
Priority is given to identifying the minimum staff (positions in bold on Attachment 2A) which allows the OSC Supervisor to declare the OSC operational. Accountability must be established for both Room 2200 and 2300. The facility head count must agree with the number of persons signed in on the accountability forms.

1. Log the names and badge numbers of persons filling the following positions and maintain accountability for them even after leaving the facility and/or site:

   a. Assembly Area Supervisor: _____

   b. Control Room HP coverage

      1) Unit 1: _____

      2) Unit 2: _____

ATTACHMENT 8
OSC SECURITY CHECKLIST
(Page 2 of 3)

B. 1. (continued) INITIAL

c. Field Monitoring Team - Red

1) Driver: _____

2) HP: _____

d. Field Monitoring Team - Blue

1) Driver: _____

2) HP: _____

e. Field Monitoring Team - Orange

1) Driver: _____

2) HP: _____

f. Other (e.g., HP sent to off-site Assembly Area, hospital, etc.):

2. Establish initial facility personnel accountable roster required 30 minute following evacuation of non-essential personnel. _____

3. Revise accountability when Non Licensed Operators report to the OSC following site evacuation. _____

4. Coordinate with the Assembly Area Supervisor to establish Security at the off-site Assembly Area based on Security resources availability. _____

ATTACHMENT 8
OSC SECURITY CHECKLIST
(Page 3 of 3)

B. (continued) INITIAL

5. Steps to occur continually while the facility is in operation:

   a. Assist the TSC Security Supervisor in maintaining site accountability.

   b. Assist Re-entry Teams in gaining access to plant areas, as needed.

   c. Assist off-site agencies in gaining plant access.

   d. Advise the OSC Staff of security related matters.

   e. Follow Security Procedures.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Provided all completed paperwork (not bound in the position notebook) to the OSC Supervisor. _____

2. Returned position notebook to storage shelf. _____

FPL

ST. LUCIE PLANT EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-06

Current Rev. No.
4

Effective Date:
06/15/01

Title:

ACTIVATION AND OPERATION OF THE EMERGENCY OPERATIONS FACILITY

Responsible Department: **EMERGENCY PLANNING**

Revision Summary

Revision 4 - Deleted exposure guideline basis, revised state liaison title, added GAM direct reports to EOP org chart, clarified instructions, revised PAR briefing guidance and made editorial and administrative changes. (J. R. Walker, 06/11/01)

Revision 3 - THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Added new PAR brief attachment. Deleted notification and PAR attachment (relocated to new EPIP-08. Moved responsibility for preparing State Notification Form from EOF HRD Communicator to EOF RM Ops Advisor/Logkeeper. Add alternate instruction for procedure revision verification. Made editorial and administrative changes. Added ETM Activities List form. (Donna Calabrese, 05/31/00)

Revision	FRG Review Date	Approved By	Approval Date
0	12/15/97	J. Scarola Plant General Manager	12/15/97
4	06/07/01	R. G. West Plant General Manager	06/11/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Corrections)	

S___OPS
DATE_____
DOCT PROCEDURE
DOCN EPIP-06
SYS_____
COMP COMPLETED
ITM 4

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(continued)

SECTION PAGE

ATTACHMENTS (continued)

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(continued)

SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

1.1 Discussion

This procedure provides instructions for the activation and operation of the Emergency Operations Facility (EOF).

1.2 Location and Description

The EOF is a dedicated facility located at the intersection of State Route 712 (Midway Road) and I-95 approximately 10 1/2 miles west of the St. Lucie Plant. The EOF has emergency communications equipment, precalculated emergency data, pertinent reports, plans, procedures, and drawings available for use.

1.3 EOF Functions

1. Accident assessment in conjunction with the Technical Support Center (TSC)

§2 2. Protective action decision making

§2 3. Off-site notifications (State, County, NRC)

4. Off-site dose assessment

5. Off-site field monitoring activities

6. Core damage assessment

7. Interfacility communications with the TSC

8. Interaction with off-site officials

9. Direction of recovery operations

1.0 PURPOSE (continued)

1.4 Minimum Staffing

1. The following is a recommended list of the minimum positions needed for EOF operation:

   - Recovery Manager
   - EOF RM OPS Advisor/Logkeeper
   - EOF Communicator (HRD)
   - ERDADS Operator OR EOF Communicator (to TSC)
   - EOF Dose Assessor/FMT Coord

§2 **1.5** Activation

Activation of the EOF is the responsibility of the Recovery Manager (RM) and is required for a Site Area Emergency or General Emergency. EOF personnel should be placed in the facility for an Alert, as conditions warrant. Arrangements have been made to activate the EOF in a timely manner.

1.6 Operations

The EOF has sufficient space to accommodate the Florida Power & Light Company (FPL) response organization and designated representatives of the Federal, State, and Local authorities. This co-location allows for an effective communications interface, coordinated decision making, and timely implementation of protective actions.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, etc., and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

2.1 REFERENCES

§1 **1.** St. Lucie Plant Technical Specifications Unit 1 and Unit 2 (Section 6.10.1)

2. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2

§2 **3.** St. Lucie Plant Radiological Emergency Plan (E-Plan)

4. St. Lucie Plant Physical Security Plan

5. St. Lucie Plant Safeguards Contingency Plan

¶1 **6.** St. Lucie Plant Topical Quality Assurance Report

7. E-Plan Implementing Procedures (EPIP 00-13)

8. St. Lucie Plant Emergency Response Directory (ERD)

9. Florida Power & Light Company St. Lucie Plant Recovery Plan

10. Florida Power & Light Company Corporate Communications Nuclear Emergency Plan.

11. QI-17-PSL-1, Quality Assurance Records

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS (continued)

2.1 REFERENCES (continued)

§3 12. Fitness for Duty Rule, 10 CFR 26

¶2 13. Reactor Operator Tech Manual 8770-12058

14. NUREG-0654, Rev. 1, FEMA Rep. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants; November, 1980.

15. St. Lucie Unit 1 and 2 as-built drawings, Nuclear Engineering files, and Ebasco Engineering files

¶3 16. Institute of Nuclear Power Operations, Emergency Resources Manual - INPO 86-032.

¶4 17. Nuclear Energy Policy on Exposure Limits for Emergency Response Personnel, Revision to Policy Statement, Ltr. No. JNO-HP-94-056, 26 October, 1994.

2.2 RECORDS REQUIRED

1. The following shall be retained following a plant emergency:

   - Checklists, data and paperwork generated per this procedure.
   - Log books maintained during the plant emergency.

§1 2. Recorded information shall be forwarded to Emergency Planning following the event, for review and archival in accordance with Technical Specification 6.10.1 and QI-17-PSL-1.

2.3 COMMITMENT DOCUMENTS

§4 1. Condition Report 96-2900, (Review and approval of Recovery Plan)

¶5 2. PMAI 99-0-024 (RM Briefing Consistency)

3.0 RESPONSIBILITIES

3.1 Recovery Manager (RM)

§2 1. Declares the EOF operational for any Site Area Emergency or General Emergency.

2. Establishes and maintains command and control of the EOF.

§2 3. Assumes the following responsibilities from the Emergency Coordinator (EC) when the EOF is prepared to go operational:

   A. Notification of off-site agencies (State and Counties), and

   B. Develops and issues Protective Action Recommendations (PARs) to State and County officials.

§2 4. Declares the EOF operational with the concurrence from the EC.

§2 5. Ensures notification of State and County agencies occurs within fifteen (15) minutes following any change in emergency classification and notification of the NRC occurs immediately following notification of the State and Counties, and in all cases within one (1) hour.

§2 6. Establishes policies, for situations in which no company policy currently exists, to support the actions that will aid in mitigation of the emergency.

§2 7. Expends funds as necessary to cope with emergency situations.

§2 8. Provides support to the EC as necessary.

§2 9. Provides concurrence to the EC for exceeding 10 CFR 20 limits for emergency response personnel, as appropriate.

3.0 RESPONSIBILITIES (continued)

3.1 Recovery Manager (RM) (continued)

§2 **10.** Requests additional support as necessary.

11. Interfaces with the Nuclear Regulatory Commission, Director of Site Operations (NRC, DSO) when the NRC Site Team arrives at the EOF.

12. De-escalates all events classified as Site Area Emergency or General Emergency.

§2 **13.** Prepares an Incident Report for submittal to the State Division of Emergency Management (DEM) and the NRC within twenty-four (24) hours after termination of an Alert or higher emergency event.

3.2 EOF Emergency Technical Manager (ETM)

§2 **1.** Provides engineering support to the EOF by directing all engineering response including:

A. Nuclear Engineering

B. Nuclear Fuels Engineering and core damage analysis

C. Electrical Engineering

D. I&C Engineering

E. Mechanical Engineering

F. Civil Engineering

2. Supports the TSC in problem solving based on engineering design and as-built construction details.

3. Oversees plant data acquisition and posting.

4. Interfaces with the NRC Reactor Safety Coordinator when the NRC Site Team arrives at the EOF.

3.0 RESPONSIBILITIES (continued)

3.3 EOF Licensing Manager

1. Oversees EOF communications performed by the following communicators:

   A. Hot Ring Down (HRD) Communicator

   B. Emergency Notification System (ENS) Communicator

   C. Health Physics Network (HPN) Communicator

   D. TSC Communicator

¶3 2. Ensures that the Institute of Nuclear Power Operations (INPO) is kept abreast of emergency status and resource requirements.

3. Serves as primary liaison with the NRC once the Site Team arrives at the EOF, interfacing with the Emergency Response Coordinator.

3.4 EOF Health Physics Manager (HPM)

1. Directs the collection, assessment, and interpretation of all radiological and radiochemistry information in the EOF.

2. Assists the RM in PAR decision making.

3. Ensures that radiological questions/concerns arising from the Emergency News Center (ENC) are addressed/resolved.

4. Interfaces with the State of Florida's Department of Health, Bureau of Radiation Control on all radiological matters.

5. Interfaces with the Protective Measures Coordinator when the NRC Site Team arrives at the EOF.

3.0 RESPONSIBILITIES (continued)

3.5 EOF Emergency Security Manager (ESM)

1. Establishes facility security and personnel accountability throughout the emergency.

§3 2. Ensures the requirements of the Fitness for Duty rule are met by persons reporting for duty in EOF positions.

3. Coordinates with the TSC Security Supervisor to support any on-site security functions and in determining the need to suspend safeguards.

§2 4. Provides the interface with local law enforcement and rescue agencies.

5. Tracks the status of all site personnel transported to off-site medical facilities.

6. Interfaces with the Safeguards/Security Coordinator when the NRC Site Team arrives at the EOF.

3.6 EOF Administrative Supervisor

1. Oversees all administrative services such as:

CAUTION

¶1 Documents, such as instructions, procedures, drawings, and software which provide guidance, specifications, or requirements affecting the quality of safety-related structures, systems, and components, shall be controlled.

A. Availability of controlled documents

B. Reproduction and distribution services

C. Support for telephone and telecopy operations

2. Makes arrangements for long term facility operations including personnel, supplies, and equipment.

3.0 RESPONSIBILITIES (continued)

3.7 EOF RM OPS Advisor/Logkeeper

1. Assists the RM in all assigned responsibilities including off-site notifications and Protective Action Recommendations (PARs).

2. Fulfills the role of RM in the "bullpen" when the RM is in conference.

3. Maintains the RM Logbook which serves as the primary facility log.

3.8 Nuclear Division Duty Officer (NDDO)

1. This position is not required to be in the EOF.

2. Maintains 24 hour a day on-call availability.

3. Serves as a technical advisor to the Emergency Control Officer (ECO).

4. Performs the duties of the ECO if one can not be located.

5. Establishes initial contact with INPO.

3.9 Emergency Control Officer (ECO)

§2 **1.** Acts as the chief nuclear officer in the absence of the President of the Nuclear Division.

§2 **2.** Serves as the official spokesperson for the Nuclear Division.

3. Approves all press releases for the Nuclear Division.

3.10 Governmental Affairs Manager (GAM)

1. This position is not required to be in the EOF.

§2 **2.** Provides liaison function between the ECO and public officials.

3. Works with the State Coordinating Officer (SCO) and Governor's Advisor. /R4

3.0 RESPONSIBILITIES (continued)

3.11 Risk Manager

1. This position is not required to be in the EOF.

2. Provides liaison to the nuclear insurance industry.

3.12 EP Manager

1. This position is not required to be in the EOF.

2. Provides emergency preparedness program expertise to the RM and other EOF staff as necessary.

3.13 EOF Emergency Information Manager (EIM)

1. Delegates responsibility for verbal and written communication as needed.

2. Determines when an emergency is serious enough to activate the Corporate Communications (CC) Nuclear Emergency Plan (CCNEP), including initiating notifications and calling for additional communications support as needed.

3. Calls for the activation of an Emergency News Center (ENC), after consulting with the ECO.

4. Invites Federal, State and County public information officers to respond to ENC where information can be jointly provided to the news media.

5. Declares the ENC operational, in coordination with the ENC Manager and ECO.

6. Ensures that technical advisors are assigned to the County Emergency Operations Centers (EOCs) and that contact is established.

4.0 DEFINITIONS

4.1 Emergency Planning Zones:

1. **Plume Exposure Pathway (10 mile EPZ)** - that area, approximately 10 miles in radius from the center of the plant, for which detailed plans are made to protect people from exposure to a plume containing radioactive materials.

2. **Ingestion Exposure Pathway (50 mile EPZ)** - that area, approximately 50 miles in radius from the center of the plant, for which plans are made to protect people from ingestion of food-stuffs and water contaminated by radioactive materials released from the plant.

4.2 Facility Status:

1. **Activation** - the request to staff and establish an Emergency Response Facility (ERF).

2. **Operational** - when sufficient personnel (i.e., minimum staff) are available to accomplish the mandatory facility functions of off-site notifications and development of PARs **AND** the RM has completed a turnover with the EC for assumption of these functions.

3. **Fully Staffed** - the complete complement of personnel is present in the facility.

4.3 **FPL Emergency Recall System (ERS)** - the call-out system used as the means of off hours call-out, as described in EPIP-03, Emergency Response Organization Notifications/Staff Augmentation.

4.4 **Protective Actions Implemented (PAIs)** - actual protective action instructions given to the general public based on the evaluation, by State and County officials, of the Protective Action Recommendations (PARs) received from FPL (i.e., actual shelter and/or evacuation response actions taken by the public).

4.5 **Risk Counties** - those counties located within the 10 mile Emergency Planning Zone of a nuclear plant. For St. Lucie Plant, the risk counties are **St. Lucie and Martin.**

4.0 DEFINITIONS (continued)

4.6 **State Agencies:**

1. **Florida Division of Emergency Management (DEM)** - headquartered in Tallahassee, responsible for the State of Florida Radiological Emergency Management Plan for Nuclear Power Plants.

2. **Florida Department of Health (DOH), Bureau of Radiation Control** - headquartered in Orlando, responsible for radiological monitoring and dose assessment.

4.7 **"Videolink"** - a closed circuit audio/visual communications link originating in the TSC with feeds to the OSC and the EOF allowing the EC briefings to be available in all the Emergency Response Facilities (ERFs).

5.0 INSTRUCTIONS

NOTE

- This section provides general information and instructions for all EOF responders.
- Position specific checklists are included as attachments to this procedure.
- Individuals specifically designated as members of the EOF Emergency Response Organization (ERO) are identified in the ERD.

5.1 Report when notified to the EOF as quickly as possible if available and able to safely do so.

5.2 Upon arrival at the facility, each EOF emergency responder should perform the following:

1. Present Security with a form of picture identification.

2. Inform Security of your "fitness for duty" status.

3. Obtain and wear a position specific access badge available in the Security area as you enter the building.

A. Place your name on the badge with a dry erase marker or in any other non-permanent manner.

4. Sign-in on the Staffing Board located on the south wall of the "bullpen" (room 101).

5. Obtain position specific notebook with procedural checklists, forms and instructions.

6. Make your workstation/location operational.

7. Notify your supervisor of your readiness status.

¶1

NOTE

Only controlled copies of nuclear safety-related procedures, drawings, and other available plant information shall be used. Non-controlled documents or drawings shall be verified with a controlled copy prior to use in the EOF.

5.3 Communications to the plant should be made through the phonetalkers and/or the TSC.

5.0 INSTRUCTIONS (continued)

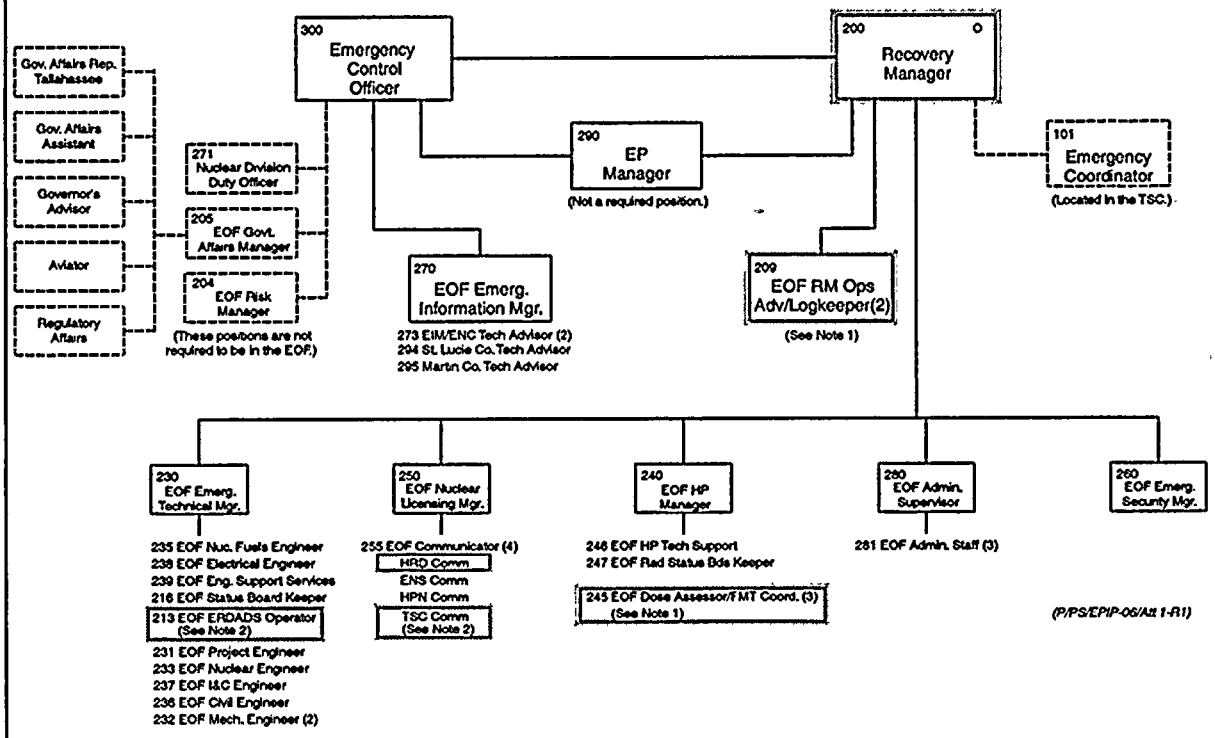
5.4 During facility briefings, stop what you are doing, pay attention and contribute as requested.

5.5 Upon termination of the event:

1. All EOF personnel should return their workstations/locations to a normal state and assist in restoring the facility to a ready condition.

2. Collect all significant information and documentation, such as completed EPIPs and attachments, logs, notification forms and other notes and data sheets, and forward this material to Emergency Planning.

ATTACHMENT 1
EOF EMERGENCY RESPONSE ORGANIZATION
(Page 1 of 1)



Autodialer position numbers are listed with position titles.

◇ 60 minute response goal, per NUREG 0654, Table B-1

Note 1- One needed for minimum staffing.

Note 2- Either an ERDADS Operator OR a TSC Communicator is acceptable to meet the minimum staffing recommendation.

☐ Indicates minimum staffing to declare the facility operational.

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 1 of 4)

CAUTION
The mandatory function of the EOF is to assume responsibility for making notifications and PARs. The RM should assume this responsibility as soon as practicable, but not before the EOF staff is fully prepared to do so.

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Determine if minimum staff is available (refer to Attachment 2A, EOF Emergency Response Organization and Shift Staffing). _____

3. Determine from the Ops Advisor that EOF communications are available. _____

4. Notify the EC of the EOF's readiness to take responsibility for off-site notifications (State, Counties and NRC) and PARs. _____

5. Based on concurrence from the EC, declare EOF operational (steps 3 & 4 must be completed). Operational at _____. _____

6. Notify the following that the EOF is operational:

   a. EC _____
   b. EOF staff _____
   c. State and local authorities _____
   d. NRC _____
   e. ECO _____

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 2 of 4)

A. FACILITY ACTIVATION (continued) — INITIAL

7. Request that all facility clocks be synchronized with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.

8. EOF fully staffed. _____

B. FACILITY OPERATION

1. Establish briefing frequency for facility updates. _____

2. Direct an RM OPS Advisor/Logkeeper to keep Logbook. _____

3. Steps to occur continually while the facility is in operation:

   a. Off-site notifications for both State/County and the NRC are approved and provided in a timely manner and in accordance with EPIP-08, Off-site Notifications and Protective Action Recommendations.

   b. Develop/adjust and approve PARs, as necessary in accordance with EPIP-08 and with the assistance of the EOF RM OPS Advisor/Logkeeper and the EOF HP Manager.

   c. Provide PAR Briefings to State and County personnel in the EOF with the assistance of the EOF RM OPS Advisor/Logkeeper and EOF HP Manager and using Attachment 2C, State and County PAR Briefing Guideline.

CAUTION
The RM shall not delegate the following:

- State Notification Form approval
- Recommendation of Protective Actions
- Expenditure of Funds
- Policy Setting

   d. Request an RM OPS Advisor/Logkeeper act as temporary relief when leaving the "Bull Pen".

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 3 of 4)

B. FACILITY OPERATION (continued)

3. (continued)

e. Ensure that Protective Actions Implemented (PAIs) are posted in the EOF and reported to the EC.

f. Maintain facility command and control.

g. Conduct facility briefings (use Attachment 2B to this attachment).

h. Contact the EC frequently to maintain awareness of plant conditions and actions. (The "Videolink may be used for this purpose.)

§2 i. Provide support/resources to the EC from other FPL sources, nuclear power plants and/or vendors.

§2 j. Review emergency dose extensions with the EC (use Attachment 12A, Exposure Limits for Emergency Response Personnel. /R4

k. Request additional support as necessary.

l. Routinely review status with the ECO.

m. Establish policies when situations arise where no company policy is in place to support the actions that will aid in mitigation of the emergency.

n. Expend funds as necessary to cope with emergency situations. (Solicit authorization from the President Nuclear Division)

o. Interface with the NRC Director of Site Operations (DSO) and other members of the Site Team, as required.

ATTACHMENT 2
RECOVERY MANAGER CHECKLIST
(Page 4 of 4)

B. FACILITY OPERATION (continued) — INITIAL

4. Direct the EOF Administrative Supervisor to establish the capability for 24 hour operation of the EOF. _____

§2 5. De-escalate the emergency classification to Site Area Emergency or lower class (use Attachment 2D, De-escalation Guidelines). _____

6. Initiate the recovery plans (use Attachment 2E, Recovery Planning). _____

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

§2 1. Direct Licensing to prepare the Incident Report for submittal to DEM and NRC (within 24 hours after termination of an Alert or higher emergency event). _____

2. All facility activities closed out. _____

3. All paperwork collected. _____

4. All equipment and supplies returned to pre-activation condition and/or location. _____

5. Provided all completed paperwork (not bound in the position notebook) to Emergency Planning. _____ /R4

6. Returned position notebook to RM office. _____ /R4

ATTACHMENT 2A
EOF ERO SHIFT STAGING*

(Page 1 of 1)

Shift*:_____ **Hours:**_____ **To:**_____

***Recovery Manager**		
***Ops Advisor**	HP Manager	Emergency Technical Manager
Ops Advisor	HP Tech Support	Project Eng
Nuclear Licensing Manager	***Dose Assessor/FMT Coord**	Nuclear Eng
***EOF Communicator (HRD)**	Dose Assessor/FMT Coord	I&C Eng
EOF Communicator (ENS)	Dose Assessor/FMT Coord	Civil Eng
EOF Communicator (HPN)	Rad Status Brd Kpr	Mechanical Eng
***EOF Communicator (TSC)**	Admin Supervisor	Mechanical Eng
	Admin Staff	Nuc Fuels Eng
	Admin Staff	Electrical Eng
** EP Manager	Admin Staff	
Emergency Control Officer	Emergency Info. Manager	
**Nuclear Division Duty Officer	EIM/ENC Tech Adv	Plant Status Brd Kpr
**Risk Manager	EIM/ENC Tech Adv	*ERDADS Oper
**Gov. Affairs Manager	St. Lucie County Tech	
	Martin County Tech Adv	Emergency Security Manager
	Corp Comm / ENC Staff	

* Recommended minimum staffing in bold

Acceptable alternates for recommended minimum staffing:
Recovery Manager - Designated alternates in ERD.
RM OPS. Advisor - Any responder with active or past operating license or equivalent (RO, SRO, SRO Cert) at PSL or PTN.
HRD Communicator - Any responder
ERDADS Operator - Any responder with working familiarity with ERDADs computer
TSC Communicator - Any responder with plant technical background
Dose Assessment Coordinator - Any responder trained in radiological assessment.

** Optional staffing (not typically EOF responders)
*** Long term staffing, refer to the St. Lucie Plant Emergency Response Directory (ERD) for position alternates.

ATTACHMENT 2B
EOF STAFF BRIEFING/UPDATE AGENDA
(Page 1 of 2)

TIME: _____

NOTE

1. Updates should occur approximately every 30 minutes. Significant changes in events should be announced promptly.
2. Briefings should not exceed 10 minutes.
3. Reference in RM Log and retain for archival.

Emergency Classification:

Unit 1 Status:

Unit 2 Status:

Current Information:

NOTE

Take the time necessary to explain events at the plant.

1. Classification changes
2. Radiological release occurrence or termination (this includes significant changes in source term or meteorological data)
3. Loss or restoration of significant equipment and/or system, such as loss of make-up capability, containment failure, etc.
4. Changes to PARs or to Protective Actions Implemented (PAIs)
5. Injured/Contaminated Personnel
6. Current mission(s) of EOF, assign task(s), as necessary.

ATTACHMENT 2B
EOF STAFF BRIEFING/UPDATE AGENDA
(Page 2 of 2)

Other Information (Request input/update information from other representatives. Remind contributors to be brief and limit comments to significant new information.)

1. Health Physics Representative:

2. Engineering Representative:

3. Security Representative:

4. State Representative:

   A. DEM:

   B. DOH:

5. St. Lucie County Representative:

6. Martin County Representative:

7. NRC Representative:

ATTACHMENT 2C

¶5 **STATE AND COUNTY PAR BRIEFING GUIDELINE**

(Page 1 of 2)

Once the EOF is declared operational, the Recovery Manager has primary responsibility for development of Protective Action Recommendations (PARs). PARs are included in the State Notification Form. Notification of State and County officials is accomplished through the conduct of PAR Briefings.

Specific Guidance

1. State and County PAR Briefings shall be conducted only if the following is true:

   A. The EOF has been declared operational.

   B. The following agencies are represented in the briefing:

      (1) Florida DEM

      (2) Florida BRC

      (3) St. Lucie County DPS

      (4) Martin County DES

2. The RM shall approve the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet.

3. The RM shall review the information from the above notification forms with State and County representatives during the PAR Briefing.

4. Following initial review and discussion, the RM should return to the "Bull Pen", leaving the EOF RM OPS Advisor and EOF HP Manager, and others as needed, to answer any technical questions or to provide additional clarification.

5. Protective Actions - Implementation

   A. The State and Counties will determine resulting protective actions to implement.

/R4

ATTACHMENT 2C

¶5 **STATE AND COUNTY PAR BRIEFING GUIDELINE**

(Page 2 of 2)

5. (continued)

   B. As soon as practical after the PAR Briefing, the RM shall consult with DEM and County representatives in the EOF concerning the actual Protective Actions Implemented (PAIs).

   C. The State Coordinating Officer (SCO) should announce the PAIs to the EOF staff (the RM should make the announcement if the SCO is unavailable).

   D. Once determined, the PAIs (using "areas") should be recorded in the RM Logbook and posted in the EOF.

   E. The RM should notify the EC of the PAIs.

/R4

ATTACHMENT 2D
DE-ESCALATION GUIDELINES
(Page 1 of 1)

The following guidelines provide points to consider when de-escalation may be appropriate.

1. Review the Emergency Classification Tables in EPIP-01 with the Emergency Coordinator to assure that the classification criteria to enter the event are no longer applicable.

2. Verify additionally that the plant is stable, under control, and trend or prognosis indicates that improvement is the most likely prospect. Consider the following:

   a. Subcriticality
   b. Core Cooling Mode
   c. Heat Sink Mode
   d. RCS Pressure Boundary Integrity
   e. Inventory Control (Primary and Secondary Coolant)

3. Verify there is no foreseeable likelihood of a significant uncontrolled release. Consider containment pressure, containment/auxiliary building radiation levels, waste gas storage tank pressures and activities, and containment water volumes and activities.

4. Verify that the long-term staffing for both the site and the EOF is organized and in place as appropriate for the event.

NOTE

De-escalation of the event does not mean that protective actions for the general public would terminate. This issue should be addressed separately and special attention should be given via the ENC to ensure that public information channels are aware of the difference.

§2 5. Verify that the Emergency Coordinator, Emergency Control Officer, DEM State Coordinating Officer, County Emergency Management Directors and the NRC are informed that de-escalation of the emergency classification is in order. /R4

ATTACHMENT 2E
§4 RECOVERY PLANNING
(Page 1 of 1)

NOTE
The Florida Power & Light Company St. Lucie Plant Recovery Plan and other FPL company plans may be referenced as guidance to assist in the organization of recovery activities.

A. Formulate general plans for recovery operations using a typical outage management/work control format and including the following additional considerations:

1. Identification of organization, personnel, and facilities to be used in recovery operations.

   a. Portions of the ERO continue to function during recovery operations including lead emergency response managers:

      1. EC/Plant General Manager

      2. RM/Site Vice President

   b. Emergency response facilities (TSC, OSC, EOF) may be used for recovery activities.

2. Identification of external (FPL and industry) assistance for inclusion in the recovery organization.

3. Identification of interfaces between FPL organizations, off-site emergency authorities, regulatory agencies, and other applicable organizations.

4. Identification of interfaces between FPL and the news media.

   a. Corporate Communications organization used during the emergency may remain in place, if deemed appropriate.

ATTACHMENT 3
EOF RM OPS ADVISOR/LOGKEEPER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Assist the RM in declaring the EOF operational by verifying the following:

   a. Minimum staff available _____

   b. Communications equipment, procedures and other supplies are available, checked and ready for use. _____

      - Commercial phone as backup to State/County and NRC Notifications (DO NOT test call HRD or ENS).
      - Extension phones in EOF.
      - EOF personnel are verifying procedures in position notebooks.

   c. Minimum staff prepared to accomplish mandatory facility functions _____

   d. EC turnover completed _____

B. FACILITY OPERATION

1. Initiate the RM Logbook (use Attachment 3A, Typical Information to be Included in the RM Logbook). _____

2. Review Attachment 2, Recovery Manager Checklist. _____

ATTACHMENT 3
EOF RM OPS ADVISOR/LOGKEEPER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued)

3. Steps to occur continually while the facility is in operation:

   a. Routinely review Emergency Operating Procedures (EOPs) progress with the RM

   b. Continue to look ahead at possible emergency classifications and PARs

   c. Maintain the RM Logbook

   d. Assist the RM in preparing notification forms for the State and NRC, as necessary and developing PARs (use EPIP-08, Off-site Notifications and Protective Action Recommendations). /R4

CAUTION
Responsibilities not delegable by the RM:

- State Notification Form approval
- Recommendation of Protective Actions
- Expenditure of Funds
- Policy setting

   e. Temporarily relieve the RM in the "Bull Pen" when RM is in conference

   f. Support the RM as needed or requested

   g. Provide operations status during PAR briefings

   h. Serve as an alternate interface to the NRC DSO and other members of the NRC Site Team

ATTACHMENT 3
EOF RM OPS ADVISOR/LOGKEEPER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Ensured all facility activities closed out. _____
2. Ensured all paperwork collected. _____
3. Closed out the RM Log, returned the logbook to the RM position notebook. _____
4. Provided all completed paperwork (not bound in the position notebook) to Emergency Planning. _____ /R4
5. Returned position notebook to RM office. _____

ATTACHMENT 3A
TYPICAL INFORMATION TO BE INCLUDED IN THE RM LOGBOOK
(Page 1 of 1)

Maintaining concise, detailed logs during an emergency event is important. Following the event, all information recorded will be needed to provide a clear picture of actions taken.

A. The following information should be included in the RM Logbook:

1. Time of each entry.
2. Emergency classification changes.
3. Notable changes in plant conditions.
4. Protective Action Recommendations and Protective Actions Implemented.
5. Summary of any directions given to other emergency responders (who was told what to do when).
6. Summary of discussions/updates with Federal, State and Local agencies.
7. Summary of discussions/updates with Emergency Managers.
8. A detailed explanation of changes to or establishment of new company policy(s).
9. Significant information, events and actions taken relative to the emergency period should be recorded.

B. Log entry requirements:

1. Time of entry.
2. Use ink.
3. Write/print legibly.
4. Use concise and accurate wording.
5. Strike through and initial changes.
6. Do not remove pages from logbook.

ATTACHMENT 4
EOF EMERGENCY TECHNICAL MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following positions are filled:

   a. EOF ERDADS Operator (minimum staff) _____

   b. EOF Nuc Fuels Engineer _____

   c. EOF Electrical Engineer _____

   d. EOF Project Engineer _____

   e. EOF Nuclear Engineer _____

   f. EOF I&C Engineer _____

   g. EOF Civil Engineer _____

   h. EOF Mech Engineer _____

   i. EOF Mech Engineer _____

   j. EOF Status Board Keeper _____

ATTACHMENT 4
EOF EMERGENCY TECHNICAL MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION	INITIAL
1. Initiate the Engineering Logbook.	_____
2. Obtain System availability status from System Operations.	_____

3. Steps to occur continually while the facility is in operation:

   a. Review need for engineering support with the RM.

   b. Log requests for engineering support.

   c. Assign engineering tasks through the EOF Project Engineer.

   d. Participate in facility briefings conducted by the RM by providing status of engineering issues and progress of technical assistance. The form provided in Attachment 4A, ETM Activities List may be used to organize briefing information.

   e. Ensure plant parameter and sequence of events data are maintained current and are correct/ reasonable.

   f. Manage engineering activities in support of the TSC.

   g. Review the redundancy of critical plant equipment.

   h. Evaluate the long term plant actions to mitigate the consequences of the event.

   i. Interface with the EOF Health Physics Manager to resolve issues involving plant components effecting plant releases.

   j. Support the RM during PAR Briefings to the State and Counties.

ATTACHMENT 4
EOF EMERGENCY TECHNICAL MANAGER CHECKLIST
(Page 3 of 3)

B. FACILITY OPERATION (continued) — INITIAL

3. (continued)

   k. Interface with the NRC Reactor Safety Coordinator when the NRC Site Team arrives at the EOF.

   l. Promptly inform the RM of engineering recommendations, determinations, or analysis results.

   m. Support recovery planning as requested by the RM by evaluating long-term plant actions to mitigate the consequences of the event.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All engineering tasks/projects are completed or assigned to a Condition Report. _____

2. All engineering paperwork is collected. _____

3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____

4. Closed out the Engineering Logbook. _____

5. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

6. Returned position notebook to the RM office. _____

ATTACHMENT 4A
ETM ACTIVITIES LIST

Item	Problem Description	Probable Cause	ETM Recommendation	Status

ATTACHMENT 5
EOF PROJECT ENGINEER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Notify the ETM when full engineering complement (as listed below) is available: _____

   a. EOF ERDADS Operator

   b. EOF Nuc Fuels Engineer

   c. EOF Electrical Engineer

   d. EOF Nuclear Engineer

   e. EOF I&C Engineer

   f. EOF Civil Engineer

   g. EOF Mech Engineer (2)

   h. EOF Status Board Keeper

3. Assign the following set-up items to the Engineering Staff: _____

   a. Synchronize clocks in the Engineering area with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room.

   b. Obtain pens, pencils, paper and other necessary supplies from the Administration area.

ATTACHMENT 5
EOF PROJECT ENGINEER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Review requests for Engineering Support (use Attachment 5A, Engineering Task and Technical Response Form) with the ETM.

   b. Assign engineering tasks.

   c. Enter engineering task assignments on Attachment 5B, Engineering Task List.

   d. Oversee progress on assigned engineering tasks

   e. Post tasks/projects being worked and status on status board in ETM office.

   f. Review completed work for accuracy.

   g. File completed task sheets (Attachment 5A, Engineering Task and Technical Response Form).

   h. Serve as alternate interface to NRC Reactor Safety Coordinator.

   i. Promptly inform the ETM of engineering recommendations, determinations or results of analyses.

   j. Provide a copy of the current Attachment 5B, Engineering Task List, to the ETM for facility status meetings/briefings.

   k. Support the EOF ETM in establishing 24-hour staffing by completing Attachment 5C, Engineering Shift Staffing Schedule and provide a copy of the completed form to the EOF Administrative Supervisor.

ATTACHMENT 5
EOF PROJECT ENGINEER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Identified all engineering tasks/projects to the ETM for final action(s). _____

2. Supported restoration of all documents, equipment, and supplies to pre-activation condition and/or location. _____

3. Provided all completed paperwork (not bound in the position notebook) to the ETM. _____

4. Returned position notebook to the RM office. _____

ATTACHMENT 5A
ENGINEERING TASK AND TECHNICAL RESPONSE FORM
(Page 1 of 1)

TO:_____ PRIORITY: 1 2 3 NO:_____

SUBJECT:	
DATE & TIME RECEIVED:	REQUESTER:
REQUEST:	
RESPONSE:	

BY:	VERIFIED:
PROJECTS:	
EMERGENCY TECHNICAL MANAGER:	
DATE & TIME:	

ATTACHMENT 5B
ENGINEERING TASK LIST
(Page 1 of 1)

To: Recovery Manager Date:____/____/____

From: Emergency Technical Manager Time:_____

TASK NO.		UNIT NO.	PRIORITY	DATE & TIME COMPLETE
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			
	Task Title:_____ _____ _____ _____ Assigned To:_____			

ATTACHMENT 5C
ENGINEERING SHIFT STAFFING SCHEDULE
(Page 1 of 1)

Emergency Technical Manager Approved:_____

	SHIFT 1	SHIFT 2	SHIFT 3
	Time_____to_____	Time_____to_____	Time_____to_____
	Date_____to_____	Date_____to_____	Date_____to_____
Emergency Tech. Mgr. EOF Ph #_____			
Projects EOF Ph #_____			
Plant Status Board EOF Ph #_____			
Nuclear EOF Ph #_____			
Mechanical EOF Ph #_____			
Electrical EOF Ph #_____			
I&C EOF Ph #_____			
Civil EOF Ph #_____			
Fuels EOF Ph #_____			
Other EOF Ph #_____			

ATTACHMENT 6
EOF ENGINEER CHECKLIST
(Page 1 of 2)

NOTE

1. This checklist applies to the following positions:

   EOF Nuclear Engineer — EOF Nuclear Fuels Engineer
   EOF Mechanical Engineer — EOF Civil Engineer
   EOF I&C Engineer — EOF Electrical Engineer

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Project Engineer. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Work tasks assigned by the EOF ETM or EOF Project Engineer.

   b. Confer with other EOF personnel as needed to complete problem resolutions.

   c. (Nuclear Fuels) perform core damage assessment in accordance with EPIP-11, Core Damage Assessment.

   d. (Nuclear Fuels) provide core damage assessment results to the EOF ETM and EOF Health Physics Manager.

   e. (Nuclear Fuels) Support Severe Accident Management Guidelines evaluations being conducted in the Technical Support Center (TSC).

   f. Keep the EOF Project Engineer apprised of status of working tasks/projects.

/R4

ATTACHMENT 6
EOF ENGINEER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

1. (continued)

   g. Document assessment/review and recommendation/ response on Attachment 5A, Engineering Task and Technical Response Form, for each task/project.

   h. Evaluate posted plant parameter data for accuracy.

   i. Ensure sequence of events board has sufficient detail to understand events in progress.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Completed all assigned tasks, as appropriate. _____

2. Returned all documents, equipment, and supplies to pre-activation condition and/or location. _____

3. Provided all completed paperwork (not bound in the position notebook) to the EOF Project Engineer. _____ /R4

4. Returned position notebook to the RM office. _____

ATTACHMENT 7
EOF ERDADS OPERATOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Project Engineer. _____

B. FACILITY OPERATION

CAUTION
Ensure data is being collected for the affected unit. Each unit has predesignated ERDADS terminals, one in the engineering area and one in the dose assessment area.

1. Check out ERDADS terminals and determine operability status. _____

   If ERDADS is inoperable or printouts are not available, Then:

   a. Assist the EOF Communicator (to TSC) in collecting plant parameter and radiological data by completing Attachment 10B (Plant Data Sheet). _____ /R4

   b. Contact TSC ERDADS Tech to report the problem. _____

ATTACHMENT 7
EOF ERDADS OPERATOR CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

2. Steps to occur continually while the facility is in operation:

   a. Callup EPIP screens and additional data as requested, refer to Attachment 7A, ERDADS Data Acquisition.

   b. Provide the following printouts to the EOF Administrative Staff:

      1. St. Lucie EOF Data Sheet (EF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

      3. Other screens, as requested.

   c. Support dose assessment by providing requested data from ERDADS.

   d. Observe ERDADS data during interval between report printing for significant changes and trends, report changes to the EOF ETM and dose assessment, as appropriate.

   e. Refer to Attachment 7B, ERDADS Data Points, to this attachment for a description of ERDAD data points.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. ERDADS system returned to pre-activation condition per the instructions on the terminal. _____

2. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

3. Returned position notebook to the RM office. _____

ATTACHMENT 7A
ERDADS DATA ACQUISITION
(Page 1 of 3)

I. DATA ACQUISITION

A. ERDADS - Emergency Response Data Acquisition and Display System, the following information is available on the display screens indicated.

1. Meteorological Data -

Display: **SMD** (Site Meteorological Data)

2. Plant Parameter Data -

CAUTION
Certain parameters (e.g., fan status) available on Unit 2 are NOT available on Unit 1.

Display: in the EOF - **EF (1/2)** (Safety Functions and Equipment Status)

3. Radiological Data -

Display: **RG (1/2)** (Radiation Gaseous Source Term) **RBS** (Health Physics Evaluation Screen - containment radiation levels and trends) **R11** (Area Radiation Monitors, Unit 1) **R21** (Area Radiation Monitors, Unit 2)

4. Chemistry Data -

Display: **R12** (S/G Blowdown, Steam Jet Air Ejector, Unit 1) **R22** (S/G Blowdown, Steam Jet Air Ejector, Unit 2)

ATTACHMENT 7A
ERDADS DATA ACQUISITION
(Page 2 of 3)

I. DATA ACQUISITION (continued)

A. (continued)

5. To access data -

1 - Press "CLEAR"
2 - Type in "Pup Unit (1/2)"
3 - Press "EXEC"ute, top of screen will read "Unit change is complete" or "Current Unit is same as entered Unit"
4 - Press "EPIP"
5 - The "PAGE UP" and "PAGE DOWN" keys will cause the following display sequence:

SMD - RG(1/2) - SF(1/2) - RBS - EF(1/2) - SMD

6. To go directly to a screen -
1 - Press "CLEAR"
2 - Type in screen designation, e.g., "**RG1**"
3 - Press "DISPLAY"

B. TSC Communicator - The TSC Communicator can be utilized as a primary source of information or as an alternate method to ERDADS.

1. Primary source - status of fans needed for dose assessment exhaust fans 6, 7, 8, 9, 10, 15, 16, and 17. /R4

ATTACHMENT 7A
ERDADS DATA ACQUISITION
(Page 3 of 3)

II. ERDADS - COLOR/SYMBOL CONVENTIONS

Color/Symbol	Explanation[1]
Numeric value in white on dark green background	Data Value is valid and within the instrument range
Numeric value blinking (yellow on blue/ red on white)	Value may be yellow on blue background (urgent alarm) or red on white background (critical alarm), indicates an alarm setting has been exceeded, the alarm must be acknowledged in the Control Room (operators are unable to acknowledge ERDADS alarms in the Simulator Control Room), the value will continue to blink until acknowledged; the value will continue to update
"BAD" (blue on white)	Preceded by a numeric value in white on a blue background signifying a suspect value indicating that one or several inputs to this composite point is/are out of instrument range, when all inputs to the point are out of range the word "BAD" replaces the numeric value
"FAILED"	Point is from a single instrument and the value is out of range
"NO DATA"	Point does not have input to ERDADS, usually point available on one unit, but not the other

[1]Based on Table 4.1 in the ERDADS Reactor Operator's Manual (8770-12058)

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 1 of 8)

The following data point descriptions for St. Lucie Plant correspond with the data normally tracked on the plant parameters status board. Consult ERDADS Manual, as necessary, for verification of point IDs, point names or description information.

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. RCS T Hot (HLA and HLB) (deg. F)	QTA541-1/2		Average	This parameter is the average of the "A" and "B" steam generator inlet temperature. It is also referred to as the average hot leg temperature. The individual "A" and "B" hot leg temperatures are derived by choosing between current narrow and wide range sensor values. The choice depends on the current values, qualities, and direction of the rates of change of the instrumentation values, as well as two pairs of overlapping switching limits and the most recent range utilized. The outputs from the calculation consist of the choice of range, the associated value, and rate of change together with the quality of each.
RCS Pressure WR (psia)	QA0501-1/2	RCS Pressure	Average	This parameter is a Reactor Coolant System (RCS) wide range instrument. It derived from Pressurizer Pressure signals PT1107-2 and PT1108-2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 2 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
RCS Pressurizer Level (%)	QA0001-1/2	PRZR LVL	Average	This parameter is pressurizer level. It is derived from Pressurizer Level control signals LT1110X-2 and LT1110Y-2 which are linear. These two signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. The top of the heaters is 73.98 inches above the lower top centerline.
Charging Flow to Regen Hx (GPM)	FT2212-1/2	RCS CHG/MU	N/A	This parameter is reactor coolant system makeup flow. It is converted to engineering units using a linear equation.
Subcooling Margin (deg. F)	QA0005-1/2	Submargin	Minimal	This parameter is derived from eight subcooled values, TMARHEAD-A-1/2, TMARRCS-B-1/2, TMARUR-A-1/2, TMARHEAD-B-1/2, TMARCET-A-1/2, TMARUR-B-1/2, TMARRCS-A-1/2, and TMARCET-B-1/2, which are provided by the Qualified Safety Parameter Display System (QSPDS). They are processed by a signal auctioneering minimum algorithm. This function finds the highest usable data value in a specified group. Each data value of the group and its quality is examined and the following quantities are obtained: 1. Lowest usable data value., 2. Point number of the lowest usable data value, 3. Number of usable data values, and 4. Lowest quality of the usable data. • For two or more usable data values, the result is the highest usable value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 3 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Avg. Core Exit Temperature (deg. F)	QA0003-1/2	Temp. Core Ex.	Average	This parameter is derived from 45 Unit 1 detectors, or 56 Unit 2 detectors located just above the upper fuel alignment plate. The Qualified Safety Parameter Display System (QSPDS) provides the values. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.
Reactor Vessel Level (%)	Unit 1: QA0004-1 Unit 2: RLEV H-2 RLEV P-2		Minimum	The reactor vessel level for Unit 1 QA0004-1 is derived from the reactor vessel levels RLEV-A-1 and RLEV-B-1 which are provided by the Qualified Safety Parameter Display System. The ERDADS select the lowest of the two values. For only one good data value, the result is set to that value and the quality is poor. The reactor vessel level for Unit 2 is displayed as reactor plenum level RLEVPB-2 and reactor head level RLEVHB-2 which is provided by the "B" side Qualified Safety Parameter Display System (QSPDS). These two parameters are displayed with no calculations being performed by the ERDADS computer system. The QSPDS obtains these values from the heated and unheated junction thermocouples located inside the reactor. They are positioned between the head and upper fuel alignment plate in the reactor internals.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 4 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Reactor Vessel Level % (continued)				Unit 1 Level Information: Head and Plenum together

Sensor	Location* (* in. to fuel alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	186 1/4	20	80
2	144 3/8	19	61
3	108	18	43
4	71 5/8	14	29
5	50 5/8	10	19
6	29 5/8	7	12
7	19 5/8	5	7
8	10 5/8	7	0

Unit 2 Level Information: Head separate from Plenum

Sensor	Location* (* in. to fuel alignment plate)	Level Segment (%)	Value if Uncovered (%)
None			100
1	170 1/2	52	48
2	140 3/4	28	20
3	111 1/8	20	0
None			100
4	98 5/8	18	82
5	74 5/8	21	61
6	53 5/8	20	41
7	32 5/8	19	22
8	12 5/8	22	0

ATTACHMENT 7B
¶2 ERDADS DATA POINTS
(Page 5 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
HPSI Total Flow (GPM)	HSITTLF-1/2	HPSI Flow	Sum	This parameter measures total HPSI flow and is derived from HPSI Header Flow signals FT3311-1/2, FT3321-1/2, FT3331-1/2 and FT3341-1/2 which are square roots. The signals are processed with a sum of inputs algorithm. This function obtains the algebraic sum of values with a good status.
LPSI Total Flow (GPM)	QA0908-1/2	LPSI Flow	Sum	This parameter measures total LPSI flow and is derived from LPSI Header Flow signals FT3312-1/2, FT3322-1/2, FT3332-1/2 and FT3342-1/2 which are square roots. These signals are processed by an algorithm which provides a sum of the inputs. This function obtains the algebraic sum of values with a good status.
Containment Temp. (deg. F)	TE07-3B-1/2	Cntmnt Temp	N/A	This parameter is a containment temperature instrument. It is converted to engineering units using a linear equation.
Containment Pressure WR (psig)	QA0507-1/2	Ctmnt Press	Average	This parameter measures containment pressure and is a wide range indicator. It is derived from Wide Range Containment Pressure signals PT07-4A1-1/2 and PT07-4B1-1/2 which are linear. They are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad.

ATTACHMENT 7B
½ ERDADS DATA POINTS
(Page 6 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
Containment Sump Level WR (Ft.)	QA0008-1/2	Cntmnt Smp WR	Maximum	This parameter is a containment sump wide range instrument. It is derived from Containment Sump Level signals LT07-13A-1/2 and LT07-13B-1/2 which are linear. They are processed by a signal auctioneering maximum algorithm. This function finds the highest usable data value in the specified group. Each data value of the group and its quality is examined and the following rules are used. • For two or more usable data values, the result is the highest usable data value and the quality is the lowest quality of the usable data. • For only one usable data value, the result is set to that value and the quality is poor. • For no usable data, the value of the result is set to the highest of all the (bad) data and the quality is bad.
Containment Hydrogen (%)	CH2-1/2	H2 Conc.	Average	This parameter is a containment hydrogen average concentration measurement. It is derived from Hydrogen Concentration signals A-HYDROGEN-1/2 and B-HYDROGEN-1/2 which are linear. These signals are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of all inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor.
SG Level A WR (%)	LT9012-1/2	SG Level A	N/A	This parameter is the "A" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 21 inches above the bottom of the U tubes.
SG Level B WR (%)	LT9022-1/2	SG Level B	N/A	This parameter the "B" steam generator wide range level instrument. It is converted to engineering units using a linear equation. LTCL = Lower Tap Center Line. The lower tap is 21 inches above the bottom of the U tubes.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 7 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
SG Pressure A (psig)	QA0021-1/2	SG Pres./A	Redundant Sensor Algorithm	This parameter is the "A" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8013A-1/2, PT8013B-1/2, and PT8013C-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
SG Pressure B (psig)	QA0022-1/2	SG Pres./B	Redundant Sensor Algorthim	This parameter is the "B" steam generator pressure. It is derived from three Steam Generator Pressure Signals, PT8023A-1/2, PT8023B-1/2, and PT8023D-1/2, which are linear. These signals are processed by a redundant sensor algorithm. This function obtains the average of the current values that have a good status and are close to the statistical majority.
Refueling Water Tank Avg. Level (Ft.)	RWTAL-1/2	BWST Level	Average	This parameter measures refueling water tank level. It is derived from three inputs. They are LT07-2A-1/2, LT07-2B-1/2, and LT07-2C-1/2. These points are processed by an average with expanded quality algorithm. This function obtains the average of all values with a good status. It also sets the quality of the result based on the number of values with good status, versus the total number of inputs. The possible status values are: • Greater than 50% of inputs have good status, result is good. • Only one good value and the total inputs are 3 or more, the result is poor. • When there are no good data values, but there are some with poor or suspect, the result is poor. • The result is suspect for all other cases except all bad, in this case the result is bad. Tank bottom refers to zero gallons.

ATTACHMENT 7B
¶₂ ERDADS DATA POINTS
(Page 8 of 8)

POINT DESCRIPTION	PT ID	POINT NAME	TYPE CALCULATION	NOTES
CHRRM. Channel (R/HR)	Unit 1: RE 26-58-1 (A Channel) RD 26-59-1 (B Channel) Unit 2: RIM 26-40-2 (A Channel) RIM 26-41-2 (B Channel)	Cntmnt. Rad	Maximum	The high containment radiation instruments for Unit 1 are the "A" side monitor RE26-58-1 and the "B" side monitor RE 26-59-1. These monitors are only range checked and flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees. The high containment radiation instruments for Unit 2 are the "A" side monitor RIM 26-40-2 and the "B" side monitor RIM 26-41-2. These monitors are only range checked and are flagged bad if out of range. Both detectors are located at the 90 foot containment elevation and are positioned at 0 and 180 degrees.

ATTACHMENT 8
EOF STATUS BOARD KEEPER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to EOF Project Engineer. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Obtain the following ERDADS data sheets (printouts) from the EOF Administrative Staff:

      1. St. Lucie EOF Data Sheet (EF 1/2).

      2. Radioactive Gaseous Source Terms (RG 1/2).

   b. Update status boards with new ERDADS data.

   c. Verify that all data has been accurately transferred to the status boards.

   d. Update the sequence of events board following each facility briefing and as needed. Provide relevant information concerning items such as:

      1. Change in classification.

      2. Significant change in plant condition.

      3. Status of plant system(s) of concern.

ATTACHMENT 8
EOF STATUS BOARD KEEPER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued)

1. (continued)

   d. (continued)

      4. Injured personnel status.

      5. Other items of relevant interest.

   e. Make corrections, when identified, by circling the corrected data.

   f. When all status board columns/blanks are filled, erase the first two columns/blanks, enter new data, with a different colored marker, leaving a space between the new and the old data.

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Status boards have been cleared and returned to pre-activation condition. _____

2. Provided all completed paperwork (not bound in the position notebook) to the EOF Project Engineer. _____ /R4

3. Returned position notebook to the RM office. _____

ATTACHMENT 9
EOF NUCLEAR LICENSING MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following positions are filled: _____

   a. EOF Communicator (4)

NOTE
Positions should be filled in this order.

   1. Hot Ring Down (HRD) Phone
   2. Emergency Notification System (ENS)
   3. TSC (direct line) (should be filled second if no ERDADS Operator is available) /R4
   4. Health Physics Network (HPN)

B. FACILITY OPERATION

1. Initiate the Licensing Logbook (use Attachment 9A, Typical Information to be included in the Logbook). _____

¶3 2. Verify INPO was notified. _____

3. Ensure backup communications devices are available and operable (work with the EOF Administrative Supervisor).

ATTACHMENT 9
EOF NUCLEAR LICENSING MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued) INITIAL

4. Steps to occur continually while the facility is in operation:

   a. Manage/supervise activities of EOF communicators (HRD, ENS, TSC, HPN).

   b. Ensure communications with the NRC (ENS, HPN) are logged by the communicators.

   c. Ensure coordination with INPO is maintained concerning industry assistance requests (if not being handled by the NDDO).

   e. Serve as primary liaison with the NRC once the Site Team arrives at the EOF, interfacing with the Emergency Response Coordinator.

      1. Ensure NRC work locations are functional.

      2. Coordinate the NRC interface with the FPL ERO, and State and County representatives in the EOF.

      3. Provide access to notification forms, press releases, and other information, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All communications links terminated. _____

2. All communications paperwork collected. _____

ATTACHMENT 9
EOF NUCLEAR LICENSING MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION (continued) — INITIAL

3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____

4. Closed out the Licensing Logbook. _____

5. Prepared Incident Report (format available in Florida Power & Light Nuclear Plant Recovery Plant) for review and approval by RM. _____

6. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

7. Returned position notebook to the RM office. _____

ATTACHMENT 9A
TYPICAL INFORMATION TO BE INCLUDED IN THE LOGBOOK
(Page 1 of 1)

Maintaining concise, detailed logs during an emergency event is important. Following the event, all information recorded will be needed to provide a clear picture of actions taken.

A. The following information should be included in the Logbook:

1. Key events (e.g., classification changes, injuries, etc.).
2. Status changes in equipment, radiological conditions, personnel, etc.
3. Decisions made or actions taken.
4. Other items of significance.

B. Log entry requirements:

1. Time of entry.
2. Use ink.
3. Write/print legibly.
4. Use concise and accurate wording.
5. Strike through and initial changes.
6. Do not remove pages from Logbook.

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 1 of 4)

NOTE

1. This checklist applies to all EOF Communicator positions as follows:

   HRD Communicator — ENS Communicator
   TSC Communicator — HPN Communicator

2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

NOTE

The first EOF Communicator to arrive at the EOF should identify himself/herself to the RM.

2. Identify availability to the EOF Licensing Manager. _____

3. Review Attachment 10A, Communications Guidelines. _____

4. (TSC) Request copy of the EC Log, completed notification forms (State and NRC) and checklists, and other pertinent information be transmitted to the EOF. _____ /R4

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 2 of 4)

B. FACILITY OPERATION — INITIAL

1. (HRD) Complete turnover with TSC HRD Communicator, assume responsibility for State/County notifications. _____

2. (ENS) Complete turnover with TSC ENS Communicator, assume lead responsibility for NRC notifications. _____

3. (TSC) Establish direct line link with TSC. _____

4. (HPN) Establish connection on NRC HP conference bridge. _____

5. Steps to occur continually while the facility is in operation:

HRD Communications

a. Assist the RM with State and County notifications by:

1. Reviewing the State notification forms (the Florida Nuclear Plant Emergency Notification and the Supplemental Data Sheet, Attachments 1 and 2 respectively in EPIP-08, Off-site Notifications and Protective Action Recommendations) for completeness. /R4

2. As necessary, ensuring Protective Action Recommendations (PARs) match the PARs Worksheet (see Attachment 3, Determination of Protective Action Recommendations (PARs) in EPIP-08). /R4

3. Ensuring the RM has approved the form.

b. Transmit the notification forms in accordance with Appendix C, Notifications From the Emergency Operations Facility (EOF) in EPIP-08. /R4

c. Request the EOF RM OPS Advisor/Logkeeper log notification times.

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 3 of 4)

B. FACILITY OPERATION (continued)

5. (continued)

> **NOTE**
> Initial contact with the NRC requires use of the NRC Reactor Plant Event Notification Worksheet (Attachment 4 to EPIP-08) notification form. Control Room or TSC personnel may have already accomplished this task. The ENS Communicator will need to ensure that an initial NRC notification form has been completed. /R4

ENS/HPN Communications

a. Maintain an open line of communication and a transmission log.

b. (ENS) Ensure notifications are initiated within 1 hour (immediately following State and County notification) of a classification/PAR change or other significant event. Refer to Appendix C in EPIP-08 if additional information is needed. /R4

c. Request the EOF RM OPS Advisor/Logkeeper log notification times.

d. Log all questions asked by NRC.

e. Obtain answers to questions from appropriate EOF Manager.

f. Obtain RM approval prior to providing additional information to the NRC.

TSC Communications

a. Maintain an open line of communication with the TSC.

ATTACHMENT 10
EOF COMMUNICATOR CHECKLIST
(Page 4 of 4)

B. FACILITY OPERATION (continued) — INITIAL

5. (continued)

   b. If ERDADS is out of service, obtain plant parameter and radiological data (use Attachment 10B, Plant Data Sheet and Radioactive Gaseous Source Terms) through phone conversation with the TSC (via the TSC EOF Communicator). /R4

   c. Clarify any discrepant information with the TSC (via the TSC EOF Communicator), as requested. /R4

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All communication links (HRD, ENS, HPN, TSC) terminated. _____

2. All communications paperwork collected. _____

3. All phone equipment returned to pre-activation condition. _____

4. Provided all completed paperwork (not bound in the position notebook) to the EOF Nuclear Licensing Manager. _____ /R4

5. Returned position notebook to the RM office. _____

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 1 of 8)

I. General Guidelines

1. Always speak clearly, firmly, and with normal tone when using any communications system.

2. The sender and receiver shall be clearly identified.

3. Message text:

   a. Communication must be free of ambiguity. Slang terms shall not be used. Avoid the use of words that sound alike; for example, avoid increase and decrease, use raise and lower instead.

   b. Communications must be specific. Use noun names for plant equipment, not acronyms; for example use low pressure safety injection pump instead of LPSI.

   c. The phonetic alphabet will be used to identify specific train, bus, channel, or equipment designations, not just letter identifier; for example, refer to the 1 Alpha heater drain pump, not the 1A heater drain pump. The following is the phonetic alphabet to be used:

A	Alpha	J	Juliet	S	Sierra
B	Bravo	K	Kilo	T	Tango
C	Charlie	L	Lima	U	Uniform
D	Delta	M	Mike	V	Victor
E	Echo	N	November	W	Whiskey
F	Foxtrot	O	Oscar	X	X-ray
G	Golf	P	Papa	Y	Yankee
H	Hotel	Q	Quebec	Z	Zulu
I	India	R	Romeo		

/R4

   d. The phonetic alphabet should not be used for stringed letter references, acceptable acronyms, or location symbols; for example, AB bus, AC or DC, TSC, respectively.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 2 of 8)

I. **General Guidelines** (continued)

4. Acknowledgement and confirmation (3-way communication) - messages shall be comprised of proper transmission, acknowledgement, and confirmation.

   a. The message is properly transmitted from the originator to the receiver.

   b. The message receiver shall acknowledge the communication by giving a functional repeat-back to the message originator. The repeat-back can be provided by either paraphrasing or explaining the message in one's own words, or by verbatim repeat-back. In all cases, verbatim repeat-back shall be used for equipment identifiers.

   c. If the message receiver does not understand the message he/she shall ask for the message to be repeated.

   d. If an incorrect repeat-back is given, the message originator shall immediately correct the miscommunication with a statement such as, "WRONG", followed by restating the correct message.

   e. The message originator shall confirm the acknowledgement (repeat-back) with a statement such as, "That is correct".

5. Use of a Call Sign is not necessary when communicating with the HP Off-site Channel radio (station ID occurs every 30 minutes automatically).

6. The Call Sign should be communicated periodically when using the LGR.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 3 of 8)

I. **General Guidelines** (continued)

7. Prior to transmission, ensure that information has been verified and approved by the appropriate authority, as necessary.

8. Ensure that any incoming pertinent information is provided to the Recovery Manager or an RM OPS Advisor/Logkeeper.

9. Maintain documentation of any significant information provided or received.

II. **Communications Systems**

1. HRD Communicator

§2 A. State Warning Point (SWP) Hot Ring Down Phone (HRD)

1. **This is the primary communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. A self-verifying phone system which is initiated by entering the 3 digit code corresponding to the desired location of contact. The phone dialing location codes are available in the St. Lucie Plant Emergency Response Directory (ERD). A confirmation ring-back (double tone) will be heard if the dialed terminal is successfully contacted. When the party answers, begin transmission by depressing the "push-to-talk" bar in the handset. Release the "push-to-talk" bar to receive response.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 4 of 8)

II. **Communications Systems** (continued)

1. (continued)

§2 B. Commercial Telephone

1. **This is the first alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. EOF Telephone System

a. Long Distance Calls (off-network):

8+1+area code+seven digit number+authorization code (if prompted)

§2 C. Emergency Satellite Communications System (ESATCOM)

1. **This is the second alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. A backup communications system to the State and Counties. To initiate transmission, lift the handset and depress the "push-to-talk" bar in the handset. Wait 3-5 seconds to hear a beep before starting to talk. The red light on the phone is a power indicator, when lit, power is available.

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 5 of 8)

II. **Communications Systems** (continued)

1. (continued)

§2 D. Local Government Radio (LGR) - CALL SIGN: KILO NOVEMBER GOLF ROMEO 8-7-4 (KNGR874)

1. **This is the third alternate communications pathway to the State Warning Point and St. Lucie and Martin Counties.**

2. A backup communications system to the Counties and indirectly to the State. The system has two low band radio frequencies. There are separate Motorola Command Series table radios, one set to the primary channel, F2 (39.180 Mhz, State channel 1) and the other set to the secondary channel, F1 (39.100 Mhz, State channel 2). The radios can be operated either by depressing the "transmit" button on the console or by removing the handset and depressing the "push-to-talk" bar in the handset. The "xmit" light is lit during transmission. (Preference should be given to using the handset).

2. ENS Communicator

A. Emergency Notification System (ENS)

1. **This is the primary communications pathway to the NRC.**

2. The ENS is part of the NRC Emergency Telecommunications System (ETS). Initiate contact by dialing one of the phone numbers provided on the phone of in the St. Lucie Plant Emergency Response Directory (ERD). The ENS will become an open line of communication at an ALERT or higher emergency class. The TSC should maintain that open line until the EOF is adequately staffed, then both the TSC and EOF should stay on the line. /R4

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 6 of 8)

II. **Communications Systems** (continued)

2. (continued)

B. Commercial Telephone

1. **This is the backup communications pathway to the NRC.**

2. EOF Telephone System

a. Long Distance Calls (off-network):

8+1+area code+seven digit number+authorization code (if prompted)

3. TSC Communicator

A. TSC Direct-line Telephone

1. This is a direct line to the Technical Support Center (TSC). Initiate contact by removing the handset from the cradle which will cause the phone in the TSC to ring. When the phone is answered, begin transmission. This link can also be initiated from the TSC.

4. HPN Communicator

A. Health Physics Network (HPN)

1. The HPN is part of the NRC Emergency Telecommunications System (ETS). The HPN will become open line of communication at an ALERT or higher emergency class. Initiate contact by dialing one of the phone numbers provided in the St. Lucie Plant Emergency Response Directory (ERD). Request that the NRC Operations Center (NRCOC) duty officer establish the HPN Bridge for St. Lucie Plant. If the TSC has already established the bridge (with the NRCOC), request to be added on. /R4

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 7 of 8)

III. **Other Communications Systems**

1. EOF Telephone System

   A. St. Lucie Plant:

      For 4000 and 7000 numbers; Dial the 4 digit extension

      For 3000 numbers; Dial 9+465-3550+the 4 digit extension

   B. Network of Interoffice:

      8+FPL network number (example - to the GO 8+552-XXXX)

   C. Intrafacility:

      Dial the 4 digit extension

   D. Local Calls (off-network):

      9+outside 7 digit number

   E. Long Distance Calls (off-network):

      8+1+area code+7 digit number+authorization code (on the phone)

   F. Local Directory Assistance

      9+411

ATTACHMENT 10A
COMMUNICATIONS GUIDELINES
(Page 8 of 8)

III. **Other Communications Systems** (continued)

2. HP Off-site Radio Channel

A. A unique 900 Mhz channel for communications with the off-site field monitoring teams. The TSC has the primary responsibility for communicating with the field teams and use of this radio in the EOF is only as a backup to the TSC. The radio is a Motorola Spectra which has been set up so that the HP Off-site Channel is the "home" channel.

1. To power-up the radio:

a. Plug the power cord into the wall outlet behind the table.

b. Press the red button on the speaker box (Astron RS-12S) to the up position, button will illuminate.

c. Depress the "pwr" button on the Spectra radio.

2. To operate the radio:

a. Depress the transmit side (with the lightning bolt) of the microphone base and begin transmission.

ATTACHMENT 10B
PLANT DATA SHEET
(Page 1 of 3)

ERDADS EF 1/2 Screen Mimic

Avg RCS T hot	
RCS Prz Pres	
RCS Prz Lvl	
Charging Flow	
Limiting Subcooling Mrgn	
Average CET	
Rx Vessel Lvl	
HPSI Flow	
LPSI Flow	
CTMT Temp	
CTMT Pres (WR)	
CTMT Sump Lvl (NR)	
CTMT H2	
S/G Level (WR) A	
S/G Level (WR) B	
S/G Pressure A	
S/G Pressure B	
RWT Level	
CHRRM Ch. A	
CHRRM Ch. B	

SAFEGUARDS

HPSI A _____
HPSI B _____
LPSI A _____
LPSI B _____
CHG PUMP A _____
CHG PUMP B _____
CHG PUMP C _____
CTMT COOLER A _____
CTMT COOLER B _____
CTMT COOLER C _____
CTMT COOLER D _____
CCW A _____
CCW B _____
CCW C _____

CIRCULATION

RCP A1 _____
RCP A2 _____
RCP B1 _____
RCP B2 _____
LPSI A _____
LPSI B _____
LPSI A1 FLOW _____
LPSI A2 FLOW _____
LPSI B1 FLOW _____
LPSI B2 FLOW _____

FEEDWATER SOURCE

MAIN FWP A _____
MAIN FWP B _____
AFW A _____
AFW B _____
AFW C _____
A MAIN FEED FLOW _____
B MAIN FEED FLOW _____
A AUX FEED FLOW (GPM) _____
B AUX FEED FLOW (GPM) _____
C AUX FEED FLOW (GPM) _____

EMERGENCY DIESEL GENERATORS

A	B
VOLTS_____	VOLTS_____
AMPS_____	AMPS_____

ELECTRICAL SYSTEMS

4160 A3 (VOLTS) _____
4160 B3 (VOLTS) _____
6900 A1 (VOLTS) _____
6900 B1 (VOLTS) _____

(EPIP06B.WPG)

ATTACHMENT 10B
PLANT DATA SHEET
(Page 2 of 3)

ERDADS RG1 Screen Mimic **1**

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
AIR TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F / 50 METER	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
05-01	A MAIN STM		MR/HR	58	A HI RANGE		R/HR
05-02	B MAIN STM		MR/HR	59	B HI RANGE		R/HR
					PRESSURE		PSIG

CHANNEL	ECCS 1A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
02-05	LOW RANGE		uC/cc	01-05	LOW RANGE		uC/cc
02-07	MID RANGE		uC/cc	01-07	MID RANGE		uC/cc
02-09	HI RANGE		uC/cc	01-09	HI RANGE		uC/cc
02-10	FLOW		SCFM	01-10	FLOW		SCFM

CHANNEL	ECCS 1B	VALUE	UNITS	CHANNEL	FUEL BLDG	VALUE	UNITS
03-05	LOW RANGE		uC/cc	04-05	LOW RANGE		uC/cc
03-07	MID RANGE		uC/cc	04-07	MID RANGE		uC/cc
03-09	HI RANGE		uC/cc	04-09	HI RANGE		uC/cc
03-10	FLOW		SCFM	04-10	FLOW		SCFM

/R4

ATTACHMENT 10B
PLANT DATA SHEET
(Page 3 of 3)

ERDADS RG2 Screen Mimic **2**

	10 METER	57.9 METER
WIND SPEED	_____MPH	_____MPH
WIND DIRECTION	_____DEG	_____DEG
CURRENT TEMP	_____DEG F	_____DEG F
DIFF TEMP	_____DEG F	

CHANNEL	MAIN STEAM	VALUE	UNITS	CHANNEL	CONTAINMENT	VALUE	UNITS
631	A MAIN STM	_____	MR/HR	40	A HI RANGE	_____	R/HR
632	B MAIN STM	_____	MR/HR	41	B HI RANGE	_____	R/HR
633	BACKGROUND	_____	MR/HR		PRESSURE	_____	PSIG

CHANNEL	ECCS 2A	VALUE	UNITS	CHANNEL	PLANT VENT	VALUE	UNITS
601	LOW RANGE	_____	uC/cc	621	LOW RANGE	_____	uC/cc
602	MID RANGE	_____	uC/cc	622	MID RANGE	_____	uC/cc
603	HI RANGE	_____	uC/cc	623	HI RANGE	_____	uC/cc
604	EFFLUENT	_____	uC/SEC	624	EFFLUENT	_____	uC/SEC

CHANNEL	ECCS 2B	VALUE	UNITS
611	LOW RANGE	_____	uC/cc
612	MID RANGE	_____	uC/cc
613	HI RANGE	_____	uC/cc
614	EFFLUENT	_____	uC/SEC

/R4

ATTACHMENT 11
COUNTY TECHNICAL ADVISOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. If arriving at EOF:

   a. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

   b. Identify availability to the EIM. _____

   c. Take a copy of your checklist when dispatched to the County. _____

OR

If arriving at the Emergency Operation's Center or having been dispatched from the EOF:

   a. Introduce yourself to the EOC staff. _____

   b. Contact the EOF and notify The EIM or an EIM/ENC Technical Advisor of your contact phone number. _____

   c. Request a copy of your checklist be telecopied to you. _____

ATTACHMENT 11
COUNTY TECHNICAL ADVISOR CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION — INITIAL

1. Steps to occur continually while the facility (EOC) is in operation:

   a. Provide overview of accident conditions and plant status.

   b. Answer technical questions and add clarification of issues not understood in the EOC.

   c. Contact personnel in the EOF for assistance in obtaining information (use the ERD).

   d. Participate in facility (EOC) briefings, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

1. Debriefed with EOC Manager. _____

2. Collected all generated paperwork. _____

3. Closed out with the EIM or EIM/ENC Technical Advisor. _____

4. Return position notebook and completed paperwork to Emergency Planning as soon as possible.

ATTACHMENT 12
EOF HEALTH PHYSICS MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following positions are filled:

   a. EOF Dose Assessor/FMT Coord (3) _____

   b. EOF HP Tech Support _____

   c. EOF Rad Status Boards Keeper _____

B. FACILITY OPERATION

1. Initiate the HP Logbook. _____

2. Conduct a turnover with the TSC Chemistry Supervisor prior to commencing dose assessment. _____

3. Conduct a turnover with the TSC HP Supervisor prior to taking over the Field Monitoring Teams. _____

4. Request that clocks in the Dose Assessment area be synchronized with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room. _____

5. Steps to occur continually while the facility is in operation:

   a. Monitor radiological conditions associated with the emergency.

   b. Manage the dose assessment and field monitoring activities in the EOF.

ATTACHMENT 12
EOF HEALTH PHYSICS MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued)

5. (continued)

c. Routinely update the RM on radiological/meteorological conditions and potential impact to the event.

d. Assist the RM in determining PARs base on radiological conditions (use Attachment 3, Determination of Protective Action Recommendations (PARs) in EPIP-08, Off-site Notifications and Protective Action Recommendations). /R4

e. Assist the EOF RM OPs Advisor / RM in determining the "Off-site Release Significance Category" as called for on the State Notification Form, as necessary. /R4

f. Review emergency dose extensions with the RM and the EC (use Attachment 12A, Exposure Limits for Emergency Response Personnel). /R4

g. Provide technical support to EOF Communicators.

h. Interface with the EOF ETM to resolve issues involving plant components affecting plant releases.

i. Provide radiological information to support the EOF EIM and the Emergency News Center (ENC).

j. Interface with the State Bureau of Radiation Control.

k. Keep the RM abreast of the status of Bureau of Radiation Control activities.

l. Interface with the NRC Protective Measures Coordinator when the NRC Site Team arrives onsite.

m. Support recovery planning as requested by the RM.

ATTACHMENT 12
EOF HEALTH PHYSICS MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All radiological assessment activities in the EOF have been terminated. _____
2. All HP paperwork is collected. _____
3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____
4. Closed out the HP Logbook. _____
5. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4
6. Returned position notebook to the RM office. _____

ATTACHMENT 12A

§2,¶4 EXPOSURE LIMITS FOR EMERGENCY RESPONSE PERSONNEL

(Page 1 of 1)

NOTE

1. Both Total Dose (TEDE) and Thyroid Dose (CDE) should be used for purposes of controlling exposure.
2. Protective clothing, including respirators, should be used where appropriate.

For the following missions, the exposure limit is[1]:	Total Dose[2] (TEDE)	THYROID[3] (CDE)
Performance of actions that would not directly mitigate the event, minimize escalation, or minimize effluent releases.	5 REM	50 REM
Performance of actions that mitigate the escalation to the event, rescue persons from a non-life threatening situation, minimize exposures or minimize effluent releases.	10 REM	100 REM
Performance of actions that decrease the severity of the event or terminate the processes causing the event in an attempt to control effluent releases to avoid extensive exposure of large populations. Also, rescue of persons from a life-threatening situation.	25 REM	250 REM
Rescue of person from a life-threatening situation. (Volunteers[4] should be above the age of 45.)	(5)	(5)

(1) Exposure limits to the lens of the eye are 3 times the Total Dose (TEDE) values listed.

(2) Total Dose (TEDE) is the total whole body exposure from both external and internal (weighted) sources - Total Effective Dose Equivalent.

(3) Thyroid Dose (CDE) commitment from internal sources - Committed Dose Equivalent. The same dose limits also apply to other organs (CDE), skin (Shallow Dose Equivalent) and extremities (Extremity Dose Equivalent).

(4) Volunteers with full awareness of risks involved including numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects.

(5) No upper limit for Total Dose (TEDE) and/or Thyroid Dose (CDE) exposure has been established because it is not possible to prejudge the risks that one person should be allowed to take to save the life of another. Also, no specific limit is given for thyroid exposure since in the extreme case, complete thyroid loss might be an acceptable sacrifice for a life saved. This should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning.

/R4

ATTACHMENT 13
EOF DOSE ASSESSOR/FMT COORD CHECKLIST
(Page 1 of 2)

NOTE

1. The responsibilities of the FMT Coordinator are provided in EPIP-10, Off-Site Radiological Monitoring.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____
2. Identified availability to RM (serve as initial EOF HP Manager)

   OR

   Identified availability to EOF HP Manager. _____

B. FACILITY OPERATION

NOTE

1. Initial operating instructions for use of the Class A Model are provided in EPIP-09, Off-Site Dose Calculations.
2. If the computerized Class A Model is not available, dose assessment shall be conducted in accordance with EPIP-09.

1. Establish communication link with the TSC Dose Assessor. _____
2. Request all previous dose calculation paperwork from the TSC. _____
3. Complete Class A Model QC check. _____

ATTACHMENT 13
EOF DOSE ASSESSOR/FMT COORD CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

4. Steps to occur continually while the facility is in operation:

   a. Obtain input data for the Class A Model from the EOF ERDADS Operator (RG 1/2 Screen).

   b. Coordinate dose assessment with the TSC.

   c. Provide status board update information to the EOF Rad Status Board keeper (use the "Status Board" printout from the Class A Program.

   d. Coordinate dose assessment with the State Bureau of Radiation Control.

   e. Review/compare field monitoring results with dose calculations.

   f. Report dose assessment results to the EOF HP Manager.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All dose assessment activities terminated. _____

2. TSC communications link terminated. _____

3. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____

4. All paperwork collected. _____

5. Provided all completed paperwork (not bound in the position notebook) to EOF HP Manager. _____ /R4

6. Returned position notebook to the RM office. _____

ATTACHMENT 14
EOF HP TECH SUPPORT CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to EOF Health Physics Manager. _____

B. FACILITY OPERATION

1. Synchronize clocks in the HP area with ERDADS. In case of ERDADS failure, synchronize with the affected Control Room. _____

2. Steps to occur continually while the facility is in operation:

   a. Assist in dose assessment and/or field monitoring activities, as needed.

   b. Ensure HP data posted on status boards are current.

   c. Provide support to the EOF Health Physics Manager as requested.

   d. Support the EOF Health Physics Manager in establishing 24 hour staffing, report staffing to the EOF Administrative Supervisor.

   e. Provide HP technical information/support to the Emergency News Center (ENC) and assist with press briefings, as necessary.

ATTACHMENT 14
EOF HP TECH SUPPORT CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Assisted with termination of all HP activities in the EOF/ENC. _____

2. All documents, equipment, and supplies returned to pre-activation condition and/or location. _____

3. Provided all completed paperwork (not bound in the position notebook) to the EOF HP Manager. _____ /R4

4. Returned position notebook to the RM office. _____

ATTACHMENT 15
EOF RAD STATUS BOARD KEEPER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Health Physics Manager. _____

B. FACILITY OPERATION

1. Verify HP Emergency Kit inventory. _____

2. Steps to occur continually while the facility is in operation:

   a. Obtain data from the EOF Dose Assessor and EOF FMT Coordinator.

   b. Update status boards with new radiological data.

   c. Verify that all data has been accurately transferred to the status boards.

   d. Make corrections, when identified, by circling the corrected data.

   e. When all status board columns/blanks are filled, erase the first two columns/blanks, enter new data, with a different colored marker, leaving space between the new and the old data.

ATTACHMENT 15
EOF RAD STATUS BOARD KEEPER CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Status boards have been cleared and returned to pre-activation condition. _____

2. Equipment and supplies have been returned to the HP Emergency Kit. _____

3. Provided all completed paperwork (not bound in the position notebook) to the EOF HP Manager. _____ /R4

4. Returned position notebook to the RM office. _____

ATTACHMENT 16
EOF ADMINISTRATIVE SUPERVISOR CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the Recovery Manager. _____

3. Direct an EOF Administrative staff member to post all EPIP revision numbers on the status board. _____

4. Ensure facility public address system is turned on (amplifier in Administration area, Room 102) and conduct a test page using the RM microphone.

   a. Coverage includes the Bullpen and the surrounding office areas.

   b. Coverage DOES NOT include the Emergency News Center (ENC). _____

5. Ensure the "Videolink" system is turned on.

   a. Turn on the master video switch located in the rack mount cabinet in Room 132 (key #14 in keybox).

   b. In the "Bullpen" turn on the two television sets using the remote controls (one for each television set) on the RM table.

   c. Set the channel selector to channel 7 and adjust volume.

ATTACHMENT 16
EOF ADMINISTRATIVE SUPERVISOR CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION — INITIAL

1. Ensure procedures, other documents and drawings are available and the revision numbers verified. _____

2. Steps to occur continually while the facility is in operation:

   a. Manage EOF Administrative Staff.

   b. Ensure photocopiers, telecopiers, computers, printers, and telephones are maintained operable.

   c. Supervise distribution of all data, notification forms, and other information.

   d. Facilitate distribution of clerical supplies to all groups in the EOF.

   e. Coordinate with facility managers or designee, to establish 24 hour staffing and completing Attachment 2A, EOF ERO Shift Staffing, Emergency Response Organization and Shift Staffing, (all positions should be filled, except as authorized by the RM).

   f. Ensure arrangements for food, water, and other necessities are made for next 48 to 72 hours, if necessary.

   g. Arrange for hotel reservations and car rentals for incoming personnel as directed by the RM.

   h. Work with the RM for authorization for the expenditure of funds.

ATTACHMENT 16
EOF ADMINISTRATIVE SUPERVISOR CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Supervised facility walkthrough to ensure all documents, equipment, and supplies were returned to pre-activation condition and/or location. _____

2. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

3. Returned position notebook to the RM office. _____

ATTACHMENT 17
EOF ADMINISTRATIVE STAFF CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the EOF Administrative Supervisor. _____

3. Verify procedures by posting revision numbers on the status board. Post all procedures (EPIP, HP, Chem). Consult Control Copy 1 in the Recovery Manager's Office or follow the steps below to print out an EPIP list. _____

   a. In Lotus Notes, click on the PSL Procedures Icon.

   b. On the Search line toolbar, click the far right button (with 2 circles and a down arrow).

   c. Select Group Search from the drop down menu.

   d. In the Search line type "EP" (where the "XX" is).

   e. Click Search or hit Enter.

   f. EPIP list is now displayed (not in any particular order).

   g. To print the list:

      - Click File.
      - Select Print from the drop down menu.
      - Select View Options in the dialogue box.
      - Click OK.

ATTACHMENT 17
EOF ADMINISTRATIVE STAFF CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION

1. All photocopiers, telecopiers, computers, printers, etc. energized and problems reported to EOF Administrative Supervisor. _____

2. Switchboard phone manned. _____

3. Establish log for incoming/outgoing telecopiers, using Attachment 17A, Telecopy Log. _____

4. Steps to occur continually while the facility is in operation:

   a. Provide clerical supplies to all groups in the EOF, as needed.

   b. Produce required/requested copies, retain originals.

   c. Distribute copies, telecopies, etc. to recipients as quickly as possible (e.g., ERDADS data sheets, notification forms, news releases, etc.).

   d. Provide any incoming telecopy materials to the RM, RM OPS Advisor/Logkeeper or as designated on the cover page.

   e. Assist the EOF Administrative Supervisor in establishing 24 hour staffing.

   f. Perform duties assigned by the EOF Administrative Supervisor.

ATTACHMENT 17
EOF ADMINISTRATIVE STAFF CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. All photocopiers, telecopiers, computers, printers, etc. de-energized and problems reported to EOF Administrative Supervisor. _____

2. Conducted facility walkthrough to ensure all documents, equipment, and supplies were returned to pre-activation condition and/or location. _____

3. EOF phone switchboard set to "night call". _____

4. Provided completed paperwork (not bound in the position notebook) to the EOF Administrative Supervisor. _____ /R4

5. Returned position notebook to the RM office. _____

ATTACHMENT 17A
EOF TELECOPY LOG
(Page 1 of 1)

___Incoming ___Outgoing Phone Number:_____ Date:____/____/____

Message #	Description	Received From	Time	Pages

Receiving Operator:_____

ATTACHMENT 18
EOF EMERGENCY SECURITY MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Identify availability to the RM. _____

§3 3. Establish controls to ensure all EOF personnel comply with the requirements of the Fitness for Duty Rule. _____

4. Verify operability of the intoxilyzer. _____

5. Ensure EOF security force established. _____

B. FACILITY OPERATION

1. Establish access control for the EOF and Emergency News Center (ENC). _____

2. Contact the TSC Security Supervisor. _____

   a. Establish responsibility/protocol for notification of off-site authorities regarding the status of site evacuation.

3. Initiate the Security Logbook. _____

4. Steps to occur continually while the facility is in operation:

   a. Advise RM on security related matters.

§2 b. Provide liaison function between local law enforcement and rescue agencies and FPL for issues such as:

      1. Bomb threats or acts of terrorism.

ATTACHMENT 18
EOF EMERGENCY SECURITY MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued) INITIAL

4. (continued)

b. (continued)

2. Members of the public or the media arriving at the site.

3. Site egress and ingress.

4. Fire or rescue/medical response.

c. Coordinate safeguards suspension with the TSC Security Supervisor.

d. Monitor site accountability status.

e. Interface with NRC Safeguards/Security Coordinator when the NRC Site Team arrives at the EOF.

f. Track status of injured personnel taken to an off-site medical facility (use Attachment 18A, Injured Person Report).

g. Maintain the Security Logbook.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. All paperwork collected. _____

2. Closed out with the local law enforcement agencies. _____

3. Closed out Security Logbook. _____

ATTACHMENT 18
EOF EMERGENCY SECURITY MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION	INITIAL	
4. Provided all completed paperwork (not bound in the position notebook) to the RM.	_____	/R4
5. Returned position notebook to the RM office.	_____	
6. All access badges returned to pre-activation location.	_____	
7. Facility sweep completed.	_____	
8. Facility locked and alarm set.	_____	

ATTACHMENT 18A
INJURED PERSON REPORT
(Page 1 of 1)

NAME:		EMPLOYER: ☐ FPL ☐ OTHER (list company name)	JOB DESCRIPTION:
TIME INJURED:	TIME REPORTED:	NATURE OF INJURY:	LOCATION WHERE INJURY OCCURRED:
IS THE VICTIM CONTAMINATED? ☐ NO ☐ YES		WHAT BODY PARTS CONTAMINATED?	LEVEL OF CONTAMINATION AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM
TRANSPORTED TO HOSPITAL? ☐ NO ☐ YES		HOW TRANSPORTED?	NAME OF HOSPITAL OR OTHER LOCATION
ACTIVITY AT THE TIME INJURY OCCURRED		CURRENT MEDICAL CONDITION	
MISC. INFO.			

NAME:		EMPLOYER: ☐ FPL ☐ OTHER (list company name)	JOB DESCRIPTION:
TIME INJURED:	TIME REPORTED:	NATURE OF INJURY:	LOCATION WHERE INJURY OCCURRED:
IS THE VICTIM CONTAMINATED? ☐ NO ☐ YES		WHAT BODY PARTS CONTAMINATED?	LEVEL OF CONTAMINATION AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM AREA____ LEVEL____ ____DPM ____CPM
TRANSPORTED TO HOSPITAL? ☐ NO ☐ YES		HOW TRANSPORTED?	NAME OF HOSPITAL OR OTHER LOCATION
ACTIVITY AT THE TIME INJURY OCCURRED		CURRENT MEDICAL CONDITION	
MISC. INFO.			

ATTACHMENT 19
NUCLEAR DIVISION DUTY OFFICER CHECKLIST
(Page 1 of 2)

NOTE
1. The following information is provided when responding in the EOF.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Initiate the Emergency Control Officer (ECO) Logbook. _____

2. Notify INPO that an Alert (or higher) emergency class was declared. _____

3. Steps to occur continually while the facility is in operation:

   a. Maintain 24-hour per day on-call availability.

   b. Serve as a technical advisor for the ECO.

      1. Serve as advisor to the EIM on technical matters that may aid in the formation of news releases.

      2. Serve as advisor to the GAM, Risk Manager, or to State and County agencies on technical matters.

      3. Make notifications for the ECO, as directed.

      4. Serve as "interim ECO" in the EOF during periods of time when the ECO leaves the facility.

ATTACHMENT 19
NUCLEAR DIVISION DUTY OFFICER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

3. (continued)

c. Maintain a record of the event and activities in the ECO Logbook (use Attachment 19A, Typical Information to be Included in the ECO Logbook).

d. Request that INPO assist FPL by performing the following:

1. As requested, submit press releases over Nuclear Network.

2. Promptly inform FPL of any media inquiries or industry offers to provide assistance by contacting you (NDDO) in the EOF (or other location) at your number.

3. Record all conversations with INPO in detail in the ECO Logbook.

C. FACILITY CLOSEOUT AND RESTORATION

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Terminated assistance to the ECO. _____

2. Collected all paperwork. _____

3. Closed out the ECO Log, returned the Logbook to the ECO position notebook office. _____

4. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

5. Returned position notebook to the RM office. _____

ATTACHMENT 19A
TYPICAL INFORMATION TO BE INCLUDED IN THE ECO LOGBOOK

(Page 1 of 1)

Maintaining concise detailed logs during an emergency event is very important. Following the event, all information recorded will be needed to provide a clear picture of actions taken. Regulatory agencies will use this information to evaluate the adequacy of mitigative and corrective actions taken by the Emergency Responders:

The following information should be included in the ECO Logbook:

- Time of each entry.
- Summary of any directions given to other Emergency Responders (i.e., who was told what to do when).
- Summary of discussions with Emergency Managers.
- Summary of discussions with the President - Nuclear Division.

Do not remove pages from the Logbook.

ATTACHMENT 20
EMERGENCY CONTROL OFFICER CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Steps to occur continually while the facility is in operation:

   a. Approve news releases.

   b. Serve as official spokesperson for the Nuclear Division.

   c. Ensure the RM is aware of the primary concerns of the media/public.

   d. Act as the chief nuclear officer.

   e. Keep the RM abreast of activities involving the Governmental Affairs Manager and Risk Manager, if they are not in the EOF.

   f. Maintain awareness of plant status and radiological conditions.

ATTACHMENT 20
EMERGENCY CONTROL OFFICER CHECKLIST
(Page 2 of 2)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

> NOTE
> All paperwork completed in the position notebook should remain in the position notebook.

1. Spokesperson responsibilities have been returned to Corporate Communications. _____

2. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

3. Returned position notebook to the RM office. /R4

ATTACHMENT 21
GOVERNMENTAL AFFAIRS MANAGER CHECKLIST
(Page 1 of 2)

NOTE
1. The following information is provided when responding in the EOF.
2. When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

2. Verify that the following are notified:

   a. Gov Affairs Rep (Tallahassee) _____

   b. Governor's Advisor _____

   c. Governmental Affairs Assistant _____

   d. Aviation Department _____

B. FACILITY OPERATION

NOTE
The liaison function between the ECO and public officials is accomplished by the GAM in conjunction with the Governmental Affairs Assistant, Governmental Affairs Representative in Tallahassee and the Governor's Advisor.

1. Steps to occur continually while the facility is in operation:

   a. Share informational updates.

   b. Refer any specific questions or comments from elected or political authorities to the ECO.

ATTACHMENT 21
GOVERNMENTAL AFFAIRS MANAGER CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) — INITIAL

1. (continued)

   c. Report summaries of interface with governmental officials routinely to the ECO.

   d. Promptly report rumors that could significantly impact emergency response capability to the ECO.

   e. Keep a log of all significant information.

C. FACILITY CLOSEOUT AND RESTORATION

1. All off-site interfaces have been discontinued. _____

2. Turnover and closeout provided to the ECO regarding liaison activities with off-site officials. _____

3. All paperwork collected. _____

4. All completed paperwork forwarded to Emergency Planning. _____

ATTACHMENT 22
EMERGENCY INFORMATION MANAGER CHECKLIST
(Page 1 of 3)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

		INITIAL
A.	FACILITY ACTIVATION	
1.	Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions.	_____
2.	Obtain an update from the ECO or RM.	_____
3.	Re-establish contact with the Emergency News Center (ENC) Manager.	_____
4.	Re-establish contact with the "acting" EIM.	_____
5.	Resume responsibility for all communications, as appropriate.	_____
6.	Determine when sufficient staff is present to handle all further media briefings from the ENC.	_____
7.	Recommend to the ECO that the ENC should be declared operational: Operational at_____.	_____
B.	FACILITY OPERATION	
1.	Request that clocks in the ENC be synchronized with EOF (based on ERDADS).	
2.	Issue a news release announcing operation of the ENC, its location and the media phone number.	_____
3.	Ensure a County Technical Advisor is dispatched to St. Lucie and Martin Counties.	_____
4.	Direct an EIM/ENC Technical Advisor to keep Logbook.	_____

ATTACHMENT 22
EMERGENCY INFORMATION MANAGER CHECKLIST
(Page 2 of 3)

B. FACILITY OPERATION (continued)

5. Steps to occur continually while the facility is in operation:

   a. When developing updates, subsequent statements and/or news releases, obtain approval from the ECO.

   b. Coordinate reviews with State, County and Federal representatives in the EOF.

   c. Ensure that all FPL news releases are delivered to the EOF Administrative Staff for distribution to the appropriate agencies (including the Corporate Communications (CC) staff in Juno Beach).

   d. Ensure that all FPL news releases are delivered to the ENC and shared among the participants in the joint news center prior to briefings.

   e. Conduct new briefings (use Attachment 22A, News Briefing Guidelines, to this attachment).

   f. Attend EOF briefings and meetings, especially those called to determine State and County Protective Action Recommendations (PARs) if possible.

ATTACHMENT 22
EMERGENCY INFORMATION MANAGER CHECKLIST
(Page 3 of 3)

C. FACILITY CLOSEOUT AND RESTORATION — INITIAL

NOTE
As necessary, continued interface with the media should be in accordance with standard Corporate Communications procedures.

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

1. Media notified of ENC deactivation. _____

2. ENC returned to pre-activation condition. _____

3. County Technical Advisors recalled. _____

4. Provided all completed paperwork (not bound in the position notebook) to the RM. _____ /R4

ATTACHMENT 22A
NEWS BRIEFING GUIDELINES
(Page 1 of 1)

NOTE

These guidelines are taken from the Corporate Communications Nuclear Emergency Plan (CCNEP). For additional information, the CCNEP should be consulted.

1. In coordination with the ENC Manager, schedule and moderate media briefings in the ENC Media Briefing Room.

2. These briefings should be proceeded by a briefing in the ENC to determine the following:

   A. Who has announcements

   B. What the announcements are

   C. What priority they should be in

3. Briefings should be conducted every hour.

4. Use the ECO, other FPL decisionmakers, FPL technical staff and representatives from State, County and Federal emergency agencies as spokespersons.

5. Use FPL's technical advisors to conduct background briefings between news briefings, as appropriate.

6. During the briefing, refer the media's questions to the agency having jurisdiction of the subject of the question.

ATTACHMENT 23
EIM/ENC TECHNICAL ADVISOR CHECKLIST
(Page 1 of 2)

NOTE
When necessary or appropriate, steps of this checklist may be performed out of sequence.

A. FACILITY ACTIVATION — INITIAL

1. Refer to section 5.0 of this procedure (included in the position notebook) and review the general instructions. _____

B. FACILITY OPERATION

1. Initiate the EIM Logbook. _____

2. Steps to occur continually while the facility is in operation:

   a. Gather information and ensure the EIM is up-to-date on the emergency status in the following areas:

      - Emergency Classifications
      - Corresponding Emergency Action Levels (EALs)
      - Associated Protective Action Recommendations (PARs)
      - Plant conditions and parameters

   b. Assist the EIM with interpreting technical data to ensure accuracy of news releases.

   c. Assist in obtaining data from the EOF staff for use in news releases, as needed (pay particular attention to updates of radiological information through dose assessment).

ATTACHMENT 23
EIM/ENC TECHNICAL ADVISOR CHECKLIST
(Page 2 of 2)

B. FACILITY OPERATION (continued) INITIAL

2. (continued)

d. Verify that you are on the routing lists for the following information:

- HP/Chemistry data
- ETM/ERDADS updates
- Nuclear licensing/communications data

e. Review content of news releases for technical accuracy.

f. Ensure that the ENC is receiving accurate, up-to-date information needed for media backgrounders.

g. Conduct technical briefings, as requested.

C. FACILITY CLOSEOUT AND RESTORATION

NOTE
All paperwork completed in the position notebook should remain in the position notebook.

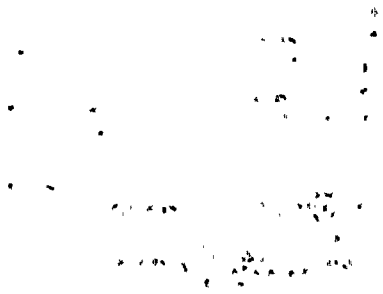
1. Assisted EIM in ENC closeout. _____

2. Returned all documents, equipment and supplies to pre-activation condition and/or location. _____

3. Closed out the EIM Log, returned Logbook to the EIM position notebook, and returned the notebook to the RM office. _____

4. Provided all completed paperwork (not bound in the position notebook) to the EIM. _____ /R4

5. Returned position notebook to RM office. _____



FPL

ST. LUCIE PLANT

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAFETY RELATED

Procedure No.
EPIP-08
Current Revision No.
3
Effective Date
06/15/01

Title:

OFF-SITE NOTIFICATIONS AND PROTECTIVE ACTION RECOMMENDATIONS

Responsible Department: **EMERGENCY PLANNING**

REVISION SUMMARY:

Revision 3 – THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Improved instructions for notification by clarifying responsibilities & revising notification checklists, improved PAR instructions by creating separate attachment, relocated procedure information, added instructions for alternate MET data, added caution regarding classification of multiple events, added note to Control Room appendix identifying attachments necessary to complete notification checklists, and made editorial and administrative changes. (J. R. Walker, 06/11/01)

Revision 2 – Added new NRC Notification form and revised title of form throughout procedure. Clarified turnover responsibilities between EC and RM. Deleted EC turnover guidance (including in EC procedure). Improved overview information regarding PARs. Added reference to NUREG-1022. Clarified instructions for determining "time contact made." Added notes identifying the availability of information from printouts of the Class A model to assist in completion of off-site notification forms. Updated directions for completion of NRC Notification Form. Made administrative / editorial changes. (R. Walker, 01/18/01)

Revision 1 – THIS PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Added definition, instruction section and added guidance on preparing the supplemental data sheet. Removed EC or RM signature from the PAR worksheets, deleted caution and instructions to review previously issued PARS and made the supplemental data sheet a required document for notifications with 60-minute time limits. (S. Knapp, 09/11/00)

Revision	FRG Review Date	Approved By	Approval Date
0	05/30/00	R. G. West Plant General Manager	05/31/00
3	06/07/01	R. G. West Plant General Manager N/A Designated Approver N/A Designated Approver (Minor Correction)	06/11/01

S___OPS	
DATE	
DOCT	PROCEDURE
DOCN	EPIP-08
SYS	
COM	COMPLETED
ITM	3

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SECTION PAGE

ATTACHMENTS (continued)

1.0 PURPOSE

1.1 Discussion

1. This procedure provides information and instructions for undertaking notifications of the State Warning Point (SWP) and the Nuclear Regulatory Commission (NRC) and for determination of Protective Action Recommendations (PARS).

2. This procedure is for use in the Control Room, Technical Support Center (TSC) and Emergency Operations Facility (EOF).

3. Upon declaration of an emergency classification the Nuclear Plant Supervisor (NPS) assumes the duties of the Emergency Coordinator (EC). The EC has initial responsibility for off-site notifications and PARs.

4. Once the EOF is operational and proper turnover has been conducted, the Recovery Manager (RM) assumes responsibility for off-site notifications and PARs from the EC.

5. At an Alert or higher level emergency, communications with the NRC transition to an open phone line from the TSC and the EOF (at a Site Area Emergency of higher level emergency).

6. The following table illustrates which facility has a responsibility for Classification, Notification or PARs.

	Control Room (**X** until EC function transfers to the TSC)	**TSC** (**X** when operational)	**EOF** (**X** when operational)
Classifications	**X** transfers →	**X**	
Notifications	**X** transfers →	**X** transfers →	**X**
PARs	**X** transfers →	**X** transfers →	**X**

7. Off-site Notification

   A. Purpose of Off-Site Notifications

   FPL is required to notify off-site agencies in the event of any emergency that could threaten the health and safety of the public. These notifications provide an early warning to agencies responsible for public protection.

1.1 Discussion (continued)

7. (continued)

NOTE

The State Department of Health (Bureau of Radiation Control) may not have their office staffed on a 24-hour basis. In the event that they do not answer the Hot Ring Down (HRD) telephone, the State Warning Point (SWP) assumes responsibility for notifying their duty officer.

B. Who Shall Be Notified

- State Division of Emergency Management
- State Department of Health (Bureau of Radiation Control)
- St. Lucie County Emergency Operations Center
- Martin County Emergency Operations Center
- NRC

1. State and County Notification

   a. State and local agencies are notified by using the Hot Ring Down (HRD) telephone. The HRD rings the State Warning Point (SWP). The SWP puts the other agencies on line and reduces the need for individual calls.

   b. ¶4 After the State Coordinating Officer (SCO) arrives in the EOF, he / she can transfer "NET Control" to the EOF. When this occurs, the Recovery Manager's PAR Briefing becomes the primary notification method for the State and Counties. The Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 1) and the Supplemental Data Sheet (form similar to Attachment 2) should still be completed and provided to the SCO or his / her designee in the EOF. The EOP HRD Communicator should no longer contact the State Warning Point (SWP).

1.1 Discussion (continued)

7. B. (continued)

2. NRC Notification

a. The NRC is notified using the Emergency Notification System (ENS) telephone.

b. NRC notifications occur through an open line of communication in the TSC and, when operational, the EOF.

C. Emergency Follow-up Information Requests from State and local agencies.

1. Incoming calls should come via the SWP over the HRD phone. If the HRD is inoperable, the SWP may use commercial telephone or ESATCOM (emergency satellite phone). If an off-site authority contacts the plant without going through the SWP, request that they contact the SWP. SWP shall verify that the agency calling is a risk county or the Department of Health (DOH) and shall notify other county and state agencies of the updated information, thus reducing the number of calls that may be directed to the plant.

2. Long, detailed explanations of plant systems or reactor theory should be avoided. If prompted for this kind of information by the State Duty Officer, he / she should be referred to the Nuclear Division Duty Officer (NDDO).

3. If the State or one of the Counties provides either the TSC or EOF with new or pertinent information, Then bring that information to the attention of the EC or EC Assistant / Logkeeper in the TSC or the RM or the RM OPS Advisor / Logkeeper in the EOF.

1.1 Discussion (continued)

8. Protective Action Recommendations

A. Protective actions for the general public are ordinarily NOT required prior to declaration of a General Emergency. It is possible however, that due to unusually stable and constant meteorological conditions, protective actions could be recommended at a Site Area Emergency based on projected doses. This is the exception rather than the rule.

Protective actions for the general public are required to be recommended if a General Emergency is declared. Initial Protective Action Recommendations (PARs) are normally based on plant conditions. This would NOT be true if the General Emergency was declared based on off-site dose (either measured or projected) or a Security Emergency (per the Security Plan). The predetermined minimum PARs (based on plant conditions) are as given below.

B. General Emergency - Minimum PARs

1. In any case where a GENERAL EMERGENCY has been declared, the minimum PAR shall be:

Shelter all people within a 2-mile radius and out to 5 miles in the sectors affected. The sectors affected are at least three, the downwind sector plus the two adjacent sectors.

2. If a GENERAL EMERGENCY has been declared due to actual or projected severe core damage, the minimum PAR shall be:

Evacuate all people within a 2-mile radius from the plant and out to 5 miles in the sectors affected. Shelter all people in the remaining sectors from 2 to 5 miles and from 5 to 10 miles from the plant.

1.1 Discussion (continued)

8. B. (continued)

3. If a GENERAL EMERGENCY has been declared due to loss of physical control of the plant to intruders, including the Control Room or any other area(s) vital to the operation of the reactor system (as defined in the Security Plan), the minimum PAR shall be:

   Evacuate all people within a 2-mile radius from the plant and out to 5 miles in the sectors affected. Shelter all people in the remaining sectors from 2 to 5 miles and from 5 to 10 miles from the plant.

C. Once a release of radioactive material occurs, dose assessment should be utilized when evaluating PARs. The final determination of the PAR should consider all available information including off-site dose projections, plant conditions and field monitoring data. The most conservative recommendation shall be made.

D. If it is anticipated that a PAR threshold will be exceeded, DO NOT wait until the threshold is exceeded to make that PAR.

2.0 REFERENCES / RECORDS REQUIRED / COMMITMENT DOCUMENTS

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on a data sheet.

2.1 References

1. St. Lucie Plant Updated Final Safety Analysis Report (UFSAR) Unit 1 and Unit 2
2. St. Lucie Plant Technical Specifications Unit 1 and Unit 2
3. §1 St. Lucie Plant Radiological Emergency Plan (E-Plan)
4. E-Plan Implementing Procedures (EPIP 00 – 13)
5. St. Lucie Plant Emergency Response Directory (ERD)
6. QI-17-PSL-1, Quality Assurance Records

2.2 Records Required

1. All PAR worksheets and notifications forms (all attachments) shall be maintained in plant files in accordance with QI-17-PSL-1.

2.3 Commitment Documents

1. ¶1 PMAI PM96-04-165, "ITR 96-006" (Unusual Event Declared Due to Dropped Rod)
2. ¶2 PMAI PM96-09-185, Condition Report CR-96-1750 (Off-site Notification Using Commercial Phone)

(continued on next page)

2.3 Commitment Documents (continued)

3. ¶3 NRC Inspection Report 91-01, Closure of IFIs 89-31-03 and 89-31-01

4. ¶4 Condition Report CR-00-0428 (Evaluated Exercise Critique)

5. ¶6 PMAI PM96-05-233 (Off-site Notification Process)

6. ¶7 PMAI PM99-09-016 (PARs Based on FMT Data, Completion of NRC Notification Form)

7. ¶8 NUREG-1022, Event Reporting Guidelines 10 CFR 50.72 and 50.73, Section 4.2.4, ENS Event Notification Worksheet (NRC Form 361).

8. ¶9 Condition Reports CR-01-0726 and CR-01-0742 (NOUEs Associated with SDC During SL1-17 Outage)

9. ¶10 Condition Report CR-01-0389 (Alternate Met Data Source)

3.0 RESPONSIBILITIES

3.1 Emergency Coordinator – Responsible for classifications, notifications and PARs.

3.2 Recovery Manager – Responsible for notifications and PARs.

3.3 Duty Call Supervisor – Assists the EC with filling-out the notification forms and performing notifications following EC approval.

3.4 TSC EC Assistant / Logkeeper or TSC OPS Coordinator – Prepares notification forms (Attachment 1, Florida Nuclear Plant Emergency Notification Form, Attachment 2, Supplemental Data Sheet, and if necessary Attachment 4, NRC Reactor Plant Event Notification Worksheets) for EC approval when the TSC is operational.

3.5 EOF RM OPS Advisor / Logkeeper – Prepares notification forms (Attachment 1, Attachment 2 and if necessary Attachment 4) for RM approval when the EOF is operational.

3.6 TSC HRD Communicator – Assists the TSC EC Assistant / Logkeeper or TSC OPS Coordinator with notification form preparation and makes calls to complete notifications to the SWP.

3.7 EOF HRD Communicator – Assists the EOF RM OPS Advisor with form preparation and makes calls to complete notifications to the SWP and the SCO following transfer of Net Control by the Division of Emergency Management (DEM).

3.8 TSC Chemistry Supervisor (in his absence, TSC Dose Assessor) – Assists the EC with radiological dose assessment data and PARS.

3.9 EOF HP Manager (in his absence, EOF Dose Assessor) – Assists the RM with radiological dose assessment data and PARS.

3.10 TSC Supervisor – Oversees communications performed by the TSC Communicators (HRD, ENS, Health Physics Network (HPN), Sound-Powered Phonetalker, EOF and Field Monitoring Team).

3.11 EOF Nuclear Licensing Manager – Oversees EOF communications performed by the EOF Communicators (HRD, ENS, HPN and TSC).

3.12 Information Services – Maintains user copies, in the Unit 1 and Unit 2 Control Rooms, of the following checklist and supporting attachments for making notifications and developing Protective Action Recommendations:

- Appendix A, Notifications from the Affected Control Room
- Attachment 1 – Florida Nuclear Plant Emergency Notification Form
- Attachment 1A – Directions for Completing the Florida Nuclear Plant Emergency Notification Form
- Attachment 3 – Determination of Protective Action Recommendations (PARs)
- Attachment 4 – NRC Reactor Plant Event Worksheet
- Attachment 4A – Directions for Completing the NRC Reactor Plant Event Worksheet

4.0 DEFINITIONS

4.1 **Conservative** – Means more extensive or comprehensive action under a given set of circumstances to provide a greater measure of safety. For example, evacuation is more conservative than sheltering.

4.2 **Emergency** – Any off-normal event or condition which is classified into one of the four emergency classes (Unusual Event, Alert, Site Area Emergency, or General Emergency) by the NPS in accordance with EPIP-01, Classification of Emergencies.

4.3 **Emergency Coordinator (EC)** – The title initially assumed by the NPS, until relieved by plant management through proper turnover, in the event of plant conditions that trigger implementation of the Emergency Plan. The EC is responsible for notifying off-site authorities, emergency responders both inside and outside the company and has full authority and responsibility for on-site emergency response actions. The EC is also responsible for Protective Action Recommendations during the initial stages of an emergency.

4.4 **Florida Nuclear Plant Emergency Notification Form** – A predetermined format used by nuclear power plants throughout the State for notification and local authorities.

4.5 **Operational** (status for an emergency facility) – The mandatory minimum staff is present and the facility has taken responsibility for its procedurally assigned functions.

4.6 **Protective Action Recommendations** (PARs) – Recommendations, for action instructions to protect the public, made by the Emergency Coordinator or Recovery Manager to State and County officials. FPL may recommend No Action, Sheltering or Evacuation.

4.7 **Recovery Manager** (RM) – A designated company officer or senior manager, who will have responsibility for the direction and control of the EOF. He / she has the authority to establish policy and to expend funds necessary to cope with emergency situations that trigger the implementation of the Emergency Plan.

4.8 **Release** (during any declared emergency)

1. Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values.

OR

2. Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

4.9 **State Notification Form (SNF)** – Less formal, more concise expression used in lieu of Florida Nuclear plant Emergency Notification Form.

5.0 INSTRUCTIONS

5.1 State and County Notification

1. Time Limits

   A. Notification shall be initiated within 15 minutes of any of the following:

      1. Recognition of entry into the Emergency Plan.
      2. Escalation in Emergency Class.
      3. De-escalation of the Emergency Class.
      4. Protective Action Recommendation.
      5. Change in Protective Action Recommendation.

   B. Notification shall be initiated within 60 minutes of any of the following:

      1. At an Alert or higher Emergency Class, the time of the last update (unless a different frequency has been agreed to by the off-site agencies as during a hurricane).
      2. A radiological release has been initiated.
      3. A radiological release has been terminated.
      4. A significant change in plant conditions has occurred (e.g., loss or restoration of off-site power or major plant equipment).
      5. Termination of the emergency.

5.1 State and County Notification (continued)

2. Forms Required for Notifications

CAUTION
Notifications require the use of a form similar to Attachment 1, Florida Nuclear Plant Emergency Notification Form. The Supplemental Data Sheet shall only be transmitted with a newly completed SNF.

A. Notifications with 15 minute time limits shall be made using a form similar to Attachment 1, Florida Nuclear Plant Emergency Notification Form.

NOTE
The Supplemental Data Sheet (Attachment 2) is NOT intended for use by the Control Room and should NOT be prepared by or transmitted from that facility.

B. A form similar to the Supplemental Data Sheet (Attachment 2) should also be prepared and transmitted with the SNF. It is permissible to prepare and transmit the "Plant Conditions Information" section only, when dose assessment data is unavailable.

C. Notifications with 60 minute time limits shall be made using a form similar to Attachment 1, Florida Nuclear Plant Emergency Notification Form, and a form similar to the Supplemental Data Sheet (Attachment 2). It is permissible to prepare and transmit the "Plant Conditions Information" section only, when dose assessment data is unavailable.

3. Special instructions due to extraordinary circumstances.

A. If Emergency Class escalation is necessary due to rapidly degrading conditions and

1. the transmission of the SNF has NOT been initiated, Then a new notification form should be filled-out describing the latest Emergency Class and conditions, but also including reference to the rapid escalation through the lower classification (e.g., the "Additional Information or Update" section of the form should include a statement similar to "Reactor Coolant System leakage had increased rapidly and did not allow for separate notification of an Unusual Event").

OR

5.1 State and County Notification (continued)

3. A. (continued)

2. the transmission of a completely filled-out and approved SNF is underway, Then provide the State and County authorities with the initial notification information by transmitting lines 1-6, at a minimum, of the SNF and terminate the phone call by stating that a new notification form will be provided within 15 minutes.

CAUTION

There can not be two concurrent declared emergency classes under the St. Lucie Plant Radiological Emergency Plan.

B. If one Unit is in a classified event and the same or the other Unit enters into an event where the same or lesser Emergency Class would apply, Then a new classification should NOT be declared. The event should be documented on a SNF as "Additional Information or Update" and issued as soon as practicable.

C. If one Unit is in a classified event and the other Unit enters into a more severe event in which a higher Emergency Class would apply, Then the new classification shall be declared and promptly, within the regulatory time limits, issued to the State, Counties and the NRC.

4. ¶4 Transfer of NET Control

A. The State Coordinating Officer (SCO) can transfer the control of Hot Ring Down (HRD) NET from the State Warning Point (SWP) to the EOF. When this occurs;

1. The RM shall do face to face communication to satisfy off-site notification requirements for the State and Counties. Calls to the SWP are no longer necessary.

2. The Florida Nuclear Plant Emergency Notification Form (Attachment 1) and the Supplemental Data Sheet (Attachment 2) shall continue to be filled out.

3. Completed notification forms are to be provided to the SCO or his / her designee in the EOF.

END OF SECTION 5.1

5.2 Nuclear Regulatory Commission (NRC) Notification

1. Time Limits

NOTE

Notification of the NRC is expected immediately after notification of State and local agencies. The one-hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

A. The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes (10 CFR 50.72 (a)(3)).

2. Special Instructions

A. Initial notification to the NRC using the Emergency Notification System (ENS) (usually done from the Control Room) should use Attachment 4, NRC Reactor Plant Event Notification Worksheet.

B. At an Alert or higher emergency class, the NRC will want to establish an open line of communication with the Control Room, utilizing an ENS conference bridge tying in the licensee with NRC Headquarters and region personnel. Once the Technical Support Center (TSC) is operational, the Control Room should transfer responsibility for NRC communications to the TSC.

C. The Emergency Operations Facility (EOF) should join the TSC on the ENS conference bridge and take the lead for NRC communications.

D. The TSC and EOF should also utilize the Health Physics Network (HPN) line in a manner similar to the ENS (i.e., establish a conference bridge with the NRC).

E. Both the ENS and HPN Communicators in both facilities should keep logs of information transmitted and received from the NRC in accordance with procedures.

END OF SECTION 5.2

5.3 ¶1 Erroneous Information

1. If erroneous information is transmitted to off-site agencies and the error is discovered prior to event termination, a correction should be provided in an update. The need for and urgency of providing the update is dependent upon the importance of the error.

2. If erroneous information is transmitted to off-site agencies and the error is discovered after event termination, the Licensing Department should be consulted to determine the need and method for contacting the off-site agencies with corrected information.

END OF SECTION 5.3

APPENDIX A
NOTIFICATIONS FROM THE AFFECTED CONTROL ROOM
(Page 1 of 6)

INITIAL

CAUTION

- §1 Notification of State and local agencies shall be made as soon as practicable within 15 minutes of declaration of an Emergency Class.
- ¶3 A new Florida Nuclear Plant Emergency Notification Form shall be completed for all updates.

NOTE

¶9 1. Completion of this checklist requires the following Attachments (all from EPIP-08):

Attachment 1 – Florida Nuclear Plant Emergency Notification Form

Attachment 1A – Directions for Completing the Florida Nuclear Plant Emergency Notification Form

Attachment 3 – Determination of Protective Action Recommendations (PARs)

Attachment 4 – NRC Reactor Plant Event Notification Worksheet

Attachment 4A – Directions for Completing the NRC Reactor Plant Event Notification Worksheet

2. Checklist Part 1 is for State Warning Point notification.

3. Checklist Part 2 is for NRC notification.

1. State Warning Point Notification

A. Prepare the Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 1) in accordance with Attachment 1A, Directions for Completing the Florida Nuclear Plant Emergency Notification Form. _____

APPENDIX A
NOTIFICATIONS FROM THE AFFECTED CONTROL ROOM
(Page 2 of 6)

1. (continued) INITIAL

B. Obtain the Emergency Coordinator (EC) approval. _____

NOTE

1. Primary notification method to the State Warning Point (SWP) is to use the Hot Ring Down (HRD) phone.

2. If the HRD is out-of-service, alternate notification methods are provided in Section E, below.

C. Using the State HOT RING DOWN (HRD) Phone, dial 100. _____

D. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State Duty Officer answers, announce "This is St. Lucie Nuclear Plant [as applicable (Unit 1, 2)] with an emergency message. I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy." Allow the Duty Officer to contact St. Lucie County, Martin County and the Bureau of Radiation Control prior to transmitting the information from the notification form. When the parties are on line, provide the information slowly (e.g., in three word intervals) and deliberately, providing time for the information to be written down. _____

APPENDIX A
NOTIFICATIONS FROM THE AFFECTED CONTROL ROOM
(Page 3 of 6)

1. (continued) INITIAL

E. Alternate Notification Methods (in order of priority)

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

1. Alternate 1 – Commercial Phone

a. Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Nuclear Plant [as applicable (Unit 1 / 2)] with an emergency declaration. My callback number is _____." _____

b. Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

c. ¶2 Request callback from the State Warning Point to verify that they notified St. Lucie County, Martin County and the Bureau of Radiation Control. _____

APPENDIX A
NOTIFICATIONS FROM THE AFFECTED CONTROL ROOM
(Page 4 of 6)

1. E. (continued) INITIAL

2. Alternate 2 - ESATCOM

NOTE
Use ESATCOM only if Alternate 1 – commercial phone is not available.

a. Hold down the "push-to-talk" button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk. _____

b. Announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1 / 2)] with an emergency declaration." Then release the "push-to-talk" button in order to listen. _____

c. When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Nuclear Plant [as applicable (Unit 1 / 2)] declaring a / an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Announce "St. Lucie clear" at the end of the conversation. _____

APPENDIX A
NOTIFICATIONS FROM THE AFFECTED CONTROL ROOM
(Page 5 of 6)

1. E. (continued) INITIAL

NOTE
Use Local Government Radio (LGR) only if Alternate 1 and Alternate 2 are both unavailable. LGR communications can be made with St. Lucie County and Martin County Emergency Operations Centers (EOCs) who will relay to the State Warning Point and they relay to the Bureau of Radiation Control.

3. Alternate 3 – Local Government Radio

a. On channel 2, contact the county EOCs by holding down the push-to-talk button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Plant [as applicable (Unit 1 / 2)] with an emergency declaration. Over." Then release the "push-to-talk" button in order to listen. When St. Lucie County replies, direct them to standby while you contact Martin County. _____

b. When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Plant [as applicable (Unit 1 / 2)] declaring a / an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. Over." _____

c. When the counties give the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Request St. Lucie County (if they are unable, Martin County) callback to verify that they notified the State Warning Point and the Bureau of Radiation Control. _____

e. End the conversation by announcing "This is St. Lucie Nuclear Plant [as applicable (Unit 1 / 2)], KNGR 874, over and out." _____

END OF PART 1

APPENDIX A
NOTIFICATIONS FROM THE AFFECTED CONTROL ROOM
(Page 6 of 6)

INITIAL

CAUTION
Notification of the NRC is expected immediately after notification of State and local agencies. The one hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

2. §1 NRC Notification

A. Prepare the NRC Reactor Plant Event Notification Worksheet (form similar to Attachment 4) in accordance with Attachment 4A, Directions for Completing the NRC Reactor Plant Event Notification Worksheet. _____

B. Obtain EC approval. _____

NOTE
1. Primary notification method to the NRC is to use the Emergency Notification System (ENS) phone.
2. If the ENS is out-of-service an alternate notification method is provided in Section D, below.

C. Transmit the form by dialing one of the numbers shown on the phone or in the Emergency Response Directory (ERD). _____

D. Alternate Notification Method

1. If the ENS is out-of-service, Then use a commercial phone to accomplish the above. _____

END OF PART 2

END OF APPENDIX A

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 1 of 6)

INITIAL

CAUTION

- §1 Notification of State and local agencies shall be made as soon as practicable within 15 minutes of declaration of an Emergency Class.
- ¶3 A new Florida Nuclear Plant Emergency Notification Form shall be completed for all updates.

NOTE

- Checklist Part 1 is for the HRC Communicator.
- Checklist Part 2 is for the ENS Communicator.

1. State Warning Point Notification

   A. Prepare the Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 1) in accordance with Attachment 1A, Directions for Completing the Florida Nuclear Plant Emergency Notification Form.

   B. Verify the Emergency Coordinator (EC) approval. _____

NOTE

1. Primary notification method to the State Warning Point (SWP) is to use the Hot Ring Down (HRD) phone.
2. If the HRD is out-of-service, alternate notification methods are provided in Section E, below.

   C. Using the State HOT RING DOWN (HRD) Phone, dial 100. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 2 of 6)

1. (continued) INITIAL

D. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State Duty Officer answers, announce "This is St. Lucie Nuclear Plant Technical Support Center with an emergency message. I am standing by to transmit Florida Nuclear Plant Emergency Notification Form and Supplemental Data Sheet information when you are ready to copy." Allow the Duty Officer to contact St. Lucie County, Martin County and the Bureau of Radiation Control prior to transmitting the information from the notification forms. When the parties are on line, provide the information slowly (e.g., in three word intervals) and deliberately, providing time for the information to be written down. _____

E. Alternate Notification Methods (in order of priority)

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

1. Alternate 1 – Commercial Phone

a. Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Nuclear Plant Technical Support Center with an emergency declaration. My callback number is _____." _____

b. Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

c. ¶2 Request callback from the State Warning Point to verify that they notified St. Lucie County, Martin County and the Bureau of Radiation Control. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 3 of 6)

1. **E.** (continued) INITIAL

2. Alternate 2 - ESATCOM

NOTE
Use ESATCOM only if Alternate 1 – commercial phone is not available.

a. Hold down the "push-to-talk" button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk. _____

b. Announce "State Warning Point, this is St. Lucie Nuclear Plant Technical Support Center with an emergency declaration." Then release the "push-to-talk" button in order to listen. _____

c. When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Nuclear Plant Technical Support Center declaring a / an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Announce "St. Lucie clear" at the end of the conversation. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 4 of 6)

1.. E. (continued) INITIAL

NOTE
Use Local Government Radio (LGR) only if Alternate 1 and Alternate 2 are both unavailable. LGR communications can be made with St. Lucie County and Martin County Emergency Operations Centers (EOCs) who will relay to the State Warning Point and they relay to the Bureau of Radiation Control.

3. Alternate 3 – Local Government Radio

a. On channel 2, contact the county EOCs by holding down the push-to-talk button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Plant Technical Support Center with an emergency declaration. Over." Then release the "push-to-talk" button in order to listen. When St. Lucie County replies, direct them to standby while you contact Martin County. _____

b. When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Plant Technical Support Center declaring a / an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. Over." _____

c. When the counties give the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Request St. Lucie County (if they are unable, Martin County) callback to verify that they notified the State Warning Point and the Bureau of Radiation Control. _____

e. End the conversation by announcing "This is St. Lucie Nuclear Plant Technical Support Center, KNGR 874, over and out." _____

END OF PART 1

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 5 of 6)

INITIAL

CAUTION

Notification of the NRC is expected immediately after notification of State and local agencies. The one-hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

NOTE

1. Primary notification method to the NRC is to use the Emergency Notification System (ENS) phone.

2. If the ENS is out-of-service, an alternate notification method is provided in Section B, below.

2. §1 NRC Notification

A. Choose and complete the appropriate steps, below:

1. If the NRC Reactor Plant Event Notification Worksheet has NOT previously been transmitted from the Control Room, Then request that the EC Assistant / Logkeeper prepare the form. _____

2. Verify EC approval. _____

3. Transmit the form by dialing one of the numbers shown on the phone or in the Emergency Response Directory (ERD), then GO TO the next step to establish an open line of communication with the NRC. _____

OR

4. If the NRC Reactor Plant Event Notification Worksheet has previously been transmitted by the Control Room, Then initiate an open line of communication with the NRC by dialing one of the numbers shown on the phone or in the ERD and request to be placed on the Conference Bridge with the NRC. _____

5. As requested, provide information to the NRC. _____

APPENDIX B
NOTIFICATIONS FROM THE TECHNICAL SUPPORT CENTER (TSC)
(Page 6 of 6)

2. (continued) INITIAL

B. Alternate Notification Method

1. If the ENS is out-of-service, Then use a commercial phone to accomplish the above. _____

END OF PART 2

END OF APPENDIX B

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)

INITIAL

CAUTION

- §1 Notification of State and local agencies shall be made as soon as practicable within 15 minutes of declaration of Emergency Class or change in Protective Action Recommendation (PAR).
- ¶3 A new Florida Nuclear Plant Emergency Notification Form shall be completed for all updates.

NOTE

- Checklist Part 1 is for the HRD Communicator.
- Checklist Part 2 is for the ENS Communicator.

1. State Warning Point Notification

   A. Prepare the Florida Nuclear Plant Emergency Notification Form (form similar to Attachment 1) in accordance with Attachment 1A, Directions for Completing the Florida Nuclear Plant Emergency Notification Form.

   B. Verify the Recovery Manager (RM) approval. _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 2 of 8)

1. (continued) INITIAL

NOTE

1. Primary notification method to the State Warning Point (SWP) is to use the Hot Ring Down (HRD) phone.
2. If the HRD is out-of-service, alternate notification methods are provided in Section D, below.
3. State and County representatives means Florida Division of Emergency Management (DEM), Florida Department of Health (DOH), St. Lucie County Department of Public Safety (DPS) and Martin County Department of Emergency Services (DES).
4. Notification forms means the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet.

C. Choose and complete the appropriate step below:

1. If State and County representatives are NOT co-located with the FPL Emergency Response Organization (ERO) in the EOF, Then call the SWP and transmit the notification forms. To contact the SWP, dial 100. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State Duty Officer answers, announce "this is St. Lucie Nuclear Plant Emergency Operations Facility with an emergency message. I am standing by to transmit the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet information when you are ready to copy." Allow the Duty Officer to contact the Bureau of Radiation Control, St. Lucie County DPS and Martin County DES prior to transmitting the information from the notification forms. When the parties are on line, transmit the information slowly, (e.g., in three word intervals) and deliberately, providing time for the information to be written down. _____

OR

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 3 of 8)

1. C. (continued) INITIAL

2. If State and County representatives are co-located with the FPL ERO in the EOF and the State Coordinating Officer (SCO) has NOT assumed Net Control, Then call the SWP and transmit the notification forms – "Time of Contact" corresponds to the start time of the Recovery Manager's Protective Action Recommendation (PAR) Briefing. To contact the SWP, dial 100. Hold down the button on the handset while talking. This must be done each time you talk. Release the button in order to listen. When the State Duty Officer answers, announce "this is St. Lucie Nuclear Plant Emergency Operations Facility with an emergency message. I am standing by to transmit the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet information when you are ready to copy." Allow the Duty Officer to contact the Bureau of Radiation Control, St. Lucie County DPS and Martin County DES prior to transmitting the information from the notification forms. When the parties are on line, transmit the information slowly, (e.g., in three word intervals) and deliberately, providing time for the information to be written down. _____

OR

3. If State and County representatives are co-located with the FPL ERO in the EOF and the SCO has transferred Net Control to the EOF, Then the SWP is not called (completed notification forms are given to the SCO – may be accomplished by the RM or RM OPS Advisor / Logkeeper). _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 4 of 8)

1. (continued) INITIAL

D. Alternate Notification Methods (in order of priority)

NOTE
Use of the commercial telephone as an alternate notification method requires callback verification from the State Warning Point. Use of ESATCOM or Local Government Radio as an alternate notification method should include a callback verification number if available (e.g., cellular phone).

1. Alternate 1 – Commercial Phone

a. Call the State Warning Point using the phone number in the St. Lucie Plant Emergency Response Directory (ERD). Announce "This is St. Lucie Nuclear Plant Emergency Operations Facility with an emergency declaration. My callback number is _____." _____

b. Hang up the phone and standby for the callback. When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

c. ¶2 Request callback from the State Warning Point to verify that they notified St. Lucie County, Martin County and the Bureau of Radiation Control. _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 5 of 8)

1. **D.** (continued) INITIAL

2. Alternate 2 - ESATCOM

NOTE
Use ESATCOM only if Alternate 1 – commercial phone is not available.

a. Hold down the "push-to-talk" button on the handset and wait 3-5 seconds to hear a beep before you start talking. This must be done each time you talk. _____

b. Announce "State Warning Point, this is St. Lucie Nuclear Plant Emergency Operations Facility with an emergency declaration." Then release the "push-to-talk" button in order to listen. _____

c. When the State Warning Point acknowledges, announce "State Warning Point, this is St. Lucie Nuclear Plant Emergency Operations Facility declaring a / an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy." When the State Warning Point gives the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Announce "St. Lucie clear" at the end of the conversation. _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 6 of 8)

1. D. (continued) INITIAL

NOTE
Use Local Government Radio (LGR) only if Alternate 1 and Alternate 2 are both unavailable. LGR communications can be made with St. Lucie County and Martin County Emergency Operations Centers (EOCs) who will relay to the State Warning Point and they relay to the Bureau of Radiation Control.

3. Alternate 3 – Local Government Radio

a. On channel 2, contact the county EOCs by holding down the push-to-talk button and announcing "St. Lucie County EOC, this is St. Lucie Nuclear Plant Emergency Operations Facility with an emergency declaration. Over." Then release the "push-to-talk" button in order to listen. When St. Lucie County replies, direct them to standby while you contact Martin County. _____

b. When both counties are online, announce "Martin and St. Lucie County EOCs, this is St. Lucie Nuclear Plant Emergency Operations Facility declaring a / an (classification), repeat (classification). I am standing by to transmit Florida Nuclear Plant Emergency Notification Form information when you are ready to copy. Over." _____

c. When the counties give the go-ahead, provide the information from the Florida Nuclear Plant Emergency Notification Form. _____

d. Request St. Lucie County (if they are unable, Martin County) callback to verify that they notified the State Warning Point and the Bureau of Radiation Control. _____

e. End the conversation by announcing "This is St. Lucie Nuclear Plant Emergency Operations Facility, KNGR 874, over and out." _____

END OF PART 1

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 7 of 8)

INITIAL

CAUTION

Notification of the NRC is expected immediately after notification of State and local agencies. The one-hour time limit in 10 CFR 50.72 (a)(3) is to ensure timely NRC notification in cases where notification of State and local agencies is delayed or prolonged.

2. §1 NRC Notification

NOTE

1. Primary notification method to the NRC is to use the Emergency Notification System (ENS) phone.

2. If the ENS is out-of-service, an alternate notification method is provided in Section B, below.

A. Choose and complete the appropriate steps, below:

1. If the NRC Reactor Plant Event Notification Worksheet has NOT previously been transmitted from either the Control Room or Technical Support Center (TSC), Then request that the RM OPS Advisor prepare the form. _____

2. Verify RM approval. _____

3. Transmit the form by dialing one of the numbers shown on the phone or in the Emergency Response Directory (ERD), then GO TO the next step to establish an open line of communication with the NRC. _____

OR

4. If the NRC Reactor Plant Event Notification Worksheet has previously been transmitted by either the Control Room or the TSC, Then initiate an open line of communication with the NRC by dialing one of the numbers shown on the phone or in the ERD and request to be placed on the Conference Bridge with the NRC and the St. Lucie TSC. _____

5. Take the lead in providing information to the NRC. _____

APPENDIX C
NOTIFICATIONS FROM THE EMERGENCY OPERATIONS FACILITY (EOF)
(Page 8 of 8)

2. (continued) INITIAL

B. Alternate Notification Method

1. If the ENS is out-of-service, Then use a commercial phone to accomplish the above. _____

END OF PART 2

END OF APPENDIX C

ATTACHMENT 1
FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 1 of 1)

1. A. ☐ THIS IS A DRILL B. ☐ THIS IS AN ACTUAL EVENT

2. A. Time / Date contact made_____ B. Reported by: (Name / Title)_____
   C. Message Number_____ D. Reported from: ☐ Control Room ☐ TSC ☐ EOF

3. Site: A. ☐ Crystal River Unit 3 B. ☐ St. Lucie Unit 1 C. ☐ St. Lucie Unit 2
   D. ☐ Turkey Point Unit 3 E. ☐ Turkey Point Unit 4

4. Accident Classification A. ☐ Notification of Unusual Event C. ☐ Site Area Emergency
   B. ☐ Alert D. ☐ General Emergency

5. Current Emergency Declaration: Time:_____ Date:_____

6. Reason for Emergency Declaration:* _____

7. Additional Information or Update: _____

8. Injuries Requiring Offsite Support: A. ☐ No ☐ Yes ☐ Unknown B. Contaminated: ☐ No ☐ Yes ☐ Unknown

9. Weather Data: A. Wind direction from _____ degrees
   B. Downwind Sectors Affected (minimum of 3): _____, _____, _____, _____

10. Release Status: A. ☐ No Release (Go to Item 12) C. ☐ A Release occurred, but stopped
    B. ☐ A Release is occurring

11. Offsite Release Significance Category (at the Site Boundary):
    A. ☐ Information not available at this time.
    B. ☐ Release within normal operating limits (≤ 3.5 E-1 ci/sec noble gas, ≤ 4.6 E-5 ci/sec iodine)
    C. ☐ Non-Significant Fraction of PAG Range (release is > normal limits and < 500 mR TEDE and 1000 mR CDE)
    D. ☐ PAG Range (≥ 500 mR TEDE or ≥ 1000 mR CDE)

12. Utility Recommended Protective Actions:
    A. ☐ None B. ☐ Shelter Zones / Areas:_____
    Evacuate Zones / Areas:_____
    OR C. ☐

Miles	No Action Sectors	Evacuate Sectors	Shelter Sectors
0 – 2			
2 – 5			
5 – 10			

13. Has Event Been Terminated?: A. ☐ No B. ☐ Yes: Time:_____ Date:_____

14. Supplemental Form is Attached?: A. ☐ No B. ☐ Yes:

    EC or RM Approval Signature:_____ Time:_____ Date:_____

15. Message Received By: Name:_____ Time:_____ Date:_____

* If emergency class escalation is known to be necessary and a new notification form will be transmitted within 15 minutes, then you may go to line 15.

END OF ATTACHMENT 1

¶6 ATTACHMENT 1A
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM

(Page 1 of 6)

ITEM ENTRY

1. Check appropriate box for drill or actual emergency as the case may be. During exercises, drills, or tests, each message shall be checked **THIS IS A DRILL.**

2A. Enter the time (using the official time, normally synchronized with ERDADS) when contact is made with the State Warning Point or the start time of the RM PAR Briefing. For initial notification of classification, this shall be within 15 minutes of the "Current Emergency Declaration" time in item 5.

2B. Enter the name and title of person making the notification call (e.g., John Doe, Duty Call Supervisor).

2C. Enter the message number beginning with #1 and following sequentially in all facilities (e.g., if the Control Room transmitted two messages the TSC would start with #3).

2D. Check the box for the facility from which the notification is being made.

3. Site
Check the box for the appropriate plant site for the emergency declaration (both St Lucie boxes might need to be checked for dual unit events such as approach of a hurricane).

4. Accident Classification
Check the box corresponding to current accident classification declared by the EC.

5. Current Emergency Declaration
Enter the emergency declaration **time** and **date** (as determined by the EC) for the current accident classification.

6. Reason for Emergency Declaration
Enter wording like that found in the Emergency Action Level (EAL) information in EPIP-01, Classification Of Emergencies. Wording should be brief yet descriptive enough for the off-site agencies to gain an understanding of the event. It should be clear from the incident description which EAL has necessitated the emergency declaration. Wording should be as non-technical as possible with no acronyms or abbreviations. This information should remain the same throughout update messages, unless there is a classification change. (The EC has this information.)

ATTACHMENT 1A
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 2 of 6)

7. Additional Information or Update
Enter additional information, if necessary, or reason for update here. For example:

- Protective Action Recommendations (PARs) change
- An occurrence that would otherwise result in a lower emergency classification, on other unit
- Weather changes affecting public safety
- Radiation level changes
- Loss of off-site power, etc.

8. Injuries Requiring Off-site Support

NOTE
Keep checking the same boxes, in item 8, on subsequent notifications unless a first injury occurs, status of contamination becomes known or erroneous data is being corrected. The checked box is to alert the County that patient transport is involved in the emergency. That fact does not change even though the transport may have already occurred during a previous notification.

A. Check the appropriate box. Check box for "Yes" only if an injury occurs that involves off-site support (EMS, hospital). Check "Unknown" if the extent of the injury is unknown at this time or if it is not yet known if off-site treatment is necessary.

B. Check the appropriate box. Check box for "Unknown" only if the nature of the injury has prevented thorough monitoring on-site or if there is any doubt whether contamination is present.

ATTACHMENT 1A
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 3 of 6)

NOTE
If the Class A Model (dose projection model) is being used, a 'State Notification Form Summary Sheet' is available which provides information for completion of items 9-12. The information is in a format similar to that found on the Florida Nuclear Plant Emergency Notification Form.

9. Weather Data

NOTE
10 meter data should be used.

A. ¶10 Wind direction can be obtained from ERDADS by depressing the "EPIP" key, on the top row of the keyboard. The Met Tower Indicator Panel in the Unit 1 Control Room is an alternate source. If these two sources are not available, refer to Attachment 1, Meteorological Data, in EPIP-09, Off-Site Dose Calculations.

B. If the wind direction is greater than 360° the wind direction is determined by subtracting 360° from the indicated number. Wind direction should be rounded to the nearest whole number.

C. Wind direction is always given as "wind from" (an easterly wind, or wind direction 90°, means that the wind is blowing from east to west).

D. When determining the sectors affected, the adjacent sectors on both sides of the actual downwind sector are included. Three sectors will typically be listed.

E. If the wind is located on the edge of a sector (i.e., 11°, 33°, etc.) and additional (fourth) sector should be added.

F. Enter the wind direction (wind from) in degrees in item "A."

ATTACHMENT 1A
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 4 of 6)

9. (continued)

G. Enter the downwind sectors in item "B."

Wind From	Sectors Affected	Wind From	Sectors Affected	Wind From	Sectors Affected
348-11	HJK	123-146	PQR	236-258	CDE
11-33	JKL	146-168	QRA	258-281	DEF
33-56	KLM	168-191	RAB	281-303	EFG
56-78	LMN	191-213	ABC	303-326	FGH
78-101	MNP	213-236	BCD	326-348	GHJ
101-123	NPQ	There is no "O" sector		There is no "I" sector	

10. Release Status

A. If there are no indications of a release of radioactive material, check box "A" and go to item 12.

A release of radioactive material (during any declared emergency) is defined as:

- Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values

OR

- Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

B. If a release of radioactive material is occurring, even though it may be less than normal operating limits, check box "B."

C. If a release has occurred but stopped, check box "C."

Specific dose information should be supplied on the supplemental data sheet after the TSC is declared operational at an Alert or higher classification.

Dose Assessment personnel in the TSC or EOF will have this information. The TSC Chemistry Supervisor, TSC HP Supervisor or EOF HP Manager should be contacted for the data.

ATTACHMENT 1A
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 5 of 6)

11. Offsite Release Significance Category
Do Not Check Any Box in Item 11 if you Checked Box 10 "A" No Release

A. If a release is occurring or has occurred and dose information is not available at the time of notification, check box "A" and follow up as soon as information becomes available.

B. Check box "B" if both noble gas and iodine release rates are less than or equal to the following:

Noble Gas release ≤ 3.5 E+5 µci/sec (3.5 E-1 Ci/sec)
Iodine release ≤ 4.6 E+1 µci/sec (4.6 E-5 Ci/sec)

C. Check box "C" if either noble gas or iodine release rates exceed the values in "B" (above) but forecasted 1 mile doses are less than either 500 mrem TEDE or 1000 mrem Thyroid CDE. These doses are less than the state's Protective Action Guide (PAG) levels.

D. Check box "D" if forecasted 1 mile doses are greater than or equal to either 500 mrem TEDE or 1000 mrem Thyroid CDE. These PAG levels require state and county action.

12. Utility Recommended Protective Actions

A. If there are no protective action recommendations (PARs), check Box "A."

B. This box pertains to Crystal River or may be used by off-site agencies and should not be used by FPL.

C. If PARs are necessary, then check Box "C." Determine appropriate PARs using the guidance in Attachment 3 to this procedure. Copy the PARs into item 12 "C." Indicate PARs using only the words NONE, ALL, ALL REMAINING or by listing the letters of the sectors affected. Protective Action Recommendations shall be approved by the Emergency Coordinator (EC) or the Recovery Manager (RM).

ATTACHMENT 1A
DIRECTIONS FOR COMPLETING THE FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM
(Page 6 of 6)

13. Has Event Been Terminated?

A. Check box "A" if the event has not been terminated. DO NOT ENTER A TIME OR DATE.

B. Check box "B" if the event has been terminated and enter the time and date of termination. The EC has this information.

14. Supplemental Form Is Attached?

NOTE
The Supplemental Data Sheet is NOT for use in the Control Room.

A. Check box "A" unless a Supplemental Data Sheet has been completed for this particular message.

B. Check box "B" if a Supplemental Data Sheet is accompanying this message.

The Emergency Coordinator (EC) or Recovery Manager (RM) shall sign to indicate approval to transmit the information contained on the form unless the second page (Supplemental Data Sheet) is signed for a two-page notification. The EC or RM Approval Signature line is not numbered because the state and counties do not need this information. DO NOT ATTEMPT TO TRANSMIT THIS INFORMATION VIA HOT RING DOWN. The state and county forms, to which they are copying data, do not contain this signature line.

15. Message Received By

Enter the name of the State Warning Point Duty Officer or the individual that receives the notification. Enter the time at the State Warning Point (request it from the Duty Officer) and indicate the date the call is completed.

END OF ATTACHMENT 1A

ATTACHMENT 2
SUPPLEMENTAL DATA SHEET
(Page 1 of 1)

The following supplemental data is to be completed after the TSC or EOF is declared operational at Alert or higher.

Supplement to Message Number _____

PLANT CONDITIONS INFORMATION

Critical Safety Functions:

A. Reactor Shutdown? ☐ Yes ☐ No

B. Core Adequately Cooled? ☐ Yes ☐ No

C. Adequate Emergency Power Available (Diesels)? ☐ Yes ☐ No

Fission Product Barrier Status: (Check one condition for each barrier)

BARRIER	√	INTACT	√	CHALLENGED	√	LOST	√	REGAINED
Fuel Cladding		No indication of clad damage		Clad is intact but losing subcooling, water level, etc.		Clad has failed, indicated by high temps., high containment rad, etc.		Cooling restored, no further degradation expected
Pri. Reactor Coolant System		Leakage is within normal charging or makeup pump capacity		Leakage is within safety injection capacity		Leakage exceeds safety injection capacity		Leakage reduced to within injection capacity (system repaired)
Containment		No evidence of containment leakage or tube rupture release is only through condenser		No leakage but containment pressure is at or above safety system actuation points		Evidence of containment leakage (known release path or rad surveys)		Repair efforts have isolated leak or containment pressure has reduced to stop leakage

Completed by:_____ Time:_____ Date:_____

RADIOLOGICAL DOSE ASSESSMENT DATA

1. Release Status: A. ☐ No Release (no further data required) C. ☐ A Release occurred, but stopped
   B. ☐ A Release is occurring

2. Release Rate:
   A. ☐ Noble Gases: _____ Curies per second ☐ Measured ☐ Default
   B. ☐ Iodines: _____ Curies per second ☐ Measured ☐ Default

3. Type of Release:
   A. ☐ Airborne Time / Date Started:_____ B. ☐ Liquid Time / Date Started:_____
   Time / Date Stopped:_____ Time / Date Stopped:_____

4. Projected Off-Site Dose Rate:

Distance	Thyroid Dose Rate (CDE)	Total Dose Rate (TEDE)
1 Mile (Site Boundary)	A._____mrem/hr	B._____mrem/hr
2 Miles	C._____mrem/hr	D._____mrem/hr
5 Miles	E._____mrem/hr	F._____mrem/hr
10 Miles	G._____mrem/hr	H._____mrem/hr

5. Weather Data (used for the above data):
   A. Wind Direction from _____ degrees
   B. Wind Speed _____ MPH
   C. Stability Class _____

Completed By:_____ Time:_____ Date:_____

Emergency Coordinator or Recovery Manager Approval_____

END OF ATTACHMENT 2

ATTACHMENT 2A
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 1 of 4)

"Supplement to Message Number" is the same number recorded in 2. "C" on the Florida Nuclear Plant Emergency Notification Form associated with this Supplemental Data Sheet.

Plant Conditions Information

Critical Safety Functions
Answer the three questions "yes" or "no" by checking the appropriate box.

A. Is the reactor shutdown?

B. Is the core adequately cooled?

C. Is there adequate emergency power available (diesels)?

Fission Product Barrier Status
Check one condition for each barrier – intact, challenged, lost, or regained.

"Completed By" should be filled in by the person recording the information on this form by printing their name on this line.

Radiological Dose Assessment Data (To Be Obtained from Dose Assessment Personnel)

> **NOTE**
> If the Class A Model is being used, a 'Supplemental Data Sheet – Radiological Dose Assessment Data' form is available which provides information for completion of items 1-5. The information is in a format similar to that found on the Supplemental Data Sheet.

1. Release Status

   A. If there are no indications of a release of radioactive material, check box "A."

   B. If a release of radioactive material is occurring, even though it may be less than normal operating limits, check box "B."

   C. If a release of radioactive material has occurred but stopped, check box "C."

ATTACHMENT 2A
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 2 of 4)

1. Release Status (continued)

   A release of radioactive material (during any declared emergency) is defined as:

   - Any effluent monitor increase of (approximately) 10 times or one decade above pre-transient values

   OR

   - Health Physics detecting airborne radioactivity levels in excess of 25% derived air concentration (DAC) outside of plant buildings due to failure of equipment associated with the declared emergency.

2. Release Rate
   This section requires the completed results of dose assessment.

   A. Check the noble gas box for a noble gas release. Write the release rate (in curies per second) in the space provided. Check either "Measured" or "Default" to indicate how the release rate was determined.

   B. Check the iodines box for an iodine release. Write the release rate (in curies per second) in the space provided. Check either "Measured" or "Default" to indicate how the release rate was determined.

3. Type of Release
   Check the type of release – either airborne or liquid. Enter the time and date that the release started and stopped.

4. Projected Off-Site Dose Rate
   This section requires the completed results of dose assessment. Enter the projected Thyroid Dose Rate (CDE) and the Total Dose Rate (TEDE) in mrem/hr for the site boundary, 2, 5, and 10 mile distances.

ATTACHMENT 2A
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 3 of 4)

5. Weather Data

NOTE
10 meter data should be used.

A. ¶10 Temperature, wind speed and wind direction can be obtained from ERDADS by depressing the "EPIP" key, on the top row of the keyboard. The Met Tower Indicator Panel in the Unit 1 Control Room is an alternate source. If these two sources are not available, refer to Attachment 1, Meteorological Data, in EPIP-09, Off-site Dose Calculations.

B. If the wind direction is greater than 360° the wind direction is determined by subtracting 360° from the indicated number. Wind direction should be rounded to the nearest whole number.

C. Wind direction is always given as "wind from" (an easterly wind, or wind direction 90°, means that the wind is blowing from east to west).

D. Enter the wind direction (wind from) in degrees in item "A".

E. Enter the wind speed in Miles Per Hour (MPH) in item "B".

F. Stability Class – Enter the stability class as determined by using the Figure below. To find the stability class, determine delta T (temperature) by subtracting the lower temperature reading from the upper temperature reading.

ATTACHMENT 2A
DIRECTIONS FOR COMPLETING THE SUPPLEMENTAL DATA SHEET
(Page 4 of 4)

5. (continued)

If Delta – T is	Then Stability Class is
Is less than or equal to -1.7	A
-1.6 To -1.5	B
-1.4	C
-1.3 To -0.5	D
-0.4 To +1.4	E
+1.5 To +3.6	F
greater than +3.6	G

Completing the Supplemental Data Sheet

Completed By: The person completing the form should print their name on this line.

Approval needs to be signed by the EC or RM who approves the forms. The EC or RM shall sign to indicate approval to transmit the information contained on the forms. The Supplemental Data Sheet signature, for a two-page notification, indicates approval of both the first and second pages. On a two-page notification the EC or RM only need sign the second page to approve both the Florida Nuclear Plant Emergency Notification Form and the Supplemental Data Sheet. The "Emergency Coordinator or Recovery Manager Approval" lines are not numbered because the state and counties do not need this information. DO NOT ATTEMPT TO TRANSMIT THIS INFORMATION VIA HOT RING DOWN. The state and county forms, to which they are copying data, do not contain these lines.

END OF ATTACHMENT 2A

ATTACHMENT 3
DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARs)
(Page 1 of 5)

NOTE

Initial notification from the Control Room may utilize PARs based on plant conditions. Once dose assessment begins, PARs should be made utilizing all available data including off-site dose projections, plant conditions and field monitoring data. **Both plant conditions and off-site doses shall be considred for PARs.** The most conservative recommendations should be made. If it is anticipated that a threshold for a PAR will be exceeded, it is neither necessary nor desirable to wait until the threshold is exceeded to make that PAR.

1. PAR Flowchart

   A. PARs Based on Plant Conditions

      1. Begin in the upper left hand corner of the chart by answering the General Emergency (GE) question.

      2. Correctly answer the questions until you reach one of the boxes that provides PAR information based on plant conditions.

      3. If there is no release, Then go to the PAR Worksheet and fill-in the PARs based on plant conditions. The sectors affected can be determined by referring to number 9, Weather Data, in Attachment 1A, Directions for Completing the Florida Nuclear Plant Emergency Notification Form.

      4. If a release is involved, Then go to Section B, PARs Based on Off-site Dose, below.

ATTACHMENT 3
DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARs)
(Page 2 of 5)

1. (continued)

NOTE

- If the Class A Model printout, State Notification Form Summary Sheet is available, it should be used to compare dose-based PARs against PARs based on plant conditions.
- Calculated off-site doses should be compared to field monitoring data when determining PARs.

B. PARs Based on Off-site Dose

1. PARs are based on the Total Effective Dose Equivalent (TEDE or total dose) and / or the Committed Dose Equivalent (CDE, thyroid dose). Do NOT use dose rate values.

2. If using the Class A Model, Then in Forecast Mode, print the State Notification Form Summary for computer generated PARs.

   a. Go to Section C, PAR Worksheet

3. If using EPIP-09, Off-site Dose Calculations, Then calculate TEDE and CDE in accordance with the procedure.

   a. Compare the TEDE dose at 1 mile with the values on the Flowchart. Enter the chart at the appropriate dose level by determining if the dose is between 500 and 999 mrem or between 1000 and 4999 mrem or 5000 mrem or greater.

   b. From the selected dose level, move to the right on the chart to the first column, 0-2 miles. The PAR provided corresponds to the calculated TEDE at 1 mile.

   c. Enter the PAR in the 0-2 miles block on the TEDE DOSE table below the PAR Flowchart. The sectors affected can be determined by referring to number 9, Weather Data, in Attachment 1A, Directions for Completing the Florida Nuclear Plant Emergency Notification Form.

ATTACHMENT 3
DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARs)
(Page 3 of 5)

1. B. 3. (continued)

d. Continue to determine the corresponding PAR at 2-5 miles using the calculated 2 mile TEDE, at 5-10 miles using the calculated 5 mile TEDE and the 10 miles plus (To Be Determined (TBD) distance) using the calculated 10 mile TEDE, as necessary.

e. Enter the PAR information in the appropriate blocks of the TEDE DOSE table.

f. Follow the same methodology for determining the PARs corresponding to the calculated CDE values beginning with the calculated value at 1 mile.

g. Enter each of the determined PARs in the CDE (Thyroid) DOSE table below the PAR Flowchart.

h. Go to Section C, PAR Worksheet.

C. PAR Worksheet

1. Fill-in the time / date and emergency class.

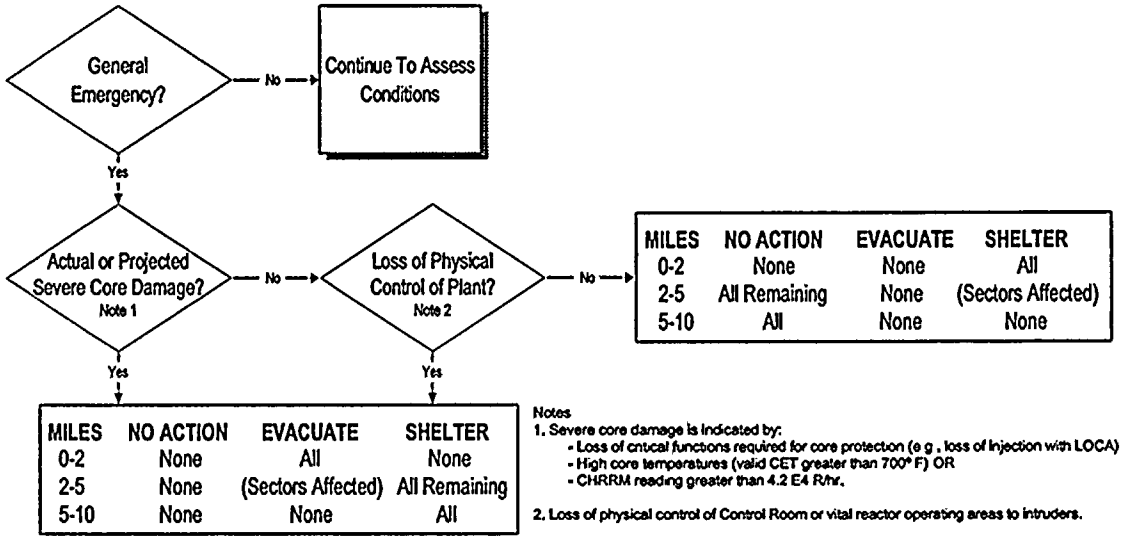
2. In Part A, determine the most conservative PARs by comparing the PARs based on plant conditions against those based on off-site dose. It is important to compare PARs at each distance (0-2, 2-5, 5-10) because the basis of the most conservative PAR could be different at different distances.

3. Enter the most conservative PARs into the table in Part B, Protective Actions Recommended by FPL. Use the word(s) NONE, ALL, ALL REMAINING or list the individual affected sectors by letter.

4. Obtain review and approval.

5. Transfer the approved PARs to the Florida Nuclear Plant Emergency Notification Form.

ATTACHMENT 3
DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARs)
(Page 4 of 5)



MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	None	All
2-5	All Remaining	None	(Sectors Affected)
5-10	All	None	None

MILES	NO ACTION	EVACUATE	SHELTER
0-2	None	All	None
2-5	None	(Sectors Affected)	All Remaining
5-10	None	None	All

Notes
1. Severe core damage is indicated by:
   - Loss of critical functions required for core protection (e g , loss of injection with LOCA) OR
   - High core temperatures (valid CET greater than 700° F) OR
   - CHRRM reading greater than 4.2 E4 R/hr.
2. Loss of physical control of Control Room or vital reactor operating areas to intruders.

PARs Based on Off-Site Dose
(For use with manual dose calculation only. Not to be completed when Class A Model is used)

TEDE DOSE	CDE (Thyroid) DOSE	0-2 Miles Use 1 mile value	2-5 Miles Use 2 mile value	5-10 Miles Use 5 mile value (Beyond 10 miles Use this Column and the 10 mile Dose Value)
TEDE 500*-999 mrem	CDE 1000*-4999 mrem	Shelter All	Shelter (Sectors Affected)	Shelter (Sectors Affected)
TEDE 1000-4999 mrem	CDE 5000-24999 mrem	Evacuate All	Evacuate (Sectors Affected) + Shelter All Remaining	Evacuate (Sectors Affected) + Shelter All Remaining
TEDE 5000 mrem or Greater	CDE 25000 mrem or Greater	Evacuate All	Evacuate All	Evacuate (Sectors Affected) + Shelter All Remaining

*Dose below this level requires NO ACTION

TEDE DOSE — Use the following terms in this table: NONE, ALL, ALL REMAINING or fill in the letters of the sectors affected.

Miles	NO ACTION	EVACUATE	SHELTER
0-2			
2-5			
5-10			
> 10			

CDE (Thyroid) DOSE — Use the following terms in this table: NONE, ALL, ALL REMAINING or fill in the letters of the sectors affected.

Miles	NO ACTION	EVACUATE	SHELTER
0-2			
2-5			
5-10			
> 10			

ATTACHMENT 3
DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARs)
(Page 5 of 5)

PAR WORKSHEET

Time / Date _____ Emergency Class: ☐ **SAE** ☐ **GE**

A. PAR Comparison

After comparing the possible recommendations from the PARs flowchart, the most conservative PARs are based on: (check one)

☐ PLANT CONDITIONS ☐ OFF-SITE DOSE

B. Protective Actions Recommended by FPL:

Use the following terms in this table: **NONE, ALL, ALL REMAINING Or fill in the letters of the sectors affected.**

	NO ACTION SECTORS	EVACUATE SECTORS	SHELTER SECTORS
0-2 miles			
2-5 miles			
5-10 miles			
10-TBD miles*			

*If necessary, add to State Notification Form.

Control Room

Signature _____
Emergency Coordinator

Technical Support Center

Signature _____ _____
TSC EC Assistant / Logkeeper TSC HP Supervisor or TSC Chemistry Supervisor

---

Emergency Operations Facility

Signature _____ _____
EOF RM OPS Advisor / Logkeeper EOF HP Manager

END OF ATTACHMENT 3

ATTACHMENT 4
¶8 NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 1 of 2)

NRC FORM 361 (12-2000)

U.S. NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

REACTOR PLANT EVENT NOTIFICATION WORKSHEET

EN #

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	NAME OF CALLER	CALL BACK #

EVENT TIME & ZONE	EVENT DATE	POWERMODE BEFORE	POWERMODE AFTER

EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)					
GENERAL EMERGENCY	GEN/AAEC		TS Deviation	ADEV	(v)(A)	Safe S/D Capability	AINA
SITE AREA EMERGENCY	SIT/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)			(v)(B)	RHR Capability	AINB
ALERT	ALE/AAEC	(i)	TS Required S/D	ASHU	(v)(C)	Control of Rad Release	AINC
UNUSUAL EVENT	UNU/AAEC	(iv)(A)	ECCS Discharge to RCS	ACCS	(v)(D)	Accident Mitigation	AIND
50.72 NON-EMERGENCY	(see next columns)	(iv)(B)	RPS Actuation (scram)	ARPS	(xi)	Offsite Medical	AMED
PHYSICAL SECURITY (73.71)	DDDD	(xi)	Offsite Notification	APRE	(xiii)	Loss Comm/Asmt/Resp	ACOM
MATERIAL/EXPOSURE	B???	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)			60-Day Optional 10 CFR 50.73(a)(1)		
FITNESS FOR DUTY	HFIT	(ii)(A)	Degraded Condition	ADEG	Invalid Specified System Actuation		AINA
OTHER UNSPECIFIED REQMT.	(see last column)	(ii)(B)	Unanalyzed Condition	AUNA	Other Unspecified Requirement (Identify)		
INFORMATION ONLY	NNF	(iv)(A)	Specified System Actuation	AESF			NONR
							NONR

DESCRIPTION

Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc. (Continue on back)

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT			
STATE(s)			
LOCAL			
OTHER GOV AGENCIES			
MEDIA/PRESS RELEASE			

ANYTHING UNUSUAL OR NOT UNDERSTOOD? ☐ YES (Explain above) ☐ NO

DID ALL SYSTEMS FUNCTION AS REQUIRED? ☐ YES ☐ NO (Explain above)

MODE OF OPERATION UNTIL CORRECTED:

ESTIMATED RESTART DATE:

ADDITIONAL INFO ON BACK ☐ YES ☐ NO

ATTACHMENT 4
¶8 NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 2 of 2)

RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS (specific details/explanations should be covered in event description)

☐ LIQUID RELEASE	☐ GASEOUS RELEASE	☐ UNPLANNED RELEASE	☐ PLANNED RELEASE	☐ ONGOING	☐ TERMINATED
☐ MONITORED	☐ UNMONITORED	☐ OFFSITE RELEASE	☐ T.S. EXCEEDED	☐ RM ALARMS	☐ AREAS EVACUATED
☐ PERSONNEL EXPOSED OR CONTAMINATED		☐ OFFSITE PROTECTIVE ACTIONS RECOMMENDED		☐ *State release path in description	

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium and dissolved noble gases)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS					
ALARM SETPOINTS					
% T.S. LIMIT (if applicable)					

RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS: (specific details/explanations should be covered in event description)

LOCATION OF THE LEAK (e.g., SG #, valve, pipe, etc.)

LEAK RATE	UNITS: gpm/gpd	T.S. LIMITS	SUDDEN OR LONG-TERM DEVELOPMENT
LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS:	PRIMARY / SECONDARY

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL

EVENT DESCRIPTION (Continued from front)

END OF ATTACHMENT 4

¶7 ATTACHMENT 4A
DIRECTIONS FOR COMPLETING THE NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 1 of 2)

A. Contact information - to be completed following contact

1. Name of the person contacting the NRC or other designated FPL contact.

2. NRC Contacts Name - will be provided upon contact. Also obtain the event number and notification time as received from the HOO should be recorded on the top of the worksheet.

B. Reactor Plant Event Notification Worksheet, Page 1

> **NOTE**
> The "EN #" is provided by the NRC.

1. Notification Time - enter the time contact is made.

2. Unit - enter the appropriate unit number: Enter "0" for a classification common to both units.

3. Callers Name - enter the name of the person making the call.

4. Call back # - enter the number of the ENS phone that you are calling from and the commercial phone number at which you can be reached.

5. Event time and Zone - enter the military time, the zone will be "EST" for Easter Standard Time or "EDT" for Eastern Daylight-savings Time.

6. Event Date - enter the date the event is occurring.

7. Power / Mode Before & Power / Mode After - enter the power in percent and the mode number (1-6) before and after the event.

> **NOTE**
> Abbreviations / acronyms (e.g., UNU / AAEC, SIT / AAEC, etc.) are for NRC use only.

8. Event Classifications - check one of the four blocks for General Emergency, Site Area Emergency, Alert, or Notification of Unusual Event.

¶7 ATTACHMENT 4A
DIRECTIONS FOR COMPLETING THE NRC REACTOR PLANT EVENT NOTIFICATION WORKSHEET
(Page 2 of 2)

B. (continued)

> **NOTE**
> No other blocks in the upper half of the form are required.

9. Description - provide a written description of the event.

> **NOTE**
> Check the blocks in the lower portion of the form based on current conditions.

10. Mode of operation until corrected - provided if known.

11. Estimate for restart date - enter "unknown".

12. Additional info on Page 2 - enter yes or no.

C. Reactor Plant Event Notification Worksheet, Page 2

1. Fill in as much of the information on the form as is immediately available - do not create undue delay in making the notification. This information can be gained once the open line of communication is established.

D. Approval

1. Information entered on the worksheet shall be reviewed and approved by the EC or RM (if used in the EOF), prior to transmission.

2. The EC / RM may initial on the worksheet to indicate approval. There is no formal sign-off location on the worksheet.

END OF ATTACHMENT 4A

FPL

ST. LUCIE PLANT

HEALTH PHYSICS PROCEDURE

SAFETY RELATED

Procedure No.
HP-203
Current Revision No.
18
Effective Date
06/15/01

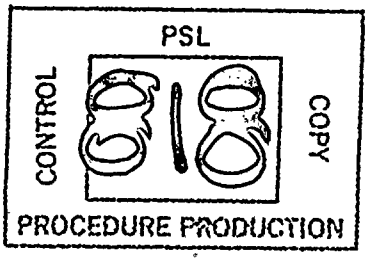
Title:

PERSONNEL ACCESS CONTROL DURING EMERGENCIES

Responsible Department: **HEALTH PHYSICS**

REVISION SUMMARY:

Revision 18 – THE PROCEDURE HAS BEEN COMPLETELY REWRITTEN. Streamlined Re-entry paperwork. Changed Radiation Protection Technician to Health Physics Technician. Deleted TMI Shielding Study reference and maps, and moved them to HP-201. Made administrative changes. (D. Calabrese, 04/26/01)



Revision	FRG Review Date	Approved By	Approval Date
0	02/01/82	J.H. Barrow (for) Plant General Manager	02/04/82
18	04/26/01	R.G. West Plant General Manager	04/26/01
		N/A Designated Approver	
		N/A Designated Approver (Minor Correction)	

S___OPS	
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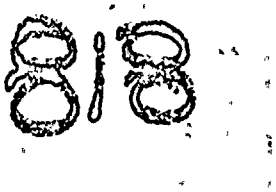
DOCN	HPP-203
SYS	
COM	COMPLETED
ITM	18



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NOTE

Initial work activities directed by the OSC Supervisor, at the ALERT LEVEL, are considered pre-re-entry and certain aspects of this procedure may be relaxed (e.g., HP paperwork & coverage). Following a site evacuation order or if radiological conditions exist outside the RCA, all provisions of this procedure are required for re-entry into the affected area.

1.0 PURPOSE

1.1 This procedure provides guidelines for control of personnel access to the plant and radiologically affected areas during and following an emergency.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 The Emergency Coordinator (EC) may waive the requirements of this procedure to allow access for the search and rescue of injured or lost personnel or to place the plant in a safe condition.

2.2 Re-entry into the plant following evacuation during an emergency shall be made only when authorized by the EC.

2.3 All re-entry teams dispatched from the Operational Support Center (OSC) shall be briefed by the HP Supervisor in the Operational Support Center (HPOSC) on the radiological conditions that are known or expected to be encountered, their allowed exposure, and protective clothing and equipment necessary.

2.4 Entry to the plant shall be through the East Security Building unless otherwise directed by the EC.

2.5 The re-entry access control point is established at the OSC at a location(s) designated by the Technical Support Center Health Physics Supervisor (TSCHPS).

2.6 The EC may adjust access control restrictions if the plant conditions and radiological conditions warrant.

CAUTION

The area radiation monitors provide only the dose rates at the detector locations. Radiation levels in areas outside the immediate detector locations may be significantly higher.

2.7 Entries into radiation areas exceeding 10 R/hr should not be made without EC or TSCHPS authorization.

2.8 Exposure to emergency response personnel should be maintained As Low As Reasonably Achievable (ALARA). Actions taken during an emergency should take into consideration the amount of exposure required to accomplish the task versus the potential benefit to the public health and safety.

2.9 Personnel shall be restricted from further exposure if their DDE reaches 5.0 Rem or if their thyroid CDE reaches 50 Rem.

2.10 Personnel reaching the dose limits in 2.9 above may be allowed to receive additional exposure after a determination of dose has been finalized by the reading of their TLD or bioassay as appropriate.

3.0 DEFINITIONS

3.1 Re-entry - Access to areas where evacuation (local or site) has been ordered constitutes a re-entry. Re-entry into an evacuated area is authorized only by the Emergency Coordinator (EC).

3.2 Re-entry Team - A group of qualified personnel who will enter an evacuated area under the authorization of the EC to accomplish an assigned task (e.g., rescue, damage control, repair, etc.). The initial Re-entry Team shall consist of at least two persons one of whom shall be an OSC Health Physics Technician. (HPT).

4.0 REFERENCES

NOTE

One or more of the following symbols may be used in this procedure:

§ Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.

¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.

Ψ Indicates a step that requires a sign off on an attachment.

4.1 St. Lucie Plant Radiological Emergency Plan (E-Plan)

4.2 E-Plan Implementing Procedures (EPIP 00-13).

4.3 Nuclear Energy Policy on Exposure Limits for Emergency Response Personnel, Revision to Policy Statement, Ltr No. JNO-HP-94-056, October 26, 1994.

4.4 HP-112, Multibadging

4.5 HP 201, Emergency Personnel Exposure Control

4.6 HP-206, Analysis of Emergency In-plant Air Samples

4.7 ¶1 Condition Report, CR-01-0078, OSC Re-Entry Team Performance

5.0 RECORDS REQUIRED

5.1 The following documents when completed shall be maintained in the plant files in accordance with QI-17-PSL-1 "Quality Assurance Records."

1. Form HP 203.1, Evacuated Area Re-entry Authorization and any attachments
2. Form HP 203.2, Emergency Access Control Log Sheet
3. Form HP 203.3, Emergency Responder Dose Control Form
4. Form HP 203.4, Emergency Exposure Authorization

6.0 INSTRUCTIONS

6.1 The Health Physics representative in charge of HP activities at the OSC (HPOSC) is responsible for ensuring access control to radiologically affected areas. The HPOSC should perform the following steps:

1. Contact the TSCHPS to determine where the access control point(s) are to be established.

2. Select an OSC HP Tech (HPT) to man the access control point(s).

3. Brief the Re-entry Team members on the conditions within the areas using available information from surveys and area monitors.

4. Evaluate the need for multibadges or extremity monitoring.

5. Instruct the Re-entry Team members that no one is permitted to enter the area without providing a completed Evacuated Area Re-entry Authorization form (HP-203.1) unless authorized by the Nuclear Plant Supervisor (NPS)/Emergency Coordinator (EC).

6. Complete form HP-203.1 for each Re-entry Team.

7. Instruct the Re-entry Team members that initial entry into an evacuated area must be made by at least two people, one of whom must be an OSC HPT.

8. Coordinate with Re-entry Supervisors on selection of Re-entry Team members (exposure histories, respiratory qualification status, authorization to exceed 10CFR Part 20 exposure limits, etc.).

9. Complete Form HP-203.4, "Emergency Exposure Authorization," for each Re-entry Team which may exceed the 10CFR Part 20 exposure limits.

END OF SECTION 6.1

6.2 The OSC HPT at the access control point should perform the following steps:

1. Position himself in such a manner that personnel accessing the area must pass by him.
2. Review form HP 203.1 to ensure that the individual is authorized entry and that the individual has the required protective equipment specified by the HPOSC.
3. Deny access to anyone who does not have a completed HP 203.1 or does not have all the required equipment as listed on the form.
4. Log the individual into the area on the Emergency Access Control Log Sheet form (HP 203.2) for each individual entering the area.
5. When an individual exits from the area, complete the log entry on form HP 203.2.
6. Report to the HPOSC any personnel contamination or exposures in excess of the allowed exposure.
7. Ensure that personnel monitoring devices are taken by the individual to the OSC for further processing and recording.
8. Check items removed from the area for contamination.
9. In the event that an individual is contaminated, detain the individual and request assistance from the HPOSC to escort and decontaminate him.
10. Record any survey data taken by the Re-entry team in the Remarks section of the Evacuated Area Re-entry Authorization form (HP 203.1) as dose rate information for future entries. Transmit this information to the HPOSC also.

END OF SECTION 6.2

6.3 The OSC Dosimetry Technician performs the following:

1. Issue TLDs to personnel not in possession of their regular TLD.

2. Check respirator quals of re-entry team members.

3. At the conclusion of the re-entry, the dose received by the individual shall be entered on form HP-203.3, "Emergency Response Dose Control," to maintain a current dose record of DDE and CDE (Thyroid) for the individual. It should be entered after air sample results have been determined in accordance with HP-206, "Analysis of Emergency In-plant Air Samples."

END OF SECTION 6.3

HP 203.1

¶1 EVACUATED AREA RE-ENTRY CHECKLIST

(Page 1 of 1)

TEAM NO. _____

_____ Dose and Dosimetry

1. Team member names and TLD numbers to Dosimetry
2. Exposure limits
3. Dose extension – refer to Form HP-203.4
4. Appropriate dosimetry

_____ Respiratory Protection

1. SCBA
2. Respirator
3. Other

_____ Dress-out

1. Dress-out requirements

_____ Briefing

1. Radiological considerations
2. Ingress/egress
3. Stay times
4. Decon
5. Other

Completed by: _____ Date: __/__/__

HP 203.2

EMERGENCY ACCESS CONTROL LOG SHEET

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Date____/____/____ Location______________________________

Name	TLD #	Time In	Time Out	Init.

HP 203.3

EMERGENCY RESPONDER DOSE CONTROL FORM

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Name:_____ TLD#:_____ Department:_____

Date	Time In	Time Out	Air Sample No.	Gamma Dose (DDE) Limit (mrem)	Gamma Dose (DDE) This Entry (mrem)	Previous Gamma Dose (DDE) Total (mrem)	Update Gamma (1) Dose (DDE) Total (mrem)	Thyroid Dose Limit (CDE) (mrem)	Thyroid Dose (CDE) This Entry (mrem)	Previous Thyroid Dose (CDE) Total (mrem)	Updated Thyroid (2) Dose (CDE) Total (mrem)

(1) Gamma Dose (DDE) Limit shall not exceed 5,000 mrem without EC authorization

(2) Thyroid Dose (CDE) Limit shall not exceed 50,000 mrem without EC authorization

HP 203.4
EMERGENCY EXPOSURE AUTHORIZATION
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I. Team Information

	Name/Dept	TLD	Signature*	Date/Time
1.				
2.				
3.				
4.				

* Your signature indicates that you have received and understand the briefing information regarding the risks associated with this exposure.

II. Reason for Entry

_____

_____

_____

III. Authorization

Exposure Limit:_____ TSC HPS[1]:_____ Date:_____

Emergency Coordinator[1]:_____ Date:_____

Recovery Manager[1,2]:_____ Date:_____

[1]Signature may be authorized by phone
[2]Signature not mandatory

IV. Briefing Information

A. For exposures exceeding 5 remTEDE or 100 rem CDE:

1. Persons should be volunteers and experienced at the task requiring the re-entry (for expected exposures exceeding 25 rem TEDE or 250 rem CDE, persons **should be above the age of 45**).

2. Persons shall have full awareness of risks involved including numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects. (See below)

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EMERGENCY EXPOSURE AUTHORIZATION
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B. Effects from an acute dose of radiation:

1. Prompt[1]

   a. 5 - 100 Rem — Minor changes in the blood, like reduced white cell and platelet counts.

   b. > 100 Rem — Can cause nausea, vomiting, fatigue, loss of appetite, and loss of hair, severity increases with increased dose.

   c. > 450 Rem — Can be fatal without proper medical care.

2. Delayed - Cancer/Life Span[2], consult table below:

Age at Exposure	10 Rem Exposure Cancer Risk	10 Rem Exposure Approx. Days Lost	25 Rem Exposure Cancer Risk	25 Rem Exposure Approx. Days Lost
21-30	< 0.3%	50	< 0.7%	124
31-40	< 0.3%	40	< 0.7%	100
41-50	< 0.3%	31	< 0.7%	77
51-60	< 0.3%	21	< 0.7%	65
61-70	< 0.3%	12	< 0.7%	29

3. Delayed - Genetic Effects[3]

   a. One Rem results in an estimated risk of genetically-related disorders in all generations (current and future) of 1x10 E-4 per person-rem (or 1 in 10,000).

References:

[1] Knapp, S. and M. Cooper, 1995. A Layman's Guide to Radiation Safety, FPL St. Lucie Nuclear Plant, Ft. Pierce, Florida 86 pp.

[2] Derived from Cohen, Bernard L., 1990. The Nuclear Energy Option, Plenum Publication Corporation, New York, New York, 338 pp.

[3] EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, Appendix B Office of Radiation Programs US EPA, Washington, DC, p. B-23.