

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNITS 1 AND 2
E-PLAN IMPLEMENTING PROCEDURE NO. 3100021E
REVISION 12

1.0 Title:

Duties And Responsibilities Of The Emergency Coordinator

2.0 Approval:

Reviewed by Plant Nuclear Safety Committee July 25, 1975

Approved by K. N. Harris Plant Manager July 29, 1975

Revision 12 Reviewed by Facility Review Group June 7 1982

Approved by [Signature] Vice Pres. Nuc Energy 8-4 1982

3.0 Scope:

3.1 Purpose:

This procedure provides the instructions to be followed by the Emergency Coordinator when an emergency occurs that requires the initiation of the Emergency Plan.

3.2 Discussion:

The Nuclear Plant Supervisor becomes the Emergency Coordinator upon initiation of the Emergency Plans and, as such, directs the On-Site Emergency Organization to bring the emergency under control.

3.3 Authority:

This procedure implements the St. Lucie Plant Radiological Emergency Plan.

4.0 Precautions:

- 4.1 The Nuclear Plant Supervisor and the shift operating staff represent the first-line of response to any developing emergency condition. The primary responsibility of the Nuclear Plant Supervisor is to control the condition as well as possible. However, the success of the Emergency Plan and Procedures requires prompt classification of the emergency (in accordance with E-Plan Implementing Procedure 3100022E, Classifications of Emergencies) and notifications of designated off-site authorities as well as FPL's Off-Site Emergency Organization (see Figure 1 for notification flow).

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4.0 Precautions: (continued)

- 4.2 The Emergency Coordinator can delegate his responsibilities at his discretion with the exception of the decision to notify state and local authorities and the content of that notification. When the TSC is operational, the Emergency Coordinator can delegate all off-site communications to the TSC Supervisor.
- 4.3 During exercises, drills or tests, ALL MESSAGES shall begin and end with "THIS IS A DRILL MESSAGE" or "THIS IS AN EXERCISE MESSAGE".
- 4.4 Protective action recommendations to state and local authorities CANNOT be delegated by the Emergency Coordinator, however, these recommendations become the responsibility of the Recovery Manager when the Interim Emergency Operating Facility is manned and operational.

5.0 Responsibilities:

- 5.1 If the Nuclear Plant Supervisor is incapacitated, the Emergency Coordinator shall be (in order of succession):
 - 5.1.1 Nuclear Watch Engineer
 - 5.1.2 Any other member of the plant staff with a Senior Reactor Operator License.
 - 5.1.3 If no Senior Reactor Operator is available, any other Licensed Operator.
- 5.2 The Emergency Coordinator shall only grant permission for watch relief, including his own, when it is safe in his judgement to do so.
- 5.3 The Operations Superintendent, the Operations Supervisor or a Operations Duty Call Supervisor can assume the Emergency Coordinator function at his discretion following the proper turnover procedure.
- 5.4 The Technical Support Center Supervisor shall fill out the checklist for Notification of Significant Events (to NRC) as soon as possible after activating the TSC and preferably before calling the NRC.
- 5.5 The Emergency Coordinator is responsible for providing protective action recommendations to off-site authorities. This responsibility cannot be delegated, but becomes the responsibility of the Recovery Manager when the Interim Emergency Operations Facility is manned and operational.

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6.0 References:

6.1 St. Lucie Plant Radiological Emergency Plan

6.2 E-Plan Implementing Procedures, as follows:

EPIP-3100022E - Classification of Emergencies.

EPIP-3100026E - Criteria for and Conduct of Evacuations.

EPIP-3100033E - Radiation Release and Dose Projection.

7.0 Records:

All significant information, events, and actions taken during the emergency period shall be recorded as directed by the Emergency Coordinator.

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8.0 Instructions:

8.1 Classification

Immediately upon becoming aware of an abnormal condition, the Nuclear Plant Supervisor shall classify the condition in accordance with the criteria given in E-Plan Implementing Procedure 3100022E, Classification of Emergencies. If the classification is, UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY, the Nuclear Plant Supervisor shall declare an emergency and become the Emergency Coordinator. The Emergency Coordinator shall, until relieved, remain in the Control Room at all times during emergency situations that require Emergency Plan implementation unless, in his opinion, his personal evaluation of the situation is necessary to maintain plant safety.

- 8.2 The Emergency Coordinator shall mobilize the On-Site Emergency Organization to begin required corrective and protective actions.

8.3 CHECKLISTS

- 8.3.1 If the situation is a Plant/Radiological Emergency, utilize the Plant/Radiological Emergency Checklist, (Page 6).
- 8.3.2 If the situation is a fire or explosion, utilize the Fire or Explosive Emergency Checklist, (Page 13).
- 8.3.3 If the situation is a medical emergency with or without contamination, utilize the Medical Emergency Checklist, (Page 16).

- 8.4 Responsibilities for off-site communications and coordination shall be relinquished first to the Technical Support Center Supervisor and then to the Emergency Control Officer when they establish contact and assume responsibilities.

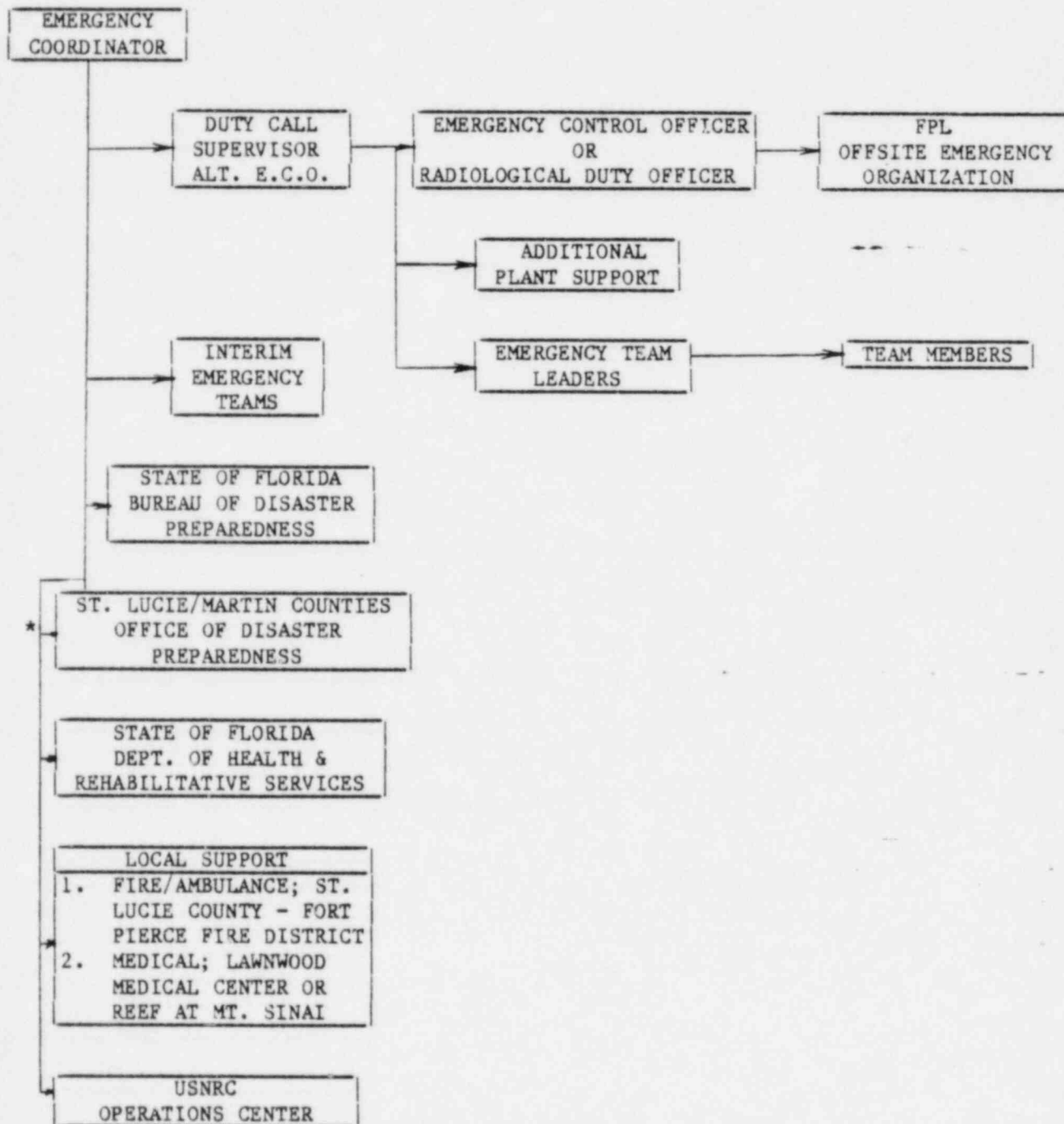
8.5 OFF-SITE PROTECTIVE ACTION RECOMMENDATIONS

The Emergency Coordinator is responsible for providing protective action recommendations to off-site authorities as indicated on Pages 19 through 23, "Guidelines for Protective Action Recommendations to Off-site Authorities". When the Emergency Control Officer has indicated that the Interim Emergency Operations Facility is manned and operational, the Recovery Manager can relieve the Emergency Coordinator of this responsibility.

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FIGURE 1



*Via LGR for Site Area and General Emergency Status
During Unusual and Alert BDP will notify the counties.

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PLANT/RADIOLOGICAL EMERGENCY CHECKLIST

| | | | | |
|---------------|---------------|------------|--------------|---------|
| | | Date _____ | Seq. # _____ | |
| Class at | | | | |
| Time of | Unusual Event | Alert | Site Area | General |
| D Declaration | D _____ | D _____ | D _____ | D _____ |
| E Escalation | _____ | E _____ | E _____ | E _____ |

TIME _____

- _____ 1. Order initial corrective action per Emergency Operating Procedures.

IF UNUSUAL EVENT - SKIP TO STEP 7

- _____ 2. Notify personnel of the emergency condition over the Unit #1 and/or #2 PA system, giving location, class, and type of emergency.

_____ Repeat Announcement

IF SITE OR GENERAL - SKIP TO STEP 4

- _____ 3. If the evacuation of an area is necessary, initiate a local evacuation in accordance with E-Plan Implementing Procedure 3100026E, Criteria for and Conduct of Evacuations.

Announce the following:

_____ Areas to be evacuated

_____ Areas to be avoided, if possible, during the Evacuation

_____ Assembly Area

IF ALERT SKIP TO STEP 7

- _____ 4. Sound Site Evacuation Alarm. Order all non essential personnel to commence evacuation of the owner controlled area in accordance with EPIP 3100026E, Criteria & Conduct of Evacuations.

- _____ 5. Repeat PA announcement.

- _____ 6. Order Security Team Leader to evacuate Owner Controlled Area and to report personnel accountability as soon as possible.

- _____ 7. Mobilize Interim Emergency Teams to respond as necessary.

- _____ 8. Commence preparation of the attached State of Florida Fixed Nuclear Facility Notification Message Form and EMERGENCY INFORMATION CHECKLIST, including off-site dose projection using E-Plan Implementing Procedure 3100033E, Radiation Release and Dose Projection.

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STATE OF FLORIDA FIXED NUCLEAR FACILITY
NOTIFICATION MESSAGE FORM

Date and time of message _____

1. SITE B St. Lucie 2. ACCIDENT CLASSIFICATION 3. UNIT NUMBER(S)
- | | |
|------------------------------|------------------|
| <u>A</u> Unusual Event | <u>A</u> One (1) |
| <u>B</u> Alert | <u>B</u> Two (2) |
| <u>C</u> Site Area Emergency | |
| <u>D</u> General Emergency | |

4. TIME AND DATE OF INCIDENT/EVENT: TIME _____ DATE _____

5. INCIDENT INVOLVES: _____

6. SITUATION INVOLVED: 7. TYPE OF RELEASE IS:
- | | |
|---|----------------------------------|
| <u>A</u> No Release | <u>A</u> Radioactive Gaseous |
| <u>B</u> Potential (possible) release | <u>B</u> Non-Radioactive Gaseous |
| <u>C</u> Imminent (probable) release | <u>C</u> Radioactive Liquid |
| <u>D</u> A release is occurring | <u>D</u> Non-Radioactive Liquid |
| <u>E</u> A release that occurred, but stopped | <u>E</u> Non-Applicable |

8. RECOMMENDED PROTECTION ACTIONS:
- A For Information only - (Unusual Event or Alert)
- B Prepare for possible action involving the public, to include notification. (Alert or Site Area Emergency)
- C Notify public to take the following protective actions. (Site Area or General Emergency)

NO ACTION

SHELTER

EVACUATE

D
E

H
I

J
K

0-2 Mile radius (Gaseous Release)

2-5 Miles for sectors _____ (Gaseous Release)

5-10 Miles for sectors _____ (Gaseous Release)

_____ Miles

L Discontinue use of potentially affected water in _____
Locations

9. RELEASE IS:
- A Continuing - Expected duration or magnitude _____
- B Terminated - Approximate Duration or Magnitude _____

10. REPORT OF GASEOUS RELEASE IS: A Ground Level

11. WIND SPEED: _____ Miles per hour; Direction, FROM _____ °

NOTE: USE NOT APPLICABLE (N/A) WHERE APPROPRIATE.

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12. WIND DIRECTION DATA (CHECK ONE, READ ACROSS)

| | WIND FROM | DEGREES | WIND TOWARD | SECTORS AFFECTED |
|----------|-----------|---------|-------------|------------------|
| <u>A</u> | N | 349-11 | S | H J K |
| <u>B</u> | NNE | 12-33 | SSW | J K L |
| <u>C</u> | NE | 34-56 | SW | K L M |
| <u>D</u> | ENE | 57-78 | WSW | L M N |
| <u>E</u> | E | 79-101 | W | M N P |
| <u>F</u> | ESE | 102-123 | WNW | N P Q |
| <u>G</u> | SE | 124-146 | NW | P Q R |
| <u>H</u> | SSE | 147-168 | NNW | Q R A |
| <u>J</u> | S | 169-191 | N | -- R A B |
| <u>K</u> | SSW | 192-213 | NNE | A B C |
| <u>L</u> | SW | 214-236 | NE | B C D |
| <u>M</u> | WSW | 237-258 | ENE | C D E |
| <u>N</u> | W | 259-281 | E | D E F |
| <u>P</u> | WNW | 282-303 | ESE | E F G |
| <u>Q</u> | NW | 304-326 | SE | F G H |
| <u>R</u> | NNW | 327-348 | SSE | G H J |

13. CURRENT OUTSIDE TEMPERATURE: A _____ °F

14. WEATHER CONDITIONS: (Rain, Snow, Sleet, Etc.): _____

15. TEMPERATURE DIFFERENCE (DELTA T): A _____ °F
Elevation of Temp. Difference Measurement: _____
Stability Class (If Known): _____

16. RELEASE DETECTED BY:

| | | | |
|----------|---------------------|-----------------|------------------------------|
| <u>A</u> | Visual | | |
| <u>B</u> | Sample Results Are: | | |
| <u>C</u> | Instrumentation | <u>Location</u> | <u>Release Rate (Ci/sec)</u> |
| | | _____ | _____ |
| | | _____ | _____ |
| | | _____ | _____ |

17. ACCIDENT RELATED INJURIES: A NO B YES Number of Injuries _____

18. OTHER INFORMATION: _____

19. MESSAGE REPORTED BY: _____
 Name Organization Telephone(Outside #)

20. MESSAGE RECEIVED BY: _____
 Your Name Time Date

CONTINUE TO NEXT PAGE FOR:

1. Plant Duty Call Supervisor
2. Emergency Control Officer/Recovery Manager/Nuclear Energy Duty Officer
3. DHRS Radiological Duty Officer

NOTE: USE NOT APPLICABLE (N/A) WHERE APPROPRIATE

EMERGENCY INFORMATION CHECKLIST
ADDENDUM TO STATE OF FLORIDA FIXED NUCLEAR FACILITY
NOTIFICATION MESSAGE FORM

- | DISTANCE | THYROID (mrem/hr) | WHOLE BODY (mrem/hr) |
|------------------------|-------------------|----------------------|
| 1 mile (site boundary) | | |
| 2 miles | | |
| 5 miles | | |
| 10 miles | | |

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PLANT/RADIOLOGICAL EMERGENCY CHECKLIST
(continued)

9. During current business day, notify the Plant Manager, during off - hours and weekends relay information to the Duty Call Supervisor (see NPS Bulletin Board for scheduled supervisor and telephone number). Order him to notify the following:

_____ Plant Manager
_____ Operations Superintendent
_____ Operations Supervisor
_____ Technical Department Supervisor
_____ Emergency Control Officer (or Nuclear Energy Duty Officer)
_____ Other Department Supervisors (Primary Team Leaders)

(ALTERNATE METHOD: If Duty Call Supervisor is unavailable - notify Emergency Control Officer.

10. Notify the following within 15 minutes of classifying the emergency:

10.1 NAWAS Announcement:

"State Warning Point Tallahassee, this is St. Lucie * ____"
(State Warning Point will give a go-ahead)
"State Warning Point Tallahassee, this is St. Lucie * ____,"
* _____, repeat * _____."
*Enter appropriate site, class.

(ALTERNATE METHOD: If NAWAS is unavailable, telephone State Warning Point at PHONE NO. _____ Florida Marine Patrol-Alternate State Warning Point-_____.

State Warning Point will call via Phone to validate the notification. After validation, transfer the information on the State of Florida Fixed Nuclear Facility Notification Message Form via NAWAS or ALTERNATE ROUTE.

State Warning Point Acknowledgement Time _____

- 10.2 Notify, by telephone, the State Radiological Duty Officer at Radiological Health Services in Orlando at _____ (they have a beeper service for full time coverage) When the Duty Officer is contacted, transfer the information on the State of Florida Fixed Nuclear Facility Notification Message Form and the Emergency Information Checklist.

IF UNUSUAL EVENT OR ALERT, SKIP TO STEP 12

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- _____ 11. When LGR system is activated by offsite organizations, contact St.- Lucie County Disaster Preparedness, inform them of off site dose projections and that site evacuation has started, location of assembly area(s), evacuation route(s). Notify them of any wind changes, and when evacuation is completed.
- _____ 12. Prepare attached SIGNIFICANT EVENT REPORT (if time permits) and notify NRC via hot-line (within one hour)
(To be done by TSC if properly staffed)

IF UNUSUAL EVENT, SKIP TO STEP 18

- _____ 13. Verify from Security Team Leader that the evacuation (if ordered) has been completed and all personnel are accounted for.
- _____ 14. Reassess corrective and protective actions. Verify activities underway, reassign personnel and teams as necessary.
- _____ 15. Activate the Technical Support Center and the Operational Support Center.
- _____ 16. Brief the Technical Support Center Supervisor on events. Order him to update state and county periodically and to refine dose projections when the Chemistry Department representative arrives.
- _____ 17. Relinquish responsibilities for communications with off-site support agencies when the Emergency Control Officer notifies the Emergency Coordinator that he accepts these responsibilities.
- _____ 18. Reassess the Emergency Classification and if the situation escalates, recycle the Plant/Radiological Emergency Checklist, excluding those entries already completed.

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SIGNIFICANT EVENT REPORT

(for NRC Notification)

Date _____ Time _____
Facility Name Florida Power & Light St. Lucie Unit #1
Caller Name _____
1. Description of Event _____

Classification of Event _____

Reactor Systems Status _____
Pressure _____ Temperature _____ Power level _____
Flow _____ ECCS Operating/Operable _____
(Pumps on) _____
PZR or RX Level _____ Cooling Mode _____
Any Radioactive Release or Increased Release? _____
Path _____ Stopped? _____ Release Rate _____
Monitored? _____
Steam Plant Status: S/G Levels _____
Equip. Failures _____ Feedwater Source/Flow _____
Electrical Dist. Status: Normal Off-site Power Sources
Available? _____
Major Busses/Loads Lost _____
Safeguards Busses Power Source _____
D/G Running? _____ Loaded? _____
Personnel Casualties/Contamination? _____
2. Consequences of Event: _____

Actual and Potential Safety Hazards: _____

Tech. Spec. Violations? _____
State Notified? _____ Press Release Planned? _____
3. Cause of Event: _____

Corrective Actions taken: _____

Planned: _____

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FIRE OR EXPLOSION EMERGENCY CHECKLIST

1. CLASS: Unusual Event _____ (time) Alert _____ (time)

NOTE: If class is SAE or GENERAL, go to Plant/Radiological Checklist.

TIME

- _____ 2. Order initial corrective action per Emergency Operating Procedures.
- _____ 3. Sound Fire Alarm.
- _____ 4. P.A. Announcement of location and extent of fire.
- _____ 5. Activate the Fire Brigade and other appropriate emergency teams in accordance with Fire Emergencies EPIP 3100025E - PA announcement.
- _____ 6. If the evacuation of an area is necessary, initiate a local evacuation in accordance with E-Plan Implementing Procedure 3100026E, Criteria for and Conduct of Evacuations. Announce the following:
- _____ Area to be evacuated
- _____ Areas to be avoided, if possible, during the Evacuation
- _____ Assembly area
- _____ 7. If off-site assistance is necessary call St. Lucie County - Ft. Pierce Fire District PHONE No. 911.
- _____ 8. Prepare the following Notification Form:

STATE OF FLORIDA FIXED NUCLEAR FACILITY
NOTIFICATION MESSAGE FORM

Date and time of message _____

| | | |
|--------------------|-----------------------------------|--------------------------|
| 1. <u>SITE</u> | 2. <u>ACCIDENT CLASSIFICATION</u> | 3. <u>UNIT NUMBER(S)</u> |
| <u>B</u> St. Lucie | <u>A</u> Unusual Event | <u>A</u> One (1) |
| | <u>B</u> Alert | <u>B</u> Two (2) |

4. TIME AND DATE OF INCIDENT/EVENT: TIME _____ DATE _____

5. INCIDENT INVOLVES: _____

6. SITUATION INVOLVED:

| | |
|----------|--------------------------------------|
| <u>A</u> | No Release |
| <u>B</u> | Potential (possible) release |
| <u>C</u> | Imminent (probable) release |
| <u>D</u> | A release is occurring |
| <u>E</u> | A release that occurred, but stopped |

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FIRE OR EXPLOSION EMERGENCY CHECKLIST
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ITEMS 7 THROUGH 16 INCLUSIVE ARE N/A (NOT APPLICABLE)

17. ACCIDENT RELATED INJURIES: A NO B YES Number of Injuries _____
18. OTHER INFORMATION: _____
19. MESSAGE REPORTED BY: _____
Name Organization Telephone(Outside #)
20. MESSAGE RECEIVED BY: _____
Your Name Time Date

9. Relay information to the Duty Call Supervisor (see NPS Bulletin Board for scheduled supervisor and telephone number). Order him to notify the following:
- _____ Plant Manager
 - _____ Operations Superintendent
 - _____ Operations Supervisor
 - _____ Technical Department Supervisor
 - _____ Emergency Control Officer (or Nuclear Energy Duty Officer)
 - _____ Other Department Supervisors (Primary Team Leaders)

(ALTERNATE METHOD if Duty Call Supervisor is unavailable -
Notify Emergency Control Officer

10. Notify the following within 15 minutes of classifying the emergency:

10.1 NAWAS ANNOUNCEMENT:

"State Warning Point Tallahassee, this is St. Lucie. * _____
(State Warning Point will give a go-ahead)
"State Warning Point Tallahassee, this is St. Lucie * _____,
* _____, repeat * _____."

*Enter appropriate site, class.

Time _____

"Acknowledge, over."

(ALTERNATE METHOD) if NAWAS is unavailable-telephone
State Warning Point at PHONE NO. _____ Florida
Marine Patrol-Alternate State Warning Point _____

State Warning Point will call via Phone to validate the notification. After validation, transfer the information on the State of Florida Fixed Nuclear Facility Notification Message Form via NAWAS or ALTERNATE ROUTE.

State Warning Point Message Validation Time _____

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FIRE OR EXPLOSION EMERGENCY CHECKLIST
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- _____ 10.2 Notify, by telephone the State Radiological Duty Officer at Radiological Health Services in Orlando at ~~904-205-1111~~ (they have a beeper service for full time coverage) When the Duty Officer is contacted, transfer the information on the State of Florida Fixed Nuclear Facility Notification Message Form.
- _____ 11. Prepare attached SIGNIFICANT EVENT REPORT (if time permits) and notify NRC via hot-line (within one hour).--(To be done by TSC if properly staffed)
- _____ 12. Verify from Security Team Leader that all personnel are accounted for (if local evacuation was conducted).
- _____ 13. Reassess corrective and protective actions. Verify activities underway, reassign personnel and teams as necessary.
- IF UNUSUAL EVENT, SKIP TO STEP '7
- _____ 14. Activate the Technical Support Center and the Operational Support Center. Appoint OSC Supervisor.
- _____ 15. Brief the Technical Support Center Supervisor on events. Order him to provide state and county with periodic updates and to refine dose projections when the Chemistry Department representative arrives.
- _____ 16. Relinquish responsibilities for communications with off-site support agencies when the Emergency Control Officer notifies the Emergency Coordinator that he accepts these responsibilities.
- _____ 17. Reassess the Emergency Classification and update the State of Florida Fixed Nuclear Facility Notification Message Form with Technical Support Center Supervisor.
- _____ 18. If the accident involves actual or impending releases of radiation, go to the PLANT/RADIOLOGICAL EMERGENCY CHECKLIST.

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MEDICAL EMERGENCY CHECKLIST

TIME

- _____ 1. Determine:
 - Name of Victim _____
 - Employer (if not FPL) _____
 - Nature and Extent of Injury _____
 - Location _____
 - Is victim contaminated? _____
- _____ 2. Activate First Aid and Personnel Decontamination Team (Notify Chemistry Supervisor).
- _____ 3. Notify:
 - _____ Health Physics
 - _____ Plant Manager
 - _____ Operations Superintendent
- _____ 4. When determined, notify Captain of Guard where to direct ambulance, etc.
- _____ 5. Determine mode of transportation based on nature and extent of injuries. (Ensure victim's TLD, selfreader, ID badge and key card are retained on site).
 - a. Medical treatment for serious injury:
AMBULANCE PHONE NO. 911
 - b. Medical treatment for minor injuries:
FPL Vehicle/Private Vehicle
- _____ 6. Send all victims to LAWNWOOD MEDICAL CENTER
PHONE NO.
Radioactively contaminated victims:
Notify REEF PHONE NO.
- _____ 7. If Plant Manager not available, notify Duty Call Supervisor and Health Physics Duty Call Supervisor-See Emergency Roster for Off-site notifications.
- _____ 8. Insure that completed Medical Notification form accompanies the victim.
- _____ 9. Complete the following message form:

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MEDICAL EMERGENCY CHECKLIST
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STATE OF FLORIDA FIXED NUCLEAR FACILITY
NOTIFICATION MESSAGE FORM

Date and time of message _____

1. SITE [B] St. Lucie 2. ACCIDENT CLASSIFICATION [A] Unusual Event 3. UNIT NUMBER(S)
[A] One (1)
[B] Two (2)

4. TIME AND DATE OF INCIDENT/EVENT: TIME _____ - DATE _____

5. INCIDENT INVOLVES: _____

6. SITUATION INVOLVED:

[A] No Release
[B] Potential (possible) release
[C] Imminent (probable) release
[D] A release is occurring
[E] A release that occurred, but stopped

ITEMS 7 THROUGH 16 INCLUSIVE ARE N/A (NOT APPLICABLE)

17. ACCIDENT RELATED INJURIES: [A] NO [B] YES Number of Injuries _____

18. OTHER INFORMATION: _____

19. MESSAGE REPORTED BY: _____
Name Organization Telephone(Outside #)

20. MESSAGE RECEIVED BY: _____
Your Name Time Date

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MEDICAL EMERGENCY CHECKLIST
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10. Within 15 minutes of classifying the emergency:

10.1 NAWAS Announcement:

"State Warning Point Tallahassee, this is St. Lucie *"
(State Warning Point will give a go-ahead)
"State Warning Point Tallahassee, this is St. Lucie *",
UNUSUAL EVENT, repeat UNUSUAL EVENT."
*Enter appropriate site.
Time

"Acknowledge, over."

(ALTERNATE METHOD if NAWAS is unavailable-telephone State
Warning Point at PHONE NO. or Florida Marine
Patrol-Alternate State Warning Point.

State Warning Point will call via Phone to validate the
notification. After validation, transfer the information on the
State of Florida Fixed Nuclear Facility Notification Message Form
via NAWAS or ALTERNATE ROUTE.

State Warning Point Message Validation Time

10.2 Notify, by telephone the State Radiological Duty Officer at
Radiological Health Services in Orlando at (they
have a beeper service for full time coverage) When the Duty
Officer is contacted, transfer the information on the State of
Florida Fixed Nuclear Facility Notification Message Form.

11. Prepare attached SIGNIFICANT EVENT REPORT (if time permits)
and notify NRC via hot-line (within one hour). (To be done by TSC if
properly staffed.)

12. Reassess the Emergency Classification and update the State
of Florida Fixed Nuclear Facility Notification Message Form.

13. If the accident involves actual or impending releases of radiation, go
to the PLANT/RADIOLOGICAL EMERGENCY CHECKLIST.

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PROTECTIVE ACTION RECOMMENDATIONS

FPL is required to provide county and state governmental authorities with recommendations for protective action to be taken by the public during radiological emergencies at the St. Lucie Nuclear Power Plant.

The responsible authorities are the State Bureau of Disaster Preparedness (BDP) and St. Lucie and Martin County Offices of Disaster Preparedness.

Due to the large political and legal ramifications of these recommendations and the potential impact on FPL, the following format and content should be used:

1. If the emergency has been classified as a GENERAL EMERGENCY and NO OFFSITE dose estimates or field survey results are available, refer to figure A-1 to evaluate offsite protective action recommendations.
2. If the emergency has been classified, and the offsite doses are LESS THAN 0.5 Rem whole body or 1 Rem to the thyroid at 1 mile over the projected duration of the release, no protective action is recommended. This should be reported to BDP and other outside agencies who inquire as:

"Based on our current assessment of all the information now available to us, Florida Power & Light recommends that you consider taking the following protective actions (PA) - NONE. This recommendation may change in the future, but we cannot now say when it may change or what it may change to."

3. If the emergency has been classified and offsite dose information is available (from any credible source), use the dose information to enter the appropriate estimated offsite table in Figure A-2 (PA with offsite dose estimates for greater than or equal to 2 hour duration) or Figure A-3 (PA with offsite dose estimates for less than 2 hour duration). The appropriate recommendations can then be made. FOR EXAMPLE, a release has occurred at the St. Lucie Plant with a projected duration of 2 hours, the wind direction is from the NNE and the projected offsite integrated (2 hr) thyroid dose is 10 Rem at 1 mile, 2 Rem at 2 miles, and less than 1 Rem at 5 miles. Referring to Figure A-2 (PA with offsite dose estimates for greater than or equal to 2 hours duration) the following recommendation should be made:

"Based on our current assessment of all the information now available to us, Florida Power & Light Company recommends that you consider taking the following protective actions:

- i. Evacuate all personnel between a 0 and 2 miles radius from the plant.
- ii. Shelter all personnel between a 2 and 5 mile radius from the plant who are in sectors J, K & L (refer to State of Florida Fixed Nuclear Facility Notification Message Form, Page 17 Entry 12)
- iii. No protective action is recommended between a 5 and 10 mile radius from the plant

ST. LUCIE UNITS 1 AND 2
E-PLAN IMPLEMENTING PROCEDURE NO. 3100021E, REVISION 12
DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

PROTECTIVE ACTION RECOMMENDATIONS

(continued)

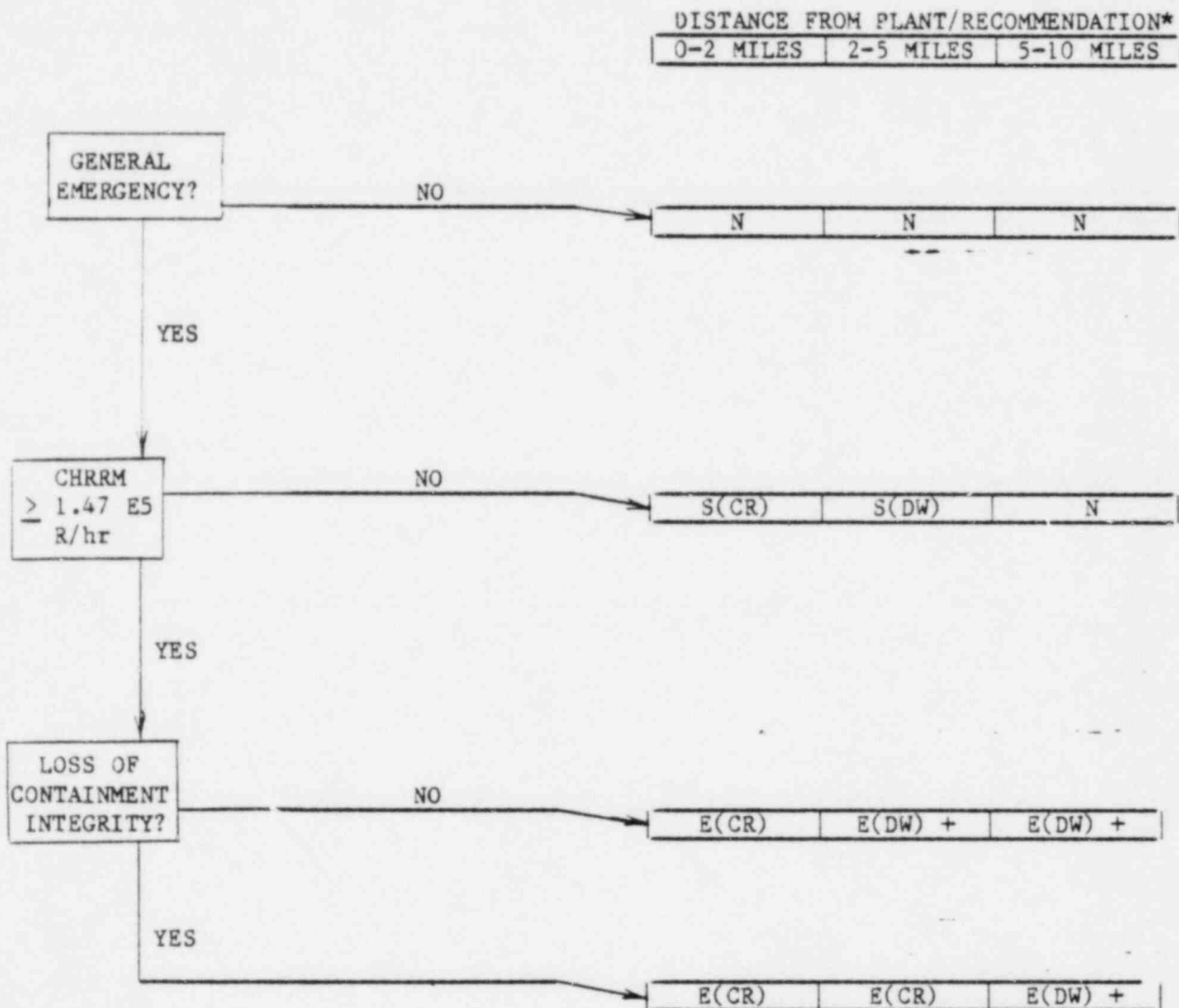
3. (continued)

This recommendation may change in the future, but we cannot now say when it may change or what it may change to."

4. For other emergency conditions which may occur, enter the table for those conditions, determine the recommended protective actions and formulate the appropriate message in the above format and transmit it to BDP.

ST. LUCIE UNITS 1 AND 2
E-PLAN IMPLEMENTING PROCEDURE NO. 3100021E, REVISION 12
DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

FIGURE A-1

PROTECTIVE ACTION RECOMMENDATIONS BASED ON PLANT CONDITIONS*LEGEND OF ABBREVIATIONS

- N - No protective action recommended
- S - Sheltering recommended
- E - Evacuation recommended
- DW - Downwind sector
- DW+ - Downwind + 2 adjoining sectors
- RS - Remaining sectors
- CR - Complete circle around plant at specified distance

ST. LUCIE UNITS 1 AND 2
E-PLAN IMPLEMENTING PROCEDURE NO. 3100021E, REVISION 12
DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

FIGURE A-2

PROTECTIVE ACTION RECOMMENDATIONS BASED ON ACTUAL RELEASE
(GREATER THAN OR EQUAL TO 2 HOUR DURATION) WITH OFFSITE DOSE ESTIMATES
(used in preference to Figure A-1)

| WHOLE BODY DOSE (REM) | OR THYROID DOSE (REM) | 0-2 MILES | 2-5 MILES | 5-10 MILES |
|----------------------------|-----------------------------|-----------|------------------|------------------|
| < 0.5 | < 1.0 | N | N | N |
| ≥ 0.5 but < 1.0 | ≥ 1.0 but < 5.0 | S(CR) | S(DW) | S(DW) |
| ≥ 1.0 but < 5.0 | ≥ 5.0 but < 25.0 | E(CR) | E(DW) + S(RS) | E(DW) + S(RS) |
| ≥ 5.0 | ≥ 25.0 | E(CR) | E(CR) | E(DW) + S(RS) |

NOTE:

If the duration of the release is projected to be less than 2 hours, use Figure A-3.

*LEGEND OF ABBREVIATIONS

- N - No protective action recommended
- S - Sheltering recommended
- E - Evacuation recommended
- DW - Downwind sector
- DW+ - Downwind + 2 adjoining sectors
- RS - Remaining sectors
- CR - Complete circle around plant at specified distance

ST. LUCIE UNITS 1 AND 2
E-PLAN IMPLEMENTING PROCEDURE NO. 3100021E, REVISION 12
DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR

FIGURE A-3

PROTECTIVE ACTION RECOMMENDATIONS BASED ON ACTUAL RELEASE
(LESS THAN 2 HOUR DURATION) WITH OFFSITE DOSE ESTIMATES
(used in preference to Figure A-1)

| WHOLE BODY DOSE (REM) | OR | THYROID DOSE (REM) | 0-2 MILES | 2-5 MILES | 5-10 MILES |
|----------------------------|----|-----------------------------|-----------|----------------|------------------|
| < 0.5 | | < 1.0 | N | N | N |
| ≥ 0.5 but < 1.0 | | ≥ 1.0 but < 5.0 | S(CR) | S(DW) | S(DW) |
| ≥ 1.0 but < 5.0 | | ≥ 5.0 but < 25.0 | S(CR) | S(CR) | S(CR) |
| ≥ 5.0 | | ≥ 25.0 | E(CR) | E(DW) S(RS) | E(DW) + S(RS) |

NOTE:

If the duration of the release is projected to be less than 2 hours, use Figure A-3.

*LEGEND OF ABBREVIATIONS

N - No protective action recommended
S - Sheltering recommended
E - Evacuation recommended
DW - Downwind sector
DW+ - Downwind + 2 adjoining sectors
RS - Remaining sectors
CR - Complete circle around plant at specified distance

FIRE EMERGENCIES

Reviewed by Facility Review Group -- July 25, 1975

Approved by K. N. Harris Plant Manager July 29, 1975

Revision 7 Reviewed by, P R G *May 11, June 7 1982*

Approved by [Signature] Vice-Pres. Nuc. Eng. 8-4 1982

3.1 Purpose

This procedure provides instructions to control and extinguish fires, minimize damage and prevent personal injuries.

3.2 Discussion

3.2.1 Any uncontrolled fire is considered a Fire Emergency. In order to control and extinguish a fire, a fire fighting organization has been established.

3.2.2 The Fire Team is composed of members of the Operating group assigned to the St. Lucie Plant. The members of the Fire Teams are qualified in fire fighting.

3.2.3 For a list of the locations of fire fighting equipment, refer to the Mechanical Maintenance preventive maintenance program as delineated in Admin. Procedure No. 0010431 "Preventive Maintenance Program".

3.2.4 The emergency classification system includes certain fire related events. Thus, fires may be classified as Unusual Events, Alerts, or Site Area Emergencies.

3.3 Authority

This procedure implements the St. Lucie Plant Emergency Plan and Fire Protection Plan.

. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100025E, REVISION 7
FIRE EMERGENCIES

4.0 Precautions:

- 4.1 Class "C" fire extinguishers (CO₂ or Dry Chemical) or fog type fire hose nozzles shall be used on combustible liquid fires, electrical fires or on fires which might involve energized conductors and/or equipment.
- 4.2 Foam type fire extinguishing materials shall not be used on electrical fires.
- 4.3 When fighting fires in the Radiation Controlled Area that may involve radioactive materials, the members of the Fire Team shall use additional protective equipment specified by the Radiation Team Leader and shall follow any instructions he issues regarding precautions to observe while fighting the fire.

5.0 Responsibilities:

- 5.1 The Nuclear Watch Engineer is the Fire Team Leader. If he is not available, the Nuclear Turbine Operator acts as his alternate. It shall be the responsibility of the Fire Team Leader to:
 - 5.1.1 Direct all phases of the fire fighting activities.
 - 5.1.2 Coordinate the activities of any outside fire fighting organization called in to assist with the emergency.
- 5.2 It shall be the responsibility of each Fire Team member to be thoroughly familiar with the contents of this procedure and the location of fire fighting equipment in the plant.
- 5.3 All personnel shall be familiar with the location of, and be familiar with operation of fire equipment in their designated work stations.
- 5.4 On the basis of observations, the Nuclear Plant Supervisor is responsible for classification of the emergency. He is also responsible for making notifications and taking other actions appropriate to the emergency class.

6.0 References:

- 6.1 St. Lucie Plant Emergency Plan.
- 6.2 E-Plant Implementing Procedure EPIP 3100021E, Duties of the Emergency Coordinator.
- 6.3 E-Plan Implementing Procedure EP3100023E , On-Site Emergency Organization/and Roster.
- 6.4 St. Lucie Plant Administrative Procedure No. 1800022 Fire Protection Plan".
- 6.5 St. Lucie Plant Administrative Procedure No. 0010431 "Preventive Maintenance Program".

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100025E, REVISION 7
FIRE EMERGENCIES

7.0 Records:

Any actions taken shall be recorded as directed by the Nuclear Plant Supervisor.

/R7

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100025E, REVISION 7
FIRE EMERGENCIES

8.0 Instructions:

8.1 When an individual discovers a fire which can be safely extinguished using fire fighting equipment at hand, he shall do so and then promptly notify the Nuclear Plant Supervisor.

8.2 When an individual discovers a fire or explosion resulting in a fire which cannot be extinguished using fire fighting equipment at hand, he shall notify the Nuclear Plant Supervisor over the PA system or the control room by dialing 333 on any PAX telephone. The following information shall be given:

8.2.1 Location of the fire.

8.2.2 Type of fire, if known.

8.2.3 Whether or not there are any injured personnel.

8.2.4 Extent of damage to plant components.

NOTE: Speed in notification is much more important than the completeness of the initial report.

8.3 The Nuclear Plant Supervisor shall instruct the individual to take any immediate action he is qualified to perform to extinguish the fire.

8.4 The Nuclear Plant Supervisor shall cross-connect the PA system, declare a Fire Emergency, announce the location of the fire, and sound the fire alarm. If sufficient information is available, he shall classify the emergency and implement the Emergency Plan.

(1) The Nuclear Watch Engineer will direct, by use of the page system, which members will meet him at the fire site, and which members will go to the fire house.

(2) If the fire is found to be in the Radiation Controlled Area, the Radiation Team shall be activated by the Emergency Coordinator (Nuclear Plant Supervisor).

(3) If the fire or explosion is in the Radiation Controlled Area, they shall wear appropriate protective clothing and respiratory equipment and personnel monitoring devices, attempt to stay upwind of the fire, and coordinate their actions with the Radiation Team.

(4) During normal working hours additional personnel are available from the maintenance department to support fire fighting efforts until outside assistance is obtained.

(5) The Emergency Coordinator (Nuclear Plant Supervisor) shall designate additional available on-site personnel to assist in extinguishing the fire, as required by the situation.

/R7

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100025E, REVISION 7
FIRE EMERGENCIES

8.0 Instructions: (continued)

8.4 (continued)

8.4.1 Requesting Outside Fire Assistance:

- (1) If the fire is too large to be controlled by available plant forces, the St. Lucie County-Ft. Pierce Fire District shall be called by the Emergency Coordinator.
- (2) The main guard station shall be notified of the location of the fire and the expected arrival of the off-site fire fighting equipment.
- (3) Working communications shall be established between the Emergency Coordinator, the person in charge of the off-site fire fighting organization, the Radiation Team Leader, if the fire is in the Radiation Controlled Area, and the Fire Team Leader.

St. Lucie County-Ft. Pierce

461-1547

or

St. Lucie County Emergency Center

911

/R7

- (4) In the case of an uncontrolled fire, not involving a safety system, but requiring off-site support, the Nuclear Plant Supervisor shall declare an UNUSUAL EVENT.
- (5) In the case of an uncontrolled fire, potentially affecting safety systems and requiring off-site support, the Nuclear Plant Supervisor shall declare an ALERT.
- (6) In the case of a fire resulting in degradation of safety systems, the Nuclear Plant Supervisor shall declare a SITE AREA EMERGENCY.

NOTE: See E-Plan Implementing Procedure 3100023E, Emergency Roster, for specific information regarding means of communication and telephone numbers.

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

1.0 TITLE:

CRITERIA FOR AND CONDUCT OF EVACUATIONS

2.0 APPROVAL:

Reviewed by Facility Review Group July 25, 1975
Approved by K. N. Harris Plant Manager July 24, 1975

Revision 5 Reviewed by Facility Review Group March 20 & 25, 1981
Approved by [Signature] V.P. Pwr. Res. March 26, 1981

Revision 6 Reviewed by Facility Review Group May 28 1981
Approved by [Signature] V.P. Pwr. Res. June 3, 1981

Revision 7 Reviewed by Facility Review Group JANUARY 28 1982.
Approved by [Signature] Dir., Nucl. Energy 2-1 1982.

Revision 8 Reviewed by Facility Review Group June 7, May 11, 1982
Approved by [Signature] V.P., Nucl. Energy 8-4 1982

3.0 SCOPE:3.1 Purpose

This procedure provides criteria for determining if evacuation of a local area on-site or the Owner Controlled Area should be carried out. It provides instructions for effecting an ordered, rapid and safe evacuation of a local area or the Owner Controlled Area in order to prevent or minimize radiation exposure to personnel. It also provides instructions for personnel accountability.

3.2 Discussion

- 3.2.1 Accurate classification of emergencies that may occur at the Plant is necessary to enable the Nuclear Plant Supervisor to take the proper corrective action and to know when to initiate the Emergency Plans. For those emergencies involving high radiation and/or the release of radioactive material to the environment, it is necessary to provide the Nuclear Plant Supervisor (Emergency Coordinator) with guidelines that will enable him to know when to order a local area evacuation or evacuation of the Owner Controlled Area.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

3.0 SCOPE: (Continued)

3.2 Discussion (Continued)

3.2.2 A local area evacuation or evacuation of the Owner Controlled Area may be necessitated by the Occurrence of any of several events where evacuation of personnel would be necessary to minimize their exposure to radiation. An Owner Controlled Area evacuation will be conducted for any Site Area Emergency or General Emergency.

3.3 Authority:

This procedure implements the St. Lucie Unit #1 Emergency Plan.

3.4 Definitions:

3.4.1 Assembly Area

The location to which evacuation personnel report. In a local evacuation, personnel evacuate and assemble in a location designated by the Emergency Coordinator. In an evacuation of the Owner Controlled Area, evacuating FPL personnel from the Protected Area go to the Site Assembly Station on Highway 1A near the north entrance to plant property, while non-FPL personnel and FPL personnel from outside the Protected Area assemble at J.C. Public Park on Highway 1A, 7 1/2 miles north of the plant. If necessary, other assembly areas can be specified by the Emergency Coordinator.

3.4.2 Escort

An individual specifically assigned to accompany other persons who are required by the Security Plan or Health Physics Manual to be escorted.

3.4.3 Local Area Evacuation

An evacuation of some portion of, but not all of, the Owner Controlled Area. It may include evacuation of a room, building, group of buildings, generating station area, or other portion of the Owner Controlled Area.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

3.0 SCOPE: (Continued)

3.4 Definitions: (Continued)

3.4.4 Owner Controlled Area

That portion of FPL property surrounding and including the plant which is subject to limited access and control as deemed appropriate by FPL (indicated by the dotted line on the attached Florida Power & Light property plan, Figure 1 of this procedure).

3.4.5 Owner Controlled Area Evacuation

The evacuation from the Owner Controlled Area of all personnel except those required to place the plant in a safe condition, the emergency teams, and the guards necessary to fulfill their evacuation responsibilities.

3.4.6 Radiation Control Point

Located in the Auxiliary Building, it is likely to be used as an assembly area during a local evacuation.

4.0 Precautions:

- 4.1 Every effort shall be made to minimize personnel exposure to radiation.
- 4.2 Personnel who have been in the area of the emergency shall remain in a group, and shall not mix with the other personnel in the Radiation Control Point or other assembly area until they have been monitored for possible contamination, unless they are injured. Injured personnel shall be treated as discussed in E-Plan Implementing Procedure 3100021E, Duties of the Emergency Coordinator.
- 4.3 Except as discussed in 4.2 above, personnel reporting to the Radiation Control Point or other assembly area shall group according to departments in order to facilitate personnel accountability and monitoring.
- 4.4 When reporting to the assembly area, take the most direct route possible, but do not use any route or area that has been declared part of the emergency area, or that could result in excessive individual exposure or injury.
- 4.5 If an area or building is evacuated, any records regarding the persons in the area shall be removed and taken to the assembly area.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

4.0 Precautions: (Continued)

- 4.6 Health Physics personnel exiting the RAB as necessitated by an emergency condition of possible radiological nature shall pick up suitable portable radiation monitoring equipment which would be required for re-entry monitoring.

5.0 Responsibilities:

- 5.1 The Nuclear Plant Supervisor is responsible for:

- 5.1.1 Classifying any emergency that may occur at Unit #1.

- 5.1.2 Initiating the Emergency Plans when appropriate.

- 5.1.3 Initiating the evacuation of any area in which the criteria for evacuation, as expressed in steps 8.1 8.2 are met.

- 5.1.4 Providing protective action recommendations to off-site authorities per Table 1 in 3100021E (Duties of Emer. Coordinator). /R6

- 5.2 The Nuclear Plant Supervisor shall act as Emergency Coordinator.

- 5.3 The Emergency Coordinator is responsible for advising the Security Team Leader of a local evacuation or an Owner Controlled Area evacuation. This notification will be by the alarm or the PA system. Information needed by the Security Force to properly fulfill their responsibilities during the evacuation shall be provided to the Security Team Leader by the Emergency Coordinator. (See E-Plan Implementing Procedure 3100021E, Duties of Emergency Coordinator).

- 5.4 The Security Guard Force is under the supervision of the Plant Security Supervisor. He serves as the Primary Security Team Leader. The Security Force Shift Supervisor is the Interim Security Team Leader.

- 5.5 The responsibilities of individuals acting as escorts are contained in Sections 5.12 and 8.4.5 of this procedure.

- 5.6 All personnel permanently or temporarily assigned to St. Lucie plant shall familiarize themselves with:

- 5.6.1 The instructions given in this procedure.

- 5.6.2 The access routes to the work location to which they are assigned.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

5.0 Responsibilities:

5.6 (Continued)

5.6.3 The locations of the evacuation assembly areas:

- a. The Radiation Control Point in the Auxiliary Building.
- b. The Site Assembly Station.
- c. The J. C. Public Park on Route 1A, north of the plant site.

5.7 It shall be the responsibility of each supervisor and department foreman not involved in the emergency response to report to the assembly area to assist in accounting for all personnel under his supervision.

5.8 Security Department Responsibilities are defined in Security Procedure 0006123.

5.9 The Control Point Guard shall maintain accurate records of all personnel entering or leaving the controlled area and make the records available when required.

Rev. 8

5.10 The Main Gate Guard shall maintain accurate records of all personnel entering or leaving the Generating Station Area and make the records available when required.

Rev. 8

5.11 The Assembly Area Supervisor shall be responsible for personnel accounting at assembly area and liaison between these personnel and the Emergency Coordinator.

5.12 Tour Guides are assigned to escort groups of visitors during tours of the plant site. In an emergency, Tour Guides are responsible for personnel accountability of their respective groups and the evacuation of their group to the Site Assembly Station in cooperation with the Security Force.

5.13 Unit 2 Responsibilities are defined in ASP 5.0.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

6.0 References:

- 6.1 St. Lucie Plant Radiological Emergency Plan.
- 6.2 St. Lucie Plant Security Plan.
- 6.3 E-Plan Implementing Procedure 3100021E, Duties of Emergency Coordinator.
- 6.4 HP207 Personnel Monitoring following an Evacuation.
- 6.5 HP208 Personnel Decontamination.

7.0 Records and Notifications:

- 7.1 A list of all persons assembled at J. C. Public Park shall be prepared by a member of the Plant Staff who will travel to that location with evacuees.
- 7.2 Records showing that all personnel in the area affected by the emergency were accounted for shall be kept as part of the records of the emergency and recorded by the Emergency Coordinator.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

8.0 Instructions:

8.1 Criteria for Local Area Evacuation

If an incident involves a high radiation field or has caused the release of radioactive material to the environment, the need to evacuate the affected area shall be determined in accordance with the following criteria:

Evacuate the affected local area in which any of the following conditions occur:

- 8.1.1 Area Radiation Monitor Alarm.
- 8.1.2 Containment Evacuation Alarm.
- 8.1.3 Unevaluated direct radiation dose rate reading in excess of 100 mRem/hour.
- 8.1.4 Unevaluated airborne radioactivity concentration in excess of 1×10^{-9} micro Ci/cc.
- 8.1.5 Removable radioactive surface contamination in an unposted area in excess of 1000 dpm/100 cm² beta-gamma over an area of 100 ft².
- 8.1.6 Removable radioactive surface contamination in an unposted area in excess of 50 dpm/100cm² alpha over an area of 100 ft².
- 8.1.7 The Emergency Coordinator determines that a situation exists for which local evacuation is appropriate.

8.2 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 Protected Area should be evacuated,
- 4. Any other situation in which the Emergency Coordinator determines that evacuation is appropriate.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

8.0 Instructions: (Continued)

8.3 Evacuation Preparedness

- 8.3.1 All visitors shall have adequate transportation available on-site to evacuate all members of their respective groups.
- 8.3.2 Escorts shall maintain control of groups or individuals to which they are assigned to enable all members of the groups to be located, notified and evacuated.

8.4 Local Area Evacuation Implementation

- 8.4.1 When the Emergency Coordinator (Nuclear Plant Supervisor) determines that a local evacuation is necessary, he shall, in following Emergency Procedure Duties of the Emergency Coordinator, announce an evacuation using the PA system, giving the area affected, the assembly area and other instructions as required.
- 8.4.2 All personnel in the evacuated area shall stop work, turn off potentially hazardous equipment, such as cutting torches, and leave the area by the same route taken to enter the area, unless otherwise instructed by the Emergency Coordinator.
- 8.4.3 All personnel in the evacuated area shall report to the Radiation Control Point in the Auxiliary Building for monitoring and accountability.
- 8.4.4 The Radiation Monitor Team shall monitor evacuated personnel for contamination, (for areas where contamination may be present).
- 8.4.5 Injured personnel shall be treated as discussed in E-Plan Implementing Procedure 3100021E, Duties of Emergency Coordinator. If an injured person is evacuated from the plant site, the person's TLD, selfreading dosimeter, identification badge, and keycard should be removed and given to the First Aid and Personnel Decontamination Team Leader.
- 8.4.6 The Control Point Guard shall make available to the Emergency Coordinator his records showing the personnel who are in the Security Controlled Area.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

8.0 Instructions: (Continued)

8.4 Local Area Evacuation Implementation (Continued)

8.4.7 The Emergency Coordinator and department supervisors and foremen having personnel working in the evacuated area shall verify that all personnel in the evacuated area are accounted for.

8.4.8 The Emergency Coordinator shall initiate a search for the personnel who have not been accounted for.

8.5 Owner Controlled Area Evacuation Implementation

8.5.1 When the Emergency Coordinator (Nuclear Plant Supervisor) determines that an evacuation of the Owner Controlled Area is necessary, he will, in the following Emergency Procedure Duties of the Emergency Coordinator, order an evacuation using the PA system and the evacuation alarm.

8.5.2 All personnel in the evacuated area shall stop work, turn off potentially hazardous equipment, such as cutting torches, and leave the area. All personnel not needed to place Unit #1 in a safe condition and not on an emergency team or otherwise required on site, shall evacuate to the appropriate Assembly Area. Emergency Teams shall report to the Administrative Building for assignment.

8.5.3 Injured personnel shall be treated as discussed in E-Plan Implementing Procedure 3100021E, Duties of Emergency Coordinator. If an injured person is evacuated from the plant site, the person's TLD, selfreading dosimeter, identification badge, and keycard should be removed and given to the First Air and Personnel Decontamination Team Leader.

8.5.4 Personnel shall remove protective clothing prior to leaving the Radiation Controlled Area.

8.5.5 Proceed to the Main Guard Station by the most direct route, unless an alternate route is specified by the Emergency Coordinator.

8.5.6 Each person shall then proceed to the Site Assembly Area (see Figure 2).

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EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

8.0 Instructions: (Continued)

8.5 (Continued)

- 8.5.7 Assemble by department for accounting and monitoring, and remain at the assembly area until given instructions by the Assembly Area Supervisor.
- 8.5.8 If the conditions associated with the emergency are such that the site assembly station area is untenable, the Emergency Coordinator shall direct all personnel to report to the J. C. Public Park and specify the route to be followed.
- 8.5.9 The department supervisors and foremen shall account for their personnel and report the results to the Assembly Area Supervisor.
- 8.5.10 The Assembly Area Supervisor shall assure that all personnel are monitored for contamination prior to leaving the Assembly Area.
- 8.5.11 The Assembly Area Supervisor, the Security Force Shift Supervisor and the department supervisors and foreman shall examine all the personnel records available to determine if any personnel are unaccounted for.
- 8.5.12 The Emergency Coordinator shall initiate a search for the personnel who have not been accounted for.

8.6 Security Force Evacuation Implementation

- 8.6.1 Upon notification of an evacuation, the Security Force Shift Supervisor (Interim Security Team Leader) shall advise by radio all other guards on duty that an evacuation is in progress. The Security Force will proceed with the evacuation of persons and with personnel accountability activities.
- 8.6.2 The Control Point Guard and the Main Gate Guard shall immediately review logs and badge records to determine what persons are in the affected area. These guards will be prepared to brief the Emergency Coordinator. The Control Point Guard shall verify that all personnel have evacuated the area and report to the Security Team Leader for further instructions. The Control Point Guard shall

FLORIDA POWER & LIGHT COMPANY
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#3100026E, REV. 8

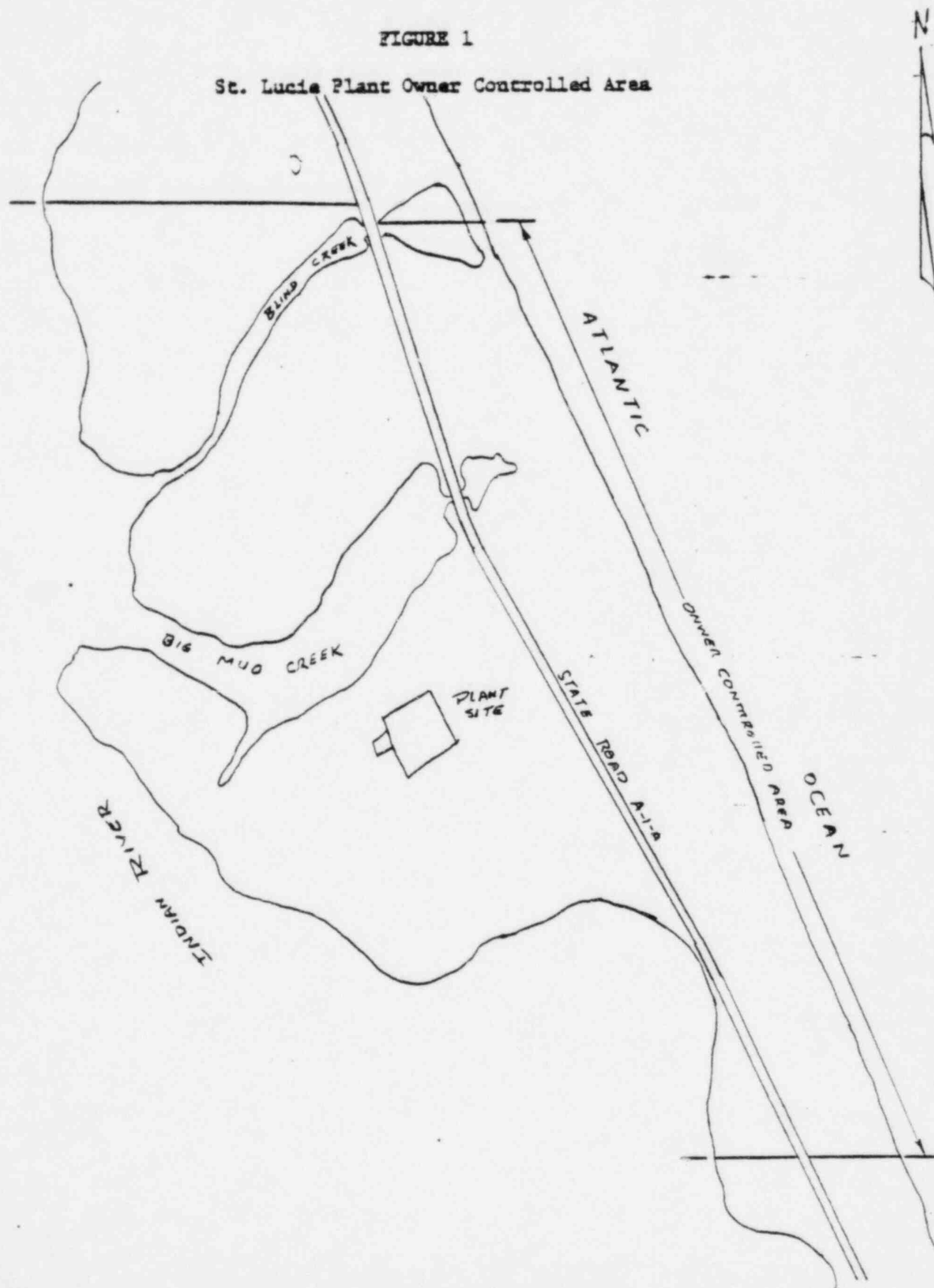
8.0 Instructions: (Continued)

8.6 (Continued)

- 8.6.2 go to the Main Gate with his personnel records and await instructions from the Security Team Leader.
- 8.6.3 The Security Team shall:
 - 1. Sweep the plant site to verify that all personnel have evacuated.
 - 2. Notify any Special Guards on duty.
 - 3. Perform additional duties as specified in the Security Guard Force Post and Force Orders.
- 8.6.4 The Security Team Leader, after completion of sweeps by members of the Security Team shall instruct guards concerning special assignments which may be required as a result of the evacuation. He shall advise the Off-Site Emergency Security Manager of any circumstances which require his attention.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 3

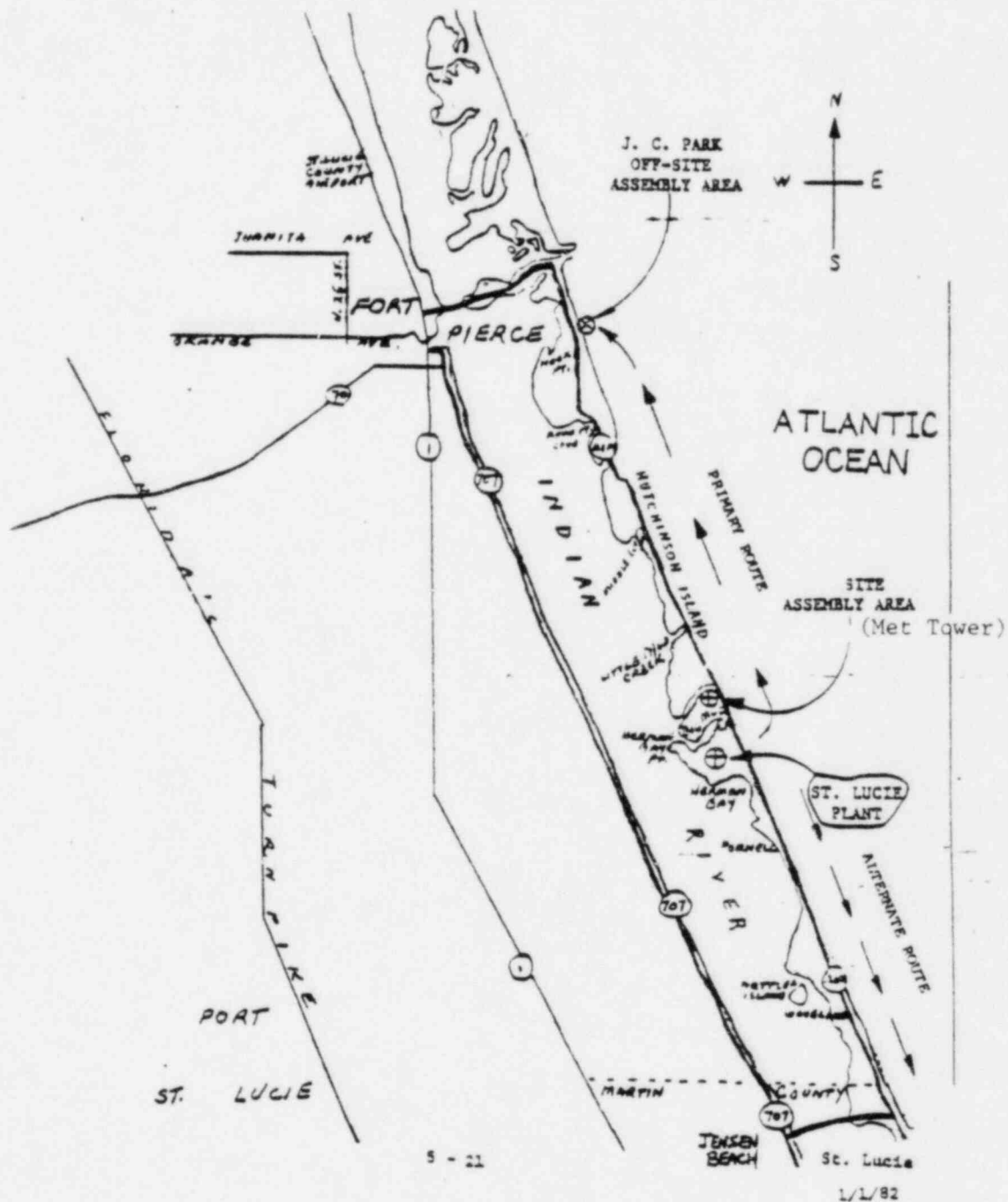
FIGURE 1



FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100026E, REV. 8

FIGURE 2

Site Assembly Area



FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100027E, REV. 5

1.0 TITLE:

RE-ENTRY

2. APPROVAL:

Reviewed by Facility Review Group July 25, 19 75
Approved by K. N. Harris Plant Manager July 29, 19 75

Revision 3 Reviewed by Facility Review Group March 20, 19 81
Approved by [Signature] P. Power Resources March 26, 19 81

Revision 4 Reviewed by Facility Review Group May 23, 19 81
Approved by [Signature] P. Power Resources June 2, 19 81

Revision 5 reviewed by FRG June 7, 1982
Approved by [Signature] W.P. Nuclear Energy May 11, 1982

3.0 SCOPE:3.1 Purpose

This procedure provides guidelines for the selection of the Re-entry Team members and provides instructions to follow during re-entry.

3.2 Discussion

3.2.1 Re-entry into an evacuated area shall be made only when authorized by the Emergency Coordinator and under the supervision of the Radiological team leader (RTL) or Interim RTL. /R5

1. To ascertain that all personnel who were in the affected area have been evacuated and to search for unaccounted for personnel.
2. To rescue any injured or trapped personnel from the affected area.
3. To perform operations which may decrease the severity of the emergency.
4. To determine the nature and extent of the emergency and the radiological conditions.
5. To establish definite personnel exclusion area boundaries.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100027E, REV. 5

3.0 SCOPE (Continued)

3.2 (Continued)

- 3.2.2 The Emergency Coordinator should select individuals with appropriate qualifications in First Aid, Operations, Health Physics, and Maintenance for the Re-entry Team.
- 3.2.3 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 Radiation Team Leader.
- 3.2.4 The Re-entry Team Leaders should be fully briefed concerning the nature of the emergency. Information for these briefings will be obtained from the applicable available sources including current operating records, interviews with evacuated employees, and surveys conducted by the Radiation Team.

3.3 Authority

This procedure implements the St. Lucie Plant Radiological Emergency Plan.

4.0 Precautions:

- 4.1 There shall be no re-entry into the area affected by the emergency after an emergency evacuation unless authorized by the Emergency Coordinator.
- 4.2 All Re-entry Team members shall wear protective clothing, dosimeters, respiratory devices, and other protective devices as specified by the Radiation Team Leader.
- 4.3 The team members should not deviate from the planned route, unless required by un-anticipated conditions such as rescue, performing an operation which would minimize the emergency conditions, etc.
- 4.4 If the monitored dose rates encountered during the re-entry exceed the limits set by the Emergency Coordinator and the Radiation Team Leader, the Re-entry Team shall return to the area from which they were dispatched.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100027E, REV. 5

4.0 Precautions: (Continued)

4.5 The following guidelines for emergency exposure of personnel shall be followed during the re-entry operation:

- 4.5.1 The Emergency Coordinator and the Re-entry Team Leaders shall make every effort to minimize re-entry personnel exposures, utilizing radiation survey and monitoring devices, protective clothing, breathing apparatus, and other special equipment as required.
- 4.5.2 Under emergency conditions not requiring action to prevent serious injury or a catastrophic incident, Re-entry Team personnel exposure in excess of 10 CFR 20 limits may be authorized by the Emergency Coordinator, but shall not exceed 5 Rem whole body exposure.
- 4.5.3 A planned emergency dose to prevent serious injury or to prevent destruction of equipment which could result in serious injury should not exceed 12 Rem whole body dose.
- 4.5.4 Under emergency conditions where immediate action is necessary to prevent serious injury or a catastrophic incident, Re-entry Team members' exposures authorized by the Emergency Coordinator, with the consent of the individuals to be exposed, should not exceed 25 Rem whole body exposure, except for life saving actions.
- 4.5.5 For life saving actions, an individual may receive a dose of up to 75 Rem whole body exposure.

4.6 A Re-entry Team shall consist of at least two persons.

5.0 Responsibilities:

- 5.1 The Emergency Coordinator has the responsibility for authorizing re-entry into an area after it has been evacuated. It shall be his responsibility to select qualified personnel for the Re-entry Team and make clear what their assigned duties are prior to re-entry.
- 5.2 The Radiation Team Leader shall be responsible for the supervision of the initial entry into an evacuated area, and for all subsequent entries until radiation areas have been properly marked and a safe route determined. He shall also make recommendations to the Emergency Coordinator as to the expected doses the Re-entry Team personnel will be subjected to and the feasibility of attempting re-entry into a given area.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100027E, REV. 5

5.0 Responsibilities: (Continued)

- 5.3 It shall be the responsibility of the person appointed Re-entry Team Leader to strictly follow the orders given to him by the Radiation Team Leader and at all times to protect the members of the Re-entry Team from possible injury and excessive radiation exposure.

6.0 References:

- 6.1 St. Lucie Plant Radiological Emergency Plan
6.2 St. Lucie Plant Radiation Protection Manual
6.3 HP 200 HP Emergency Organization
6.4 HP 201 Personnel Exposure Control
6.5 HP 203 Personnel Access Control

/R5

7.0 Records and Notifications:

Detailed records of all significant actions of the Re-entry Team shall be recorded by the Emergency Coordinator.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100027E, REV. 5

8.0 Instructions:

8.1 The Emergency Coordinator or the Radiation Team Leader or their designee shall:

- 8.1.1 Select at least two qualified persons to form a Re-entry Team. One of the members shall be qualified in Health Physics procedures.
- 8.1.2 Brief the team members concerning the nature of the emergency and the possibility of hazards being present.
- 8.1.3 Instruct the team members as to what is required of them while in the emergency area. This may consist of the following:
 - 1. Search for injured, trapped or unaccounted for personnel.
 - 2. Operate equipment as needed.
 - 3. Determine the nature and extent of the emergency and radiological conditions.
 - 4. Establish definite personnel exclusion areas and access routes.

8.2 The Radiation Team Leader shall:

- 8.2.1 Evaluate the emergency to determine the possible dose rates and stay times. Refer to Step 4.5 of this procedure for guidelines.
- 8.2.2 Supervise the initial entry of the Re-entry Teams into the area of the emergency and any subsequent entries until readiation areas have been properly marked.
- 8.2.3 Based on the information available, select a route for the Re-entry Teams to follow into the affected area.
- 8.2.4 Assure that all Re-entry personnel are properly equipped with protective clothing, high range dosimeters, low range dosimeter, TLD, respiratory devices, and other protective equipment as required.
- 8.2.5 Specify self-monitoring and decontamination procedures for the Re-entry Teams.

FLORIDA POWER & LIGHT COMPANY
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100027E, REV. 5

8.0 Instructions: (Continued)

8.3 The Re-entry Team members shall:

- 8.3.1 Wear protective clothing and other protective devices ~~and~~ dosimetry as specified by the Radiation Team Leader. /R5
- 8.3.2 Unless unanticipated conditions are encountered, follow the pre-planned route into the affected area, and perform the assigned jobs quickly and safely.
- 8.3.3 Monitor the dose rate along the route followed, and identify high radiation areas.
- 8.3.4 Frequently observe their dosimeters and withdraw to a safe area before established dose limits are received.
- 8.3.5 When re-entry is completed, follow the self-monitoring and personnel decontamination procedures as specified by the Radiation Team Leader.
- 8.3.6 Record and report to the Emergency Coordinator or his designee the radiological conditions and extent of damage in the affected area.

8.4 The Emergency Coordinator and the Recovery and Restoration Team Leader shall evaluate the existing conditions and plan further actions as required.

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE
#3100029E, REV. #6

R6

1.0 TITLE:

DUTIES OF AN INDIVIDUAL WHO DISCOVERS AN EMERGENCY CONDITION

2.0 APPROVAL:

Reviewed by Facility Review Group July 25, 1975
Approved by K. N. Harris Plant Manager 7-29-1975

Revision 5 Reviewed by FRG March 20, 1981
Approved by *[Signature]* V.P. Pwr. Res. *[Signature]* 1981

Revision 6 Reviewed by Facility Review Group June 7, 1982
Approved by *[Signature]* V.P. Nuc. Eng. 2-4-1982

3.0 SCOPE:3.1 Purpose

This procedure provides the actions to be taken by an individual who discovers an emergency condition.

3.2 Definitions

3.2.1 An emergency condition is an incident which could result in personnel injury and/or damage to plant components. It may or may not be accompanied by high radiation or radioactive contamination. Examples of an emergency condition include but are not limited to:

3.2.1.1 Fire or explosion.

3.2.1.2 Steam line break.

3.2.1.3 Unanticipated high radiation field.

3.2.1.4 Accidental release of reactor coolant.

3.2.1.5 Accidental release of radioactive liquid waste.

ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE #3100029E, REV #6
DUTIES OF AN INDIVIDUAL WHO DISCOVERS AN EMERGENCY CONDITION

3.0 Scope (Continued)

3.2 Definitions (Cont'd)

3.2.1

3.2.1.6 Accidental release of radioactive waste gas due to rupture or improper valve alignment in system piping.

3.2.1.7 Accidental release of chlorine gas.

3.3 Authority

This procedure implements the St. Lucie Plant Radiological Emergency Plan.

4.0 Precautions:

All personnel should be continuously alert to detect any unsafe situation which, if not corrected, could result in an emergency condition. Strict adherence to existing operating and maintenance procedures and safety rules, and the exercise of good judgement could prevent the occurrence of an emergency condition.

5.0 Responsibilities:

5.1 All personnel permanently or temporarily assigned to the St. Lucie Plant shall familiarize themselves with:

5.1.1 The contents of this procedure.

5.1.2 The locations of area radiation monitors and fire fighting equipment in, and the entrances to and exits from the areas in which they work.

5.2 All personnel shall notify the Nuclear Plant Supervisor of all unusual or emergency conditions.

6.0 References:

St. Lucie Plant Radiological Emergency Plan

7.0 Records:

All significant information, events, and actions taken during the emergency period shall be recorded by the Emergency Coordinator.

ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE # 310029E, REV #6
DUTIES OF AN INDIVIDUAL WHO DISCOVERS AN EMERGENCY CONDITION

8.0 Instructions:

An individual who discovers an emergency condition shall:

- 8.1 Take any immediate action he is qualified to perform that will aid in controlling and minimizing the effects of the emergency such as:
 - 8.1.1 Extinguishing a small fire with fire fighting equipment located in the immediate area.
 - 8.1.2 Locally stopping machinery that is contributing to the severity of the emergency (stopping a pump when the downstream piping was ruptured, deenergizing a burning motor, etc.)
 - 8.1.3 Closing an upstream valve when a system pipe rupture has occurred.
 - 8.1.4 Helping injured personnel from the affected area, if necessary, to minimize their exposure to further injury. Do not attempt to move seriously injured or unconscious personnel unless failure to act will obviously place the victim in grave danger.
 - 8.1.5 Warning other personnel in the affected area to withdraw to a safe area.
- 8.2 Notify the Nuclear Plant Supervisor. Give the following information:
 - 8.2.1 Type of emergency (fire, pipe rupture, etc.)
 - 8.2.2 Location of emergency.
 - 8.2.3 Any injury to personnel, including obvious signs that would indicate the seriousness of the injury.
 - 8.2.4 Extent of damage to plant components.
- 8.3 Withdraw to a safe area.
- 8.4 If possibility of radioactive contamination exists, remain in a safe area until monitored.
- 8.5 Follow instructions issued by the Nuclear Plant Supervisor (Emergency Coordinator).

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E
REVISION: 3

1.0 Title:

ON-SITE SUPPORT CENTERS

2.0 Approval:

Reviewed by Facility Review Group
Approved by [Signature] V. P. Power Resources March 26, 1981
Revision 3 Reviewed by FRG May 11, 1982
Approved by [Signature] V. P., Nuclear Energy 2-4, 1982

3.0 Scope:

3.1 Purpose

This procedure provides guidelines and responsibilities for activation and use of the on-site Technical and Operational Support Centers. This procedure describes interim facilities and shall be revised when permanent facilities are operational.

3.2 Discussion

The activities of plant management, technical, and engineering support personnel are an important part of the overall site response to an accident, and must be properly defined and logistically supported. The need for additional operational support personnel, other than those required and allowed in the Control Room, is also recognized as vitally important in properly responding to an emergency.

The intent of providing Technical and Operational Support Centers is to provide bases where post-accident emergency planning can be conducted and required operational support personnel can assemble for potential duty. Both centers will be in close communication with the Control Room via the PAX phone system, without disrupting, congesting, or confusing the activities in the Control Room by the physical presence of additional personnel.

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

3.0 Scope (cont):

3.3 Description

3.3.1 Technical Support Center (TSC)

The TSC is located in the training classroom area, adjacent to the Unit #1 Control Room. Emergency supplies available near the TSC are listed in Table 1. Documents and drawings available are listed in Table 2.

3.3.2 Operational Support Center (OSC)

The OSC is maintained in the first floor maintenance area of the Service Building.

3.3.3 Communications Equipment

The Control Room contains necessary telephone and public address systems for communications within and outside the plant. The Control Room also contains NAWAS and Local Government Radio for communications with state and county agencies. Use of these systems is described in the Appendix.

The TSC contains necessary telephones to communicate with the Control Room, OSC, the General Office Emergency Center, the Emergency Operations Facility and outside agencies. It also contains an ENS dedicated telephone to the NRC Operations Center and the NRC Region I office.

3.4 Authority

This procedure implements the St Lucie Plant Radiological Emergency Plan.

4.0 Precautions:

4.1 The TSC and OSC shall be activated upon the direction of the Emergency Coordinator or his designated alternate only.

4.2 Radiological conditions in the on-site Technical and Operational Support Center shall be monitored when required to be in use. Radiation levels in the TSC should be monitored using available (control room) portable instruments, in addition, Health Physics Department shall provide an NMC portable monitor to the Technical Support Center for radioiodine monitoring. This monitor can also be used for monitoring the control room.

4.3 The Emergency Coordinator shall recommend a suitable location other than the designated areas if radiological conditions warrant such actions.

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

5.0 Responsibilities:

- 5.1 The Emergency Coordinator is responsible for activating the TSC, activating the OSC, and arranging for staffing through the Duty Call Supervisor.
- 5.2 The TSC Supervisor will be the most senior person available to remain at the TSC of the following:

| | |
|-----------|--|
| Primary: | Technical Supervisor |
| Alternate | Off duty Shift Technical Advisor (See 3100023E, Emergency Roster) |

He is responsible for supervising TSC activities, reporting to the Emergency Coordinator, and communicating with the Emergency Operations Facility.

- 5.3 Each department head or designated alternate is responsible for reporting to the TSC when called.
- 5.4 Those reporting to the Operational Support Center are responsible for being prepared to carry out support functions designated by the Emergency Coordinator.
- 5.5 The Emergency Coordinator has the overall responsibility for the conduct of emergency operations and activities and should work closely with the TSC to ensure all information is used in making accident recovery decisions.
- 5.6 The QC department is responsible for ensuring that records, documents, and prints are maintained in the TSC or are available for immediate use in the Document Control vault.

6.0 References:

- 6.1 St Lucie Plant Radiological Emergency Plan
- 6.2 E-Plan Implementing Procedure 3100021, "Duties of the Emergency Coordinator". /R3
- 6.3 E-Plan Implementing Procedure 3100033E, "Off Site Dose Calculations". /R3
- 6.4 E-Plan Implementing Procedure 3100022E, "Classification of Emergencies". /R3

7.0 Records:

A record of actions taken at the TSC shall be maintained by the TSC Supervisor.

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

8.0 Instructions:

8.1 Activation

The Emergency Coordinator shall activate the TSC and the OSC for an emergency condition classified as Alert, Site Area Emergency, or General Emergency.

8.2 Staffing

The Emergency Coordinator shall arrange for staffing through the Duty Call Supervisor, Table 3 identifies the TSC staffing requirements.

8.3 Use of the Technical Support Center

The TSC shall be used to provide plant management and technical support to plant operations personnel during emergency conditions. A primary task shall be to relieve the Emergency Coordinator of off-site communications to the state and local agencies, NRC and the FPL Off-Site Emergency Organization. This task becomes the responsibility of the EOF when they request the delegation. The TSC staff shall provide technical support as requested by the Emergency Coordinator and shall direct itself toward determining current and projected plant status and providing in-depth diagnostic and engineering assistance, as required.

/R3

/R3

8.4 Use of the Operational Support Center

The Emergency Coordinator shall assign available plant staff not needed in the TSC or Control Room to the OSC. The OSC Supervisor (Assistant Superintendent Mechanical Maintenance or designated alternate) shall maintain communications with the TSC and report as directed by the Emergency Coordinator or TSC Supervisor.

8.5 Deactivation

It is the responsibility of the Emergency Coordinator or his designee to deactivate and secure the TSC and OSC when the emergency condition no longer exists.

8.6 Alternate OSC

In the event that the OSC becomes untenable, the Emergency Coordinator shall designate an alternate location.

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100632E, REV 3
ON-SITE SUPPORT CENTERS

TABLE 1

RADIOLOGICAL EMERGENCY EQUIPMENT
ST LUCIE PLANT
CONTROL ROOM STORAGE LOCKER
(ALSO FOR TSC USE)

1. Coveralls
2. Hood
3. Gloves
4. Shoe Covers
5. Self Contained Breathing Apparatus
6. Full Face Respirators and Filters
7. Pocket Dosimeters
8. Dosimeter Chargers
9. TLD's
10. Portable Count Rate Instrumentation
11. Portable Dose Rate Instrumentation
12. Contamination Smears
13. Envelopes
14. Radiation Tape/Rope
15. Radiological Signs
16. Industrial First Aid Kit
17. Step-Off Pads
18. Plastic Bags

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

TABLE 2

EMERGENCY DATA, DRAWINGS AND DOCUMENTS
MAINTAINED AT THE TSC
ST LUCIE PLANT

1. Plant Technical Specifications
2. Plant Operating Procedures
3. Emergency Operating Procedures
4. Emergency Plan and Implementing Procedures
5. Final Safety Analysis Report
6. Drawings, Schematics and Diagrams

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

TABLE 3

TECHNICAL SUPPORT CENTER STAFFING
ST LUCIE PLANT

TSC Supervisor

| | |
|-----------|---|
| Primary: | Technical Supervisor |
| Alternate | Off duty STA (per 3100023E, Emergency Roster) |

Operations Representative (Off duty Duty Call Supervisor or NPS)

Health Physics Supervisor

Chemistry Supervisor

Reactor Engineering Supervisor

Maintenance Superintendent

Quality Control Supervisor

Support Staff as determined by these supervisors

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

APPENDIX

COMMUNICATIONS EQUIPMENT

A. Use of the NAWAS System

1. The NAWAS is used for announcing the initial warning to the State Warning Point at the Bureau of Disaster Preparedness (BDP) and St. Lucie Disaster Preparedness Coordinator of all four Emergency Classes.
2. The NAWAS is a direct, protected telephone land line with the handset installed in the Control Room.
3. Picking up the handset from its cradle activates a response at the State Warning Point and St. Lucie and Martin County Disaster Preparedness Offices. The Nuclear Plant Supervisor (Emergency Coordinator) will advise the personnel on the other end of the system, in a coded message, of the conditions at the plant. He then places the handset back on its cradle, as this is the only use for it during an emergency. His message will activate the required state and local emergency teams.
4. The procedure for reporting an emergency via NAWAS is summarized in E-Plan Implementing Procedure 3100021E, Duties of Emergency Coordinator, and described in detail below.

- A. (1) "State Warning Point Tallahssee, this is St. Lucie One
(State Warning Point will give a go-ahead)
"State Warning Point Tallahssee, this is St. Lucie One,
* , repeat *"

R3

Time _____

"Acknowledge, over."

(ALTERNATE METHOD) If NAWAS is unavailable-telephone
State Warning Point at PHONE NO. [REDACTED] or
Florida Marine Patrol-Alternate State Warning Point
[REDACTED].

State Warning Point will call via Phone to validate the
notification. After validation, transfer the information
on the State of Florida Fixed Nuclear Facility Notification
Message Form via NAWAS or ALTERNATE ROUTE.

State Warning Point Message Validation Time _____

*Announce the class as indicated by EPIP 3100022E
"Classification of Emergencies"

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

APPENDIX (cont)

A. Use of the NAWAS System (cont)

2. Classifications

The classes of Radiological Emergencies are described in E-Plan Implementing Procedure 3100022E, Classification of Emergencies.

3. Low Population Zone

- A. The Low Population Zone will extend outward from each nuclear power plant for a radius of five (5) miles, and shall be segmented into 22-1/2° arcs and will be lettered A through R (excluding I and O) for the 360° of the compass.
- B. Each area is divided into SECTORS beginning at the center and extending outward in mile increments One through Five. Contaminated area, extending outward from the nuclear plant, will be located and reported as discussed in E-Plan Implementing Procedure 3100033E, "Off-Site Dose Calculations."

R3

B. Use of the Local Government Radio (LGR)

1. The LGR is used, unless inoperative or unavailable, for maintaining communications with various state and local disaster preparedness personnel. Messages are transmitted and received on frequencies allocated by the state Bureau of Disaster Preparedness.

R3

2. The LGR control unit is installed in the Control Room, and TSC.

R3

C. Use of the ENS (OPX) Telephone Network

1. Within one hour of the time that the Emergency Plan or any part of the Emergency Plan is implemented the NRC shall be notified and an open, continuous communications channel established using the NRC ENS circuit (red phone). The Nuclear Plant Supervisor (Emergency Coordinator) shall be responsible for assuring that this notification is made.
2. To initiate a signal to the NRC Operations Center, remove the handset from the receiver.
3. When the NRC Duty Officer answers, identify yourself as "Florida Power & Light, St Lucie Plant".

EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100032E, REV 3
ON-SITE SUPPORT CENTERS

APPENDIX (cont)

C. Use of the ENS (OPX) Telephone Network (cont)

4. Make the notification.
5. Maintain the line open and manned until allowed to terminate the call by the NRC Duty Officer.

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FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE NO. 3100033E
REVISION 5

1.0 Title:

Off-Site Dose Calculations

2.0 Review and Approval:Reviewed by Facility Review Group March 20 and 25, 1981Approved by A. D. Schmidt V.P. Power Resources March 26, 1981Revision 5 Reviewed by F R G May 11 1982Approved by *J. Williams* V.P. Nuc Energy 8-6 19823.0 Scope:3.1 Purpose:

- 3.1.1 This procedure provides a method for estimating whole body and thyroid dose rates and integrated whole body and thyroid dose for the area surrounding the plant out to ten miles.
- 3.1.2 This procedure provides a method of comparing dose results, release rates, and radiation levels in containment to Emergency Classifications Guidelines.

3.2 Discussion:

- 3.2.1 The Emergency Coordinator, his designee, or the Chemistry Department representative will estimate thyroid and whole body dose rates for off-site locations using this procedure whenever releases occur during an emergency.
- 3.2.2 The Emergency Coordinator, his designee, or the Chemistry Department representative will use the thyroid and whole body dose rate estimates to calculate integrated dose during the duration of the event.
- 3.2.3 This activity can be delegated to the dose assessment group in the EOF when it is manned and operational.

3.3 Authority:

This procedure implements the St. Lucie Plant Radiological Emergency Plan.

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

2

4.0 Precautions:

None

5.0 Responsibilities:

The Emergency Coordinator or his designee has the responsibility for directing that thyroid and whole body dose rate estimates and integrated thyroid and whole body doses are calculated following an accident which involves a release of radioactivity.

The Chemistry Department representative shall make the estimates upon arriving at the scene at the direction of the Emergency Coordinator.

6.0 References:

- 6.1 St. Lucie Plant Radiological Emergency Plan
- 6.2 St. Lucie Plant Radiation Protection Manual
- 6.3 "Bases for Accident Dose Calculations for St. Lucie Nuclear Power Plant." (Bases prepared by HMM Associates of Waltham, Massachusetts.)

7.0 Records and Notification:

Detailed records of meteorological conditions used to estimate dose rates, the estimated thyroid and whole body dose rates and the integrated thyroid and whole body doses shall be kept on the attached worksheets. As deemed appropriate by the Emergency Coordinator, the off-site authorities shall be notified of:

- 1. Meteorological conditions (wind speed, wind direction, stability, and precipitation).
- 2. Projected thyroid and whole body dose rates and integrated thyroid and whole body dose at 1, 2, 5, and 10 miles, including sectors affected, and
- 3. Whether default values or actual measurements were used for dose estimates.

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

2

8.0 Instructions:

- 8.1 Upon the initiation of an event which has resulted in or could result in releases of radioactive material, the Containment High Range Radiation Monitors (if inoperable, use POST LOCA) reading should be compared to the Action Guidelines for supplemental classification of the event.
- 8.2 Determine the available release rate data source and use the indicated forms.
- 8.2.1 Effluent monitors available, use:
MET Data Worksheet
Effluent Monitor Source Term Worksheets
- 8.2.2 Containment High Range Radiation Monitor is available during a LOCA, use:
MET Data Worksheet
CHRRM Source Term Worksheet
- 8.2.3 Chemistry-Grab Sample data is available, use:
MET Data Worksheet
Chemistry Data Worksheet
- 8.2.4 If none of the above, use Default Value Method Using Post Loca Monitor and Forms:
MET Data Worksheet
Post LOCA Monitor Dose Worksheet
- 8.3 Calculate doses, cumulative dose and Action Guidelines using forms:
Dose Calculation Worksheet
Dose Conversion Tables
Action Guidelines
Cumulative Dose Distribution Worksheet
- 8.4 The Emergency Coordinator or his designee shall monitor release rates and meteorological conditions to determine how frequently to update the dose rate estimates. Dose rate estimates shall be updated if any of the following averages change by the amounts indicated below over a period not to exceed 30 minutes:
1. Release rates increase by more than 25%.
 2. Wind speed decreases by two classes or more.
 3. Atmospheric stability becomes more stable by more than one class (e.g., stability D to F).
 4. Wind direction changes by more than 22.5° (i.e., plume centerline is more than one sector away from prior location). In any case, the 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.

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

2

8.0 Instructions: (continued)

8.5 The Emergency Coordinator shall track integrated thyroid and whole body dose once each hour for the duration of the event as follows:

- 8.5.1 The average thyroid and whole body dose rates shall be determined for each sector from the Dose Rate Worksheets completed for the hour of interest.
- 8.5.2 Update the Cumulative Dose Distribution Worksheet, Table 2, by adding the thyroid and whole body dose rate determined from 8.3.1 for each applicable sector/distance block to the integrated dose from event initiation to the present for that sector/distance block.
- 8.5.3 Integrated doses for sector/distance blocks with zero estimated dose rate for the current hour remain unchanged.

Note: In reporting doses and dose rates, to conservatively accommodate the effects that could conceivably result from a postulated potential stabilizing effect of the Indian River, those residents in sectors K, L, or M (between SW and WNW of the facility), should be considered to reside at 1.0 miles.

- 8.6 Projections of doses and dose rates should be made on the basis that the most recently estimated dose rates and their distribution will persist for two hours. Projecting dose rates for periods other than two hours should be made on an ad hoc basis using best available data on release rate estimates and subsequent meteorological conditions.
- 8.7 The results of Calculated Release Rates, Dose Rate, and Integrated Dose should be compared to applicable Table 3 - ACTION GUIDELINES. The Emergency Coordinator, if not performing the actual calculations, shall be informed of all dose estimates. The Emergency Coordinator shall evaluate the results and declare a new status as applicable.
- 8.8 Dose conversion tables for distances 1 to 12 miles, by 1 mile increments, are attached as Appendix A for calculations of dose at other than 1, 2, 5 and 10 miles.

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

METEOROLOGICAL DATA WORKSHEET

Calculation for (Date) / / (Time) :

2

1. Determine stability class, using Delta T (A or B or C)

A. MET Tower

 °F minus °F = °F Delta T
200 ft 32 ft

Check left column of
Table at bottom of page.

or

B. West Palm Beach Airport

Stability Class Wind Speed From °

or

C. Default (No Other MET Data Available)

| | Daytime | Nighttime |
|------------|---------|-------------|
| Class | D | F |
| Wind Speed | >4 to 9 | >2 to 4 mph |

2. Wind Speed (Average of most recent 15 minute period)

A. Lower MET Tower Sensor mph

or B. Upper MET Tower Sensor mph

or C. West Palm Beach Airport

or D. Default

3. Wind direction (Average of most recent 15 minute period)
Same as 2A, 2B or 2C.

| Delta T Ranges °F. | Stab. Class | Wind Speed Range Groups in mph | | | | | Wind From Definition |
|-----------------------|----------------|--------------------------------|---------|---------|----------|-----------|-------------------------|
| | | 0 to 2 | >2 to 4 | >4 to 9 | >9 to 18 | >18 to 36 | |
| < -1.6 | A | | | | | | Extremely unstable |
| -1.6 to < -1.5 | B | | | | | | Moderately unstable |
| -1.5 to < -1.3 | C | | | | | | Slightly unstable |
| -1.3 to < -0.4 | D | | | \$ | | | Neutral |
| -0.4 to < +1.3 | E | | | | | | Slightly stable |
| +1.3 to < +3.4 | F | | * | | | | Moderately stable |
| > or = +3.4 | G | | | | | | Extremely stable |

*-Night DEFAULT

\$ Daytime DEFAULT

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

EFFLUENT MONITOR SOURCE TERM WORKSHEET

NOTE: Read CHRRM and compare to ACTION GUIDES (Page 14)

2

1. Determine sum of Noble Gas Release (Ci/sec)

A. Edit the 10 minute average file of the applicable release point(s) on the Eberline Control Terminal A (or B) output the data by:

- i) Turn keyboard keyswitch ON with key.
- ii) Press HIST MIN.
- iii) Enter the CHANNEL NUMBER (CH #) from the table below.
- iv) Press ENTER, data prints in Ci/sec even though labeled otherwise.
- v) Use the NEXT-TO-LAST value on printout and enter on table below:

CHANNEL OUTPUT DATA Ci/sec

| RELEASE POINT | LOW RANGE | | MID RANGE | | HIGH RANGE | |
|---------------|-----------|------|-----------|------|------------|------|
| | CH # | DATA | CH # | DATA | CH # | DATA |
| Plant Vent | 0105 | | 0107 | | 0109 | |
| ECCS A | 0205 | | 0207 | | 0209 | |
| ECCS B | 0305 | | 0307 | | 0309 | |
| Fuel Bldg. | 0405 | | 0407 | | 0409 | |
| Steam Line A | | N/A | 0501 | | | N/A |
| Steam Line B | | N/A | 0502 | | | N/A |

2. Determine flow correction value from the below table. Check as appropriate.

PLANT VENT

FUEL BUILDING

| | | | |
|---|------|--------------------------------------|------|
| HVE 10A (or 10B) running | 1.0 | HVE 15 and HVE 17 running | 1.0 |
| HVE 10A and 10B running | 2.0 | HVE 17 only | 0.34 |
| HVE 10A (or 10B) and Cont Purge HVE | 1.22 | HVE 17 and HVE 16A (or 16B) | 1.0 |
| HVE 10A (or 10B) and HVE 6A (or 6B) | 1.06 | HVE 17 and HVE 15 and HVE 16A (or B) | 1.66 |
| HVE 10A (or 10B) and HVE 6A and 6B | 1.13 | HVE 15 only | 0.66 |
| No HVE 10A (or 10B), but HVE 6A (or 6B) | 0.05 | HVE 15 and HVE 16A (or 16B) | 1.32 |
| No HVE 10A (or 10B), but HVE 6A and 6B | 0.13 | | |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

EFFLUENT MONITOR SOURCE TERM WORKSHEET
(continued)

3. Enter the highest upscale channel data for the release points flow correction value.

| RELEASE POINT | RELEASE RATE | FLOW CORRECTION | ADJUSTED RATE |
|---------------|--------------|-----------------|---------------|
| Plant Vent | | | |
| ECCS-A | | 1.0 | |
| ECCS-B | | 1.0 | |
| Fuel Building | | | |
| Steam Line A | | 1.0 | |
| Steam Line B | | 1.0 | |

4. If a Loss of Coolant Accident is occurring, correct Plant Vent for bypass: Adjusted Plant Vent _____ (X) 1.14 = _____
5. Calculate Noble Gas and Iodine Release values.
Carry from Step 3 (and 4) and Noble Gas release values and enter in table below. Multiply left to right and sum Nobles and Iodines down.

| RELEASE POINT | ACCIDENT TYPE | NOBLES CI/SEC X | IODINE FACTOR = | IODINE CI/SEC |
|---------------|------------------|-----------------|-----------------|---------------|
| Plant Vent | Steam Line Break | | 1.4 | |
| Plant Vent | S/G Tube Rupture | | 1.24 E - 6 | |
| Plant Vent | LOCA | | .014 | |
| ECCS-A | LOCA | | .014 | |
| ECCS-B | LOCA | | .014 | |
| Fuel Bldg. | Fuel Handling | | .06 | |
| Fuel Bldg. | Cask Drop | | 1.54 | |
| Steam Line A | S/G Tube Rupture | | 1.24 E - 6 | |
| Steam Line B | S/G Tube Rupture | | 1.24 E - 6 | |

Total Nobles _____ Ci/sec Total Iodines _____ Ci/sec

6. Take the total Nobles and Iodine release rates to the Dose Calculation Worksheet.

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

CHRRM SOURCE TERM WORKSHEET

NOTE: Read CHRRM and compare to ACTION GUIDES (Page 14)

2

1. Read CHRRM and note time after trip.

CHRRM _____ R/hr Time since trip _____ hrs.

2. Select conversion value. If between time after trip times, select next higher time.

| CHECK | TIME, HR. | VALUE | CHECK | TIME, HR. | VALUE |
|-------|-----------|----------|-------|-------------------------------|----------|
| _____ | 0 | 5.00 E-7 | _____ | 4.0 | 6.25 E-6 |
| _____ | .5 | 1.00 E-6 | _____ | 8.0 | 1.25 E-5 |
| _____ | 1.0 | 1.67 E-6 | _____ | 24.0 | 2.22 E-5 |
| _____ | 2.0 | 3.33 E-6 | _____ | If >24 hrs., use 24 hr. value | |

3. Convert CHRRM to Core Fraction Airborne (CFA)

CHRRM (R/hr) Conv. Value CFA

_____ X _____ = _____

4. Find Reduction Value (RV) for Noble Gas, from graph.

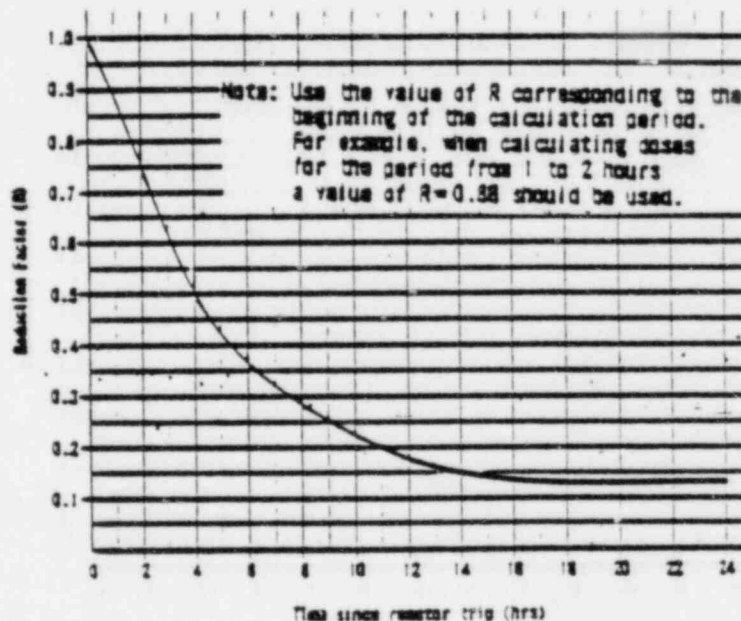
Time used _____ hrs.

RV _____

5. Iodine Conversion Value (ICV)
Check used value.

Safeguards working _____ .6

No Safeguards _____ 1.6



6. Calculate Release Values

| | | | | | | | |
|---------|-----|---|-----|---|------------|---|-----------|
| Nobles | CFA | X | RV | X | Conv Value | = | Ci/sec |
| | | X | | | 40 | | Noble Gas |
| Iodines | CFA | | | | ICV | | |
| | | X | 1.0 | X | | | Iodines |

7. Take the Release Values to the Dose Calculation Worksheet.

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

CHEMISTRY DATA WORKSHEET

NOTE: Read CHRRM and compare to ACTION GUIDES (Page 14)

1. Acquire sample Assay Data.

Iodines and Noble gas concentrations in $\mu\text{Ci/cc}$ and enter in table below.

2. For Plant Vent and Fuel Building, check Vent Correction Factor.

PLANT VENT

FUEL BUILDING

| | | |
|---------------------------------|-------|------|
| HVE 10 A or 10 B running | _____ | 1.00 |
| HVE 10A and 10B | _____ | 2.00 |
| HVE 10A (or 10B and 6A (or 6B) | _____ | 1.06 |
| HVE 10A (or 10B) and Cont Purge | _____ | 1.22 |
| HVE 10A (or 10B) and 6A and 6B | _____ | 1.13 |
| No 10A (or 10B), but 6A (or 6B) | _____ | 0.06 |
| No 10A (or 10B), but 6A and 6B | _____ | 0.13 |

| | | |
|--------------------------------|-------|------|
| HVE 15 and 17 running | _____ | 1.00 |
| HVE 17 only | _____ | 0.34 |
| HVE 17 and HVE 16A (or 16B) | _____ | 1.00 |
| HVE 17 and 15 and 16A (or 16B) | _____ | 1.66 |
| HVE 15 only | _____ | 0.66 |
| HVE 15 and 16A (or 16B) | _____ | 1.32 |

3. Calculate Release Rates.

| TIME | PATHWAY | TYPE | GROSS $\mu\text{Ci/cc}$ | FLOW CONST | VENT CORRECTION | CALCULATED, CI/SEC | |
|------|---------------|--------|----------------------------|---------------|--------------------|--------------------|--------|
| | | | | | | NOBLES | IODINE |
| | ECCS-A | Gas | | 15.3 | 1.0 | ***** | |
| | | Iodine | | | | | |
| | ECCS-B | Gas | | 14.7 | 1.0 | ***** | |
| | | Iodine | | | | | |
| | Plant Vent | Gas | | 44.1 | | ***** | |
| | | Iodine | | | | | |
| | Fuel Bldg. | Gas | | 6.95 | | ***** | |
| | | Iodine | | | | | |

Total Noble _____

Total Iodines _____

4. Take total Noble and Iodine release rates to the Dose Calculation Worksheet.

2

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

DOSE CALCULATION WORKSHEET

1. From MET Worksheet: Stability Class _____, Wind Speed _____, From _____°
2. From Source Term Worksheet: _____ Ci/sec Noble Gas
_____ Ci/sec Iodine
3. Calculate Dose Rates. Enter into table below:

NOTE: Dose factors found on pages 12 and 13.

| WHOLE BODY | | | | THYROID | | |
|---------------|---------------------|------------------------------------|---------|--------------|-----|---------|
| RANGE MILE | NOBLE GAS CI/SEC | MULTIPLY BY (X) DOSE FACTOR (=) | MREM/HR | I CI/SEC (X) | (=) | MREM/HR |
| 1 | | | | | | |
| 2 | | | | | | |
| 5 | | | | | | |
| 10 | | | | | | |

ENTER DOSE RATE RESULTS FOR INDICATED SECTOR & ADJACENT SECTOR ON EACH SIDE:

| Wind Dir. Indicated | Downwind Direction | mrem/hr Whole Body @ mile | | | | mrem/hr Thyroid @ mile | | | |
|------------------------|-----------------------|---------------------------|---|---|----|------------------------|---|---|----|
| | | 1 | 2 | 5 | 10 | 1 | 2 | 5 | 10 |
| 180 | N ALPHA | | | | | | | | |
| 202.5 | NNE BRAVO | | | | | | | | |
| 225 | NE CHARLIE | | | | | | | | |
| 247.5 | ENE DELTA | | | | | | | | |
| 270 | E ECHO | | | | | | | | |
| 292.5 | ESE FOXTROT | | | | | | | | |
| 315 | SE GOLF | | | | | | | | |
| 337.5 | SSE HOTEL | | | | | | | | |
| 000 | S JULIET | | | | | | | | |
| 022.5 | SSW KILO | * | | | | * | | | |
| 045 | SW LIMA | * | | | | * | | | |
| 067.5 | WSW MIKE | * | | | | * | | | |
| 090 | W NOVEMBER | | | | | | | | |
| 112.5 | WNW PAPA | | | | | | | | |
| 135 | NW QUEBEC | | | | | | | | |
| 157.5 | NNW ROMEO | | | | | | | | |

*Indian River Residents assumed to live at 1 mile and evacuation criteria shall be based accordingly.

COMPARE DOSE RATE RESULTS TO TABLE 3 ACTION GUIDELINES

Also enter Dose Rates into Plant/Radiological Emergency Checklist
Emergency Information Checklist.

REMARKS:

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

POST-LOCA MONITOR DOSE WORKSHEET

2

1. From MET Worksheet: Stability Class _____, Windspeed _____, From _____°

| PLM mR/hr | Noble Ci/sec | Iodines in Ci/sec | |
|--------------|-----------------|-------------------|---------------|
| | | With Safeguards | No Safeguards |
| 30 to 90 | *** | *** | *** |
| 60 to 190 | 2 | .03 | .1 |
| 100 to 1000 | 10 | .14 | .4 |
| >1000 | 40 | .60 | 1.6 |

*** = Negligible Release Rate

NOTE: Verify PLM readings with portable dose rate instruments before going to step 3.

3. Calculate Dose.

NOTE: Dose factors found on pages 12 and 13.

| WHOLE BODY | | | | THYROID | | |
|----------------|---------------------|------------------------------------|---------|--------------|-----|---------|
| RANGE MILES | NOBLE GAS CI/SEC | MULTIPLY BY (X) DOSE FACTOR (=) | MREM/HR | I CI/SEC (X) | (=) | MREM/HR |
| 1 | | | | | | |
| 2 | | | | | | |
| 5 | | | | | | |
| 10 | | | | | | |

ENTER DOSE RATE RESULTS FOR INDICATED SECTOR & ADJACENT SECTOR ON EACH SIDE:

| Wind Dir. Indicated | Downwind Direction | mrem/hr Whole Body @ mile | | | | mrem/hr Thyroid @ mile | | | |
|------------------------|-----------------------|---------------------------|---|---|----|------------------------|---|---|----|
| | | 1 | 2 | 5 | 10 | 1 | 2 | 5 | 10 |
| 180 | N ALPHA | | | | | | | | |
| 202.5 | NNE BRAVO | | | | | | | | |
| 225 | NE CHARLIE | | | | | | | | |
| 247.5 | ENE DELTA | | | | | | | | |
| 270 | E ECHO | | | | | | | | |
| 292.5 | ESE FOXTROT | | | | | | | | |
| 315 | SE GOLF | | | | | | | | |
| 337.5 | SSE HOTEL | | | | | | | | |
| 000 | S JULIET | | | | | | | | |
| 022.5 | SSW KILO | * | | | | * | | | |
| 045 | SW LIMA | * | | | | * | | | |
| 067.5 | WSW MIKE | * | | | | * | | | |
| 090 | W NOVEMBER | | | | | | | | |
| 112.5 | WNW PAPA | | | | | | | | |
| 135 | NW QUEBEC | | | | | | | | |
| 157.5 | NNW ROMEO | | | | | | | | |

*Indian River Residents assumed to live at 1 mile and evacuation criteria shall be based accordingly.

COMPARE DOSE RATE RESULTS TO TABLE 3 ACTION GUIDELINES

Also enter Dose Rates into Plant/Radiological Emergency Checklist
Emergency Information Checklist.

REMARKS:

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

DOSE CONVERSION TABLES mRem/hr

STABILITY CLASS A

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|------|--------|-----|---------|------|----------|------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 1.25 | 3E+3 | .416 | 1E+3 | .208 | 500 | .104 | 250 | .052 | 125 |
| 2 | .668 | 1.6E+3 | .223 | 534 | .111 | 267 | .0556 | 134 | .0278 | 66.8 |
| 5 | .360 | 863 | .120 | 288 | .0559 | 144 | .0300 | 71.9 | .015 | 36 |
| 10 | .360 | 863 | .120 | 288 | .0559 | 144 | .0300 | 71.9 | .015 | 36 |

STABILITY CLASS B

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|------|--------|------|---------|------|----------|------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 8.9 | 2.1E+4 | 2.97 | 7100 | 1.43 | 3600 | .742 | 1800 | .371 | 890 |
| 2 | 2.26 | 54100 | .752 | 1800 | .376 | 902 | .188 | 451 | .094 | 226 |
| 5 | .702 | 1680 | .129 | 311 | .065 | 155 | .032 | 77.6 | .016 | 38.8 |
| 10 | .650 | 1560 | .120 | 288 | .060 | 144 | .030 | 71.9 | .015 | 36.0 |

STABILITY CLASS C

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|--------|--------|------|---------|------|----------|------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 22.5 | 5.4E+4 | 7.51 | 1.8E+4 | 3.75 | 9010 | 1.88 | 4510 | .939 | 2250 |
| 2 | 6.54 | 1.6E+4 | 2.18 | 5240 | 1.09 | 2620 | .545 | 1310 | .273 | 654 |
| 5 | 1.81 | 4340 | .417 | 1000 | .208 | 500 | .104 | 250 | .052 | 125 |
| 10 | 1.27 | 3050 | .225 | 541 | .073 | 187 | .039 | 93.6 | .020 | 46.8 |

STABILITY CLASS D

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|--------|--------|--------|---------|--------|----------|------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 46.2 | 1.1E+5 | 15.4 | 3.7E+4 | 9.14 | 2.2E+4 | 5.40 | 1.3E+4 | 2.70 | 6480 |
| 2 | 18.9 | 4.5E+4 | 6.31 | 1.5E+4 | 3.51 | 8410 | 1.96 | 4710 | .982 | 2360 |
| 5 | 5.5 | 1.3E+4 | 1.83 | 4400 | .964 | 2310 | .511 | 1230 | .255 | 613 |
| 10 | 2.1 | 5030 | .70 | 1680 | .36 | 863 | .186 | 446 | .093 | 223 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

DOSE CONVERSION TABLES mRem/hr per Ci/sec
(continued)

2

STABILITY CLASS E

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|--------|--------|--------|---------|--------|----------|--------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 70.6 | 1.7E+5 | 23.5 | 5.7E+4 | 15.9 | 3.8E+4 | 10.2 | 2.5E+4 | 5.1 | 1.2E+4 |
| 2 | 33.1 | 7.9E+4 | 11.0 | 2.7E+4 | 6.73 | 1.6E+4 | 4.05 | 9710 | 2.02 | 4860 |
| 5 | 11.6 | 2.8E+4 | 3.87 | 9280 | 2.15 | 5150 | 1.18 | 2840 | .592 | 1420 |
| 10 | 5.07 | 1.2E+4 | 1.69 | 4050 | .897 | 2150 | .475 | 1140 | .237 | 570 |

STABILITY CLASS F

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|--------|--------|--------|---------|--------|----------|--------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 125 | 3E+5 | 42 | 1E+5 | 31 | 7.4E+4 | 19 | 4.5E+4 | 9.5 | 2.3E+4 |
| 2 | 64 | 1.5E+5 | 21.3 | 5.1E+4 | 14 | 3.4E+4 | 8.53 | 2E+4 | 4.3 | 1E+4 |
| 5 | 25.4 | 6E+4 | 8.5 | 2E+4 | 5.0 | 1.2E+4 | 2.9 | 6660 | 1.4 | 3330 |
| 10 | 12.1 | 2.9E+4 | 4.0 | 9670 | 2.2 | 5300 | 1.2 | 2840 | .60 | 1420 |

STABILITY CLASS G

| RANGE MILES | WIND SPEED GROUPS, MPH | | | | | | | | | |
|----------------|------------------------|--------|--------|--------|--------|--------|---------|--------|----------|--------|
| | 0 to 2 | | 2 to 4 | | 4 to 9 | | 9 to 18 | | 18 to 36 | |
| | WB | THY | WB | THY | WB | THY | WB | THY | WB | THY |
| 1 | 196 | 4.7E+5 | 65.3 | 1.6E+5 | 57 | 1.4E+5 | 31 | 7.4E+4 | 15.4 | 3.7E+4 |
| 2 | 111 | 2.7E+5 | 37 | 8.9E+4 | 28 | 6.7E+4 | 17 | 4.0E+4 | 8.3 | 2.0E+4 |
| 5 | 52 | 1.3E+5 | 17 | 4.1E+4 | 11 | 2.7E+4 | 6.3 | 1.5E+4 | 3.2 | 7540 |
| 10 | 27.5 | 6.6E+4 | 9.2 | 2.2E+4 | 5.4 | 1.3E+4 | 2.9 | 6980 | 1.5 | 3490 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

ACTION GUIDELINES

For the Containment High Range Radiation Monitor (CHRRM)

| Case | Instantaneous | Event Classification |
|-------|---------------|----------------------|
| CHRRM | >1.47 E5 R/hr | General Emergency |
| CHRRM | >7.3 E3 R/hr | Site Area Emergency |
| CHRRM | <10 R/hr | Negligible |

As back up to the above/if using POST LOCA RAD MONITOR (or survey meter at same)

| | | |
|-----------|-------------|-------------------|
| POST LOCA | >1000 mR/hr | General Emergency |
| POST LOCA | < 60 mR/hr | Negligible |

For Noble Gas Release Rates i.e., Ci/sec from the Site

| Case | Instantaneous | Situation |
|---------------|----------------------------------|---|
| Gas Rel. Rate | <0.083 Ci/sec | Within Technical Specification-No Action |
| Gas Rel. Rate | >0.083 but less than 0.83 Ci/sec | Unusual Event-Tech. Spec. possibly exceeded-see ETS-B & take steps to reduce rate |
| Gas Rel. Rate | >0.83 Ci/sec | ALERT CLASSIFICATION |

For Dose Rate Results

| Case | Instantaneous | Or Duration For 2 minutes of | Or Duration For 1/2 hour of | Situation |
|------------------------------|---------------|---------------------------------|--------------------------------|------------------------|
| If Whole Body @ 1 mile is | N/A | >500 mrem/hr | >50 mrem/hr | Site Area Emergency |
| If Whole Body @ 1 mile is | >1000 mrem/hr | N/A | N/A | General Emergency |
| If Thyroid @ 1 mile is | N/A | >2500 mrem/hr | >250 mrem/hr | Site Area Emergency |

For Cumulative Thyroid Integrated Dose

| | | | |
|---|------------|------|-------------------|
| If Thyroid Integrated Dose @ 1 mile using actual met data | >5000 mrem | then | General Emergency |
|---|------------|------|-------------------|

2

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

CUMULATIVE DOSE DISTRIBUTION WORKSHEET

Time release assumed to occur: _____

Time through which this distribution applies: _____

2

| Met Station | | | Whole Body Dose(mrem) | | | | Thyroid Dose (mrem) | | | |
|-----------------------------|-----------------------|----------|---------------------------|----------|----------|-----------|---------------------------|----------|----------|-----------|
| Wind Direction (As Read) | Downwind Direction | | Downwind Distance (miles) | | | | Downwind Distance (miles) | | | |
| | | | <u>1</u> | <u>2</u> | <u>5</u> | <u>10</u> | <u>1</u> | <u>2</u> | <u>5</u> | <u>10</u> |
| 180 | N | ALPHA | | | | | | | | |
| 202.5 | NNE | BRAVO | | | | | | | | |
| 225 | NE | CHARLIE | | | | | | | | |
| 247.5 | ENE | DELTA | | | | | | | | |
| 270 | E | ECHO | | | | | | | | |
| 292.5 | ESE | FOXTROT | | | | | | | | |
| 315 | SE | GOLF | | | | | | | | |
| 337.5 | SSE | HOTEL | | | | | | | | |
| 000 | S | JULIET | | | | | | | | |
| 022.5 | SSW | KILO | * | | | | * | | | |
| 045 | SW | LIMA | * | | | | * | | | |
| 067.5 | WSW | MIKE | * | | | | * | | | |
| 090 | W | NOVEMBER | | | | | | | | |
| 112.5 | WNW | PAPA | | | | | | | | |
| 135 | NW | QUEBEC | | | | | | | | |
| 157.5 | NNW | ROMEO | | | | | | | | |

*Indian River Drive residents assumed to live @ 1 mile
and Evacuation criteria shall be based accordingly.

COMPARE RESULTS TO TABLE 3 ACTION GUIDELINES

Date and time this worksheet was completed:

Date _____

Time _____

REMARKS:

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS A

2

WHOLE BODY DOSE FOR STABILITY CLASS A - (MPREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

WIND
SPEED
(MPH)

DOWNWIND DISTANCE - MILES

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0-2 | 1.20E+00 | 6.68E-01 | 4.60E-01 | 3.60E-01 | 3.00E-01 | 2.60E-01 | 2.30E-01 | 2.00E-01 | 1.80E-01 | 1.60E-01 | 1.50E-01 | 1.40E-01 |
| 2-4 | 4.16E-01 | 2.20E-01 | 1.54E-01 | 1.20E-01 | 1.00E-01 | 8.80E-02 | 7.80E-02 | 7.00E-02 | 6.40E-02 | 5.80E-02 | 5.40E-02 | 5.00E-02 |
| 4-9 | 2.08E-01 | 1.11E-01 | 7.70E-02 | 5.99E-02 | 5.00E-02 | 4.40E-02 | 3.90E-02 | 3.50E-02 | 3.20E-02 | 2.90E-02 | 2.70E-02 | 2.50E-02 |
| 9-18 | 1.04E-01 | 5.56E-02 | 3.86E-02 | 3.00E-02 | 2.50E-02 | 2.20E-02 | 2.00E-02 | 1.80E-02 | 1.60E-02 | 1.50E-02 | 1.40E-02 | 1.30E-02 |
| 18-36 | 5.20E-02 | 2.78E-02 | 1.93E-02 | 1.50E-02 | 1.25E-02 | 1.10E-02 | 1.00E-02 | 9.00E-03 | 8.00E-03 | 7.50E-03 | 7.00E-03 | 6.50E-03 |

THYROID DOSE FOR STABILITY CLASS A - (MPREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

WIND
SPEED
(MPH)

DOWNWIND DISTANCE - MILES

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0-2 | 2.99E+03 | 1.60E+03 | 1.11E+03 | 8.60E+02 | 7.00E+02 | 6.00E+02 | 5.30E+02 | 4.80E+02 | 4.40E+02 | 4.00E+02 | 3.80E+02 | 3.60E+02 |
| 2-4 | 7.70E+02 | 5.34E+02 | 3.70E+02 | 2.80E+02 | 2.30E+02 | 2.00E+02 | 1.80E+02 | 1.60E+02 | 1.50E+02 | 1.40E+02 | 1.30E+02 | 1.20E+02 |
| 4-9 | 4.39E+02 | 2.67E+02 | 1.80E+02 | 1.40E+02 | 1.10E+02 | 9.80E+01 | 8.80E+01 | 8.00E+01 | 7.40E+01 | 6.80E+01 | 6.40E+01 | 6.00E+01 |
| 9-18 | 2.50E+02 | 1.34E+02 | 9.26E+01 | 7.19E+01 | 6.00E+01 | 5.30E+01 | 4.80E+01 | 4.40E+01 | 4.00E+01 | 3.80E+01 | 3.60E+01 | 3.40E+01 |
| 18-36 | 1.25E+02 | 6.68E+01 | 4.60E+01 | 3.60E+01 | 3.00E+01 | 2.60E+01 | 2.30E+01 | 2.00E+01 | 1.80E+01 | 1.60E+01 | 1.50E+01 | 1.40E+01 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS B

2

WHOLE BODY DOSE FOR STABILITY CLASS 3 - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

[illegible]

THYROID DOSE FOR STABILITY CLASS 3 - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

[illegible]

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS C

2

WHOLE BODY DOSE FOR STABILITY CLASS C - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 2.25E+01 | 6.54E+00 | 3.15E+00 | 2.21E+00 | 1.31E+00 | 1.53E+00 | 1.33E+00 | 1.27E+00 | 1.27E+00 | 1.27E+00 | 1.27E+00 | 1.27E+00 |
| 2-4 | 7.51E+00 | 2.16E+00 | 1.05E+00 | 6.24E-01 | 4.17E-01 | 3.00E-01 | 2.37E-01 | 2.25E-01 | 2.25E-01 | 2.25E-01 | 2.25E-01 | 2.25E-01 |
| 4-9 | 3.75E+00 | 1.09E+00 | 5.25E-01 | 3.12E-01 | 2.08E-01 | 1.50E-01 | 1.13E-01 | 9.56E-02 | 8.59E-02 | 7.30E-02 | 7.79E-02 | 7.79E-02 |
| 9-18 | 1.38E+00 | 5.45E-01 | 2.63E-01 | 1.56E-01 | 1.04E-01 | 7.49E-02 | 5.66E-02 | 4.78E-02 | 4.29E-02 | 3.70E-02 | 3.55E-02 | 3.00E-02 |
| 18-36 | 9.39E-01 | 2.73E-01 | 1.31E-01 | 7.30E-02 | 5.21E-02 | 3.74E-02 | 2.83E-02 | 2.39E-02 | 2.15E-02 | 1.75E-02 | 1.75E-02 | 1.55E-02 |

THYROID DOSE FOR STABILITY CLASS C - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 5.41E+04 | 1.57E+04 | 7.56E+03 | 5.31E+03 | 4.34E+03 | 3.66E+03 | 3.20E+03 | 3.05E+03 | 3.05E+03 | 3.05E+03 | 3.05E+03 | 3.05E+03 |
| 2-4 | 1.30E+04 | 5.24E+03 | 2.52E+03 | 1.50E+03 | 1.00E+03 | 7.19E+02 | 5.66E+02 | 5.41E+02 | 5.41E+02 | 5.41E+02 | 5.41E+02 | 5.41E+02 |
| 4-9 | 9.01E+03 | 2.62E+03 | 1.26E+03 | 7.49E+02 | 5.00E+02 | 3.59E+02 | 2.72E+02 | 2.29E+02 | 2.06E+02 | 1.37E+02 | 1.37E+02 | 1.37E+02 |
| 9-18 | 4.51E+03 | 1.31E+03 | 6.30E+02 | 3.75E+02 | 2.50E+02 | 1.30E+02 | 1.36E+02 | 1.15E+02 | 1.03E+02 | 9.26E+01 | 8.58E+01 | 7.75E+01 |
| 18-36 | 2.25E+03 | 6.54E+02 | 3.15E+02 | 1.37E+02 | 1.25E+02 | 8.79E+01 | 6.30E+01 | 5.74E+01 | 5.15E+01 | 4.66E+01 | 4.29E+01 | 3.77E+01 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS D

2

WHOLE BODY DOSE FOR STABILITY CLASS D - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 4.62E+01 | 1.89E+01 | 1.10E+01 | 7.46E+00 | 5.50E+00 | 4.27E+00 | 3.45E+00 | 2.97E+00 | 2.43E+00 | 2.10E+00 | 1.83E+00 | 1.76E+00 |
| 2-4 | 1.54E+01 | 6.31E+00 | 3.66E+00 | 2.49E+00 | 1.83E+00 | 1.42E+00 | 1.15E+00 | 9.55E-01 | 8.10E-01 | 6.99E-01 | 6.17E-01 | 5.88E-01 |
| 4-7 | 9.14E+00 | 3.51E+00 | 1.99E+00 | 1.32E+00 | 9.54E-01 | 7.44E-01 | 5.98E-01 | 4.94E-01 | 4.16E-01 | 3.60E-01 | 3.17E-01 | 3.02E-01 |
| 7-13 | 5.40E+00 | 1.76E+00 | 1.08E+00 | 7.09E-01 | 5.11E-01 | 3.71E-01 | 3.12E-01 | 2.57E-01 | 2.17E-01 | 1.86E-01 | 1.63E-01 | 1.53E-01 |
| 13-36 | 2.70E+00 | 9.32E-01 | 5.41E-01 | 3.54E-01 | 2.55E-01 | 1.76E-01 | 1.56E-01 | 1.29E-01 | 1.08E-01 | 9.29E-02 | 8.17E-02 | 7.78E-02 |

THYROID DOSE FOR STABILITY CLASS D - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 1.11E+03 | 4.54E+02 | 2.65E+02 | 1.79E+02 | 1.32E+02 | 1.03E+02 | 8.28E+01 | 6.88E+01 | 5.83E+01 | 5.03E+01 | 4.44E+01 | 4.22E+01 |
| 2-4 | 3.70E+02 | 1.51E+02 | 8.82E+01 | 5.97E+01 | 4.40E+01 | 3.42E+01 | 2.76E+01 | 2.29E+01 | 1.74E+01 | 1.58E+01 | 1.43E+01 | 1.41E+01 |
| 4-7 | 2.19E+02 | 8.41E+01 | 4.77E+01 | 3.18E+01 | 2.31E+01 | 1.79E+01 | 1.45E+01 | 1.19E+01 | 1.00E+01 | 8.62E+00 | 7.50E+00 | 7.23E+00 |
| 7-13 | 1.30E+02 | 4.71E+01 | 2.60E+01 | 1.70E+01 | 1.22E+01 | 9.39E+00 | 7.50E+00 | 6.17E+00 | 5.20E+00 | 4.46E+00 | 3.92E+00 | 3.74E+00 |
| 13-36 | 6.48E+01 | 2.36E+01 | 1.30E+01 | 8.50E+00 | 6.10E+00 | 4.70E+00 | 3.73E+00 | 3.09E+00 | 2.60E+00 | 2.22E+00 | 1.96E+00 | 1.87E+00 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS E

2

WHOLE BODY DOSE FOR STABILITY CLASS E - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

WIND
SPEED
(MPH)

DOWNWIND DISTANCE - MILES

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0-2 | 7.06E+01 | 3.31E+01 | 2.10E+01 | 1.51E+01 | 1.16E+01 | 9.02E+00 | 7.78E+00 | 6.62E+00 | 5.76E+00 | 5.07E+00 | 4.51E+00 | 4.06E+00 |
| 2-4 | 2.52E+01 | 1.10E+01 | 6.79E+00 | 5.02E+00 | 3.37E+00 | 2.12E+00 | 2.59E+00 | 2.21E+00 | 1.72E+00 | 1.39E+00 | 1.50E+00 | 1.32E+00 |
| 4-9 | 1.59E+01 | 6.73E+00 | 4.07E+00 | 2.84E+00 | 2.12E+00 | 1.71E+00 | 1.41E+00 | 1.19E+00 | 1.02E+00 | 8.77E-01 | 7.96E-01 | 7.10E-01 |
| 9-18 | 1.02E+01 | 4.02E+00 | 2.52E+00 | 1.59E+00 | 1.18E+00 | 9.00E-01 | 7.59E-01 | 6.36E-01 | 5.45E-01 | 4.75E-01 | 4.19E-01 | 3.74E-01 |
| 18-36 | 5.10E+00 | 2.02E+00 | 1.17E+00 | 7.77E-01 | 5.72E-01 | 4.65E-01 | 3.79E-01 | 3.18E-01 | 2.70E-01 | 2.37E-01 | 2.10E-01 | 1.87E-01 |

THYROID DOSE FOR STABILITY CLASS E - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

WIND
SPEED
(MPH)

DOWNWIND DISTANCE - MILES

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0-2 | 1.70E+03 | 7.34E+04 | 5.03E+04 | 3.61E+04 | 2.78E+04 | 2.24E+04 | 1.87E+04 | 1.59E+04 | 1.38E+04 | 1.22E+04 | 1.08E+04 | 9.73E+03 |
| 2-4 | 5.65E+04 | 2.62E+04 | 1.68E+04 | 1.20E+04 | 9.08E+03 | 7.48E+03 | 6.22E+03 | 5.01E+03 | 4.31E+03 | 4.02E+03 | 3.61E+03 | 3.22E+03 |
| 4-9 | 3.31E+04 | 1.62E+04 | 9.76E+03 | 6.22E+03 | 5.15E+03 | 4.10E+03 | 3.08E+03 | 2.35E+03 | 2.46E+03 | 2.15E+03 | 1.71E+03 | 1.71E+03 |
| 9-18 | 2.45E+04 | 9.71E+03 | 5.62E+03 | 3.80E+03 | 2.84E+03 | 2.22E+03 | 1.82E+03 | 1.52E+03 | 1.31E+03 | 1.14E+03 | 1.01E+03 | 8.99E+02 |
| 18-36 | 1.22E+04 | 4.86E+03 | 2.81E+03 | 1.91E+03 | 1.42E+03 | 1.12E+03 | 9.10E+02 | 7.64E+02 | 6.54E+02 | 5.70E+02 | 5.02E+02 | 4.49E+02 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS F

2

WHOLE BODY DOSE FOR STABILITY CLASS F - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 1.25E+02 | 6.38E+01 | 4.23E+01 | 3.20E+01 | 2.54E+01 | 2.09E+01 | 1.73E+01 | 1.54E+01 | 1.36E+01 | 1.21E+01 | 1.09E+01 | 9.89E+00 |
| 2-4 | 4.15E+01 | 2.15E+01 | 1.45E+01 | 1.07E+01 | 8.46E+00 | 6.78E+00 | 5.72E+00 | 5.10E+00 | 4.52E+00 | 4.03E+00 | 3.63E+00 | 3.30E+00 |
| 4-7 | 2.09E+01 | 1.41E+01 | 9.39E+00 | 6.40E+00 | 4.79E+00 | 4.00E+00 | 3.32E+00 | 2.97E+00 | 2.50E+00 | 2.21E+00 | 1.98E+00 | 1.79E+00 |
| 7-18 | 1.39E+01 | 8.52E+00 | 5.21E+00 | 3.65E+00 | 2.73E+00 | 2.22E+00 | 1.83E+00 | 1.58E+00 | 1.35E+00 | 1.19E+00 | 1.06E+00 | 9.49E-01 |
| 18-36 | 9.46E+00 | 4.26E+00 | 2.60E+00 | 1.83E+00 | 1.39E+00 | 1.11E+00 | 9.17E-01 | 7.79E-01 | 6.74E-01 | 5.93E-01 | 5.23E-01 | 4.73E-01 |

THYROID DOSE FOR STABILITY CLASS F - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 2.99E+05 | 1.53E+05 | 1.03E+05 | 7.67E+04 | 6.09E+04 | 5.03E+04 | 4.27E+04 | 3.70E+04 | 3.25E+04 | 2.90E+04 | 2.61E+04 | 2.37E+04 |
| 2-4 | 9.96E+04 | 5.10E+04 | 3.42E+04 | 2.56E+04 | 2.03E+04 | 1.68E+04 | 1.42E+04 | 1.22E+04 | 1.08E+04 | 9.67E+03 | 8.71E+03 | 7.91E+03 |
| 4-7 | 7.42E+04 | 3.38E+04 | 2.13E+04 | 1.53E+04 | 1.19E+04 | 9.61E+03 | 8.04E+03 | 6.88E+03 | 6.00E+03 | 5.30E+03 | 4.73E+03 | 4.29E+03 |
| 7-18 | 4.54E+04 | 2.05E+04 | 1.25E+04 | 8.77E+03 | 6.66E+03 | 5.32E+03 | 4.40E+03 | 3.74E+03 | 3.24E+03 | 2.84E+03 | 2.52E+03 | 2.28E+03 |
| 18-36 | 2.37E+04 | 1.02E+04 | 6.21E+03 | 4.39E+03 | 3.33E+03 | 2.66E+03 | 2.20E+03 | 1.87E+03 | 1.62E+03 | 1.42E+03 | 1.27E+03 | 1.14E+03 |

ST. LUCIE PLANT
E-PLAN IMPLEMENTING PROCEDURE 3100033E, REVISION 5
OFF-SITE DOSE CALCULATIONS

APPENDIX A
DOSE FACTORS FOR STABILITY CLASS G

2

WHOLE BODY DOSE FOR STABILITY CLASS G - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 1.96E+02 | 1.11E+02 | 7.98E+01 | 6.26E+01 | 5.16E+01 | 4.39E+01 | 3.82E+01 | 3.38E+01 | 3.03E+01 | 2.75E+01 | 2.51E+01 | 2.31E+01 |
| 2-4 | 6.53E+01 | 3.70E+01 | 2.66E+01 | 2.09E+01 | 1.72E+01 | 1.46E+01 | 1.27E+01 | 1.13E+01 | 1.01E+01 | 9.15E+00 | 8.36E+00 | 7.69E+00 |
| 4-7 | 5.65E+01 | 2.91E+01 | 1.97E+01 | 1.39E+01 | 1.11E+01 | 9.16E+00 | 7.79E+00 | 6.77E+00 | 5.98E+00 | 5.35E+00 | 4.84E+00 | 4.41E+00 |
| 7-18 | 2.08E+01 | 1.36E+01 | 1.09E+01 | 8.33E+00 | 6.29E+00 | 5.14E+00 | 4.32E+00 | 3.70E+00 | 3.27E+00 | 2.91E+00 | 2.62E+00 | 2.37E+00 |
| 18-36 | 1.54E+01 | 8.29E+00 | 5.47E+00 | 4.01E+00 | 3.14E+00 | 2.57E+00 | 2.17E+00 | 1.87E+00 | 1.64E+00 | 1.45E+00 | 1.31E+00 | 1.19E+00 |

THYROID DOSE FOR STABILITY CLASS G - (MREM/HR), BASED ON A 1.0 CI/SEC EMISSION RATE

| WIND SPEED (MPH) | DOWNWIND DISTANCE - MILES | | | | | | | | | | | |
|------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 0-2 | 4.70E+03 | 2.67E+03 | 1.71E+03 | 1.30E+03 | 1.04E+03 | 8.65E+02 | 7.17E+02 | 6.12E+02 | 5.27E+02 | 4.59E+02 | 4.02E+02 | 3.54E+02 |
| 2-4 | 1.57E+03 | 8.89E+02 | 6.32E+02 | 4.91E+02 | 4.12E+02 | 3.51E+02 | 3.06E+02 | 2.71E+02 | 2.42E+02 | 2.20E+02 | 2.01E+02 | 1.82E+02 |
| 4-7 | 1.32E+03 | 6.74E+02 | 4.48E+02 | 3.34E+02 | 2.66E+02 | 2.20E+02 | 1.87E+02 | 1.63E+02 | 1.44E+02 | 1.28E+02 | 1.16E+02 | 1.06E+02 |
| 7-18 | 7.39E+02 | 3.98E+02 | 2.62E+02 | 1.93E+02 | 1.51E+02 | 1.22E+02 | 1.04E+02 | 8.96E+01 | 7.83E+01 | 6.98E+01 | 6.32E+01 | 5.70E+01 |
| 18-36 | 5.67E+02 | 3.09E+02 | 2.01E+02 | 1.48E+02 | 1.15E+02 | 9.17E+01 | 7.82E+01 | 6.78E+01 | 5.93E+01 | 5.29E+01 | 4.74E+01 | 4.32E+01 |

END

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT NO. 1 & 2
EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100034E
REVISION 3

1.0 Title:

MAINTAINING EMERGENCY PREPAREDNESS - RADIOLOGICAL EMERGENCY PLAN TRAINING

2.0 Approvals:

| | | |
|------------------------------------|-------------------|---------------|
| Reviewed by Facility Review Group | | 19 |
| Approved by <u>4.0 [Signature]</u> | V.P. Pwr. Res. | 19 |
| * See Signed Cover Sheet. | | |
| Rev. 1 Reviewed by FRG | July 7 -- | 1981 |
| Approved by <u>[Signature]</u> | V. P. Pwr. Res | July 13, 1981 |
| Rev. 3 Reviewed by FRG | | 1982 |
| Approved by <u>[Signature]</u> | V. P. Nuc. Energy | 2-4 1982 |

3.0 Scope:

3.1 Purpose

This procedure provides requirements for a periodic training of individuals, onsite, who may have some response upon initiation of the St. Lucie Plant Radiological Emergency Plan.

3.2 Discussion

In order to maintain emergency preparedness, personnel working at the St. Lucie Plant must be familiar with certain preplanned actions in the Emergency Plan and its implementing procedures.

Any changes in required actions or response due to revision of the Plan or procedures must be presented to appropriate personnel on a periodic basis.

3.3 Authority

St. Lucie Plant Radiological Emergency Plan

3.4 Definition

Throughout this procedure, the terms Emergency Plan and Plan will be used to mean St. Lucie Plant Radiological Emergency Plan.

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT NO. 1 & 2
EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100034E
REVISION 3

4.0 Precautions

- 4.1 This procedure does not cover requirements for periodic training of the FPL Offsite Emergency Organization.

5.0 Responsibilities:

- 5.1 The Plant Manager has the overall responsibility for Emergency Plan Training.
- 5.2 The Plant Training Supervisor is responsible to the Plant Manager for ensuring all Emergency Plan Training is conducted in accordance with the references listed herein.
- 5.3 The primary team leader of each emergency team is responsible for the development and implementation of his team's training and retraining program. He may assign competent individuals to assist him in accomplishing this task.
- 5.4 The Operations Superintendent is responsible for the development and implementation of the Emergency Coordinator training and retraining program. He may assign competent individuals to assist him in accomplishing this task.
- 5.5 The Plant Training Supervisor is responsible for development and implementation of Emergency Plan Training of all candidates for reactor operator or senior reactor operator licenses.
- 5.6 The Plant Training Supervisor shall provide for training all individuals requiring unescorted access on site describing the action to be taken by an individual discovering an emergency condition, the location of assembly areas, the identification of emergency alarms, and the action to be taken on hearing those alarms.

6.0 References

- 6.1 St. Lucie Plant Radiological Emergency Plan
- 6.2 10 CFR 50.47
- 6.3 10 CFR 50 Appendix E
- 6.4 NUREG 0654, Revision 1

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT NO. 1 & 2
EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100034E
REVISION 3

7.0 Records and Notifications:

Records documenting the Emergency Plan Training received by individuals are quality assurance records and, therefore, shall be retained in accordance with Quality Instruction, QI-17-PR/PSL-1, Quality Assurance Records.

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8.0 Instructions:

8.1 Emergency Coordinator Training

All Nuclear Plant Supervisors, Duty Call Supervisors (Operations), Nuclear Watch Engineers, Reactor Control Operators (who are holders of Senior Reactor Operator licenses) shall receive training in categories provided in this section, annually: (\pm 3 months)

- a) Interpretation of plant and field data and how it relates to emergencies and their classification (i.e. emergency action level determination).
- b) Prompt and effective notification methods, including the types of communication system
- c) Method of activating the Florida Power & Light Company Emergency Organization.
- d) The methods used for estimating radiation doses.

8.2 Other Operational Assistance

Other control room shift personnel who may be required during an emergency shall receive training in the following areas on an annual basis:

- a) Emergency Plan familiarization.
- b) Emergency implementing procedures familiarization.
- c) Communications and record keeping methods.
- d) Accident assessment and corrective action.
- e) Shift relief policy.
- f) Specific emergency team training (for individuals assigned to interim emergency teams).

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8.0 Instructions: (cont'd)

8.3 Shift Technical Advisor

All Shift Technical Advisors shall receive the following annual training: (+ 3 months)

- a) Emergency Plan familiarization
- b) Emergency implementing procedures familiarization.
- c) Technical Specifications (in-depth understanding).
- d) Specialized training in power plant and reactor specific core operating characteristics (normal and abnormal) and accident assessment.

8.4 Emergency Teams

8.4.1 Primary and interim Emergency Team Leaders, their alternates, and emergency team members shall have successfully completed radiation protection training conducted by the Health Physics group. Successful completion of this training is acknowledged by the issuance of a "Red Badge" identification card.

8.4.2 All assigned primary and interim leaders shall participate in an annual training exercise designed to have them and their teams respond to simulated situations.

8.4.3 Specific emergency team training shall be conducted by the primary team leader or his qualified designee familiarizing team members with their responsibilities described in the Emergency Plan and its implementing procedures, communications and coordination with other emergency teams and the following team-specific topics:

8.4.3.1 Radiation Emergency Team

- a) Use of air sampling equipment.
- b) Performance of contamination surveys.
- c) Determination of air activity and stay times based on MPC values.
- d) Determination of radiation levels and allowable dose limits in emergency conditions.

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8.0 Instructions: (cont'd)

8.4 Emergency Teams (cont'd)

8.4.3 (cont'd)

8.4.3.1 (cont'd)

- e) Record keeping methods.
- f) In-depth knowledge of personnel and field monitoring/analyzing techniques.
- g) Responsibilities of the Emergency Radiation Team.

8.4.3.2 Security Team

- a) Personnel accountability procedures.
- b) Site ingress and egress control procedures.
- c) Deployment of Security Personnel.

8.4.3.3 First Aid/Decontamination Team

- a) Description, storage location, and application of supplies and equipment.
- b) Sequential steps for the assessment of contamination levels and treatment of injured personnel.
- c) Allowable radiation exposures and advisable radiological environments.
- d) Personnel decontamination procedures.
- e) Procedures for the evacuation of contaminated persons to off-site medical facilities.
- f) At least three members will satisfactorily complete the American National Red Cross Multi-Media First Aid Course and will requalify every three years (± 6 months).

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8.0 Instructions: (cont'd)

8.4 Emergency Teams (cont'd)

8.4.3 (cont'd)

8.4.3.4 Fire Team

Fire Team training is covered by the Fire Protection manual, Administrative Procedure 1800022.

8.4.3.5 Recovery and Restoration & Re-entry Teams

These teams are composed of personnel previously described teams and as such receive adequate training with respect to the Emergency Plan and its implementing procedures.

8.4.3.6 Other Personnel Requiring Unescorted Access On Site

- a) Emergency Plan Familiarization.
- b) Selected Emergency implementing procedures familiarization.

8.4.3.7 Technical Support Center Supervisor

- a) Emergency Plan familiarization.
- b) Emergency implementing procedures familiarization.
- c) Technical Specifications (in-depth understanding).
- d) Specialized training in power plant and reactor specific core operating characteristics (normal and abnormal) and accident assessment.

- 8.4.3.7.1 Those personnel designated as "Support Staff" on Table 3 of Emergency Plan Implementing Procedure 3100032E need not receive the above training.

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REVISION 2

1.0 Title:

Offsite Radiological Monitoring and Dose Assessment

2.0 Review and Approval:

Reviewed by Facility Review Group _____ -- July 7, 1981

Approved by A. D. Schmidt Vice Pres. Pwr.Res. July 13, 1981

Revision 2 Reviewed by F R G May 11, June 7 1982

Approved by *[Signature]* V. P. Nuc. Energy 2-4 1982

3.0 Scope:

3.1 Purpose:

This procedure gives guidelines for assessment of thyroid and whole body doses based on offsite radiological monitoring

3.2 Authority:

This procedure implements the St. Lucie Plant Radiological Emergency Plan.

4.0 Precautions:

4.1 The Radiation Team Leader shall control the exposures of the off-site and on-site out-of-plant monitoring teams within 10 CFR 20 limits unless higher levels are authorized by the Emergency Coordinator or Recovery Manager. These higher limits should be less than 5 Rem whole body and 25 Rem thyroid.

4.2 Field measurements indicating doses and dose rates that are less than those predicted by using plant instrumentation shall not be used to relax recommended protective actions while releases are in progress.

4.3 Field measurements indicating doses and dose rates greater than those predicted by using plant instrumentation should be used to recommend protective actions as appropriate.

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OFFSITE RADIOLOGICAL MONITORING AND DOSE ASSESSMENT

4.0 Precautions: (continued)

- 4.4 Doses to personnel in the OSC and Interim EOF shall be maintained to the limits of 4.1.

5.0 Responsibilities:

- 5.1 The Emergency Coordinator, or his designee, is responsible for ensuring that offsite monitoring is performed during plant emergencies which involve the release of radioactive material to the environment.
- 5.2 The Emergency Coordinator is responsible for determining the protective actions that will be recommended to off-site agencies. The TSC Supervisor is responsible for notification of off-site agencies of the recommended protective actions.
- 5.3 The Radiation Team Leader or his designee is responsible for the activation and direction of offsite monitoring team(s).
- 5.4 The Radiation Team Leader is responsible for providing dose projections based upon offsite monitoring data to the TSC Supervisor.
- 5.5 The State of Florida's Department of Health and Rehabilitative Services assumes responsibility for offsite monitoring and dose projections after arrival of the Mobile Emergency Radiological Laboratory. The transfer of this responsibility from the plant to MERLE will be made when the State informs the plant that they are ready.
- 5.6 The TSC Supervisor shall inform the appropriate offsite agencies concerning off-site monitoring data and projected doses until relieved of this responsibility by the Recovery Manager.

6.0 References:

- 6.1 St. Lucie Plant Radiological Emergency Plan
- 6.2 Florida Radiological Emergency Plan for Fixed Nuclear Facilities
- 6.3 HP-202, "Offsite Environmental Monitoring During Emergencies".
- 6.4 St. Lucie Plant Emergency Plan Implementing Procedures.

7.0 Records and Notifications:

- 7.1 Off-site monitoring data and projected thyroid and whole body doses will be recorded on Appendix A.
- 7.2 Integrated Off-Site Dose Table.

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OFFSITE RADIOLOGICAL MONITORING AND DOSE ASSESSMENT

8.0 Instructions:

- 8.1 Upon the classification of an ALERT level emergency the on-site out-of-plant field monitoring team shall be activated and the off-site field teams may be activated at the discretion of the Emergency Coordinator. At the SITE AREA and GENERAL EMERGENCY Level, the on-site and off-site field monitoring teams shall be activated. The staffing and control of these teams is the responsibility of the Radiation Team Leader.
- 8.2 The Radiation Team Leader shall determine monitoring points based upon meteorological conditions and population zones.
 - 8.2.1 Preslected monitoring points are listed in Appendix B and indicated on the area maps contained in the off-site monitoring kits. The preslected points are possible monitoring points and may be used as reference points to direct monitoring teams.
- 8.3 Communication with monitoring teams will be through the FPL two-way radio system or telephone.
- 8.4 Monitoring teams will take direct radiation readings and air samples and analyze air samples for radioiodine concentration.
 - 8.4.1 Radioiodine analysis will normally be performed using portable analyzers with scintillation detectors.

Note: In the event radioiodine analysis cannot be done in the field, the Radiation Team Leader will provide for the transport of air samples to the plant site for analysis.
- 8.5 Thyroid dose projections shall be done using the nomagram in Appendix C. The projected release time should be for 2 hours unless otherwise indicated.
 - 8.5.1 The projected thyroid dose is determined by matching the radioiodine concentration, on the right, vertical scale, with the projected exposure time, on the horizontal scale, and reading the projected thyroid dose off the nomagram.
- 8.6 Whole body dose projections will be determined by multiplying the gamma exposure rate by the projected exposure time.
- 8.7 Projected doses and survey data will be recorded on Appendix A.
- 8.8 The Radiation Team Leader will inform the TSC Supervisor and the Emergency Coordinator in regard to monitoring data and projected doses. Recommended protective actions shall be based on whole body and thyroid dose projections for adults.

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OFFSITE RADIOLOGICAL MONITORING AND DOSE ASSESSMENT

8.0 Instructions: (continued)

- 8.9 Projected doses to field teams are computed by using the measured dose rates and iodine concentrations in the plume and the time the team was in the plume. Record the information on Appendix D.
- 8.10 If it appears that a team will receive doses in excess of those listed in 4.1, the Radiation Team Leader will make the necessary arrangements for replacing the team.
- 8.11 When the EOF is manned and operational, the previously gained off-site monitoring data dose assessment will be forwarded to the dose assessment group in the EOF.
- 8.12 When the EOF is manned and operational, the dose assessment group in the EOF will select the locations for off-site monitoring and forward that information to the TSC where the teams will be dispatched.

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APPENDIX B

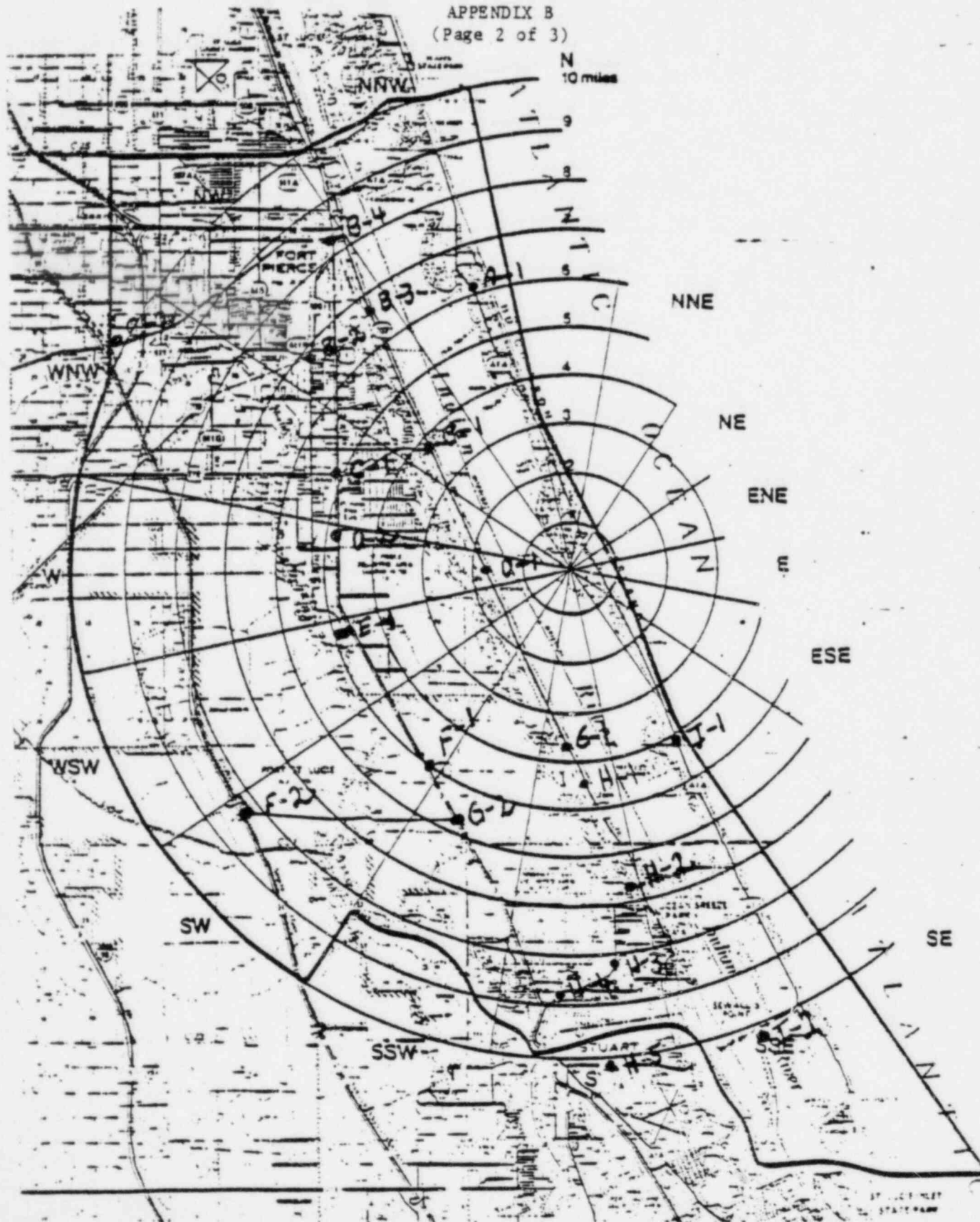
PRESELECTED OFFSITE MONITORING POINTS

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| Survey Point | Location | Distance From Plant | EPZ Sector |
|--------------|---|---------------------|------------|
| A-1 | S.R. AlA, North of plant site | 6.0 mi. | NNW |
| B-1 | Intersection S.R. 707 and S.R. 712 E. of White City & S. of Ft. Pierce | 3.9 mi. | NW |
| B-2 | Intersection U.S. 1 & S.R. 611, S. side of Ft. Pierce near RR crossing | 6.5 mi. | NW |
| B-3 | S.R. 707, S.E. side of Ft. Pierce | 6.7 mi. | NW |
| B-4 | Intersection U.S. 1 and S.R. 70 | 8.1 mi. | NW |
| C-1 | Intersection U.S. 1 & S.R. 712 White City | 5.1 mi. | WNW |
| C-2 | S.R. 70 near Florida Turnpike | 10.1 mi. | WNW |
| D-1 | S.R. 707 W. of plant site | 1.1 mi. | W |
| D-2 | U.S. 1, S. of White City | 4.9 mi. | W |
| E-1 | Intersection U.S. 1 & Prima Vista Blvd., Port St. Lucie | 4.9 mi. | WSW |
| F-1 | Intersection U.S. 1 & Walton Rd., Port St. Lucie | 5.0 mi. | SW |
| F-2 | Port St. Lucie Blvd. at Fl. Turnpike | 8.6 mi. | SW |
| G-1 | Intersection S.R. 707 & Walton Rd. | 3.5 mi. | S |
| G-2 | Intersection U.S. 1 & Port St. Lucie Blvd., Port St. Lucie | 5.9 mi. | SSW |
| H-1 | S.R. 707 in Eden, 2 mi. N. of Jensen Beach Causeway | 3.5 mi. | S |
| H-2 | S.R. 707 & Jensen Beach Causeway | 6.9 mi. | S |
| H-3 | Intersection S.R. 707 & Palmer Rd., S. of Jensen Beach | 8.1 mi. | S |
| H-4 | S.R. 707 in Rio | 8.9 mi. | S |
| H-5 | Martin Memorial Hospital in Stuart | 10.2 mi. | S |
| I-1 | S.R. AlA, S. of plant site | 4.0 mi. | SSE |
| I-2 | S.R. AlA & Causeway in Sewell's Point | 10.3 mi. | SSE |

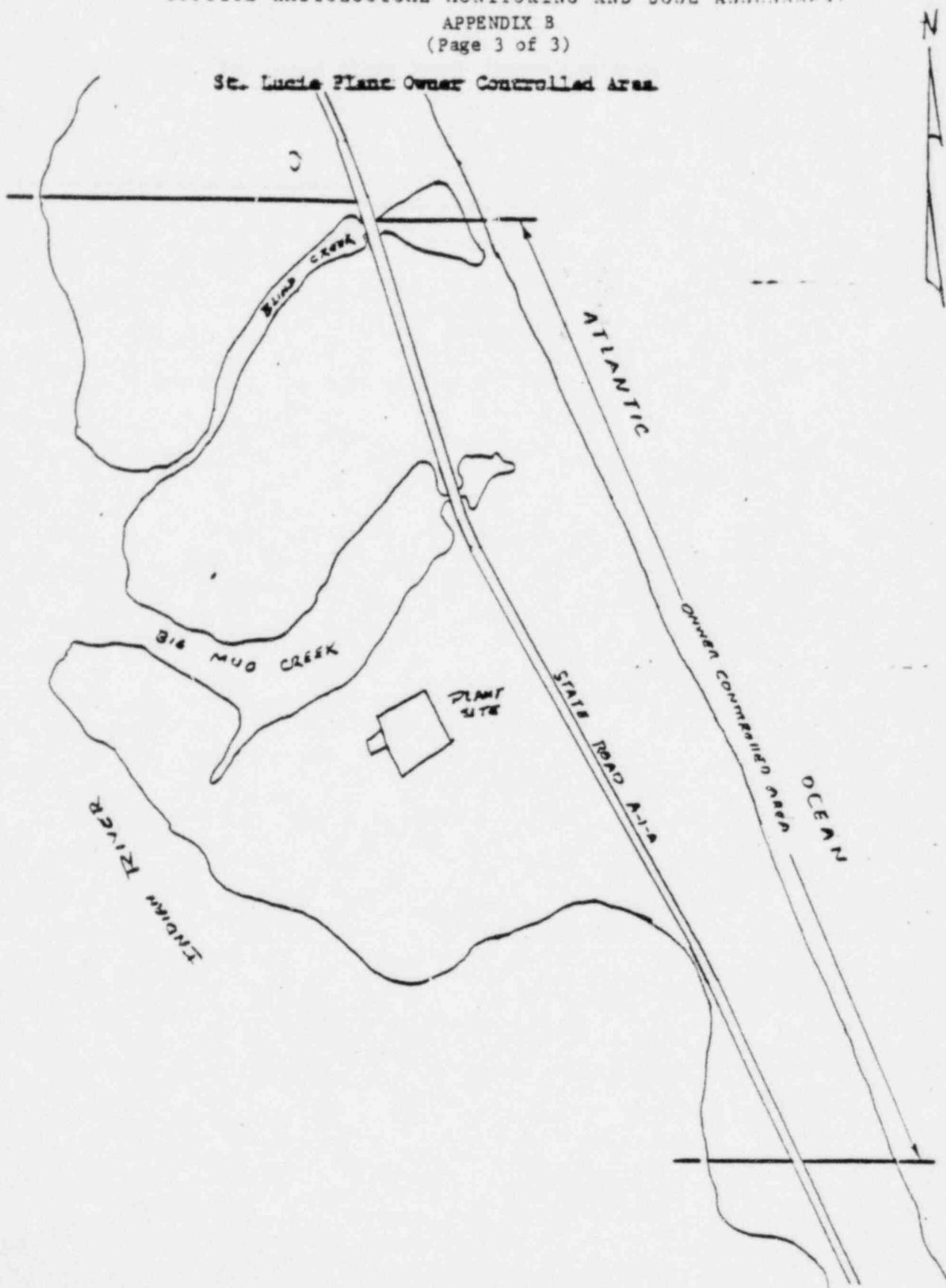
FLORIDA POWER & LIGHT COMPANY ST. LUCIE PLANT
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OFFSITE RADIOLOGICAL MONITORING AND DOSE ASSESSMENT

APPENDIX B
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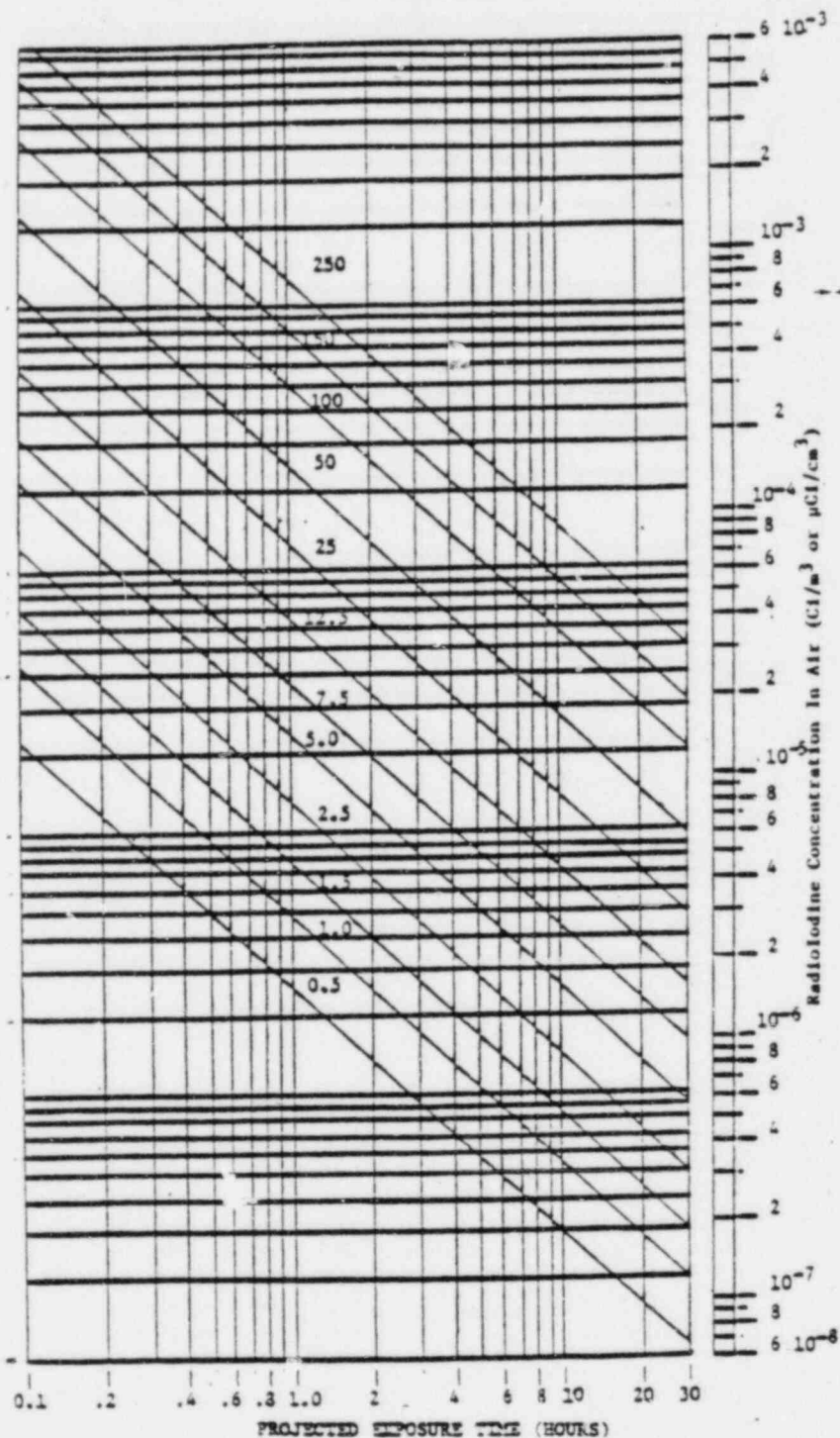
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APPENDIX C



FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE NO. 3100050E
REVISION 5

1.0 Title:

MAINTAINING EMERGENCY PREPAREDNESS - EMERGENCY EXERCISES, DRILLS, TESTS,
AND EVALUATIONS.

2.0 Approvals:

Reviewed by Facility Review Group July 25, 1975
Approved by K. N. Harris Plant Manager July 29, 1975

Rev. 4 Reviewed by FRG March 20 -- 1981
Approved by *[Signature]* V. P. Power Resources March 16, 1981

Rev. 5 Reviewed by FRG June 7, May 11, 1982
Approved by *[Signature]* V. P. Nuclear Energy 8-4 1982

3.0 Scope:

3.1 Purpose

This procedure provides instructions for conducting periodic emergency exercises, drills, and tests.

3.2 Discussion

Periodic exercises and drills will be conducted in order to test the state of emergency preparedness of participating personnel, organizations, and agencies. Each exercise or drill will be conducted to:

- 1) Ensure that participants are familiar with their respective duties and responsibilities.
- 2) Verify the adequacy of the Emergency Plan and emergency procedures.
- 3) Test the communication network and systems.
- 4) Check the availability of emergency supplies and equipment.
- 5) Verify the operability of emergency equipment.

The results of the exercises will form the basis for corrective action to eliminate identified deficiencies, and will be discussed during a post-exercise evaluation.

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REVISION 5

3.0 Scope: (cont'd)

3.3 Authority

This procedure implements the St. Lucie Plant Radiological Emergency Plan.

4.0 Precautions:

- 4.1 Every emergency alarm or announcement shall be assumed to be true unless an announcement is made to the contrary.

5.0 Responsibilities:

- 5.1 The FPL Emergency Planning Supervisor shall be responsible for planning, scheduling, and coordinating all major emergency drills or exercises involving off site agencies. When an exercise is to be conducted, the Emergency Planning Supervisor shall:

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- a) Schedule a date for the exercise in coordination with the Plant Manager and the primary State and county emergency response agencies.
- b) Request that the Plant Manager assign personnel to assist the Emergency Planning Supervisor prepare a scenario.
- c) Coordinate all FPL efforts with other participating personnel, organizations, and agencies.
- d) Obtain the approval of the Plant Manager.
- e) Offer federal, state and local observers the opportunity to evaluate the exercise.
- f) Discuss and evaluate the exercise with observers and principal participants.
- g) Ensure that for all identified deficiencies, corrective measures are recommended.
- h) Prepare and retain documentation for record keeping.

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- 5.2 The Operations Superintendent shall be responsible for planning, scheduling, and coordinating all onsite emergency drills. When a drill is to be conducted, he shall:

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5.0 Responsibilities: (cont'd)

5.2 (cont'd)

- a) Schedule a date for the drill in coordination with the Plant Manager and the Emergency Planning Supervisor. /R5
- b) Assure that a scenario is prepared.
- c) Assign observers for specific portions of the drill.
- d) Obtain the approval fo the Plant Manager.
- e) Discuss and evaluate the exercise with observers and principal participants.
- f) Ensure that for all identified deficiencies corrective measures are recommended.
- g) Prepare and retain documentation for record keeping.

5.3 When an exercise or a major drill is to be conducted, the Plant Manager shall assure that the following is accomplished:

- a) Assign personnel to prepare a scenario.
- b) Coordinate through the Emergency Planning Supervisor all activities which involve off-site personnel organizations or agencies. /R5
- c) Schedule a date for this activity in coordination with the Emergency Planning Supervisor and assign observers. /R5
- d) Review evaluations of exersise or drill with the observers and the Facility Review Group.
- e) Ensure that deficiencies which are identified are addressed with corrective measures.
- f) Prepare and submit documentation to the Emergency Plan Administrator for record keeping.

These exercises and drills will simulate emergency conditions and may be scheduled such that two or more exercises or drills are conducted simultaneously.

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6.0 References

6.1 St. Lucie Plant Radiological Emergency Plan

6.2 NUREG 0654

7.0 Records and Notifications

7.1 Log Entries

7.2 Written evaluation to FRG, Plant Manager, and Emergency Planning
Supervisor by the Operations Superintendent

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7.3 Consolidated exercise summary by the Emergency Planning Supervisor.

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REVISION 5

8.0 Instructions

8.1 The following emergency exercises, drills, and tests shall be conducted at the frequency indicated:

a) Exercises (Integrated Drills)

A major radiological emergency response exercise shall be conducted at least once every twelve (12) months (plus or minus three months) to demonstrate the effectiveness of the Emergency Plan. This exercise shall be conducted as a Site Area Emergency or General Emergency and will provide for the coordination with and participation of off-site emergency response personnel organizations and agencies including those of federal, state, and local governments. The emergency scenario shall be varied from year to year. Provisions shall be made to start at least one exercise between 6:00 PM and midnight, and at least one exercise between midnight and 6:00 A.M., every six years.

This emergency response exercise shall be critiqued by Florida Power & Light Company observers/evaluators and other observers as appropriate from federal, state, and local agencies.

b) Radiological Monitoring Drill

A radiological monitoring drill shall be conducted at least once every twelve (12) months (plus or minus three months). These drills will include collection and analysis of sample media (e.g. water, air).

c) Health Physics Drills

The Health Physics Department shall conduct health physics drills semi-annually and one of the semi-annual drills may be incorporated into the radiological monitoring drill.

d) Medical Emergency Drill

A medical emergency drill involving a simulated contaminated individual, with provisions for activation of the plant First Aid and Personnel Decontamination Team and participation by local support services (i.e., ambulance and off-site medical treatment facility), shall be conducted at least once every twelve (12) months (plus or minus three months).

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REVISION 5

8.0 Instructions (cont'd)

8.1 (cont'd)

e) Fire Emergency Drill

Fire drills are conducted in accordance with Technical Specifications to test the operational readiness (personnel, equipment and procedures) to control and extinguish a fire onsite. The drills also serve to evaluate and document the response of onsite personnel and participating off-site agencies to varying fire situations. The communication links and notification procedures are tested at least semi-annually during fire emergency drills. A postdrill critique is held after each fire drill completed to identify possible areas for improvement in equipment and/or procedures.

f) Communications Tests

Communications with the Bureau of Disaster Preparedness, Department of Health and Rehabilitative Services, and St. Lucie and Martin County Disaster Preparedness Coordinators within the plume exposure pathway Emergency Planning Zone (EPZ) will be tested monthly.

8.2 Conducting Drills

8.2.1 The Nuclear Plant Supervisor (NPS) shall evaluate the plant conditions and ascertain that the drill will not adversely affect plant equipment or operations.

8.2.2 The Operations Superintendent shall designate specific members of the plant staff to act as observers during the drill. These observers shall be familiar with the procedures and proper actions to be taken associated with their post during the drill. Additionally, briefings shall be conducted to indicate what purpose the drill will serve and what specific areas the observers should be concerned with.

These observers shall be posted throughout the plant area to observe and record the actions of plant personnel during the drill and to verify alarm audibility.

8.2.3 After receiving a signal of alarm indicating that an emergency condition exists, which has been initiated as part of the drill, the NPS shall take action as required by the Emergency Plan.

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8.0 Instructions (cont'd)

8.2 (cont'd)

- 8.2.4 At the termination of the drill, the NPS shall announce over the PA system that the drill is over. This shall be repeated along with any required instructions.

8.3 Evaluation of Drills and Exercises

- 8.3.1 Following a drill the Operations Superintendent shall assimilate all information and data concerning the emergency procedure drill and hold a critique on the drill with the FRG.

The FRG shall recommend changes to the Emergency Procedures as necessary.

- 8.3.2 Following an exercise, the Emergency Planning Supervisor, plant management, FPL observers and principal participants in the exercise will meet to discuss and evaluate the exercise.

/R5

The evaluation shall be based on the ability of participants to follow emergency procedures, the adequacy of emergency procedures, and the adequacy of emergency equipment and supplies. Plant management shall be responsible for an necessary changes in the Plant Emergency Procedures and for recommending changes in the Emergency Plan to the Emergency Planning Supervisor. Recommended changes in the Emergency Plan shall be submitted to the Emergency Planning Supervisor.

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- 8.3.3 The FRG shall submit a written evaluation following an exercise to the Emergency Planning Supervisor. These comments will be incorporated, with comments from other principal participants and observers, into a consolidated exercise summary. The summary will be distributed as described in the "Duties and Responsibilities of the Emergency Planning Supervisor" procedure.

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