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HOVEY,R.J. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Forwards response to NRC Bulletin 96-001, "Control Rod Insertion Problems." Rev 0 JPN-PTN-SEFJ-96-015 rept for Mar 1996 encl.

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TITLE: NRC Bulletin 96-01 - Control Rod Insertion Problems

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FPL

P.O. Box 029100, Miami, FL, 33102-9100

APR 05 1996

L-96-082
10 CFR §50.54(f)

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

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
NRC Bulletin 96-01
CONTROL ROD INSERTION PROBLEMS

NRC Bulletin 96-01, "CONTROL ROD INSERTION PROBLEMS", issued March 8, 1996, requested licensees take specific actions and provide information to the NRC. In accordance with the bulletin, Florida Power and Light Company provides the attached response relative to the Turkey Point Plant.

Should there be any questions, please contact us.

Very truly yours,

R. J. Hovey
Vice President
Turkey Point Plant

JAH

Attachment

cc: S. D. Ebneter, Regional Administrator, Region II, USNRC
T. P. Johnson, Senior Resident Inspector, USNRC,
Turkey Point Plant

110014

IE57

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

R. J. Hovey being first duly sworn, deposes and says:

That he is Vice President, Turkey Point Plant, of Florida Power and Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.

R. J. Hovey

Subscribed and sworn to before me this 5th day of April, 1996.

James E. Knorr
Name of Notary Public (Type or Print)

JAMES E. KNORR
MY COMMISSION # CC 434300
EXPIRES: January 22, 1999
Bonded Thru Notary Public Underwriters

NOTARY PUBLIC, in and for the County of Dade, State of Florida

My Commission expires 1-22-99
Commission No. CC 434300

R. J. Hovey is personally known to me.

FLORIDA POWER AND LIGHT

TURKEY POINT UNITS 3 AND 4

NRC BULLETIN 96-01

CONTROL ROD INSERTION PROBLEMS

Florida Power and Light provides the following information relative to Turkey Point Units 3 and 4 in response to NRC Bulletin (NRCB) 96-01.

Requested Action #1

Promptly inform operators of recent events (reactor trips and testing) in which control rods did not fully insert and subsequently provide necessary training, including simulator drills, utilizing the required procedures for responding to an event in which the control rods do not fully insert upon reactor trip (e.g., boration of a pre-specified amount).

FPL Response

A Training Brief has been distributed to all licensed operators. The Training Brief describes the events detailed in NRCB 96-01. The Training Brief also reviews the actions required in the event control rods fail to fully insert following a trip.

All on shift active licensed operators have received special classroom and simulator training on NRCB 96-01. The simulator scenarios consisted of a modified existing scenario and a custom designed scenario to specifically challenge the operator's ability to recognize control rods which do not fully insert.

Off shift and inactive license holders will be trained as part of Licensed Operator Continuing Training.

Requested Action #2

Promptly determine the continued operability of control rods based on current information. As new information becomes available from plant rod drop tests and trips, licensees should consider this new information together with data already available from Wolf Creek, South Texas, North Anna, and other industry experience, and make a prompt determination of control rod operability.

FPL Response

On March 13, 1996, Turkey Point Site Management approved an operability evaluation performed by FPL's Nuclear Fuel Group.

The operability evaluation reviewed the available industry information, previous Turkey Point operating experience, potential impacts on existing accident safety analysis, and the results of a successful end of cycle manual reactor trip performed per the Westinghouse Owners Group recommendation.

Nuclear Fuel also evaluated a hypothetical scenario where all RCCAs in fuel assemblies with exposure greater than 40,000 MWD/MTU failed to insert past the entrance of the thimble tube dashpot region. The results show a very minor, approximately 100 pcm impact on shutdown margin.

Based on this information FPL has been concluded that Turkey Point Units 3 and 4 RCCAs remain operable and continued operation is acceptable.

The complete Operability Evaluation is included, see page 6.

Requested Action #3

Measure and evaluate at each outage of sufficient duration during calendar year 1996 (end of cycle, maintenance, etc.), the control rod drop times and rod recoil data for all control rods. If appropriate plant conditions exist where the vessel head is removed, measure and evaluate drag forces for all rodded assemblies.

a. Rods failing to meet the rod drop time in the technical specifications shall be deemed inoperable.

b. Rods failing to bottom or exhibiting high drag forces shall require prompt corrective action in accordance with Appendix B to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR Part 50).

FPL Response

On March 4, 1996, Turkey Point Unit 4 was scheduled to commence a refueling outage. An End-of-Cycle manual reactor trip was performed in accordance with Westinghouse Owners Group recommendations to assist in the root cause investigation. Unit 4 was at 2% rated thermal power with control bank D rods at 74 steps and control bank C rods at 202 steps. A manual reactor trip was performed, all rod bottom lights energized and all control rods indicated they were fully inserted.

On March 8, 1996, the effective date of NRCB 96-01, Turkey Point Unit 4 was in mode 5. The CRDM cables were disconnected, CRDM fan ductwork was removed and reactor vessel level was drained down. Plant conditions could not support rod drop testing.

A drag test of all 45 RCCAs was performed after the reactor vessel head was removed. The test involved raising the RCCA and drive shaft approximately 10 feet and observing a special load monitoring device provided by Westinghouse. Turkey Point Unit 4 will obtain rod drop times and rod recoil data for the Cycle 16 startup. An outage summary report detailing the results of all control rod testing will be generated pursuant to Required Response (3), 30 days following the refueling outage for Unit 4.

Turkey Point has no further scheduled outages for calendar year 1996. Each short notice outage will be evaluated on a case by case basis to determine if "sufficient duration" exists to obtain control rod drop signatures.

Requested Action #4

For each reactor trip during calendar year 1996, verify that all control rods have promptly fully inserted (bottomed) and obtain other available information to assess the operability and any performance trend of the rods. In the event that all rods do not fully insert promptly, conduct tests to measure and evaluate rod drop times and rod recoil.

FPL Response

Unit 3 tripped due to High Steam Generator Water Level on February 09, 1996. All control rods promptly inserted. No other information was specifically obtained because this event pre-dated NRCB 96-01.

A procedure change has been submitted to the Post Trip Review administrative procedure. The change adds a specific requirement to confirm all rod bottom lights energize. This information is supplied via the plant monitoring computer.

Required Response

Pursuant to Section 182e, the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), all licensees of Westinghouse-designed plants must submit the following information:

(1) **Within 30 days of the date of this bulletin, a report certifying that control rods are determined to be operable; actions taken for Requested Actions (1) and (2) above; and the plans for implementing Requested Actions (3) and (4).**

FPL Response

A copy of the Nuclear Fuel Group Operability Evaluation is included, see page 6. The Turkey Point response to each Requested Action is detailed under each Requested Action heading.

(2) **Within 30 days of the date of this bulletin, a core map of rodded fuel assemblies indicating fuel type (materials, grids, spacers, guide tube inner diameter) and current and projected end of cycle burnup of each rodded assembly for the current cycle; when available, provide the same information for the next cycle.**

FPL Response

Core maps for Turkey Point Unit 3 Cycle 15, Unit 4 Cycle 15, Unit 4 Cycle 16 and the information concerning fuel assembly types and dimensions are included, see pages 20 to 23.

The current and projected end of cycle burnups for each rodded assembly in Turkey Point Unit 3 Cycle 15, Unit 4 Cycle 15 and Unit 4 Cycle 16 are provided in Table 4.1 of the included Operability Evaluation.

(3) Within 30 days after completing Requested Action (3) for each outage, a report that summarizes the data and that documents the results obtained; this is also applicable to Requested Action (4) when any abnormal rod behavior is observed.

FPL Response

An outage summary report detailing the results of all control rod testing will be submitted 30 days following the refueling outage for Unit 4. FPL considers this 30 day window to commence following completion of the Hot Rod Tests for Unit 4.