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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF THE SECRETARY  
DOCKETING & SERVICE  
BRANCH

In the Matter of  
FLORIDA POWER AND LIGHT  
COMPANY

}  
Docket No. 50-250-OLA-4  
50-251-OLA-4

(Turkey Point Plant, Units 3 and 4)

}  
(P/T Limits)

RESPONSE OF NRC STAFF IN SUPPORT OF  
LICENSEE'S MOTION FOR SUMMARY DISPOSITION

I. INTRODUCTION

On September 11, 1989, the Florida Power & Light Company (Licensee) moved the Atomic Safety and Licensing Board (Licensing Board) for summary disposition, pursuant to 10 C.F.R. § 2.749 of the Commission's rules of practice and regulations and the Licensing Board's Memorandum and Order of June 8, 1989, of each of the Intervenor's admitted contentions in the captioned matter. For the reasons set forth below, the NRC Staff (Staff) supports the Licensee's Motion for summary disposition (Motion) of Contention 2 on the grounds that they have demonstrated an absence of any genuine issue of material fact to be litigated and that they are entitled to a favorable judgment as a matter of law. The Staff is in agreement with the Licensee's statements made concerning Contention 3, however, the Staff's position is that Contention 3 was withdrawn from consideration in this proceeding by the Intervenor. See Lorion Letter of September 8, 1989. For this reason the Staff will not address issues raised by the licensee in its motion for summary disposition concerning Contention 3.

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## II. BACKGROUND

On October 19, 1988 the NRC published in the Federal Register a Notice of Proposed Issuance of Amendments to the Technical Specifications for Turkey Point Units 3 and 4. 53 Fed. Reg. 40988. The Staff published a proposed no significant hazards consideration determination to the license amendments on the same day.

On November 17, 1988, Ms. Joette Lorion filed a request for a hearing and petition for leave to intervene on her own behalf and on the behalf of the Center for Nuclear Responsibility with respect to license amendments for Pressure/Temperature limits. "Request for Hearing and Petition for Leave to Intervene" (November 17, 1989). On February 17, 1989, the Center for Nuclear Responsibility and Ms. Joette Lorion filed an amended request for hearing and petition to intervene and proposed three contentions as matters to be placed in controversy in this proceeding. "Petitioners' Amended Request for Hearing and Petition for Leave to Intervene" at 5-12 (February 17, 1989).

By Order of January 19, 1989, the Licensing Board presiding over this proceeding scheduled a prehearing conference in this matter for March 21, 1989 in Miami, Florida. Order, January 19, 1989 at 2. Oral arguments by the parties and intervenors were heard on the admissibility of the proposed contentions at the prehearing conference. The Licensing Board's Memorandum and Order of June 8, 1989 set forth the actions taken at the prehearing conference. Florida Power and Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4) LBP-89-15, 29 NRC 493 (1989). The Licensing Board granted the petition to intervene and ruled on the

admissibility of the contentions; Contention 1 was rejected and Contentions 2 and 3 were admitted and narrowed in scope. Id. Discovery was completed on September 8, 1989.

### III. DISCUSSION

#### A. Standards For Summary Disposition

Summary disposition is appropriate pursuant to the Commission's regulations if, based on a motion, the attached statements of the parties in affidavits and other filings in the proceeding, it is shown that there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. 10 C.F.R. § 2.749(d). The Commission's rules governing summary disposition are analogous to Rule 56 of the Federal Rules of Civil Procedure. Alabama Power Company (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 217 (1974); Dairyland Power Cooperative (LaCrosse Boiling Water Reactor), LBP-82-58, 16 NRC 512, 520 (1982). Therefore, decisions concerning the interpretation of Rule 56 may be used by the Commission's adjudicatory Boards as guidance in applying the provisions of 10 C.F.R. § 2.749.

A hearing on the questions raised by an intervenor is not inevitable. See Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-654, 14 NRC 632, 635 (1981). The purpose of summary disposition is to avoid hearings, unnecessary testimony and cross-examination in areas where there are no material issues to be tried. The Supreme Court has stated that there is no right to a trial except so far as there are issues of fact in dispute to be determined. Ex parte Peterson, 253 U.S. 300, 310 (1920). Under the Federal Rules, the motion is designed to pierce the allegations of fact in the pleadings and to obtain summary relief where facts set forth in detail in affidavits,

depositions, interrogatories, or other material of evidentiary value show that there are no genuine issues of material fact to be tried. Moore's Federal Practice ¶ 56.04[1] (2d ed. 1976). Mere allegations in the pleadings will not create an issue as against a motion for summary disposition supported by affidavits. 10 C.F.R. § 2.749(b); Fed. R. Civ. P. 56(e).

A party seeking summary disposition has the burden of demonstrating the absence of any genuine issue of material fact. Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2, ALAB-443, 6 NRC 741, 753 (1977)). In determining whether a motion for summary disposition should be granted, the record must be viewed in the light most favorable to the opponent of such a motion. Poller v. Columbia Broadcasting System, Inc., 368 U.S. 464, 473 (1962); Dairyland Power Cooperative (LaCrosse Boiling Water Reactor), LBP-82-58, 16 NRC 512, 519 (1982).

The Supreme Court has pointed out that Rule 56 of the Federal Rules of Civil Procedure does not permit a plaintiff to get to a trial on the basis of allegations in a complaint coupled with the hope that something can be developed at trial in the way of evidence to support the allegations. First National Bank of Arizona v. Cities Service Co., 391 U.S. 253, 289-90 (1968), rehearing den., 393 U.S. 901 (1968). Similarly, a plaintiff may not defeat a motion for summary judgment on the hope that on cross-examination the defendant will contradict their respective affidavits. To permit trial on such a basis would nullify the purpose of Rule 56, which permits the elimination of unnecessary and costly litigation where no genuine issues of material fact exist. See

Orvis v. Brickman, 95 F. Supp 605, 607 (1951), aff'd, 196 F. 2d 762 (D.C. Cir. 1952), cited with approval in Gulf States Utilities Co. (River Bend Station, Units 1 and 2), LBP-75-10, 1 NRC 246, 248 (1975). To defeat summary disposition an opposing party must present material and substantial facts to show that an issue exists. Conclusions alone will not suffice. River Bend, LBP-75-10, supra at 248; Perry, ALAB-443, supra at 754.

The federal courts have held that a party opposing a motion for summary judgment is not entitled to hold back evidence, if any, until the time of trial. The opponent must come forth with evidentiary facts to show that there is an outstanding unresolved material issue to be tried. Stansifer v. Chrysler Motors Corp., 487 F.2d 59, 63 (9th Cir. 1973).

The Commission's regulations permit responses both in support of and in opposition to motions for summary disposition. 10 C.F.R. § 2.749(a). Such responses may be filed with or without supporting affidavits. Id. However, if the motion is properly supported, the opponent of such a motion may not rest on allegations or denials of the contents of the motion. Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 453 (1980).

Both the Appeal Board and the Commission have encouraged the use of the Commission's summary disposition procedure. Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 467 (1981). See Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-73-12, 6 AEC 241 (1973), aff'd sum nom BPI v. Atomic Energy Commission, 502 F.2d 424 (D.C. Cir. 1974); Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11

NRC 542, 550-51 (1980); Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 424-25 (1973);

Duquesne Light Co. (Beaver Valley Power Station, Unit 1), ALAB-109, 6 AEC 243, 245 (1973). The Commission has stated that:

. . . Boards should encourage the parties to invoke the summary disposition procedures on the issues of material fact so that evidentiary hearing time is not unnecessarily devoted to such issues.

CLI-81-8, supra, 13 NRC 452, 457. The Commission's summary disposition procedures "provide . . . an efficacious means of avoiding unnecessary and possibly time-consuming hearings on demonstrably insubstantial issues."

Allens Creek, supra, 11 NRC at 550.

B. The Licensee Has Demonstrated the Absence of a Genuine Issue of Material Fact on Contention 2 and Is Entitled to a Favorable Judgment as a Matter of Law Pursuant to 10 C.F.R. § 2.749(d)

The factual basis used in support of the Staff's position that there is no genuine issue of material fact to be litigated with respect to any of the Intervenor's admitted contentions is found in the Staff's response as set forth below and in the "Affidavit of Barry Elliot in Support of NRC Staff's Response to Licensee's Motion for Summary Disposition", dated October 19, 1989. Mr. Elliot's Affidavit is attached and made a part of the Staff's response.

Admitted Contention 2 states:

That the revised temperature/pressure limits that have been set for Turkey Point Unit 4 are non-conservative and will cause that reactor unit to exceed the requirements of General Design Criterion 31 of Appendix A to 10 C.F.R. Part 50, which requires that the reactor coolant pressure boundary be designed with a sufficient margin to insure that, when stressed under operating, maintenance, testing, and postulated accident conditions, (1) the boundary behaves in a non-brittle manner and (2) the probability of a rapidly propagating fracture is minimized.

Petitioners contend that the new pressure/temperature limits could cause the reactor vessel to exceed these requirements because the Licensee has based its calculation of the predicted RTNDT for Unit 4 partly on surveillance capsule V test results from Turkey Point Unit 3 rather than predicting the RTNDT for Unit 4 based on Unit 4 capsule V surveillance capsule data -- a practice which is not scientific, not valid, and could cause the Unit 4 reactor to behave in a brittle manner which would make the chances of a pressure vessel failure and resultant meltdown more likely. Petitioners contend that predictions of RTNDT and pressure/temperature limits derived from the shift in nil-ductility temperature should be based only on plant-specific Unit 4 data, especially in light of the fact that the only tests ever performed on Unit 4 weld specimens demonstrated that the weld material in the Unit 4 vessel was 30% more brittle than that of Unit 3. Because Unit 4's weld material is more embrittled, Petitioners contend that the FPL Integrated Surveillance program does not meet the Requirements of 10 C.F.R. Appendix G Parts V.A and V.B, and 10 C.F.R. Appendix H, including Appendix H Parts IIC and IIIB. Finally, Petitioners contend that the surveillance capsule V for Unit 4 should be tested to establish the new pressure/temperature limits and should the testing indicate that the RTNDT for Unit 4 has passed the 300-degree Fahrenheit (sic) screening criterion set by the NRC, Unit 4 should be shut down until it is demonstrated that the Unit 4 reactor pressure vessel can maintain its integrity beyond this limit.

Memorandum and Order at 500-501; Petitioners' Amended Request for Hearing and Petition for Leave to Intervene, at 7-8.

In admitting this contention, the Licensing Board limited the scope to a consideration of (1) whether the "Licensee's conduct of the integrated surveillance program at Turkey Point fails to meet the requirements of the program itself," and (2) whether a "difference of less than five percent in the operating time between the two units is simply not significant." Memorandum and Order at 503. In addition, the Licensing Board excluded from consideration in this proceeding the issues

pertaining to the Turkey Point integrated surveillance program approved in 1985 and the 300-degree screening criteria. Id. at 503-504.

The Intervenors allege that the revised pressure/temperature (P/T) limits for Turkey Point Unit 4 are non-conservative because the Licensee used data from its integrated surveillance program to predict  $RT_{NDT}$ , rather than relying on data obtained only from the Unit 4 surveillance capsule. The Intervenor's identified the bases for Contention 2 in their discovery responses: (1) Turkey Point Units 3 and 4 have had different extended outages; (2) The Licensee implemented its integrated surveillance program even though initial test results differed from predicted results; (3) Unit 4 experienced an overpressurization event and Unit 3 did not; and (4) during 1987 Unit 3 operated at 14 percent capacity factor and Unit 4 operated at 45 percent capacity factor. The Staff agrees that the Licensee has conducted an acceptable integrated surveillance program. And the Staff agrees that a difference in operating time of less than five percent does not invalidate the surveillance data.

The Staff agrees with the Licensee's conclusion that the Turkey Point integrated surveillance program was properly conducted. Affidavit of Stephen A. Collard on Contentions 2 and 3, at ¶¶ 45, 46, 77 (hereinafter Collard Affidavit at \_\_\_\_); Affidavit in Support of NRC Staff's Response to Licensee's Motion for Summary Disposition, at ¶¶ 17, 28 (hereinafter Elliot Affidavit at \_\_\_\_). The Staff approved the Licensee's use of an integrated surveillance program at Turkey Point Units 3 and 4 in 1985. See Florida Power and Light Co. Docket Nos. 50-250 and 50-251, Turkey Point Unit Nos. 3 and 4, Amendment Nos. 112 and 106 (April 22, 1985). The integrated surveillance program allows the Licensee to use the results of

the tests of the weld specimens from Units 3 and 4 to make predictions about and to monitor both units. Collard Affidavit at ¶¶ 45, 46.

The Staff recommends that neutron irradiation damage to reactor beltline materials be calculated in accordance with Revision 2 of Regulatory Guide 1.99. The adjusted reference temperature (ART), which is the sum of (1) the unirradiated  $RT_{NDT}$ , (2) the increase in  $RT_{NDT}$  due to neutron irradiation, and (3) a margin of safety to account for uncertainties in the test data, is used to calculate P/T limits. Elliot Affidavit at ¶ 7. P/T limits must be increased by the amount of increase in ART to ensure that the margins of safety are met when neutron irradiation causes an increase in ART. Therefore, it is necessary to revise periodically the P/T limits for a nuclear power plant to account for the increase in ART caused by neutron irradiation of the reactor vessel. Elliot Affidavit at ¶ 8.

The integrated surveillance program at Turkey Point allows the Licensee to revise the P/T limits based on data obtained by tests conducted on the surveillance specimen capsules. The Licensee complied with Appendix H of 10 C.F.R. Part 50, which requires that surveillance specimen capsules be located near the inside reactor vessel wall in the beltline region so that the specimen irradiation history duplicates, as near as possible, the maximum neutron fluence experienced by the reactor vessel inner surface. Elliot Affidavit at ¶ 13. Three capsules containing specimens of reactor weld material remain in each of the Turkey Point units. Collard Affidavit at ¶ 37.

The Capsules T and V for Unit 3 and Capsule T from Unit 4 have been withdrawn according to the requirements of Appendix H of 10 C.F.R Part 50.

Elliot Affidavit at ¶¶ 13, 15. The Licensee calculated the neutron fluence of each capsule after withdrawal and the materials in the capsule were Charpy-impact tested to determine the increase in  $RT_{NDT}$  resulting from the neutron fluence of the capsule. Elliot Affidavit at ¶¶ 13, 14. The surveillance weld samples in the Turkey Point surveillance capsules are fabricated from the same heat of weld wire as was used in the critical beltline welds in the Turkey Point Units 3 and 4 reactor vessels. The Turkey Point surveillance material is representative of the critical beltline weld material in the Units 3 and 4 reactor vessels, therefore, it is credible. Because the Turkey Point surveillance material is credible, the data derived from it is credible and may be used to predict the increase in  $RT_{NDT}$ . The increase in  $RT_{NDT}$  is used in calculating revised P/T limits and the Licensee calculated the P/T limits for Turkey Point Units 3 and 4 according to the methods set forth in Regulatory Guide 1.99, Rev. 2. The Turkey Point P/T limits also meet the required margin of safety for 20 effective full power years (EFPY) of operation. The Turkey Point Plant's implementation of the integrated surveillance program meets the requirements of the program itself. Elliot Affidavit at ¶¶ 15, 16, 17.

The Intervenor also claim that the test results from the Turkey Point integrated surveillance program are not credible because the initial test results differ from predicted results. The test results in question are from Capsule T of Unit 4 and are within the range of scatter expected for the surveillance data. Therefore, Unit 4 surveillance data are credible according to Regulatory Guide 1.99, Rev. 2, and may be used in conjunction with Unit 3 surveillance data to calculate the ART for Unit 3

and Unit 4. Regulatory Guide 1.99, Rev. 2 requires that credible data be used in these calculations. Elliot Affidavit at ¶¶ 9, 18, 19, 20.

The differences in operating times and power levels at the Turkey Point Plant are less than five percent; differences of this magnitude are insignificant and do not invalidate the Turkey Point surveillance data. The calculation of total accumulated neutron irradiation (neutron fluence) provides a more accurate measure of neutron irradiation damage and embrittlement or fracture toughness of the reactor vessel than does a comparison of the operating times or power levels of two units. That is because differences in operating times and power levels at the Turkey Point Plant were accounted for when the Licensee calculated the neutron fluence of the surveillance capsules. Elliot Affidavit at ¶ 18. Therefore, the Intervenor's allegation that differences in operating times and power levels invalidate the data is unsupported by the facts.

The Staff agrees that the Licensee has a contingency plan for Turkey Point which would be implemented if either Unit 3 or Unit 4 were shut-down for an extended period or underwent a long period of low power operation. Elliot Affidavit at ¶ 24; Collard Affidavit at ¶ 34. Plants are required to have contingency plans as part of their integrated surveillance programs pursuant to 10 C.F.R. Part 50, Appendix H. The contingency plan ensures that if one host reactor in the integrated surveillance program experiences an extended shut-down or period of low power operation, surveillance test data will be available from another host reactor in the program. Elliot Affidavit at ¶ 23. A contingency plan also ensures that sufficient surveillance data are available in the future to allow determinations of fracture toughness of a reactor vessel to be made.

Collard Affidavit at ¶¶ 54, 55. The Turkey Point integrated surveillance program does not rely on data obtained from surveillance capsules irradiated in host plants; all Turkey Point surveillance capsules are in either Unit 3 or Unit 4. In the event of an extended outage or a period of low power operation at Turkey Point, the Licensee could rely on the surveillance capsules in the operating unit or place all capsules into the operating unit. A difference in operating time of less than five percent between Unit 3 and Unit 4 does not require that the Licensee implement its contingency plan. Elliot Affidavit at ¶ 25.

In response to a Licensee's discovery request the Intervenors stated that Unit 3 surveillance data should not be used to calculate the ART for Unit 4 because of two overpressurization events in Unit 4 which occurred in 1981. The peak pressures during the events were approximately 1115 pounds per square inch gauge (psig) and 740 psig, respectively, and the temperature of the reactor vessel was approximately 110°F. Elliot Affidavit at ¶ 25. The Staff agrees with the Licensee that this issue is outside the scope of Contention 2 as admitted by the Licensing Board. Memorandum and Order at 502-503. The events in question took place before the integrated surveillance program was in effect and do not bear on the implementation of the program as was required by the Licensing Board. Id. The Licensing Board should find that issues concerning the overpressurization events are outside this proceeding.

In any case, while these pressure/temperature levels exceeded the P/T limits for Turkey Point, the levels were substantially below the normal operating and design pressure limits of the vessel and the normal operating temperature of the reactor coolant inlet. Elliot Affidavit

at ¶ 25. The overpressurization events were minor and did not damage the reactor vessel or invalidate the results derived from the surveillance data. Elliot Affidavit at ¶ 25; Collard Affidavit at ¶ 69. Therefore, it is proper to use Unit 3 and 4 surveillance data to calculate ART for Unit 4.

In their discovery responses the Intervenors contend that the differences in the capacity factors (14 percent capacity for Unit 3 and 45 percent capacity for Unit 4) during 1987 undercut the validity and reliability of P/T limits calculate for 20 EFPY. The actual operating capacities of the two units are unimportant in this context. Elliot Affidavit at ¶¶ 26, 17. The total accumulated neutron irradiation (neutron fluence), not the rates at which neutron accumulation occurs, is important because the total fluence value provides a measure of radiation damage and vessel embrittlement. Elliot Affidavit at ¶ 26. The Licensee provides data which show the difference between the total neutron fluence for Units 3 and 4 is less than 3 percent for the 1985 to 1988 period. <sup>1/</sup> Collard Affidavit at ¶ 62, Table 5. A difference of this magnitude in total neutron fluence for the Turkey Point Units is insignificant and raises no concerns regarding the validity and reliability of the P/T limits or the use of surveillance capsules from one unit to help predict the fracture toughness of another unit. Elliot Affidavit at ¶ 26.

The Licensee calculated hypothetical P/T limits for Unit 4 based on the methodology set forth in Sections 1.1 and 1.2 of Regulatory Guide

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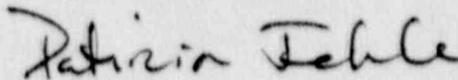
<sup>1/</sup> The actual capacity factor for Unit 3 in 1987 was 15 percent. See Collard Affidavit at ¶ 68.

1.99, Rev. 2, which is used when credible surveillance data from the reactor in question are not available. Independent calculations performed by the Staff indicate that the Licensee's hypothetical P/T limits for Unit 4 are within the proper range. Elliot Affidavit at ¶ 27; Collard Affidavit at ¶¶ 71-74.

IV. CONCLUSION

In view of the foregoing, the Staff agrees with and supports Licensee's motion for summary disposition, because there is no genuine issue of material fact in Intervenor's Admitted Contention 2 to be litigated. Therefore, pursuant to 10 C.F.R. § 2.749, the Licensee is entitled to a favorable decision on Contention 2 as a matter of law.

Respectfully submitted,



Patricia Jehle  
Counsel for NRC Staff

Dated at Rockville, Maryland  
this 19th day of October, 1989.