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 FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

AUTH.NAME AUTHOR AFFILIATION
 BOHLKE,W.H. Florida Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to Licenses DPR-31 & DPR-41, modifying
 TS Section 3/4.3.2, "ESF Actuation Sys Instrumentation," to
 eliminate ref to specific type of relay used in degraded
 voltage protection scheme.

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FPL

P.O. Box 14000, Juno Beach, FL 33408-0420

L-92-097
10 CFR 50.90

APR 21 1992

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
Proposed License Amendments: 480V Load Centers Degraded
Voltage Protection Scheme

In accordance with 10 CFR 50.90, Florida Power and Light Company (FPL) requests that Appendix A of Facility Operating Licenses DPR-31 and DPR-41 be amended to modify Turkey Point Units 3 and 4 Technical Specification Section 3/4.3.2, Engineered Safety Features Actuation System Instrumentation. The purpose of these amendments is to eliminate the reference to a specific type of relay used in the degraded voltage protection scheme.

FPL has determined that the proposed license amendments do not involve a significant hazard pursuant to 10 CFR 50.92. A description of the amendment request is provided in Attachment 1. The no significant hazards determination in support of the proposed Technical Specification change is provided in Attachment 2. Attachment 3 provides the proposed Technical Specification change.

In accordance with 10 CFR 50.91 (b) (1), a copy of these proposed license amendments are being forwarded to the State Designee for the State of Florida.

The proposed amendments have been reviewed by the Turkey Point Plant Nuclear Safety Committee and FPL Company Nuclear Review Board.

Should there be any questions on this request, please contact us.

Very truly yours,

W. H. Bohlke
Vice President
Nuclear Engineering and Licensing

WHB/RJT/rt

Attachments

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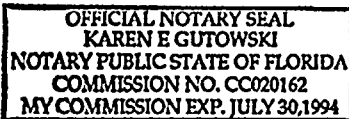
cc: Stewart D. Ebnetter, Regional Administrator, Region II,
USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant
Mr. Jacob Daniel Nash, Florida Department of Health and
Rehabilitative Services

STATE OF FLORIDA)
) ss.
COUNTY OF PALM BEACH)

W. H. Bohlke being first duly sworn, deposes and says:

That he is Vice President, Nuclear Engineering and Licensing, 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.




W. H. Bohlke

Subscribed and sworn to before me this

21st day of April, 1992.



KAREN E. GUTOWSKI
Name of Notary Public (Type or Print)

NOTARY PUBLIC, in and for the County of
Palm Beach, State of Florida

My Commission expires July 30, 1994
Commission No. CC020162

W. H. Bohlke is personally known to me.

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ATTACHMENT 1

DESCRIPTION OF AMENDMENTS REQUEST

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Introduction

The proposed amendments to the Turkey Point Units 3 and 4 Technical Specifications permits the addition of one definite time delay relay per channel in the existing non-Safety Injection degraded voltage protection scheme for safety related load centers. The change to the Technical Specifications will eliminate the reference to a specific type of relay used in the degraded voltage protection scheme. For consistency, this text change is also proposed for the 480 Volt load center Safety Injection degraded voltage protection scheme. This change is consistent with NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors." A description of this change is provided as follows.

- o To support the addition of definite time delay relays, the description of the relays provided in Functional Unit Item 7c of Tables 3.3-2, 3.3-3 and 4.3-2 will be revised to delete the words "2 inverse time relays per load center" from Table 3.3-2 and "Inverse Time Relays" from Tables 3.3-3 and 4.3-2.
- o To provide consistency, the description of the relays provided in Functional Unit Item 7b of Tables 3.3-2, 3.3-3 and 4.3-2 will be revised to delete the words "2 instantaneous relays per load center" from Table 3.3-2 and "Instantaneous Relays" from Tables 3.3-3 and 4.3-2.

Discussion

Presently, the 480 Volt load center degraded voltage protection scheme detects degraded voltage on any of the load center buses and, in response to a significant degraded voltage condition, initiates a signal to the sequencers to transfer power from off-site power to on-site power sources. For the non-Safety Injection protection scheme, the existing detection circuit includes two inverse time relays for each load center. For any one of the four load centers per unit, both inverse time relays must change state (two-out-of-two) to initiate the sequencer trip logic.

The relay setpoints are established to provide detection of a degraded voltage condition. However, the setpoint is near the high end of the existing inverse time delay relay performance

range such that the relay settings may drift. The performance range of the definite time delay relays is better suited for the required setpoint range. Therefore, the degraded voltage protection scheme will be modified by installing two definite time delay relays (one per logic channel) in addition to the existing set of two (one per logic channel) inverse time relays in the degraded voltage protection scheme for each load center.

For the proposed changes, the four protective relays for each load center will be interconnected in a two-out-of-two logic channel trip configuration such that the logic trips if degraded voltage is detected by either Channel 1 inverse time or definite time delay relay concurrently with either Channel 2 inverse time or definite time delay relay. The definite time delay relay will protect the 480 Volt circuit for degraded voltage over a long time duration while the inverse time relay protects the system during a large voltage transient for a short time duration.

The proposed change to the protection of safety related equipment was analyzed by examining the load currents which could occur due to varying levels of degraded voltage. The analysis compared the relay actuation time to the corresponding values on motor safe heating curves and individual overcurrent protection curves and concluded that the modified scheme protects the safety related motors. In the proposed change, degraded voltage protection is ensured by the definite time delay relay with the upper limit setpoint value specified in Technical Specifications.

This change to the 480 Volt degraded voltage scheme will augment the existing degraded voltage protection scheme by providing an additional definite time delay relay per channel to improve repeatability. With the implementation of this modification, the probability of degraded voltage detection relay setting drift will be greatly reduced. No new failure modes are created that could impact nuclear safety, and the ability to perform safety related functions is not compromised.

The proposed change does not affect the initiation or mitigation of any accident evaluated in the safety analysis report. Based on the above, there is no significant increase in the probability or consequences of an accident previously evaluated.

ATTACHMENT 2

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. FPL has determined that:

1. operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change does not revise any equipment requirements or any plant operating parameters required to provide undervoltage protection. Indeed, the definite time delay relays are better suited to maintaining the required settings, thereby enhancing the ability to detect a degraded voltage condition at the required setpoint. As such, the 480 Volt load center (non-Safety Injection) degraded voltage protection scheme will continue to assure the capability to detect degraded voltage on any of the load center buses and, in response to a significant degraded voltage condition, to initiate a signal to the sequencers to transfer power from off-site power to on-site power sources. Therefore, the proposed change does not increase the probability or consequences of accidents previously analyzed.

2. operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change does not change the operation, function or modes of plant or equipment operation. The ability of the 480 Volt load center (non-Safety Injection) degraded voltage protection scheme to detect degraded voltage on any of the load center buses and, in response to a significant degraded voltage condition, initiate a signal to the sequencers to transfer power from off-site power to on-site power sources is

maintained. No new hazards are created or postulated which may cause an accident different from any accident previously analyzed. Also, the definite time delay relays are proven for reliable service in the industry and, as such, do not create any new failure modes in themselves or for the load center protected circuit. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The ability of the 480 Volt load center (non-Safety Injection) degraded voltage protection scheme to perform its detection and actuation functions is confirmed by existing surveillance requirements. Installation of the definite time delay relays will enhance the ability to detect a degraded voltage condition at the required setpoints and to actuate the sequencer trip logic in sufficient time to assure motor protection. Also, the associated bases are not affected and the existing degraded voltage setpoint values are not changed. Therefore, the proposed amendment does not involve a reduction in the margin of safety.

Based on the above, FPL has determined that the proposed license amendments request does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety; and therefore does not involve a significant hazards consideration as defined in 10 CFR 50.92.