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L-2000-162
10 CFR 50.12
10 CFR 50.73

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

Subject: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Request for Exemption -
10 CFR 50.73 Licensee Event Report Requirements

The purpose of this letter is to request, in accordance with the provisions of Title 10 Code of Federal Regulations Section 50.12 (10 CFR 50.12), and 10 CFR 50.73(f), an exemption from certain requirements of 10 CFR 50.73, "Licensee event report system," for Turkey Point Units 3 and 4. The exemption request is provided as an attachment to this letter.

Specifically, Florida Power & Light Company (FPL) requests an exemption from the reporting requirements of 10 CFR 50.73 subsection (a)(2)(i)(B), which requires the submittal of a Licensee Event Report (LER) as a result of any operation or condition prohibited by the plant's Technical Specifications. This exemption will allow Turkey Point Units 3 and 4 to perform a Technical Specification required monthly surveillance for the 480 volt undervoltage Engineered Safety Features Actuation System Instrumentation, without requiring submittal of the 30 day LER.

Turkey Point Units 3 and 4 Technical Specification (TS) Section 3.3.2, Engineered Safety Features Actuation System Instrumentation, Table 3.3-2, Loss of Power, Items 7.b and 7.c, addresses the requirements for the 480 volt load centers degraded voltage protection. Under the existing TS, the minimum required operable channels is "2 per load center" which is equal to the number of channels available. A test switch is used to test the operability of the relays periodically, in accordance with the Technical Specifications. During the performance of the monthly surveillance, the test switch is placed in the test position multiple times for no more than 90 seconds continuously. During this time, when the switch is in the test position, both channels of the load center being tested are rendered inoperable. Table 3.3-2, Loss of Power, Items 7.b and 7.c and the related ACTION 18 do not address this condition. As a result, TS 3.0.3 is applicable for the time the monthly surveillance is being performed. FPL will submit Licensee Event Report 250/2000-02 to document the previously unrecognized entries into TS 3.0.3.

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Acceptable protection logic in the design of the load center degraded voltage testing scheme exists. The design of the test circuit is such that it would block the trip signal from its associated load center during the duration of a test. During testing, should a degraded condition occur at the load center, the degraded voltage would be sensed on the other load center of the same power train, and the trip signal would initiate sequencer action. Therefore, automatic safety function capability is maintained during the testing of the relays at any load center.

The requested exemption satisfies the requirements of 10 CFR 50.12 in that it is authorized by law, will not present an undue risk to the public health and safety, is consistent with the common defense and security, and involves special circumstances.

The Technical Specification surveillance requirement for undervoltage protection scheme requires each train (2 Load Centers per train, 2 channels per Load Center) to be tested at least every 62 days on a staggered test basis. The next surveillance is due no later than August 17, 2000. The requested exemption will allow performance of the required monthly surveillance starting with the August 17, 2000 surveillance, which requires entering TS 3.0.3, without requiring a submittal of a LER for each instance the surveillance is performed.

FPL will submit a proposed license amendment no later than August 31, 2000, to revise the Turkey Point Units 3 and 4 Technical Specifications. The proposed license amendment will allow the performance of the TS required surveillance without placing the units in a condition prohibited by the Technical Specifications. FPL requests exemption from the LER reporting requirements from the date of this letter until NRC approval of the proposed revised Technical Specifications.

Very truly yours,

D. E. Jernigan for

R. J. Hovey
Vice President
Turkey Point Plant

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Attachment

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point
Turkey Point Project Manager, NRR, USNRC

TURKEY POINT UNITS 3 AND 4
REQUEST FOR EXEMPTION
10 CFR 50.73 Licensee Event Report Requirements

I. Introduction

The purpose of this submittal is to request, in accordance with the provisions of Title 10 Code of Federal Regulations section 50.12 (10 CFR 50.12), "Specific exemptions", and 10 CFR 50.73(f), an exemption from the reporting requirements of 10 CFR 50.73(a)(2)(i)(B) for Turkey Point Units 3 and 4.

II. Discussion

A. Background

Pursuant to 10 CFR 50.73(a), "Reportable events," item (1) states that "the holder of an operating license for a nuclear power plant (licensee) shall submit a Licensee Event Report (LER) for any event of the type described in this paragraph within 30 days after the discovery of the event." Specifically, 10 CFR 50.73(a)(2)(i)(B), states that the licensee shall report "any operation or condition prohibited by the plant's Technical Specifications." Turkey Point Units 3 and 4 Technical Specifications (TS) Table 3.3-2, Loss of Power, Items 7.b and 7.c, addresses the requirements for the 480 volt load centers degraded voltage protection. Under the existing TS, the minimum required operable channels is "2 per load center," which is equal to the number of channels available. A test switch is used to test the operability of the relays periodically, in accordance with the TS. During the performance of the monthly surveillance, the test switch is placed in the test position multiple times for no more than 90 seconds continuously. During this time, when the switch is in the test position, both channels of the load center being tested are rendered inoperable. Table 3.3-2, Loss of Power, Items 7.b and 7.c and the related ACTION 18 do not address this condition. As a result, TS 3.0.3 is applicable during the time interval the monthly surveillance is being performed.

The standards applied by the NRC to grant an exemption from regulatory requirements are set forth in 10 CFR 50.12. The standards are that:

(a) The Commission may, upon application by an interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are -

(1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.

(2) The Commission will not consider granting an exemption unless special circumstances are present.

B. Requested Exemption

Florida Power & Light Company (FPL) requests an exemption from the reporting requirements of 10 CFR 50.73 subsection (a)(2)(i)(B), which requires the submittal of a Licensee Event Report (LER) as a result of any operation or condition prohibited by the plant's Technical Specifications. This exemption will allow Turkey Point

Units 3 and 4 to perform a TS required monthly surveillance for the 480 volt undervoltage Engineered Safety Features Actuation System Instrumentation, without requiring submittal of additional LERs.

On July 21, 2000, operators were reviewing the surveillance procedure 3-OSP-006.2, "480 Volt Switchgear- Undervoltage Test," and questioned the operability of the undervoltage relays during testing. Subsequent analysis by plant Engineering indicated that the load center undervoltage relay testing design and the plant TS as written place the plant in Technical Specification 3.0.3 during the time that the test switch was in any position other than normal. FPL will submit LER 250/2000-02 to document the previously unrecognized entries into TS 3.0.3.

The TS surveillance requirement for the undervoltage protection scheme requires each train (2 Load Centers per train, 2 channels per Load Center) to be tested at least every 62 days on a staggered test basis. The next surveillance is due no later than August 17, 2000. The requested exemption will allow performance of the required monthly surveillance starting with the August 17, 2000 surveillance, which requires entering TS 3.0.3, without requiring the submittal of an LER for each instance the surveillance is performed.

FPL will submit a proposed license amendment no later than August 31, 2000, to revise the Turkey Point Units 3 and 4 TS. The proposed license amendment will allow the performance of the required surveillance without placing the units in a condition prohibited by the TS. Exemption from the LER reporting requirements is requested from the date of this letter until NRC review and approval of the proposed revised TS addressing this issue is obtained.

C. Bases for Requested Exemption

The requested exemption is consistent with the requirements of 10 CFR 50.12 and should be granted. First, in accordance with subsection 50.12(a)(1), it is clear from the discussion herein that the exemption sought by FPL for Turkey Point is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

(1) Authorized by Law. As discussed above, exemptions from 10 CFR 50.73 are expressly authorized by 10 CFR 50.73(f).

(2) No Undue Risk. The proposed exemption from the LER reporting requirements poses no undue risk to the public health and safety because an adequate level of protection is maintained. As demonstrated in the engineering assessment below, performance of the TS required surveillance satisfies the underlying intent of the TS, which is to assure that the Engineered Safety Features Actuation System Instrumentation is operable when needed. Acceptable protection logic in the design of the load center degraded voltage testing scheme exists. There are two redundant channels in each load center (LC). There are two LCs in each bus. LCs A and C are supplied from the 4.16kV bus A. LCs B and D are supplied from 4.16kV bus B. The design of the test circuit is such that it would block the trip signal from its associated load center during

the duration of a test. During testing, should a degraded condition occur at the load center, the degraded voltage would be sensed on the other load center of the same power train, and the trip signal would initiate sequencer action. Therefore, automatic safety function capability is maintained during the testing of the relays at any load center. As such, adequate protection of the public health and safety is provided.

(3) Consistent with the Common Defense and Security. Common defense and security issues are not implicated by the proposed exemption because no safeguards issues or equipment are affected by the request.

Second, consistent with the requirements of subsection 50.12(a)(2), special circumstances are present. In particular, as discussed below, special circumstances exist within the terms of subsection 50.12(a)(2)(ii).

Subsection 50.12(a)(2)(ii) -- Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule;

10 CFR 50.73 requires written LERs to be submitted on reportable events within 30 days of their occurrence, after a thorough analysis of the event, its root causes, safety assessments, and corrective actions, to permit the NRC analyses and studies. The information is used by the NRC staff in confirming licensing bases, assessing trends and patterns of operational experience, monitoring performance, identifying precursors of more significant events, and providing operational experience to the industry.

10 CFR 50.73(a)(2)(i)(B) requires submittal of an LER within 30 days for "any operation or condition prohibited by the plant's Technical Specifications." NUREG-1022, Revision 1, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," provides specific guidance regarding entry into TS 3.0.3, and states that entry into TS 3.0.3 for any reason or justification is reportable.

On July 21, 2000, operators were reviewing the surveillance procedure 3-OSP-006.2, "480 Volt Switchgear- Undervoltage Test", and questioned the operability of the undervoltage relays during testing. Subsequent analysis by plant Engineering indicated that the load center undervoltage relay testing design and the plant Technical Specifications as written would place the plant in Technical Specification 3.0.3 during the time that the test switch was in any position other than normal. FPL will submit LER 250/2000-02 to document the previously unrecognized entries into TS 3.0.3.

The TS surveillance requirement for the undervoltage protection scheme requires each train (2 Load Centers per train, 2 channels per Load Center) to be tested at least every 62 days on a staggered test basis. The next surveillance is due no later than August 17, 2000. As a result of performing the TS required monthly surveillance, at least sixteen events will occur within the 62 day period requiring

LER submittals for the same situation. NUREG-1022, Revision 1, states that revisions should not be used to report subsequent failures of the same or like component. It further discusses the incorrect use of LER revisions to report new events that were discovered after the original event because they were loosely related to the original event. Submittal of additional LERs on the same incident is not required to achieve the underlying purpose of the rule. The underlying purpose of the rule will be achieved by the initial LER submittal.

FPL's position is that the sixteen LERs would be directly related to the original event, the performance of the TS required surveillance, and that submittal of sixteen additional LERs or LER supplements is not required to meet the underlying purpose of the rule in that the events are not safety significant, and the additional reports would provide no additional or new information.

D. Engineering Assessment

The undervoltage monitoring system on the 480 volt safety related load centers is provided to ensure timely separation of the safety-related buses from offsite power during (sustained) degraded voltage conditions. Two protection schemes are provided. One is provided for degraded voltage conditions concurrent with a Safety Injection (SI) signal while the other is provided for normal operation. Both schemes ensure that connected loads, and loads to be added, are not damaged by degraded voltage conditions.

The 480 Volt System consists of LCs and Motor Control Centers for each unit. LCs A, B, C, D and H are vital (safety-related); LCs E, F and G are non-vital. The vital portion of the system is required to enable safe shutdown of the reactor in the event of a plant accident. The LCs power all of the motor control centers and loads rated between 100 and 300 horsepower.

LCs A and C are supplied from the 4.16 kV bus A. LCs B and D are supplied from the 4.16 kV bus B. The vital portion of the system is powered from the 4.16 kV Engineered Safety Features (ESF) buses A and B through four 4.16 kV/480 V step-down transformers.

480V degraded voltage protection with SI signal

Each of the 480V safety related LC buses A, B, C, and D degraded voltage protection scheme includes two trip-logic channels. LCs A and C are supplied from the 4.16 kV bus A. LCs B and D are supplied from the 4.16 kV bus B. Two instantaneous undervoltage relays on each safety-related 480V LC are installed to monitor the LC voltage. The two relays in each LC are connected in an "AND" logic, so that single failure would not initiate stripping. If both instantaneous relays on any of the safety-related LC's experience an undervoltage condition along with an SI signal (and the associated EDG's output breaker is open), they will instantly drop out, initiating a 10 second time delay prior to causing bus stripping on the associated 4 KV bus.

A three position, spring return to normal, key operated test switch is provided. Placing the test switch in any position other than normal will bypass the trip circuit of both channels and block the trip signal from its associated load center. During testing, should a degraded condition occur at the load center, the degraded voltage would be sensed on the other load center of the same power train, and the trip signal would initiate sequencer action. Therefore, automatic safety function capability is maintained during the testing of the relays at any load center.

Degraded voltage on 480 Volt Load Center Without a Safety Injection Signal

The degraded voltage scheme has four voltage sensing relays on each load center, two relays per channel. Each channel utilizes one definite time delay relay (327I) and one inverse time delay relay (327T). The relays are interconnected in a two out of two channel trip logic such that the logic trips (initiates bus stripping) if degraded voltage is detected by either channel 1 logic (327I or 327T relay) concurrently with either channel 2 logic (327I or 327T relay). The 327I relay protects the 480 volt system for degraded voltage over an extended time, while the 327T relay protects the system during a large voltage transient for shorter durations.

A three position bypass switch is used to place one undervoltage relay channel in the trip mode when one or both of the relays on that channel fail and/or are removed from the logic circuit.

A five position test switch enables the operator to test either the 327I or the 327T relay on either channel. The switch is configured such that only one relay in its respective channel can be tested at one time.

The bypass switch and the test switch can operate independent of each other. The purpose of the bypass switch is to bypass the trip circuit associated with any one of the two degraded voltage channels and place the circuit in trip mode. Therefore, when a channel is bypassed, the trip logic is changed from two-out-of-two to one-out-of-one.

The test switch is used to test the operability of the relays periodically, in accordance with the surveillance requirements of the Technical Specifications. The off-normal position of the test switch is also annunciated in the control room.

Acceptable protection logic in the design of the load center degraded voltage testing scheme exists. The design of the test circuit is such that the test switch would block the trip signal from its associated load center during the duration of a test. During testing, should a degraded condition occur at the load center, the degraded voltage would be sensed on the other load center of the same power train, and the trip signal would initiate sequencer action. Therefore, automatic safety function capability is maintained during the testing of the relays at any load center.

III. Summary and Conclusion

10 CFR 50.73 addresses LER reporting requirements. Exemptions are provided under the provisions of 10 CFR 50.12 and, 10 CFR 50.73(f). The exemption requested is consistent with Section 50.12 of the Commission's regulations in that it is authorized by law, will not present an undue risk to the public health and safety, is consistent with the common defense and security, and presents special circumstances. Accordingly, the requested exemption should be granted.