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PLUNKETT,T.F. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to licenses DPR-31 & DPR-41,mofifying TS Tables 3.3-1 & 3.3-2 Action statements for RPS/NIS/ESFAS instrumentation,Tables 4.3-1 & 4.3-2 SR for RPS/NIS/ESFAS instrumentation & Bases 3/4.3.1 & 3/4.3.2 for RPS/NIS/ESFAS.

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FPL

JUL 26 1995

L-95-181
10 CFR §50.36
10 CFR §50.90

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
Surveillance Interval Extensions for Reactor Protection System (RPS), Engineered Safety Features Actuation System (ESFAS), and Nuclear Instrumentation System (NIS)

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 the Turkey Point Units 3 and 4 Technical Specifications (TS) Tables 3.3-1 and 3.3-2 ACTION statements for RPS/NIS/ESFAS Instrumentation, Tables 4.3-1 and 4.3-2 SURVEILLANCE REQUIREMENTS for RPS/NIS/ESFAS Instrumentation, and BASES 3/4.3.1 and 3/4.3.2 for RPS/NIS/ESFAS Instrumentation.

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

FPL has determined that these proposed amendments are consistent with the Executive Order to reduce regulatory burden and as such are proposed as a Cost Beneficial Licensing Action (CBLA) with estimated savings over the remaining licensed operating terms of both units, in excess of one-hundred thousand dollars.

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

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

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Plant

CDV

Attachments

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A001
1/1

cc: S. D. Ebneter, Regional Administrator, Region II, USNRC
T. P. Johnson, Senior Resident Inspector, USNRC, Turkey Point
W. A. Passetti, Florida Department of Health and Rehabilitative Services

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

T. F. Plunkett 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.

T. F. Plunkett

Subscribed and sworn to before me this

26 day of July, 1995.

Cheryl A. Kelly

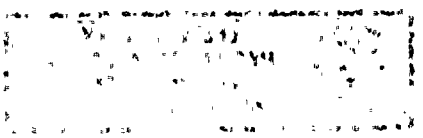
Name of Notary Public (Type or Print)

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

CHERYL A. KELLY
MY COMMISSION # CC 223781
EXPIRES: September 27, 1996
Bonded Thru Notary Public Underwriters

My Commission expires _____
Commission No. _____

T. F. Plunkett is personally known to me.



ATTACHMENT 1

DESCRIPTION OF AMENDMENTS REQUEST

DESCRIPTION AND PURPOSE

In response to Nuclear Regulatory Commission (NRC) Generic Letter 83-28, "Requested Actions Based on Generic Implications of Salem ATWS Events", addressing the impact of current testing and maintenance requirements on plant operation, including those related to instrumentation systems like the Reactor Protection System (RPS), including the Nuclear Instrumentation System (NIS), and Engineered Safety Features Actuation System (ESFAS), the Westinghouse Owner's Group initiated a program to develop a methodology for increasing the intervals between Technical Specification surveillances for these systems. Operating plants have experienced many inadvertent reactor trips during the performance of surveillances, causing unnecessary transients and challenges to safety systems. Significant time and effort on the part of the operating staff must be devoted to performing, reviewing, documenting and tracking the various surveillance activities, which may be unwarranted based on the high reliability of the equipment involved. Significant benefits for operating plants are achievable through revisions to the Technical Specifications test and maintenance requirements.

Westinghouse topical report, WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System", documents the justification for revisions to the RPS Technical Specifications, and WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System", for revisions to the ESFAS Technical Specifications. The justification consists of a deterministic and numerical evaluation of the effects of particular Technical Specification changes with consideration given to such things as safety, equipment requirements, human factors, and operational impact. The objective is to reach a balance in which safety and operability are ensured. The results, which were applied to the RPS and ESFAS instrumentation systems, were submitted to the NRC in the form of two Westinghouse topical reports. The NRC subsequently approved the use of this methodology and provided the Westinghouse Owner's Group with Safety Evaluation Reports (SERs) for the above changes.

The scope and focus of the proposed changes in Technical Specifications is on the analog protection system instrumentation associated with the Turkey Point Units 3 and 4 RPS and ESFAS systems.

The proposed changes were selected for consistency with the guidance provided in the Westinghouse topical reports and with the generic acceptance criteria established in the NRC's SERs for WCAP-10271. In order to demonstrate consistency with the Westinghouse topical reports and NRC criteria, these amendments confirm the applicability of the

generic analyses to the proposed plant-specific changes and confirm that increased instrument drift due to the proposed extended surveillance intervals are properly accounted for in the setpoint calculation methodology which is applicable to Turkey Point Units 3 and 4.

BACKGROUND

The primary function of the RPS is to prevent fuel cladding damage and thus maintain the first fission barrier intact, in compliance with NRC regulatory criteria. To prevent exceeding fuel design and regulatory parameters, the RPS functions to trip the reactor, resulting in the rapid insertion of control rods. Another portion of the RPS consists of interlock and permissive circuits. These circuits further serve to enhance plant reliability by minimizing inadvertent reactor trips, and allowing certain trips to be blocked. The ESFAS, in conjunction with the RPS, is designed to initiate the operation of engineered safety features equipment to mitigate the consequences of design basis transients and accidents.

For both the RPS and ESFAS, signals from process instrumentation are sent to the analog protection system instrumentation, where up to four channels of the redundant signals are processed. Signal processing consists of generating a trip signal by conditioning the analog input signal and comparing it to either a fixed or variable setpoint. If the input signal exceeds the system setpoint, the output of the circuit is changed. This means that the circuit output is "bistable" in its design, so that its output is either energized or de-energized. At this point, two signal trains (A and B) are produced. The output from the analog signal processing circuitry then actuates logic cabinet circuitry, which ultimately actuates relays in combinational logic matrices, resulting in reactor trips or engineered safety features equipment actuations.

Design provisions are made to allow testing of the RPS and ESFAS, including the analog protection systems. The analog protection rack functions are designed so that they can be tested or calibrated at power without tripping the reactor or loss of protection. This is accomplished with coincident logic paths (1 out of 2 channels, 2 out of 3 channels, or 2 out of 4 channels) for reliability, and a trip mode circuit to ensure the basic logic function is conservatively preserved during the testing and calibration process. Technical Specifications 3/4.3.1 and 3/4.3.2 address the LIMITING CONDITIONS FOR OPERATION (i.e., the minimum number of operable channels) and SURVEILLANCE REQUIREMENTS for RPS and ESFAS instrumentation, respectively. Current Technical Specifications require a monthly surveillance of the actuation devices (i.e., the analog "bistable" comparator modules) associated with the analog protection systems.

Digital equipment (Eagle 21) is used for the Overpower Delta-T, Over-temperature Delta-T, and pressurizer water level protection functions. The digital protection functions are similarly designed so that they can be tested or calibrated at power without tripping the reactor or

loss of protection. This is accomplished with a 2 out of 3 coincident logic path. Current Technical Specifications require quarterly surveillances for the digital protection systems (Eagle 21).

The Nuclear Instrumentation System (NIS) is used for: (1) High Flux Power Range, High Setpoint; (2) High Flux Power Range, Low Setpoint; (3) High Flux Intermediate Range; and (4) High Flux Source Range protection functions. The NIS is similarly designed so that it can be tested or calibrated at power without tripping the reactor or loss of protection. This is accomplished with either a 1 out of 2 or a 2 out of 4 coincidence logic path. The current TS requires monthly surveillances.

DISCUSSION AND DESCRIPTION OF PROPOSED CHANGES

The following changes in plant Technical Specifications (TS) shown in Attachment 3 are proposed:

1. **PROPOSED TECHNICAL SPECIFICATION SURVEILLANCE AND OUT OF SERVICE TIME REVISIONS FOR RPS**

   Four specific changes were addressed in the NRC SERs for WCAP-10271. These changes are limited to the specific RPS channels evaluated in WCAP-10271 and are subject to the specific conditions identified by the NRC. The NRC conditions that must be addressed by each utility are discussed in Section 3 below. No changes to the testing of the actuation logic and reactor trip breakers are requested at this time. The four specific changes are as follows:

   (1) The surveillance or test frequency for analog channels may be changed from monthly to quarterly.

   (2) The time allowed for a channel to be inoperable or out of service in an untripped condition may be changed from one hour to six hours.

   (3) The time, during which a channel in a functional group may be bypassed to perform testing, may be increased from two to four hours. This bypass time applies to either an inoperable channel when testing is done in the tripped mode or to a channel in test when testing is done in the bypass mode.

   (4) Routine channel testing may be performed in the bypassed condition instead of the tripped condition.

   Note: Only NIS and Eagle 21 have the capability to be tested in the bypass mode. Hagan instruments do not have a bypass capability.

   The following proposed changes to the current TS implement the approved revisions described above, and in the WCAP-10271 SERs:

TS Table 3.3-1 - Revise ACTION Statements 2a, 6, 12 and 13 to increase the time allowed for a channel to be inoperable or out of service in an untripped condition from one hour to six hours. Revise ACTION Statement 2b to increase the time a NIS channel in a functional group may be bypassed to perform testing from two to four hours.

TS Table 4.3-1 - Revise the surveillance interval for Items 2.a, 4, 7, 8, 10, 11, 12 and Note (9) from monthly to quarterly. Revise the surveillance interval for Item 2.b from monthly to startup, and Item 3 from monthly/startup to startup only. Revise the surveillance interval for Items 17.a, 17.b, 17.c and 17.d from monthly to refueling. Revise Note (1) from "7 days" to "31 days" and delete Note (8).

TS BASES 3/4.3.1 and 3/4.3.2 - Revise the BASES section for Technical Specification Section 3/4.3.1 and 3/4.3.2 to reference the Westinghouse WCAPs 10271 and 10271, Supplement 2, and associated NRC SERs.

2. PROPOSED TECHNICAL SPECIFICATION SURVEILLANCE AND OUT OF SERVICE TIME REVISIONS FOR ESFAS

Four specific changes were addressed in the NRC SERs for WCAP-10271. These changes are limited to the specific ESFAS channels evaluated in WCAP-10271, Supplement 2, and are subject to the specific conditions identified by the NRC. The NRC conditions that must be addressed by each utility are discussed in Section 3 below. No changes to the testing of the coincident logic, or the master or slave relays are requested at this time. The four specific changes are:

(1) The surveillance or test frequency for analog channels may be changed from monthly to quarterly.

(2) The allowable outage time for testing of the analog channels may be increased from two hours to four hours.

(3) The allowable outage time for testing of the logic trains may be increased to 8 hours.

(4) The allowable outage time for maintenance for all components may be extended to 12 hours. Additionally, all components, except for the analog channels, are to be in a bypass mode during the maintenance allowed outage time, with an analog channel tripped after 6 hours in a bypass configuration.

Note: Since the ESFAS analog channels at Turkey Point do not have bypass capability, this change will allow 12 hours for maintenance of each ESFAS logic and actuation relay train and will place each inoperable train in the tripped condition after 6 hours.

The following proposed changes to Turkey Point Units 3 and 4 Technical Specifications implement the approved revisions described above and in the NRC's SERs for WCAP-10271:

TS Table 3.3-2 - Revise ACTION Statement 14 to increase the time to be in HOT STANDBY with the number of OPERABLE channels one less that the Minimum Channels OPERABLE requirement from six to twelve hours. Revise ACTION Statements 14, 20 and 22 to increase the allowed outage time for testing of the logic trains from two hours to eight hours. Revise ACTION Statements 15, 18 and 25 to increase the time allowed for a channel to be inoperable and out of service in an untripped condition from one hour to six hours.

TS Table 4.3-2 - Revise the surveillance interval for Items 1.d, 1.e, 1.f, 4.d, 5.c, 6.b, and 8.a from monthly to quarterly.

JUSTIFICATION

The proposed changes in Technical Specifications are in accordance with the recommendations and criteria of Westinghouse WCAP-10271, Westinghouse WCAP-10271, Supplement 2, and the NRC's SERs on the same subjects dated February 21, 1985 and February 22, 1989.

The proposed changes in Technical Specifications, which revise outage times and surveillance intervals from monthly to quarterly for the subject RPS/ESFAS instrumentation, do not alter the manner in which protection is afforded nor the manner in which limiting setpoint criteria are established. In addition, the proposed changes do not involve the fundamental process or conditions required to accomplish these channel operational tests.

The analog instrumentation installed at Turkey Point Units 3 and 4 is enveloped by the analyses performed by Brookhaven National Laboratory for the NRC, as presented in WCAP-10271 and WCAP-10271, Supplement 2. The methodology documented in these WCAPs are applicable to all operating Westinghouse NSSS plants, and application of the methodology provides justification for revising plant-specific Technical Specifications. The NRC has imposed conditions on utilities seeking to implement the Technical Specification changes approved as a result of its review of WCAP-10271. The responses to those conditions are documented below. The Westinghouse generic analysis of the RPS/ESFAS and the specific response to the NRC imposed conditions provides justification for the proposed Turkey Point Units 3 and 4 Technical Specification changes.

The NRC's SER for RPS, as supplemented by the discussion contained in the NRC's letter of July 24, 1985, recognized the need to consider the special surveillance requirements for those channels which are only operational during transitional modes of operation (e.g., Mode 2 and Mode 1 below 10% power). Since it may not be possible to perform a valid operational test on these channels at power, testing during start-up is the appropriate test frequency required for these

channels. For some RPS trip setpoints, such as, for the "source range, neutron flux" setpoint, the start-up test must be included in addition to a quarterly surveillance; this will provide coverage during periods of extended shutdown. These types of changes have been included among those contained in Attachment 3 for the following Turkey Point setpoints: (1) power range, neutron flux, low setpoint; (2) intermediate range, neutron flux; (3) source range, neutron flux; (4) P-6 reactor trip system interlock, associated with intermediate range, neutron flux; (5) P-7 reactor trip system interlock, associated with low power reactor trips block; and (6) P-8 reactor trip system interlock, associated with power range, neutron flux.

3. COMPLIANCE WITH NRC IMPOSED TECHNICAL CONDITIONS

The NRC has imposed conditions on utilities seeking to implement the Technical Specification changes approved generically as a result of their review of WCAP-10271. The responses to those conditions are discussed in the following subsections.

(1) STAGGERED TESTING

The first NRC condition requires the use of a staggered test plan for the RPS channels changed to the quarterly test frequency. As indicated in their safety evaluation for WCAP-10271, the NRC imposed a condition which would have required a staggered test plan for increased interval testing. This requirement was later relaxed to eliminate the need for staggered testing in Supplement 2 of the WCAP. FPL does not plan to institute a staggered testing plan at Turkey Point.

(2) COMMON MODE FAILURES

The second NRC condition requires that plant procedures initiate an evaluation for a failure(s) in the RPS channel, that has been changed to the quarterly test frequency, and requires additional testing for plausible common cause failures. As stated in the SER for WCAP-10271, the NRC Staff's evaluation of RPS unavailability assumed that common cause failures would be identified during testing. The NRC Staff assumption was that the identification would occur because all the additional channels in a function would be tested whenever one channel failed a test. However, from a practical standpoint, there are several kinds of failures which are not regarded as common cause failures, e.g., instrument drift and failure of power to a single channel. Additional testing is not necessary for these failures or other failures where the cause of those other failures can be evaluated and shown not to affect multiple channels. In order to validate the NRC Staff's underlying assumption, the Staff's acceptance of less frequent surveillances is contingent upon implementation of procedures to identify common cause failures and to test the other channels which may be affected by the common cause.

The existing plant procedures provide specific instructions concerning the calibration, surveillance testing and operability determination of the RPS, including NIS, and ESFAS analog instrumentation. The review programs associated with current plant procedures are sufficient to identify failures whose root cause may contain elements of common cause, however, they do not explicitly address common cause failures.

In order to satisfy this NRC condition of acceptance, existing plant procedures will be enhanced to require the evaluation of a failure of any RPS/ESFAS channel as part of the quarterly test program, in order to determine if that failure could have resulted from a common cause. The plant procedures will require that appropriate remedial action(s), such as, additional testing of the other channels in that function, be taken if the failure is determined to have resulted from a plausible common cause mechanism. The intent of the procedure enhancement will not be to judge every failure as a potential common cause problem, since eventually equipment may be expected to fail. Rather, the intent is to increase the awareness of the potential for common mode failures and to take additional action when a plausible common mode failure(s) is identified.

(3) HARDWARE FOR BYPASS MODE TESTING

The third NRC condition requires installed hardware capability for testing channels in the bypass mode. As stated in the NRC's SERs for WCAP-10271, testing of the RPS analog channels in the bypassed condition by use of temporary jumpers or by lifting leads is not acceptable. The probability of personnel errors, leaving a number of channels in the bypassed condition, would be too large for the routine use of such methods.

The RPS and ESFAS Hagan analog protection instrumentation installed at the Turkey Point plant currently does <u>not</u> have bypass capability. Surveillance testing will continue to be performed by placing the channel in the tripped position prior to testing. The Eagle 21 and NIS instrumentation systems do have design provisions for testing while in a bypass mode.

(4) DUAL FUNCTION CHANNELS

The fourth NRC condition involves channels that provide input to both the RPS and ESFAS. In order to avoid confusion in plant Technical Specifications regarding such dual function channels, the NRC Staff concluded in the SERs for WCAP-10271 that either: (1) the channels should not be changed in the RPS tables until the ESFAS review is finished; or (2) cautionary notes in the RPS tables should refer to the more stringent ESFAS requirements.

Although the Turkey Point plant does use common channels which are shared by both the RPS and ESFAS systems, this integrated license amendment is being submitted for changes to both the RPS and ESFAS systems at the same time. Based on this, the above

concern relating to a partial implementation of the changes identified in either of the two Westinghouse topical reports is not applicable.

(5) SETPOINT DRIFT

The fifth NRC condition addresses setpoint drift. Based on a review of previous Westinghouse topical reports, the NRC Staff noted in the SERs for WCAP-10271 that margin is included in the channel setpoint determination to account for possible instrument drift over a one month surveillance interval. Accordingly, the NRC Staff's acceptance is contingent on confirmation that the instrument setpoint methodology includes sufficient adjustments to offset the drift anticipated as a result of less frequent surveillance.

On August 26, 1991, the NRC issued License Amendments 146 and 141 to Turkey Point Units 3 and 4, respectively. These amendments consisted of changes to the Technical Specifications in response to FPL's application transmitted by letter dated December 19, 1990 and supplemented on April 24, June 3 and July 8, 1991. These amendments revised Technical Specification Section 2.2, "Limiting Safety Systems Settings" and Section 3/4.3.2, "Engineered Safety Features Actuation System Instrumentation" for implementation of the Westinghouse five-column setpoint methodology. By FPL letter, L-95-137, FPL proposed that the current TS format be changed from a five-column setpoint format to a two-column format. This request will only change the format of the setpoints, not the methodology used in determining them. Therefore, the proposed five-to-two column format change will not affect the analysis used in the Westinghouse topical reports.

Integral to the Westinghouse methodology is the assumption of instrumentation drift over time. Drift values are utilized in the determination of the total instrument loop uncertainty, which is referred to by Westinghouse as the Channel Statistical Allowance (CSA). Rack drift values are also components in the determination of rack surveillance criteria, which are referred to by Westinghouse as the Allowable Value (AV).

In the Westinghouse five-column setpoint methodology, rack drift is conservatively considered to be a dependent term along with Rack Calibration Accuracy, Rack Comparator Setting Accuracy, and Rack Measurement & Test Equipment Accuracy. These dependent terms are algebraically added together prior to statistical combination in the overall CSA calculation. The dependent treatment of these terms is conservative.

Of the Westinghouse five-column parameters associated with rack surveillance, the rack drift term is the only term which is time dependent. The drift values provided by Westinghouse for the analog racks at Turkey Point were conservatively selected based on many years of operating experience at various plants with similar equipment. The drift values provided, which form the

basis for the analog rack Technical Specifications, were based on a one month surveillance interval.

"As-found" versus "as-left" surveillance data for RPS/ESFAS analog rack comparators, which are presently subject to a monthly surveillance interval, were reviewed for Units 3 and 4 for the preceding 18-month period. Based on this review, it was determined that the assumed magnitude of the rack drift conservatively envelopes the drift experienced over a three month period.

A summary of the results (in terms of calibrated span - CS) of this investigation into the 18-month surveillance data is presented in the following tabulations:

1. Values assumed in the existing setpoint uncertainty analysis -

HAGAN DRIFT	1.0% CS
NIS POWER RANGE DRIFT	1.0% CS
NIS INTERMEDIATE RANGE DRIFT	4.2% CS

2. Expected Drift (in percent calibrated span per 3 month duration) -

	Average of All Channels	Worst Single Channel
HAGAN (RPS/ESFAS) DRIFT	0.180 % CS	0.849% CS
NIS POWER RANGE DRIFT	0.483 % CS	0.681% CS
NIS INTERMEDIATE RANGE DRIFT	0.834 % CS	1.260% CS

The data presented above is sufficient to demonstrate that the basis of the Technical Specification setpoint determinations are not adversely affected by extending the surveillance interval from one month to quarterly, that is, quarterly surveillance test intervals would not exceed the allowable instrument drift of these analog devices.

The RPS and ESFAS configurations used in the generic analyses performed by Westinghouse (WCAP-10271 and WCAP-10271, Supplement 2) consisted of analog and digital channels, combinational logic units (logic relays) and actuation circuitry (master and slave relays). A typical analog channel is made up of a sensor, signal conditioning circuits and a comparator, where the comparator is the output device, providing input into the combinational logic trains. Any particular protective feature will have either 2, 3 or 4 separate analog channels each providing input into two separate logic trains. Each train will use either a 1 of 2, 2 of 3, or 2 of 4 actuation logic. Upon completion of this logic, each train will either trip the respective reactor trip breaker or actuate the associated ESFAS equipment. The overall design of the RPS and ESFAS instrumentation used at Turkey Point Units 3 and 4 is similar to the circuitry and components used in the generic Westinghouse analysis.

The Westinghouse analysis allows testing of the analog channels in a bypassed condition instead of a tripped condition. The capability exists at Turkey Point to test the master relay on-line and to perform a "continuity" check of the slave relay circuit. In addition, the NIS and Eagle 21 equipment installed at Turkey Point have bypass capability, however the Hagan analog instrumentation does not have bypass capability. Testing is performed with the channel in the tripped position. In addition, Turkey Point was licensed without the design capability to test the master and slave relays associated with ESFAS. The ESFAS master and slave relays are tested every refueling outage during safeguards testing.

Based on the similarity in the overall design and on the specific conditions addressed within this evaluation and in the generic Westinghouse analysis, it can be concluded that the generic Westinghouse analysis is applicable to Turkey Point Units 3 and 4.

SUMMARY

The scope of these requested changes and focus of the proposed changes in Technical Specifications is on the analog protection system instrumentation contained within the Hagan racks associated with the Turkey Point Units 3 and 4 RPS/ESFAS. This evaluation has served to provide a basis for extensions in the Technical Specification surveillance test intervals for the Hagan RPS/ESFAS analog protection instrumentation. The RPS and ESFAS increased surveillance and out of service time intervals were selected for consistency with the guidance provided in the Westinghouse topical reports and with the generic acceptance criteria established in the NRC's SERs for those topical reports. To demonstrate consistency with the Westinghouse topical reports and NRC criteria, this evaluation confirmed the applicability of the generic analyses to the proposed plant-specific changes and confirmed that increased instrument drift due to proposed extended surveillance intervals are properly accounted for in the setpoint calculation methodology which is applicable to Turkey Point Units 3 and 4.

ATTACHMENT 2

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

DESCRIPTION OF PROPOSED LICENSE AMENDMENTS

Changes in the Technical Specification surveillance intervals and allowed outage times will be required for the channel operational tests performed on the analog "bistable" comparator modules for the reactor trip, reactor trip permissive functions, engineered safety features actuation and permissive functions identified below.

TS Table 3.3-1 - Revise ACTION Statements 2a, 6, 12 and 13; increase the time allowed for a channel to be inoperable or out of service in an untripped condition from one hour to six hours. Revise ACTION Statement 2b; increase the time a Nuclear Instrumentation System (NIS) channel in a functional group may be bypassed to perform testing from two to four hours.

TS Table 3.3-2 - Revise ACTION Statement 14; increase the time to be in HOT STANDBY with the number of OPERABLE channels one less that the Minimum Channels OPERABLE requirement from six to twelve hours. Revise ACTION Statements 14, 20 and 22; increase the allowed outage time for test of the logic trains from 2 hours to 8 hours. Revise ACTION Statements 15, 18 and 25; increase the time allowed for a channel to be inoperable and out of service in an untripped condition from one hour to six hours.

TS Table 4.3-1 - Revise the surveillance interval for Items 2.a, 4, 7, 8, 10, 11, 12 and Note (9) from monthly to quarterly. Revise the surveillance interval for Item 2.b from monthly to startup, and Item 3 from monthly/startup to startup only. Revise the surveillance interval for Items 17.a, 17.b, 17.c and 17.d from monthly to refueling. Revise Note (1) from "7 days" to "31 days" and delete Note (8).

TS Table 4.3-2 - Revise the surveillance interval for Items 1.d, 1.e, 1.f, 4.d, 5.c, 6.b, and 8.a from monthly to quarterly.

TS BASES 3/4.3.1 and 3/4.3.2 - Revise the BASES section for Technical Specification Sections 3/4.3.1 and 3/4.3.2 to reference the Westinghouse WCAPs 10271 and 10271, Supplement 2, and associated Nuclear Regulatory Commission (NRC) safety evaluation reports (SERs).

INTRODUCTION

The NRC 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. Each standard is discussed below for the proposed amendments.

DISCUSSION

(1) **Operation of the facility in accordance with the proposed amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated.**

The proposed changes in Technical Specification surveillance intervals and allowed outage times for the subject Reactor Protection System (RPS)/Nuclear Instrumentation System (NIS)/Engineered Safety Features Actuation System (ESFAS) analog instrumentation have been revised in accordance with the recommendations and criteria of Westinghouse WCAP-10271, WCAP 10271, Supplement 2, and the NRC's SERs on the same subject dated February 21, 1985 and dated February 22, 1989.

The proposed changes do not involve any hardware or setpoint changes. Similarly, the proposed changes do not alter the manner in which safety limits, limiting safety system setpoints or limiting conditions for operation are determined. Implementation of the proposed changes does affect the probability of failure of the RPS, including NIS, and ESFAS, but does not alter the manner in which protection is afforded nor the manner in which limiting setpoint criteria are established for the RPS/ESFAS instrumentation systems. Consequently, the proposed changes do not result in an increase in the severity or consequences of any accident previously evaluated.

Implementation of the proposed changes is expected to result in an acceptably small increase in total RPS unavailability. This increase is primarily due to less frequent surveillances and was generically quantified to be less than 3% within WCAP-10271. WCAP-10271 also documents that the implementation of the proposed changes is also expected to result in a significant reduction in the probability of core melt from inadvertent reactor trips (WCAP-10271). This is the result of a reduction in the number of inadvertent reactor trips (0.5 fewer inadvertent reactor trips

per unit per year) occurring during testing of the RPS instrumentation. This reduction is primarily attributable to testing in bypass for applicable channels and to less frequent surveillances. WCAP-10271 documents that the reduction in inadvertent core melt probability is sufficiently large to counter the increased core melt probability, resulting in an overall reduction in total core melt probability of approximately 1%.

A corresponding probabilistic risk assessment (WCAP-10271, Supplement 2) was documented by Westinghouse for the generic implementation of the proposed changes for ESFAS instrumentation. This Westinghouse evaluation along with the independent assessments performed by an NRC contractor demonstrated that a 6% core damage frequency increase represented an upper bound for Westinghouse plants. For more realistic testing strategies, the core damage frequency increase would be substantially less than this.

Consequently, the changes in Technical Specifications associated with an extension of the surveillance intervals and out of service times for the RPS/ESFAS instrumentation systems will have only a small impact on plant risk. On this basis, FPL concludes that the proposed changes will not have a significant effect on the probability or consequences of licensing basis events; and the probability or consequences of an accident previously evaluated for Turkey Point does not significantly increase.

(2) **Operation of the facility in accordance with the proposed amendments would not create the possibility of a new or different kind of accident from any accident previously evaluated.**

The proposed changes in Technical Specification surveillance intervals and allowed outage times for the subject RPS/ESFAS analog instrumentation have been revised in accordance with the recommendations and criteria of Westinghouse WCAP-10271, WCAP 10271, Supplement 2, and the NRC's SERs on the same subject dated February 21, 1985 and dated February 22, 1989.

The proposed changes do not involve any hardware or setpoint changes. Some existing instrumentation is designed to be tested in bypass and current Technical Specifications allow testing in bypass. Testing in bypass is also recognized by IEEE Standards. Therefore, testing in bypass has been previously approved and implementation of the proposed changes for testing in bypass does not create the possibility of a new or different kind of accident from any previously evaluated. Furthermore, since the proposed changes do not alter the manner in which protection is afforded nor the manner in which limiting criteria are established for the

RPS and ESFAS instrumentation systems, the possibility of a new or different kind of accident from any previously evaluated has not been created.

The proposed changes do not result in a change in the manner in which the RPS or ESFAS provides plant protection. No change is being made which alters the function of the RPS or ESFAS (other than in a test mode). Rather, the likelihood or probability of the RPS and ESFAS functioning properly is the only effect. Therefore, the proposed changes do not create the possibility of a new or different kind of accident nor involve a reduction in a margin of safety as defined in the Safety Analysis Report.

Consequently, the changes in Technical Specifications associated with an extension of the surveillance intervals and out of service times for the RPS/ESFAS instrumentation systems will not create the possibility of a new or different kind of accident from any previously evaluated by the NRC, and does not create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) **Operation of the facility in accordance with the proposed amendments would not involve a significant reduction in a margin of safety.**

The proposed changes in Technical Specification surveillance intervals and allowed outage times for the subject RPS/ESFAS analog instrumentation have been revised in accordance with the recommendations and criteria of Westinghouse WCAP-10271, WCAP 10271, Supplement 2, and the NRC's SERs on the same subject dated February 21, 1985 and dated February 22, 1989.

These changes in Technical Specifications only affect the frequency of the channel operational tests and the allowed outage times; they do not alter the manner in which protection is afforded nor the manner in which limiting setpoint criteria are established. In addition, the fundamental process to implement these channel operational tests remains the same.

The proposed changes do not alter the manner in which safety limits, limiting safety system setpoints or limiting conditions for operation are determined. The impact of reduced testing is to allow a longer time interval over which instrument uncertainties (e.g., drift) may act. The site specific review of historical drift data and the conservative application of drift in the Westinghouse methodology are sufficient to demonstrate that the basis of the Technical Specification setpoint determinations are not adversely affected by extending the surveillance interval from monthly to quarterly, that is, quarterly surveillance test intervals would not exceed the

allowable instrument drift of these analog devices.

Implementation of the proposed changes is expected to result in an overall improvement in safety by:

a) Fewer inadvertent reactor trips per unit per year. This is due to less frequent testing which minimizes the time spent in a partial trip condition.

b) Higher quality repairs leading to improved equipment reliability due to longer allowed repair times.

c) Improvements in the effectiveness of the operating staff in monitoring and controlling plant operation. This is due to less frequent distractions of the operator and shift supervisor from attending to instrumentation testing.

The Westinghouse analysis demonstrates that any expected increases in probability of core melt or core damage frequency are small and are therefore acceptable. Consequently, the changes in Technical Specifications associated with an extension of the surveillance intervals and out of service times for the RPS/ESFAS instrumentation systems will not significantly reduce the margin of plant safety.

SUMMARY

Based on the above discussion, FPL has determined that the proposed amendment 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 the proposed changes do not involve a significant hazards consideration as defined in 10 CFR §50.92. Additionally, fewer inadvertent reactor trips are expected, equipment reliability is expected to increase and operator effectiveness is expected to improve.

L-95-181
Attachment 3

ATTACHMENT 3

**PROPOSED LICENSE AMENDMENT FOR
SURVEILLANCE INTERVAL EXTENSIONS FOR REACTOR PROTECTION SYSTEM,
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM,
AND NUCLEAR INSTRUMENTATION SYSTEM**

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