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 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co.      05000335  
 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.      05000389

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SUBJECT: Forwards St Lucie Units 1 & 2 Emergency Exercise Senerio for Feb 1994.

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December 8, 1993

L-93-308

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Gentlemen:

Re: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Exercise Scenario for  
Emergency Exercise - February 1994

Florida Power & Light Company (FPL), in cooperation with the State of Florida, St. Lucie County, and Martin County emergency response agencies, will conduct an exercise of the emergency plan for St. Lucie Plant on February 9, 1994. The exercise will involve participation by local emergency response agencies and State emergency response personnel and will be evaluated by the Federal Emergency Management Agency.

As requested by NRC letter dated April 3, 1987 (J. Nelson Grace to C. O. Woody), the exercise scenario package is being forwarded only to Mr. Kenneth Barr, Emergency Preparedness Section Chief, Region II, "To be opened by addressee only." This exercise scenario package can be released from confidential status after the exercise date.

If there are any questions or comments concerning this exercise, or the scenario, please contact Mr. R. D. Mothena at (407) 694-4218.

Very truly yours,

*DA Sager*  
D. A. Sager  
Vice President  
St. Lucie Plant

DAS/JWH/kw

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, St. Lucie Plant  
Kenneth Barr, Emergency Preparedness Section Chief, Region II, USNRC

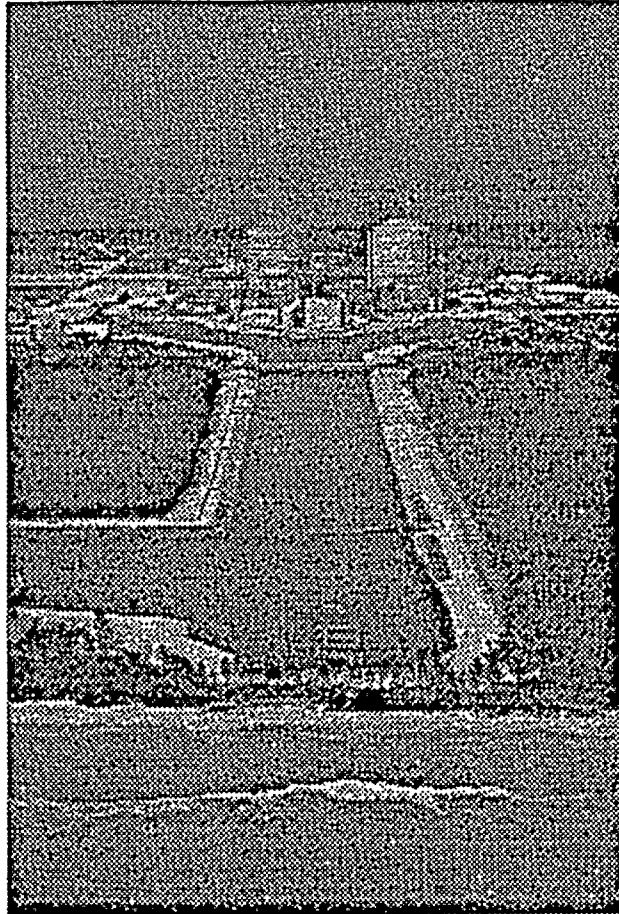
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FLORIDA POWER AND LIGHT COMPANY



**ST. LUCIE NUCLEAR PLANT**  
**1994 EMERGENCY PREPAREDNESS**  
**EVALUATED EXERCISE**  
**FEBRUARY 9, 1994**

9403250062

IEB5



**CONFIDENTIAL** (Until 02-10-94)

**4.2 MEDICAL SCENARIO AND MESSAGES**

FPL/PSL

4.2-0

**CONFIDENTIAL** (Until 02-10-94)  
94-EX/Rev.02/12-06-93



**CONFIDENTIAL** (Until 02-10-94)

FLORIDA POWER AND LIGHT COMPANY  
ST. LUCIE NUCLEAR POWER PLANT  
1994 EMERGENCY PREPAREDNESS  
EVALUATED EXERCISE  
FEBRUARY 9, 1994

4.2 MEDICAL SCENARIO AND MESSAGES

-- NOTE --

This Section contains data on the simulated contaminated injury including: inplant, transport and treatment at the off-site medical treatment facility (Martin Memorial Hospital).

CONTENTS

Scenario and anticipated actions

Messages

**CONFIDENTIAL** (Until 02-10-94)

**4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)**

**GENERAL SCENARIO:**

A Radwaste Operator (simulated by a volunteer victim) was working in the Drumming Room of the Unit 2 Reactor Auxiliary Building (RAB) when a lid on a B25 box slipped from the top of the box where it was sitting loosely and knocked the worker to the floor. As the lid fell, it knocked the victim over and the corner of the lid ripped open the right sleeve of the victim's protective clothing, gashing the right outer forearm between elbow and wrist. The victim was bowled over by the falling lid, striking their head soundly on the floor and was knocked semi-conscious. The victim is stunned and bleeding and a coworker (simulated by the Medical Controller) helped the worker out of the Drumming Room where the victim slumped to the floor and the medical emergency scenario begins with a notification telephone call to the Unit 2 Control Room (Simulator).



4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

SCENARIO

The medical scenario begins with the volunteer victim lying on their side in the Unit 2 RAB outside the Drumming Room. The victim is wearing protective clothing. The victim is semi-conscious and bleeding from the right forearm. Bleeding is apparent through the PC sleeve.

Initial condition

Respiration: 24  
Pulse: 85  
Skin: Pale, and wet with perspiration.  
Pupils: Dilated

ACTIONS

The Medical Controller or a conscripted Player will call in the injury information to the Unit 2 Control Room (Simulator), initiating the medical emergency scenario.

The victim is semi-conscious and unresponsive to inquiry.

4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

SCENARIO

ACTIONS

Plant First-Aid/Decon Team Arrival

Respiration: 24  
Pulse: 85  
B/P: 140/96  
Skin: Pale and wet with perspiration.  
Pupils: Equal.

Communications are established. Vital signs and patient condition are assessed. Protective clothing is removed to facilitate treatment of the wound. A pressure dressing is applied to the laceration. The victim is kept in a supine condition and remaining protective clothing is cut away. Psychological support is given.

The Patient is conscious, but is weak, dizzy and unable to sit up. The victim complains of headache, a feeling of vertigo and nausea. There is copious bleeding from the torn right forearm.

4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

Radiological evaluation:

While triage is being administered to the patient, Health Physics Technician should be assessing the general area radiological conditions and evaluating the contamination levels of the victim.

General area radiation levels:

At Drumming Room door threshold (door open):

airborne:	2 mr/hr
smearable:	<MDA
(door closed):	5000 cpm >Bkg
airborne:	1 mr/hr
smearable:	<MDA
Patient's SRD:	5000 cpm >Bkg
	10 mr

4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

SCENARIO

ACTIONS

Radiological Evaluation:(Continued)

When moved to a lower background area:

In general, radiation, contamination and airborne activity outside of the immediate pumphoom area will be AS READ.

Patient:

PC's (general):

5000 cpm >Bkg

right sleeve:

3000 cpm >Bkg

Gloves:

5000 cpm >Bkg

After PC removal:

Right forearm, wound area:

2500 cpm >Bkg

Face, left cheek:

1000 cpm >Bkg

Right Hand:

5000 cpm >Bkg

Left Knee:

2000 cpm >Bkg

4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

SCENARIO

ACTIONS

Initial Treatment: (Continued)

During the initial treatment and preparation for transport:

Respiration:

36, shallow, irregular.

Pulse:

110

B/P:

148/98

Skin:

Pale, cool diaphoretic

Pupils:

Equal

Patient is still complaining of headache and dizziness, is becoming less lucid, less responsive.

Notification of patient condition and contamination should be made to the Control Room and the Emergency Coordinator. Due to the possibility of a cranial injury, notification to off-site treatment facility should be made and preparations for ambulance transport begun. The patient should be transported by stretcher to meet the ambulance and contamination control appropriate to the medical priorities should be exercised as the patient crosses the Radiation Control Area (RCA) line.



4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

SCENARIO

ACTIONS

Radiological Evaluation: (Continued)

After initial decon attempts:

Right forearm, wound area:

1500 cpm >Bkg

Face, left cheek:

100 cpm >Bkg

Right Hand:

100 cpm >Bkg

Left Knee:

Background

The initial decontamination attempts performed either in the RAB or in the ambulance will reduce the patient contamination levels to those indicated. These levels will remain unchanged until the patient reaches the off-site treatment facility.

Secondary Treatment: (Martin Memorial Hospital)

Respiration:

38, irregular.

Pulse:

110

B/P:

186/100

Skin:

Pale, clammy, moist.

Pupils:

Equal, responsive.

Medical evaluation finds the forearm laceration to be approximately 18 cm in length and not deep. There is considerable venous bleeding, no apparent tendon/muscle damage. The patient is becoming more reactive to inquiry and stimuli, there is the possibility of a subdural hematoma as a result of the head impact upon falling. Blood loss is controlled.

Patient is still disoriented, is getting stronger and more responsive.

4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

<u>SCENARIO</u>	<u>ACTIONS</u>
<u>Secondary Treatment:</u> (Off-Site Medical, Continued))	In the Hospital, the patient's remaining clothing is removed. Appropriate medical and nursing treatment are initiated. As determined by the Physician, radiological surveys are performed and samples collected. All surveys should be correctly documented, all samples properly labeled.
Contamination levels:	
Wound: 1500 cpm >Bkg.	
Face and Cheek: 100 cpm >Bkg.	
Right hand: 100 cpm >Bkg.	
<u>After 1st Decon:</u>	
Wound: 500 cpm >Bkg.	
Face and Cheek: Background.	
Right hand: 100 cpm >Bkg.	



4.2.1 DETAILED SCENARIO AND ACTIONS (Continued)

<u>SCENARIO</u>	<u>ACTIONS</u>
<u>After 2nd Decon:</u> Wound: 200 cpm >Bkg.	During the treatment, the wound will continue to exhibit measurable radiation readings in spite of decontamination efforts until the third simulated decontamination attempt. The removal of this contamination essentially completes the treatment and decontamination phase of the scenario.
<u>After 3rd Decon:</u> Wound: Background.	

**CONFIDENTIAL** (Until 02-10-94)

TO: First-Aid/Decon Team

MESSAGE NO.: M - 1      TIME: 0905 (Approx.)

LOCATION: Unit 2 RAB, Drumming Room Entrance

MESSAGE:

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**Controller Note:**      Provide the following information only to the First-Aid/Decon team members as they earn it by performing the appropriate action.

**Vitals:**

Respiration:            24  
Pulse:                    85  
B/P:                      140/96  
Skin:                     Pale and wet with perspiration.  
Pupils:                   Equal.

**Survey results of injured Operator:**

PC's (general):            5000 cpm >Bkg  
Right sleeve:              3000 cpm >Bkg  
Gloves:                    5000 cpm >Bkg  
SRD:                        10 mR

**After PC's are removed:**

Right forearm, wound area:    2500 cpm >Bkg  
Face, left cheek:            1000 cpm >Bkg  
Right hand:                  5000 cpm >Bkg  
Left Knee:                    2000 cpm >Bkg

**CONFIDENTIAL** (Until 02-10-94)

TO: First-Aid/Decon Team

MESSAGE NO.: M - 2      TIME: 0915 (Approx.)

LOCATION: Unit 2 RAB

MESSAGE:

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**Controller Note:**      Provide the following information only to the First-Aid/Decon team members as they earn it by performing the appropriate action.

Vital Signs while preparing for transport:

Respiration:	36, shallow, irregular.
Pulse:	110
B/P:	148/98
Skin:	Pale, cool and diaphoretic
Pupils:	Equal, responsive

Patient is still complaining of headache and dizziness, is becoming less lucid, less responsive.

CONFIDENTIAL (Until 02-10-94)

TO: First-Aid/Decon Team

MESSAGE NO.: M - 3      TIME: 0945 (Approx.)

LOCATION: Ambulance Loading Point

MESSAGE:

---

Controller Note:      Provide the following information only to the First-Aid/Decon team members as they earn it by performing the appropriate action.

Initial decontamination efforts (if performed) yield the following results:

Right forearm, Wound area: 1500 cpm >Bkg

Left Knee:                      Background

Face, left cheek:              100 cpm >Bkg

Right hand:                      100 cpm >Bkg

**CONFIDENTIAL** (Until 02-10-94)

TO: Ambulance Medical Team

MESSAGE NO.: M - 4      TIME: 1000 (Approx.)

LOCATION: Ambulance Loading Point, Enroute to Martin Memorial

**MESSAGE:**

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When the patient is examined and evaluated by Ambulance Medical Team and the entire transport to the Martin Memorial Hospital, provide the following information only as it is earned by the ambulance medical team's actions:

**Vitals:**

Respiration:            43, irregular.  
Pulse:                    116  
B/P:                      186/100  
Skin:                     Pale, clammy, moist  
Pupils:                  Equal, responsive

Patient is still disoriented, is responsive to painful stimuli but unable to communicate lucidly.

**Wound:**

There is a shallow laceration outside the right forearm between elbow and wrist approximately 18 cm in length. There is considerable venous bleeding and no evidence of any possible tendon/nerve damage.

**CONFIDENTIAL** (Until 02-10-94)

TO: Health Physics Technician

MESSAGE NO.: M - 5      TIME: 1030 (Approx)

LOCATION: Martin Memorial Hospital

MESSAGE:

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After the transfer of the patient from the ambulance into the treatment area, clearing of ambulance protective coverings and proper removal of protective clothing by ambulance personnel--survey/status of the ambulance and attendants is:

Ambulance:                      All Areas Background

Transfer Route:                All Areas Background

Ambulance Team Members: All Areas Background

FPL/PSL

4.2.2-5

**CONFIDENTIAL** (Until 02-10-94)

94-EX/Rev.02/12-06-93

**CONFIDENTIAL** (Until 02-10-94)

TO: Medical Team

MESSAGE NO.: M - 6      TIME: 1030 (Approx.)

LOCATION: Martin Memorial Hospital

MESSAGE:

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When the patient is examined and evaluated by Medical Team:

Vitals:

Respiration:	38, irregular.
Pulse:	110
B/P:	186/100
Skin:	Pale, clammy, moist
Pupils:	Equal, responsive

Patient is still disoriented, is getting stronger and more responsive.

Wound:

There is a shallow laceration outside the right forearm between elbow and wrist approximately 18 cm in length. There is considerable venous bleeding and no evidence of any possible tendon/nerve damage. The patient is becoming more reactive to inquiry and stimuli and there may be an injury to the head caused by the fall.

FPL/PSL

4.2.2-6

**CONFIDENTIAL** (Until 02-10-94)  
94-EX/Rev.02/12-06-93

**CONFIDENTIAL** (Until 02-10-94)

TO: Medical Team

MESSAGE NO.: M - 7 . TIME: 1045 (Approx.)

LOCATION: Martin Memorial Hospital

**MESSAGE:**

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Additional patient status during examination:

Vitals:

Pulse:	100
Respiration:	28
B/P:	160/104
Skin:	Pale, clammy, moist

Patient is weak, slightly disoriented, but responsive and can answer inquiries.



CONFIDENTIAL (Until 02-10-94)

TO: Health Physics Technician

MESSAGE NO.: M - 8      TIME: 1050 (Approx.)

LOCATION: Martin Memorial Hospital

MESSAGE:

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**Controller Note:**      Provide the following information only to the First-Aid/Decon team members as they earn it by performing the appropriate action.

Additional radiological survey results:

Face and cheek:                      100 cpm >Bkg

Right hand:                              100 cpm >Bkg

Wound:                                      1500 cpm >Bkg

FPL/PSL

4.2.2-8

CONFIDENTIAL (Until 02-10-94)  
94-EX/Rev.02/12-06-93

**CONFIDENTIAL** (Until 02-10-94)

TO: Health Physics Technician

MESSAGE NO.: M - 9      TIME: 1100 (Approx.)

LOCATION: Martin Memorial Hospital

MESSAGE:

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Post-Decon radiological survey results after the first decon:

Face and cheek:	Background
Right hand:	100 cpm >Bkg
Wound:	500 cpm >Bkg

FPL/PSL

4.2.2-9

**CONFIDENTIAL** (Until 02-10-94)  
94-EX/Rev.02/12-06-93

**CONFIDENTIAL** (Until 02-10-94)

TO: Health Physics Technician

MESSAGE NO.: M - 10    TIME: 1115 (Approx.)

LOCATION: Martin Memorial Hospital

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**MESSAGE:**

Post-Decon radiological survey results after the second decon:

Right hand:                                 Background

Wound:                                        200 cpm >Bkg

**CONFIDENTIAL** (Until 02-10-94)

TO: Health Physics Technician

MESSAGE NO.: M - 11      TIME: 1130 (Approx.)

LOCATION: Martin Memorial Hospital

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MESSAGE:

Post-Decon radiological survey results after third decon:

Wound:

Background

FPL/PSL

4.2.2-11

**CONFIDENTIAL** (Until 02-10-94)  
94-EX/Rev.02/12-06-93

**CONFIDENTIAL** (Until 02-10-94)

TO: Medical Team

MESSAGE NO.: M - 12      TIME: 1140 (Approx.)

LOCATION: Martin Memorial Hospital

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MESSAGE:

The third wound irrigation completes decontamination of the patient. All surveys now indicate Background. You may now evaluate release of the patient to conventional treatment areas.

FPL/PSL

4.2.2-12

**CONFIDENTIAL** (Until 02-10-94)  
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**CONFIDENTIAL** (Until 02-10-94)

TO: Health Physics Technician

MESSAGE NO.: M - 13    TIME: 1150 (Approx)

LOCATION: Martin Memorial Hospital

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**MESSAGE:**

After the transfer of the patient, proper exit and removal of protective clothing by Medical personnel--survey/status is:

Patient:	All Areas Background
Stretcher:	All Areas Background
Medical Team Members:	All Areas Background

**CONFIDENTIAL** (Until 02-10-94)

TO: Medical Team

MESSAGE NO.: M - 14      TIME: 1200 (Approx.)

LOCATION: Martin Memorial Hospital

**MESSAGE:**

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The Radiological Medical Emergency Drill is terminated. An in-place critique and discussion will take place.

FPL/PSL

4.2.2-14

**CONFIDENTIAL** (Until 02-10-94)  
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