CATEGORY 1

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HOVEY, R. J. Florida Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Provides info per requirements of Section 182a of Atomic Energy Act of 1954, as amended, & 10CFR50.54(f) in response to GL 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves."

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CATEGORY 1 DOCUMENT

FPL

MAR 11 1997

L-97-055
10 CFR 50.54(f)

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

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to Generic Letter 96-05,
Periodic Verification of Design-Basis
Capability of Safety-Related Motor-Operated Valves

By letter dated September 18, 1996, the NRC issued Generic Letter (GL) 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," to (1) discuss the periodic verification of the capability of safety-related motor-operated valves (MOVs) to perform their safety functions consistent with the current licensing bases of nuclear power plants, (2) to request that licensees implement the requested actions described in the GL, and (3) require that licensees provide to the NRC a written response to the GL relating to implementation of the requested actions.

By letter L-96-286, Florida Power and Light Co. (FPL) documented its intentions to implement the requested actions by March 17, 1997, and to provide a written summary description of the MOV periodic verification program established in accordance with the requested actions of the GL by March 17, 1997. FPL has completed the review of the current MOV Program for Turkey Point Units 3 and 4 and determined that it can effectively verify on a periodic basis that the safety-related MOVs continue to be capable of performing their safety functions within the current licensing bases. In addition, the existing MOV Program properly identifies and accounts for changes in performance resulting from degradation. The attachment to this letter provides the summary description of the Turkey Point Units 3 and 4 MOV Periodic Verification Program.

The information is provided pursuant to the requirements of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f).

Should there be any questions concerning this response, please contact us.

1/1
A073

Very truly yours,

R. J. Hovey
Vice President
Turkey Point Plant

OIH

Attachment

cc: Luis A. Reyes, Regional Administrator, NRC
T. P. Johnson, Senior Resident Inspector, Turkey Point Plant

L-97-055
Response to Generic Letter 96-05,
Periodic Verification of Design-Basis
Capability of Safety-Related Motor-Operated Valves

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

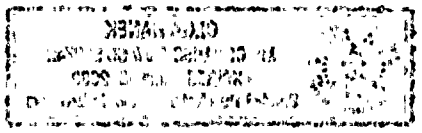
Subscribed and sworn to before me this
11th day of March, 1997.

Olga Hanek

Olga Hanek
Name of Notary Public (Type or Print)

OLGA HANEK
MY COMMISSION # CC 562742
EXPIRES: June 18, 2000
Bonded Thru Notary Public Underwriters

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



TURKEY POINT UNITS 3 & 4
NRC GENERIC LETTER 96-05 - PROGRAM SUMMARY DESCRIPTION

In accordance with NRC Generic Letter (GL) 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," the following summary description of the Turkey Point program for periodic verification of Motor-Operated Valve (MOV) design basis capability is provided.

Per the requested actions of GL 96-05, Turkey Point has reviewed the effectiveness of its MOV program to verify on a periodic basis that safety-related MOVs continue to be capable of performing their safety functions within the current licensing basis. The MOV program was established as part of Turkey Point's response to GL 89-10. The review has validated that degradations can be properly identified and accounted for within the periodic verification program. As a result of this review, Turkey Point has enhanced the program, incorporating the guidance and information provided in GL 96-05. The resulting enhanced program blends a strong preventive maintenance program and a mixture of static and dynamic (in-situ) diagnostic testing, to ensure that potential age-related degradations are addressed or identified. Considerations of risk-significance, available margin, and environmental effects were included in the evaluation of required periodic verification activities. Industry experience and initiatives such as the Joint Owners Group (JOG) effort on Periodic Verification have been monitored to ensure that the Turkey Point program incorporates industry experience and lessons learned. The entire scope of valves (111) included in the GL 89-10 Program are included in the periodic verification scope for GL 96-05.

The focus of the periodic verification activities is on the risk significant and low margin valves. The MOVs within the scope of GL 89-10 were separated into high, medium, and low risk significance categories. The prioritization of the MOVs was completed using both Probabilistic Risk Assessment and deterministic insights. Design margin was used to evaluate the requirements for periodic verification testing. Design margin is defined as margin available in the design setpoint for the MOV. For example, for a closing valve stroke, design margin is the difference between the thrust required during the dynamic test and the design required thrust. The Electric Power Research Institute(EPRI) Performance Prediction Methodology (PPM) was utilized for the high and medium ranked valves which were not dynamically tested. For these valves, use of the EPRI methodology is considered to provide high design margin as it yields "aged" thrust requirements.

Potential degradations which may result in an increase in thrust or torque requirements or a decrease in motor actuator capability were identified. Turkey Point's preventive maintenance schedule and a combination of static and dynamic testing will be used to assure the

ability of the MOVs to fulfill their design basis function based on these potential degradations. Each high and medium risk significant MOV was reviewed individually to assure adequate design margin exists to account for potential degradation mechanisms, such as long-term valve factor degradation, lubrication degradation, and component wear. For valves analyzed per the EPRI PPM, degradation or aging was considered in the analysis. Therefore, these MOVs are treated as high margin. Low margin is defined as less than 20% design margin. Due to their design, globe valves are not considered to be susceptible to significant valve factor, internal friction, or aging degradations. Low risk significant MOVs were addressed as a group. No low margin high or medium risk significant MOVs were identified as candidates for periodic dynamic testing. Overall, it is desirable to perform dynamic testing on a periodic basis to collect data applicable to the overall MOV Program. A target population of approximately 10% of the valves practical and useful to test will be dynamically tested over a 3 cycle period for each unit. The tested valves will be wedge and double disc gate valves. The valves selected will be high and medium risk significant low margin valves to maximize the safety benefit of the testing. Low risk significant valves may be included in the population provided there is a clear benefit to safety or a contribution to the overall MOV Program.

The current periodic verification activities include:

1. Stem lubrication every cycle for all MOVs.
2. Static testing every 3 cycles for MOVs in non-severe environments. (Note 1)
3. Static testing every cycle for MOVs in severe environments. (Note 1)
4. Actuator inspection and refurbishment every 3 cycles for MOVs in non-severe environments.
5. Actuator inspection and refurbishment every cycle for MOVs in severe environments.
6. Approximately 10% of the valves that are practical and useful to test will be dynamically tested over a 3 cycle period for each unit.
7. Trending of trouble and breakdown, stem to stem nut coefficient of friction, actuator inspection results, and grease condition.

Note 1: The pressurizer power operated relief valve block valves and main steam isolation bypass valves are identified as severe environment valves within the MOV Program. These environments are identified as severe due to the potential for high temperature due to ambient conditions and adjacent heat sources.

The current periodic verification program is considered to be conservative. The scope includes all of the valves within the GL 89-10 program. The program addresses all the elements of GL 96-05 and provides for a blend of maintenance, static and dynamic testing to assure overall MOV capability. The program is focused, utilizing risk

significance and margin to determine the appropriate activities and frequency.

Provisions have been included to make the MOV program a living program. The maintenance and testing periods will change, both increasing and decreasing, based on continued operating experience, trending, and testing results. In addition, changes to testing methods or industry experience may dictate future changes to the periodic verification program. Turkey Point will continue to monitor and support industry initiatives such as the JOG Periodic Verification Program to incorporate industry experience and lessons learned into the program. Turkey Point's commitment is to maintain a periodic verification program to ensure safety-related MOVs continue to be capable of performing their safety functions within the current licensing basis.