

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO: Mr Ziemann

FROM: Florida Pwr & Light Co
Miami, Fla
R E Uhrig

DATE OF DOCUMENT
8-3-76

DATE RECEIVED 8-9-76

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DESCRIPTION

Ltr requesting deletion of Condition J to the OL.....

PLANT NAME: St Lucie #1

ENCLOSURE

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|------------------|--------------------|------------------------|--|--------|---------|-----|
| SAFETY | | FOR ACTION/INFORMATION | | ENVIRO | 8-10-76 | ehf |
| ASSIGNED AD: | | ASSIGNED AD: | | | | |
| BRANCH CHIEF: | <i>Ziemann (5)</i> | BRANCH CHIEF: | | | | |
| PROJECT MANAGER: | <i>Silver</i> | PROJECT MANAGER: | | | | |
| LIC. ASST.: | <i>Diggs</i> | LIC. ASST.: | | | | |

| INTERNAL DISTRIBUTION | | | |
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| <input checked="" type="checkbox"/> REG FILE | SYSTEMS SAFETY | PLANT SYSTEMS | SITE SAFETY & |
| <input checked="" type="checkbox"/> NRC PDR | HEYNEMAN | TEDESCO | ENVIRO ANALYSIS |
| <input checked="" type="checkbox"/> I & E (2) | SCHROEDER | BENAROYA | DENTON & MULLER |
| <input checked="" type="checkbox"/> OELD | | LAINAS | |
| <input checked="" type="checkbox"/> GOSSICK & STAFF | ENGINEERING | IPPOLITO | ENVIRO TECH. |
| <input checked="" type="checkbox"/> MIPC | MACCARRY | KIRKWOOD | ERNST |
| <input checked="" type="checkbox"/> CASE | KNIGHT | | BALLARD |
| <input checked="" type="checkbox"/> HANAUER | SIHWEIL | OPERATING REACTORS | SPANGLER |
| <input checked="" type="checkbox"/> HARLESS | PAWLICKI | STELLO | |
| <input checked="" type="checkbox"/> PROJECT MANAGEMENT | REACTOR SAFETY | OPERATING TECH. | SITE TECH. |
| <input checked="" type="checkbox"/> BOYD | ROSS | EISENHUT | GAMMILL |
| <input checked="" type="checkbox"/> P. COLLINS | NOVAK | SHAO | STAPP |
| <input checked="" type="checkbox"/> HOUSTON | ROSZTOCZY | BAER | HULMAN |
| <input checked="" type="checkbox"/> PETERSON | CHECK | BUTLER | SITE ANALYSIS |
| <input checked="" type="checkbox"/> MELTZ | | GRIMES | VOLLNER |
| <input checked="" type="checkbox"/> HELTEMES | AT & I | | BUNCH |
| <input checked="" type="checkbox"/> SKOVHOLT | SALTZMAN | | J. COLLINS |
| | RUTBERG | | KREGER |

| EXTERNAL DISTRIBUTION | | | CONTROL NUMBER |
|---|--------------------|--------------------|----------------|
| <input checked="" type="checkbox"/> LPDR: Ft Pierce, Fla | NAT LAB: | BROOKHAVEN NAT LAB | 8033 |
| <input checked="" type="checkbox"/> TIC: | REG. VIE | ULRIKSON (ORNL) | |
| <input checked="" type="checkbox"/> NSIC: | LA PDR | | |
| <input checked="" type="checkbox"/> ASLB: | CONSULTANTS | | |
| <input checked="" type="checkbox"/> ACRS / 6 CYS HOLDING / SEN: | <i>TO LA DIGGS</i> | | |
| | | | |

Mr. Stegmann

Florida Power & Light Co
Miami, Fla
R. E. Ehrig

8-3-76

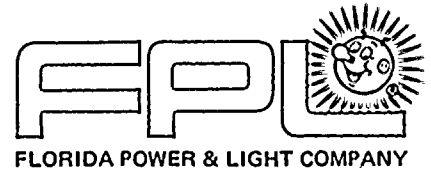
8-9-76

one signed

Let requesting deletion of Condition 1 to
the O.L.....

St Lucie #1

8-10-76 chf



August 3, 1976
L-76-281



Office of Nuclear Reactor Regulation
Attn: Dennis L. Ziemann, Chief
Operating Reactors Branch No. 2
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Dear Mr. Ziemann:

Re: St. Lucie Unit No. 1
Operating License DPR-67
Condition of License J

Florida Power & Light Company (FPL) hereby requests that Section J of Enclosure 1 to the St. Lucie Unit No. 1 Operating License be deleted as a Condition of License. As discussed herein, FPL believes that this Condition has been satisfied and is no longer required.

The subject Condition of License reads as follows:

"J. Control Element Drive Mechanism (CEDM) 44 shall be repaired or replaced at the next extended reactor shutdown expected to last at least two weeks."

This Condition was added by Amendment 4 to DPR-67, because FPL was unable to complete the cold rod drop time testing required by a preceding Condition of License. The testing was required to preclude the reactor being made critical under conditions (i.e., cold) which had not first been tested for rod drop times, since it was conceivable that the plant would be in a cold critical condition at some time during its expected service lifetime. This testing was not completed due to difficulty experienced in withdrawing the rod controlled by CEDM 44 in cold condition. The test procedure required that the two fastest rods be tested several times at various flow conditions. It happened that the second fastest rod was that controlled by CEDM 44. Although the rod could not be withdrawn successively in a cold condition in order to complete the required number of tests, it operated satisfactorily at hot operating conditions. Accordingly, the license was conditioned to add Section J to Enclosure 1 of DPR-67 and to delete the authorization for low temperature criticality contained in Technical Specification 3.10.3.

8033
PEOPLE...SERVING PEOPLE



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To: Dennis L. Ziemann
Re: St. Lucie Unit No. 1
Operating License DPR-67
Condition of License J

August 3, 1976
Page -2-

Since the issuance of Amendment 4 to DPR-67, the performance of the CEDM has improved considerably. Although it initially required heating the RCS to approximately 360°F before the CEDM could be withdrawn consistently, it now reaches this level of operation at approximately 290°F. The rod has been tested on several occasions since the initial cold rod drop time testing. On June 12, 1976, during a maintenance shutdown, and following cooldown to 260°F, the rod was withdrawn three times in succession and dropped once to verify its previous timing. It was then withdrawn and dropped nine times in succession under various flow conditions in accordance with the test procedure. During the heatup back to power on June 18, 1976, the rod was again tested and was withdrawn successfully at 260°F. However, on July 10, 1976, during the shutdown to investigate an observed power distribution anomaly and following cooldown to 260°F, the rod was successfully withdrawn on the first attempt, but could not be fully withdrawn on succeeding attempts. Thus, although considerable improvement has been observed in its withdrawal at low temperature, the CEDM continues to show some inconsistency in its performance.

Despite this inconsistency successive withdrawal of the rod at the test temperature has occurred sufficiently to allow completion of the cold rod drop time testing. These tests establish the rod controlled by CEDM 44 as the fastest rod during successive drops at low temperature under various flow conditions. These data have been reviewed by the Facility Review Group and are available onsite for review by Region II I&E personnel.

Having satisfactorily completed the required testing, the repair of CEDM 44 loses any significance it may have had as a Condition of License. Difficulty in withdrawal at low temperature now has only operational significance since a fully inserted rod is inherently safe. Thus, the repair of CEDM 44 becomes more appropriately a routine maintenance item rather than a Condition of License. Furthermore, the performance of the rod at low temperature does not even have operational significance since FPL has no intention of reinstating Technical Specification 3.10.3 which would allow low temperature criticality.

Although FPL believes that Section J is no longer a necessary Condition of License, FPL does plan to undertake inspection of the mechanism during the present outage. Upon removal of the CEDM upper guide structure, the extension shaft of CEDM 44 will be visually inspected. Following removal of the reactor head, the mechanism will be inspected internally using a



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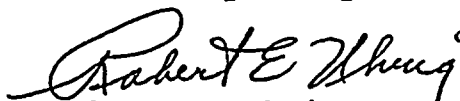
August 3, 1976
Page -3-

boroscope to determine whether any material obstructions or configurational anomalies exist. The CEDM coils will then be energized and the grippers will be exercised. The boroscope will be used to observe their manner of operation. Flushing will be undertaken as required. Upon completion of this inspection and during the subsequent heatup, CEDM 44 will again be tested at 260°F. The inspection efforts for CEDM 44 are expected to require one week. Since replacement may not be necessary, and since replacement would require two weeks to complete which would, thereby, interfere with the present reactor inspection and testing program (the reactor head will be off for only one week), replacement of CEDM 44 is not planned during this outage. Should the efforts during this outage prove unsuccessful, the mechanism will be tested during the next scheduled refueling outage and replaced if necessary.

All indications are that CEDM 44, which is located in the northeast quadrant of the core, is not a factor in the power distribution anomaly which has been observed in the northwest quadrant of the core.

On the basis of the foregoing, FPL believes that it has satisfied the requirements leading to the incorporation of Section J into the St. Lucie Unit No. 1 Operating License and that future repair or replacement of CEDM 44 is a routine maintenance matter. This repair is no different from that of any other CEDM which fails to operate properly during the service life of the reactor. Repair or replacement of CEDM 44 will be undertaken in a manner which will not impact the present schedule for inspection and testing to resolve the observed power distribution anomaly. Accordingly, FPL requests that Section J of Enclosure 1 to the St. Lucie Unit No. 1 Operating License be deleted.

Yours very truly,



Robert E. Uhrig
Vice President

REU/LLL/hlc

cc: Norman C. Moseley, Region II
Jack R. Newman, Esq.

