

4 08/17/78

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)
DISTRIBUTION FOR INCOMING MATERIAL

50-335

REC: OREILLY J P
NRC

ORG: SCHMIDT A D
FL PWR & LIGHT

DOCDATE: 08/07/78
DATE RCVD: 08/15/78

DOCTYPE: LETTER NOTARIZED: NO

COPIES RECEIVED

SUBJECT:

LTR 1 ENCL 1

LICENSEE EVENT REPT 50-335/78-25 ON 07/24/78 CONCERNING AN ERROR IN THE
ANALYSIS FOR THE CASK DROP ACCIDENT WHICH MAKES THE TECH SPEC 3.9.14
NON-CONSERVATIVE.

PLANT NAME: ST LUCIE #1

REVIEWER INITIAL: XBT

DISTRIBUTOR INITIAL: *m*

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

INCIDENT REPORTS
(DISTRIBUTION CODE A002)

FOR ACTION: BR CHIEF ORB#4 BC**W/4 ENCL

INTERNAL:

REG FILE**W/ENCL
I & E**W/2 ENCL
I & C SYSTEMS BR**W/ENCL
NOVAK/CHECK**W/ENCL
AD FOR ENG**W/ENCL
HANAUER**W/ENCL
AD FOR SYS & PROJ**W/ENCL
ENGINEERING BR**W/ENCL
KREGER/J. COLLINS**W/ENCL
K SEYFRIT/IE**W/ENCL

NRC PDR**W/ENCL
MIPC**W/3 ENCL
EMERGENCY PLAN BR**W/ENCL
EEB**W/ENCL
PLANT SYSTEMS BR**W/ENCL
AD FOR PLANT SYSTEMS**W/ENCL
REACTOR SAFETY BR**W/ENCL
VOLLMER/BUNCH**W/ENCL
POWER SYS BR**W/ENCL

EXTERNAL:

LPDR'S
FT PIERCE, FL**W/ENCL
TIC, LIZ CARTER**W/ENCL
NSIC**W/ENCL
ACRS CAT B**W/16 ENCL

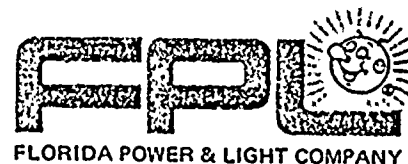
DISTRIBUTION: LTR 45 ENCL 45
SIZE: 3P

CONTROL NBR: 782230377

460

***** THE END *****

REGULATORY DOCKET FILE COPY



August 7, 1978
PRN-LI 78-2198

US NRC
DISTRIBUTION SERVICES
BRANCH

AUG 15 AM 10 03

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 335-78-25
ST. LUCIE UNIT 1
DATE OF OCCURRENCE: JULY 24, 1978

CASK DROP ANALYSIS

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

Very truly yours,

JRB
for A. D. Schmidt
Vice President
Power Resources

MAS/ms

Attachment

cc: Harold F. Reis, Esquire
Director, Office of Inspection and Enforcement (40)
Director, Office of Management Information and
Program Control (3)

782230377

PEOPLE...SERVING PEOPLE

A002
S
11

U. S. NUCLEAR REGULATORY COMMISSION

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CONT

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----|----|---------------|---|---|---|---|---|----|----|------------|---|---|---|---|---|----|-------------|---|---|---|---|---|----|---|
| 0 | 1 | X | 6 | 0 | 5 | 0 | 0 | 0 | 3 | 3 | 5 | 7 | 0 | 7 | 2 | 4 | 7 | 8 | 3 | 0 | 8 | 0 | 7 | 7 | 8 | 9 |
| 7 | 8 | 60 | 61 | DOCKET NUMBER | | | | | | 63 | 62 | EVENT DATE | | | | | | 74 | REPORT DATE | | | | | | 80 | |

Q Because of an error in the analysis for the cask drop accident, T.S.

3.9.14 is non-conservative. It has been determined that a dropped cask

04 | could impact a larger radius, therefore, a longer decay time is needed

55 before a cask can be moved into the spent fuel pool cask compartment.

05 | There are no adverse consequences because of the small amount of fuel in

917 the pool and the high degree of conservatism in the analysis.

012 | _____

0 9 11 12 13 14 15 16

(17) LER/RO REPORT NUMBER 78 025 01 T 0

ACTION TAKEN (Z) (18) (X) (19) EFFECT ON PLANT (Z) (20) SHUTDOWN METHOD (Z) (21) HOURS (0) (0) (0) (0) ATTACHMENT SUBMITTED (Y) (23) NPRO-4 FORM SUB. (N) (24) PRIME COMP. SUPPLIER (Z) (25) COMPONENT MANUFACTURER (Z) (9) (9) (9)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 | The cask drop was not analyzed in accordance with FSAR methodology, there-

by leading to a non-conservative basis for T.S. 3.9.14. A bounding analy-

[12] sis has been performed and will be administratively applied in case use of

113 | the spent fuel cask is required before a proposed Technical Specification

113 : amendment can be submitted and approved by the NRC.

| | | | | | | | | | |
|-----------------|---|---------|----|--------------|---|---------------------|----|-----------------------|----|
| FACILITY STATUS | | % POWER | | OTHER STATUS | | METHOD OF DISCOVERY | | DISCOVERY DESCRIPTION | |
| 1 | 5 | E | 23 | 1 | 0 | 0 | 29 | NA | 30 |
| | | | | | | | | D | 31 |
| | | | | | | | | Notification from A/E | |
| | | | | | | | | 32 | |

| ACTIVITY CONTENT RELEASED OF RELEASE | | AMOUNT OF ACTIVITY (35) | LOCATION OF RELEASE (36) |
|---|--------|-------------------------|--------------------------|
| 116 | Z (33) | NA | NA |
| | Z (34) | | |

| PERSONNEL EXPOSURES | | TYPE | | DESCRIPTION | |
|---------------------|---|------|--------|-------------|----|
| NUMBER | | | | | |
| 0 | 0 | 0 | (37) Z | (23) | NA |

| PERSONNEL INJURIES | | DESCRIPTION | |
|--------------------|-----|-------------|--|
| NUMBER | | | |
| 01 | 010 | NA | |

| 7 | 8 | 9 | 10 | 11 | 12 |
|------------------------------------|---|---|----|----|----|
| LOSS OF OR DAMAGE TO FACILITY (43) | | | | | |
| TYPE DESCRIPTION | | | | | |

ISSUED PUBLICITY DESCRIPTION (45) NRC USE ONLY

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 2 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

NAME OF PREPARER M. A. Schoppman

PHONE: (305) 552-3802

Additional Event Description

During power operation, the Architect/Engineer found an error in the accident analysis for the drop of a spent fuel cask into the spent fuel pool. As a result of the error, Specification 3.9.14 on spent fuel handling is non-conservative. The analysis was originally performed assuming a single pendulum, which gave a drop radius of 133 inches. The FSAR methodology, however, specifies a double pendulum, which gives a drop radius of 248 inches. This means that a dropped cask could impact more fuel elements, therefore, "fresh" spent fuel must be stored farther from the cask area and/or allowed to decay longer before the cask can be moved into the spent fuel pool. The probable consequences of the occurrence are not significant because fuel was stored in the pool for only 2 months before the error was found, and there is considerable conservatism in the dose rate analysis for the cask drop accident. This was the first occurrence involving a calculational error associated with a spent fuel system.