

Q 05/10/78

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

REC: OREILLY J P  
NRC

ORG: SCHMIDT A D  
FL PWR & LIGHT

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

DOCTYPE: LETTER NOTARIZED: NO COPIES RECEIVED  
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

INTERNAL: REG FILE\*\*W/ENCL  
I & E\*\*W/2 ENCL  
SCHROEDER/IPPOLITO\*\*W/ENCL  
NOVAK/CHECK\*\*W/ENCL  
KNIGHT\*\*W/ENCL  
HANAUER\*\*W/ENCL  
EISENHUT\*\*W/ENCL  
SHAO\*\*W/ENCL  
KREGER/J. COLLINS\*\*W/ENCL  
K SEYFRIT/IE\*\*W/ENCL

NRC PDR\*\*W/ENCL  
MIPC\*\*W/3 ENCL  
HOUSTON\*\*W/ENCL  
EEB\*\*W/ENCL  
BUTLER\*\*W/ENCL  
TEDESCO\*\*W/ENCL  
BAER\*\*W/ENCL  
VOLLMER/BUNCH\*\*W/ENCL  
ROSA\*\*W/ENCL

EXTERNAL: LPDR'S  
FT PIERCE, FL\*\*W/ENCL  
TIC\*\*W/ENCL  
NSIC\*\*W/ENCL  
ACRS CAT B\*\*W/16 ENCL

COPIES NOT SUBMITTED PER  
REGULATORY GUIDE 10.1

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

CONTROL NBR: 781300092

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

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Ro 4



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REGULATORY DOCKET FILE COPY



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

34. 12  
1942

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

LICENSE EVENT REPORT

CONTROL BLOCK: 

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(PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME														LICENSE NUMBER												LICENSE TYPE				EVENT TYPE	
01	F	L	S	L	S	1	0	0	-	0	0	0	0	0	-	0	0	4	1	1	1	1	0	3							
7	8	9	14	15	25	26	30	31	32																						
01 CONT		CATEGORY		REPORT TYPE	REPORT SOURCE	DOCKET NUMBER				EVENT DATE				REPORT DATE																	
01	CONT			L	L	0	5	0	-	0	3	3	5	0	3	2	8	7	8	0	4	2	7	7	8						
7	8	57	58	59	60	61	68	69	74	75	80	80	80																		

EVENT DESCRIPTION

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

SYSTEM CODE		CAUSE CODE		COMPONENT CODE				PRIME COMPONENT SUPPLIER		COMPONENT MANUFACTURER				VOLATCN		
07	C	G	E	F	U	E	L	X	X	N	C	4	9	0	N	
7	8	9	10	11	12	17	43	44	47	48						

CAUSE DESCRIPTION

08	After an extended period of power operation with a nominal level of fuel leakage, the																							
09	plant shutdown transient was sufficient to cause Iodine to build up (Iodine spiking																							
10	phenomemon) and exceed the purification capacity for a short period of time.																							

FACILITY STATUS		% POWER		OTHER STATUS				METHOD OF DISCOVERY		DISCOVERY DESCRIPTION					
11	H	0	0	0	See Event Desc.	a	N/A								
7	8	9	10	12	13	44	45	46	80						

FORM OF ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY				LOCATION OF RELEASE					
12	Z	Z	N/A				N/A						
7	8	9	10	11	44	45	80						

PERSONNEL EXPOSURES

NUMBER		TYPE		DESCRIPTION								
13	0	0	0	Z	N/A							
7	8	9	11	12	13	80						

PERSONNEL INJURIES

NUMBER		DESCRIPTION									
14	0	0	0	N/A							
7	8	9	11	12	80						

PROBABLE CONSEQUENCES

15	N/A																								
7	8	9	80																						

LOSS OR DAMAGE TO FACILITY

TYPE		DESCRIPTION								
16	Z	N/A								
7	8	9	10	80						

PUBLICITY

17	N/A																								
7	8	9	80																						

ADDITIONAL FACTORS

18	Technical Specification 3.4.8.a. This was the first event of this type. (335-78-13).																								
7	8	9	80																						

19																									
7	8	9	80																						

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	--

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



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