

Q 05/10/78

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)  
DISTRIBUTION FOR INCOMING MATERIAL 50-335

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FL PWR & LIGHT

DOCDATE: 04/27/78  
DATE RCVD: 05/09/78

DOCTYPE: LETTER NOTARIZED: NO

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SUBJECT:

LTR 1 ENCL 1

FORWARDING LICENSEE EVENT REPT (RO 50-335/78-13) ON 03/28/78 CONCERNING  
DURING SHUTDOWN FOR REFUELING, DOSE EQUIVALENT IODINE EXCEEDED TECH SPEC  
3. 4. 8... W/ATT.

PLANT NAME: ST LUCIE #1

REVIEWER INITIAL: XJM

DISTRIBUTOR INITIAL: W

\*\*\*\*\* DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS \*\*\*\*\*

INCIDENT REPORTS  
(DISTRIBUTION CODE A002)

FOR ACTION: BR CHIEF REID\*\*W/4 ENCL

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K SEYFRIT/IE\*\*W/ENCL

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BAER\*\*W/ENCL  
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EXTERNAL: LPDR'S  
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COPIES NOT SUBMITTED PER  
REGULATORY GUIDE 10.1

DISTRIBUTION: LTR 45 ENCL 45  
SIZE: 2P+3P

CONTROL NBR: 781300092

\*\*\*\*\* THE END \*\*\*\*\*

60  
A0 4



REGULATORY DOCKET FILE COPY



FLORIDA POWER & LIGHT COMPANY

April 27, 1978

PRN-LI-78-21

U.S. NRC  
ON-SITE  
SERVICES

MAY 9 AM 10 04

RECEIVED DISTRIBUTION  
SERVICES UNIT

Mr. James P. O'Reilly, Director, Region II  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
230 Peachtree Street, N.W., Suite 1217  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

REPORTABLE OCCURRENCE 335-78-13

ST. LUCIE UNIT 1

DATE OF OCCURRENCE: MARCH 28, 1978

TECHNICAL SPECIFICATION 3.4.8.a

DOSE EQUIVALENT I-131

The attached Licensee Event Report is being submitted in accordance with Technical Specification 6.9 to provide 30-day notification of the subject occurrence.

Very truly yours,

A. D. Schmidt  
Vice President  
Power Resources

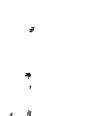
MAS/mb

Attachment

cc: Robert Lowenstein, Esquire  
Director, Office of Inspection and Enforcement (30)  
Director, Office of Management Information and  
Program Control (3)

781300092

A002  
S/11



SUPPLEMENTARY INFORMATION  
TECHNICAL SPECIFICATION REPORT  
DOSE EQUIVALENT IODINE

1. Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded

From 3/26/78 @2200 until 3/28/78 @0900, the plant was at an average steady state power of 99.5%, at which time preparations for refueling shutdown were begun:

3/28/78	@1000	Rx Power 92.4%
3/28/78	@1100	Rx Power 69.0%
3/28/78	@1200	Rx Power 30.0%
3/28/78	@1300	Off-line (Hot Standby for S/G Safety Valve Testing)
3/28/78	@2245*	Off-line (Hot Standby for S/G Safety Valve Testing)

\*First Iodine Sample > 1.0  $\mu$ Ci/gram DEQ

2. Fuel burnup by core region

Fuel burnup by octants:

Region 1 - 11291.08)	Average Burnup in Megawatt Days per Metric Ton Uranium (MWD/MTU)
Region 2 - 12256.19)	
Region 3 - 11525.70)	
Region 4 - 12200.74)	
Region 5 - 11521.31)	
Region 6 - 12117.92)	
Region 7 - 11453.26)	
Region 8 - 12212.59)	

Total Core Average Burnup - 11822.35 MWD/MTU

# LICENSEE EVENT REPORT

CONTROL BLOCK: 1 6

(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME <span style="border: 1px solid black; padding: 2px;">01</span> <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">L</span> <span style="border: 1px solid black; padding: 2px;">S</span> <span style="border: 1px solid black; padding: 2px;">L</span> <span style="border: 1px solid black; padding: 2px;">S</span> <span style="border: 1px solid black; padding: 2px;">1</span>														LICENSE NUMBER <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">-</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">-</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span>														LICENSE TYPE <span style="border: 1px solid black; padding: 2px;">4</span> <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;">1</span>						EVENT TYPE <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">3</span>	
CATEGORY <span style="border: 1px solid black; padding: 2px;">01</span> CONT		REPORT TYPE <span style="border: 1px solid black; padding: 2px;">L</span>		REPORT SOURCE <span style="border: 1px solid black; padding: 2px;">L</span>		DOCKET NUMBER <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">5</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">-</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">3</span> <span style="border: 1px solid black; padding: 2px;">3</span> <span style="border: 1px solid black; padding: 2px;">5</span>						EVENT DATE <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">3</span> <span style="border: 1px solid black; padding: 2px;">2</span> <span style="border: 1px solid black; padding: 2px;">8</span> <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">8</span>						REPORT DATE <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">4</span> <span style="border: 1px solid black; padding: 2px;">2</span> <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">8</span>																	

## EVENT DESCRIPTION

<span style="border: 1px solid black; padding: 2px;">02</span> During shutdown for refueling, Dose Equivalent (DEQ) Iodine exceeded the Technical																																																																															
<span style="border: 1px solid black; padding: 2px;">03</span> Specification 3.4.8.a limit of 1.0 µCi/gram DOSE EQUIVALENT I-131. The DEQ Iodine was																																																																															
<span style="border: 1px solid black; padding: 2px;">04</span> first measured above the limit at 2245 on 3/28/78 while the plant was in hot standby																																																																															
<span style="border: 1px solid black; padding: 2px;">05</span> for required surveillance testing prior to continuation of the cooldown. The attached																																																																															
<span style="border: 1px solid black; padding: 2px;">06</span> sheets contain the information required by (Continued under ADDITIONAL FACTORS)																																																																															

SYSTEM CODE <span style="border: 1px solid black; padding: 2px;">07</span> <span style="border: 1px solid black; padding: 2px;">C</span> <span style="border: 1px solid black; padding: 2px;">G</span>				CAUSE CODE <span style="border: 1px solid black; padding: 2px;">E</span>		COMPONENT CODE <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">U</span> <span style="border: 1px solid black; padding: 2px;">E</span> <span style="border: 1px solid black; padding: 2px;">L</span> <span style="border: 1px solid black; padding: 2px;">X</span> <span style="border: 1px solid black; padding: 2px;">X</span>						PRIME COMPONENT SUPPLIER <span style="border: 1px solid black; padding: 2px;">N</span>		COMPONENT MANUFACTURER <span style="border: 1px solid black; padding: 2px;">C</span> <span style="border: 1px solid black; padding: 2px;">4</span> <span style="border: 1px solid black; padding: 2px;">9</span> <span style="border: 1px solid black; padding: 2px;">0</span>				VIOLATION <span style="border: 1px solid black; padding: 2px;">N</span>	
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## CAUSE DESCRIPTION

<span style="border: 1px solid black; padding: 2px;">08</span> After an extended period of power operation with a nominal level of fuel leakage, the																																																																															
<span style="border: 1px solid black; padding: 2px;">09</span> plant shutdown transient was sufficient to cause Iodine to build up (Iodine spiking																																																																															
<span style="border: 1px solid black; padding: 2px;">10</span> phenomenon) and exceed the purification capacity for a short period of time.																																																																															

FACILITY STATUS <span style="border: 1px solid black; padding: 2px;">11</span> <span style="border: 1px solid black; padding: 2px;">H</span>		% POWER <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span>		OTHER STATUS See Event Desc.										METHOD OF DISCOVERY <span style="border: 1px solid black; padding: 2px;">a</span>		DISCOVERY DESCRIPTION N/A															
FORM OF ACTIVITY RELEASED <span style="border: 1px solid black; padding: 2px;">12</span> <span style="border: 1px solid black; padding: 2px;">Z</span>		CONTENT OF RELEASE <span style="border: 1px solid black; padding: 2px;">Z</span>		AMOUNT OF ACTIVITY N/A										LOCATION OF RELEASE N/A																	

## PERSONNEL EXPOSURES

NUMBER <span style="border: 1px solid black; padding: 2px;">13</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span>		TYPE <span style="border: 1px solid black; padding: 2px;">Z</span>		DESCRIPTION N/A															
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## PERSONNEL INJURIES

NUMBER <span style="border: 1px solid black; padding: 2px;">14</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">0</span>		DESCRIPTION N/A															
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## PROBABLE CONSEQUENCES

<span style="border: 1px solid black; padding: 2px;">15</span> N/A																																																																															
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## LOSS OR DAMAGE TO FACILITY

TYPE <span style="border: 1px solid black; padding: 2px;">16</span> <span style="border: 1px solid black; padding: 2px;">Z</span>		DESCRIPTION N/A															
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## PUBLICITY

<span style="border: 1px solid black; padding: 2px;">17</span> N/A																																																																															
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## ADDITIONAL FACTORS

<span style="border: 1px solid black; padding: 2px;">18</span> Technical Specification 3.4.8.a. This was the first event of this type. (335-78-13).																																																																															
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<span style="border: 1px solid black; padding: 2px;">19</span>																																																																															
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NAME: M. A. Schoppman

PHONE: 305/552-3802

Re: Reportable Occurrence 335-78-13

3. Clean-up flow history starting 48 hours prior to the first sample in which the limit was exceeded

From 3/26/78 @2200 until 3/28/78 @1400, purification flow rate was ~88 gpm (two charging pumps).

At 1400 on 3/28/78 a third charging pump was started, thereby raising purification flow rate to ~132 gpm.

The purification flow rate was maintained at ~132 gpm until the start of Shutdown Cooling (SDC) at 0430 on 3/29/78.

NOTE: Clean-up demineralization consisted of a mixed bed at a 1:1 ratio, cation to anion in series with a straight anion bed. Bed volumes were 36 cubic feet each.

4. History of de-gassing operation starting 48 hours prior to the first sample in which the limit was exceeded

<u>DATE</u>	<u>LOCATION</u>	<u>H2%</u>	<u>H2 (cc/kg)</u>
3/20/78	VCT gas space	.95	--
3/21/78	RCS dissolved gas	--	12.1
3/23/78	Shifted to H2 regulator on VCT cover gas.	--	--
3/24/78	RCS dissolved gas	--	16.9
3/26/78	VCT purged several times with N2.	--	--
3/27/78	VCT gas space	25	--
3/28/78	RCS dissolved gas @0045	--	2.6
3/28/78	RCS dissolved gas @0930	--	1.7
3/28/78	VCT gas space @1800	6	--
3/28/78	Purged VCT with N2 @2000	--	--
3/29/78	VCT gas space	1.0	--

Page four

Re: Reportable Occurrence 335-78-13

5. The time duration when the specific activity of the primary coolant exceeded 1.0  $\mu\text{Ci}/\text{gram}$  DOSE EQUIVALENT I-131.

Iodine 131 Dose Equivalent was greater than 1.0  $\mu\text{Ci}/\text{gram}$  from 3/28/78 @2245 to 3/29/78 @1130. The total time above 1.0  $\mu\text{Ci}/\text{gram}$  was 12.75 hours.

6. Results of Specific Activity Analysis ( $\mu\text{Ci}/\text{gram}$ )

DATE	TIME	I-131	I-132	I-133	I-135	DEQ
3/28/78	1500	6.7 E-1	6.7 E-1	6.7 E-1	3.1 E-1	.89
3/28/78	2245	1.6 E-0	2.6 E-1	1.2 E-0	3.2 E-1	1.91
3/29/78	0100	1.13 E-0	9.1 E-2	8.15 E-1	1.9 E-1	1.37
3/29/78	0420	1.23 E-0	6.5 E-2	7.8 E-1	1.5 E-1	1.46
3/29/78	0730	9.87 E-1	3.03 E-2	5.84 E-1	8.9 E-2	1.15
3/29/78	1130	4.99 E-1	---	2.37 E-1	---	.56

11-11-11