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SUBJECT: Submits request for schedular exemption from requirements of 10CFR50, App J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors."

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L-95-206
10 CFR §50.12
10 CFR Part 50 Appendix J

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

Subject: Turkey Point Unit 4
Docket No. 50-251
Request for Scheduler Exemption
10 CFR Part 50 Appendix J

The purpose of this letter is to request an exemption, in accordance with the provisions of 10 CFR §50.12, "Specific Exemptions," from certain requirements of 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." A one time scheduler exemption is requested from the Type A testing interval (Integrated Leak Rate Test {ILRT}) specified in 10 CFR Part 50, Appendix J for Turkey Point Unit 4.

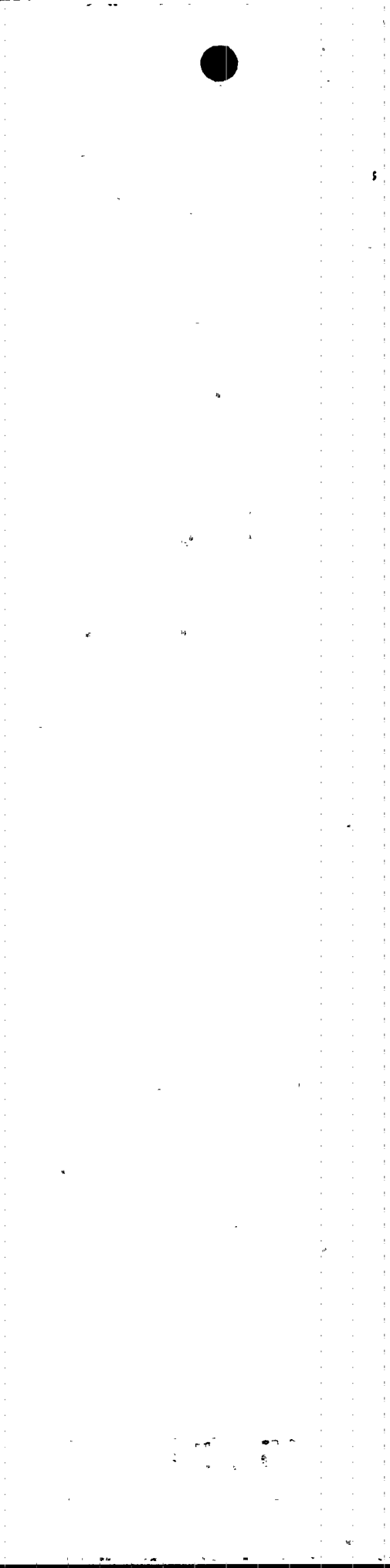
The NRC has published a proposed revision to 10 CFR 50, Appendix J which will modify the ILRT test schedule to require one test every ten years, as compared to the current requirement of three ILRTs every ten years. Approval of the ILRT test schedule proposed rule change may not be sufficiently timely to preclude planning for (including the expenditure of funds), and accomplishment of, a currently required ILRT for the Turkey Point Unit 4 March 1996 refueling outage. Accordingly, FPL proposes a one-time scheduler exemption for Turkey Point Unit 4 which would delay performance of an ILRT by one refueling outage. A visual inspection of the containment surfaces as required by 10 CFR 50, Appendix J, Section V.A. will be performed during the upcoming Turkey Point Unit 4 refueling outage.

Florida Power & Light Company (FPL) has reviewed the test results from previous ILRTs at Turkey Point Units 3 and 4 and the test intervals for these tests and has found that the test results are below the leak rate acceptance criteria set forth in the plant's Technical Specifications. Final adoption of the ILRT test schedule presented in the proposed rule change may not be sufficiently timely to preclude planning for (including the expenditure of funds), and accomplishment of, a currently required ILRT for the Turkey Point Unit 4 March 1996 refueling outage. Accordingly, FPL proposes a one-time scheduler exemption for Turkey Point Unit 4 which would delay performance of an ILRT by one refueling outage. This one-time scheduler exemption will allow FPL to adopt the proposed test frequency, if approved, and prevent unnecessary, safety-neutral testing and the associated cost of performing these tests in the near term.

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The attachment to this letter provides the basis for this exemption request. FPL requests that this exemption be reviewed and approved by October 31, 1995, so that approval of this exemption will be sufficiently timely to obviate the need for contingency ILRT planning for the next Turkey Point Unit 4 refueling outage, currently scheduled for March 1996.

If you have any questions concerning this request, please contact us.

Very truly yours,



T. F. Plunkett
Vice President
Turkey Point Plant

Attachments

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



**Proposed Scheduler Exemption
from Certain Requirements of
Title 10 CFR Part 50, Appendix J**

Introduction

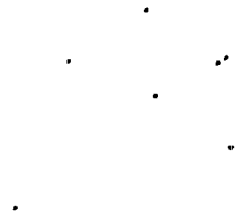
Florida Power and Light Company (FPL) requests an exemption to the Type A testing interval required by 10 CFR 50 Appendix J. Specifically, FPL requests an exemption to 10 CFR 50 Appendix J, III D.1 (a), which states, in part:

After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each 10-year service period. The third test of each set shall be conducted when the plant is shutdown for the 10-year plant inservice inspections.

Additional guidance for Type A testing is provided by other standards referenced in 10 CFR Appendix J including ANSI N45.4-1972, and ANSI/ANS 56.8-1987. Section 3.2.3 of ANSI/ANS 56.8-1987, "Type A Test Frequency" states:

Periodic Type A tests shall be completed at the first refueling shutdown but no more than three years subsequent to the preoperational test and at intervals not to exceed five years thereafter.

The most recent ILRT Type A test for Turkey Point Unit 4 was performed on October 20, 1991. The next refueling outage for Turkey Point Unit 4 is scheduled for March 1996. This schedule will place the ILRT test approximately 53 months after the last ILRT performed in 1991 (see Table 1). The 53 month interval meets the maximum interval of 60 months, per ANSI/ANS 56.8-1987 and the "...approximately equal intervals.." criterion of 10 CFR Part 50, Appendix J. FPL proposes to forego the March 1996 ILRT and to conduct ILRT testing at the next refueling outage (currently scheduled for October 1997) if 10 CFR Part 50, Appendix J proposed rulemaking is not completed by that time. The proposed scheduler exemption would result in approximately 72 months between ILRTs for Turkey Point Unit 4, in the absence of rulemaking (see Table 2). Such an exemption is acceptable based on the results obtained during previous testing, the NRC's contemplated rulemaking (which bounds the proposed exemption), and the costs associated with the performance of this safety-neutral test if rulemaking is subsequently completed.



Background

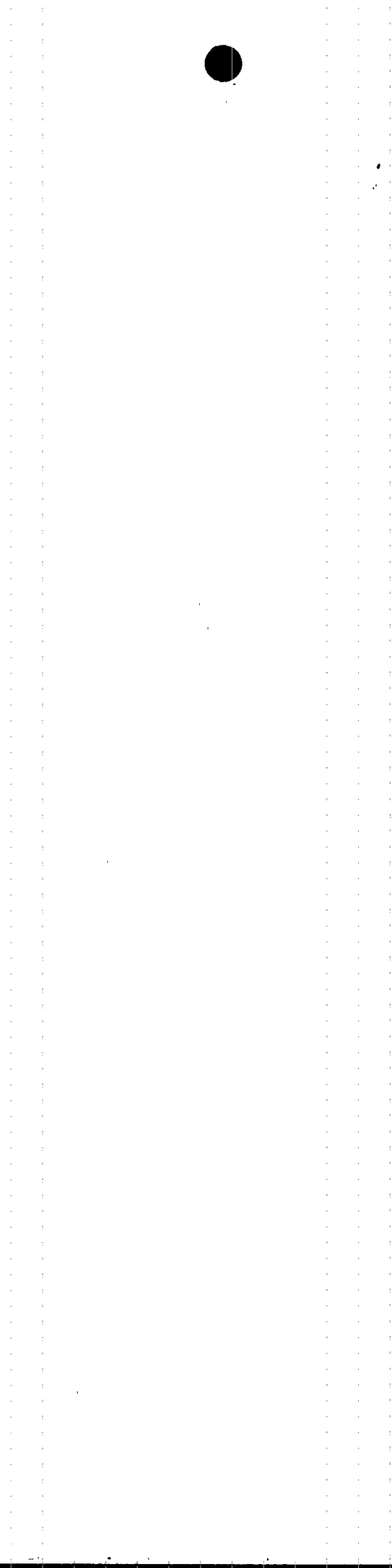
The NRC has published (60 FR 9634) a proposed revision to 10 CFR Part 50, Appendix J, including revised requirements for accomplishment of Type A ILRT tests; a frequency of one test every 10 years would replace the current requirement of three times during every 10 year interval. The proposed test frequency is performance based. This one-time scheduler exemption will allow FPL to adopt the test frequency of the proposed revision to Appendix J, when approved, and prevent unnecessary testing and the associated cost of performing this test in the interim.

Purpose of a Type A Test

The purpose of an ILRT (also called "Type A test") is to determine the overall containment leak rate. Type B and C tests, also required by 10 CFR Part 50, Appendix J, determine the individual leak rates for airlocks and containment penetrations. The Type B and C tests are performed during each refueling outage. During the development of the Appendix J regulation in the 1960s, containment leaks were envisioned to occur from maintenance activities, degradation of the containment penetrations and from the corrosion of welds in the liner plates. Operational experience, subsequent to the publication of the rule, has shown that the majority of containment leaks are found during the performance of Type B and C tests and that Type A test failures have not been an industry problem. According to Draft NUREG-1493 "Performance Based Containment Leak Test Program" and SECY 94-283 "Proposed Revision to 10 CFR 50 Appendix J, 'Containment Leakage Testing' to Adopt Performance-Oriented and Risk Based Approaches," industry experience indicates that Type B and C tests detect over 97 percent of containment leaks.

ILRT Testing Considerations

Performance of an ILRT, on the average, requires four days of critical path time during an outage, rental of air compressors/dryers required to pressurize the containment for the test and over two weeks of preparation for numerous operations, by maintenance and technical department personnel. The performance of a Type A test represents a substantial cost to FPL. The NRC has proposed revisions to 10 CFR 50, Appendix J to relax the testing frequency of Type A tests to once every 10 years. This relaxation is performance based since the Type B and C tests identify the majority of the containment leak paths. The Type B and C test schedules will not be affected by this exemption request and have been, and will continue to be, performed during each refueling outage.



Prior ILRT Results

Turkey Point Plant has performed a total of nine Type A tests on both units from 1981 to present. The test results, shown in Tables 3 and 4, demonstrate that both reactor containment buildings have acceptable leak rates that are far below the leak rates assumed in the site's offsite dose calculation. It should also be noted that these reported leak rates are higher than actual leak rates due to the instrument error tolerances added to the test results and the early termination of the test upon meeting leakage/time acceptance criteria rather than waiting for complete stabilization of parameters. If a longer duration test had been performed, containment parameters which input to the overall leak rate would further stabilize resulting in more accurate (though no less conservative) calculations of containment leakage. This conclusion is substantiated by the test results obtained for Unit 4 in 1991 (when a 24 hour test was performed instead of the usual 8 hour test).

For the test results shown in Tables 3 and 4, Turkey Point Units 3 and 4 average containment leak rate based on the mass point calculations is 0.086% and 0.064%, respectively. These values are approximately one-third to one-fourth of the leakage assumed in offsite dose rate calculations (0.25%) and approximately one-half to one-third of the acceptance criteria for the ILRT (0.1875%). The leak rate data from these tests do not show an increasing trend, indicating that the containment liner and isolation system are stable and supporting the conclusion that a one-time scheduler exemption will not reduce the current level of safety.

Test Frequency

10 CFR 50 Appendix J states:

After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each 10-year service period. The third test of each set shall be conducted when the plant is shutdown for the 10-year plant inservice inspections.

Historically, the plant has performed an ILRT approximately every other refueling outage to prevent violation of the surveillance interval (see Tables 3 and 4). This has resulted in more tests than required by the current rule and significant added cost. The ILRT test frequency does not affect or alter the leakage performance of the containment building. As stated above, changes to the current test frequency are being contemplated to



reduce required testing to once in 10 years by proposed revisions to 10 CFR Part 50, Appendix J.

The test frequency for Type B and C tests, which determine the individual leak rates for airlocks and containment penetrations will not be altered by this exemption request. The Type B and C tests will continue to be performed during the refueling outage. Therefore, allowing a one-time scheduler exemption will not reduce the current level of safety since the Type A test frequency does not alter the containment leak rates.

Basis for Exemption

10 CFR 50.12(a) (1) provides that the Commission may, upon application, grant exemptions from the requirements of the regulations (10 CFR 50) which are authorized by law, which will not present an undue risk to the public health and safety, and are consistent with the common defense and security.

1. The requested exemption and the associated activities are authorized by law.

There are no prohibitions of law which preclude the postponement of activities which would be authorized by the requested exemption. Similar exemptions have been granted by the Commission. Therefore, the NRC is authorized by law to approve the proposed exemption.

2. The requested exemption will not present undue risk to the public.

An exemption from the requirements of 10 CFR 50 Appendix J to perform reactor containment leakage testing will not present undue risk to the health and safety of the public. The measured containment leak rate over the life of the plant has been far lower than the maximum allowed by the Turkey Point Technical Specifications and the assumptions of the Offsite Dose Calculation Manual. Furthermore, the leak rate data from these tests do not show an increasing trend thus indicating that the containment liner and isolation system are stable and supporting the conclusion that a one-time scheduler exemption will not reduce the current level of safety. Finally, more Type A tests have been performed than are required under the existing rule.



3. The requested exemption will not endanger the common defense and security.

The common defense and security are in no way compromised by this proposed exemption since approval of the exemption would in no way affect relevant physical or procedural factors.

Special Circumstances

FPL has concluded that the requested one-time scheduler exemption meets the criteria in 10 CFR 50.12(a)(2) in that special circumstances are present. These special circumstances are:

10 CFR 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.

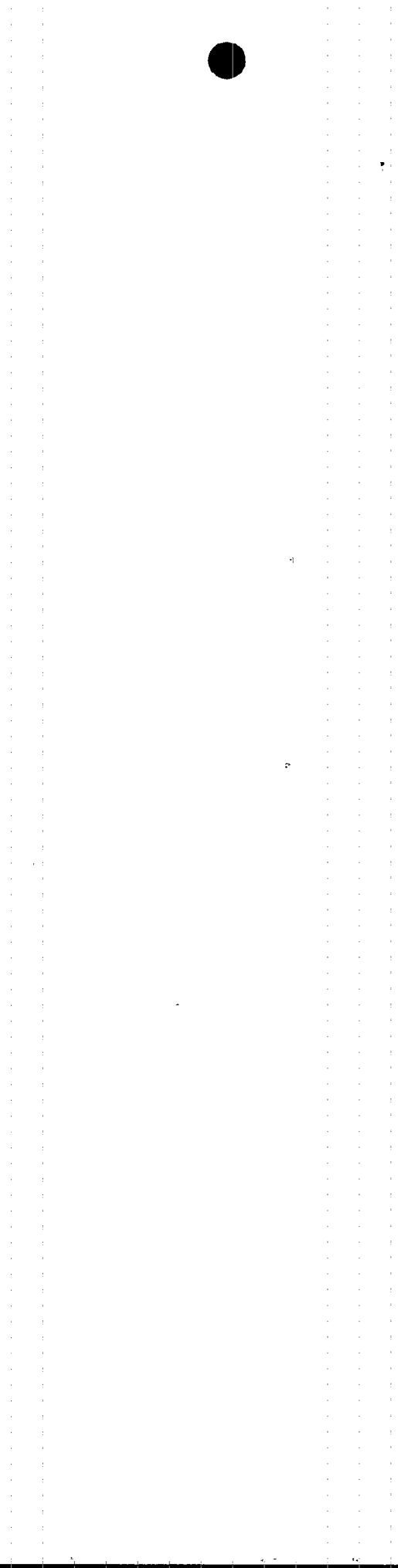
Basis The actual containment leak rates measured for both units have been far below the Technical Specification leak rate acceptance criteria. This is due to the design of the containment liner, the control of work processes and the lack of failed welds on the containment liner plates. Performance-based requirements would allow surveillances and tests that continually pass the acceptance criteria to be scheduled at a time interval that is a function of the component's past performance. The average containment leak rate since 1981 is 0.088 weight percent (wt%) for Unit 3 and 0.075 wt% for Unit 4. These values are far below the Offsite Dose Calculation requirements of 0.25 wt% and therefore, support the requested one-time scheduler exemption. This change to the test frequency does not change or alter the leakage performance of the reactor containment buildings.

Based on the above, application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

10 CFR §50.12(a)(2)(iii)

Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

Basis As shown in Tables 3 and 4, more Type A tests have been performed than are required by Appendix J.



The cost of performing a Type A test is significant. The equipment rental and calibration cost, personnel cost and replacement power cost can approach \$400,000 per day or well over \$1,000,000 per test. This cost can be avoided by this one-time scheduler exemption as can the expenditure of substantial human resources that can be otherwise devoted to safety related activities.

Therefore, continued compliance would result in undue hardship and costs that are significantly in excess of those contemplated when the regulation was adopted.

Environmental Considerations

Proposed Action

The proposed action would exempt FPL from the requirements of 10 CFR Part 50, Appendix J, to the extent that a scheduler exemption from the requirements of Section III.D.I.(a) would be granted. This evaluation considers the potential environmental issues associated with the proposed action.

Need for Proposed Action

Under the current regulations, the proposed action is required to allow FPL to postpone the next ILRT Type A test for Turkey Point Unit 4 until the refueling outage currently scheduled for October 1997. The last ILRT Type A test was performed at Unit 4 on October 20, 1991. Thus, the exemption would result in an ILRT interval of approximately 72 months. This is in excess of both the maximum 60 month interval per ANSI/ANS 56.8-1987, and the "approximately equal interval" criterion of 10 CFR Part 50, Appendix J, Section III.D.1.(a). The exemption would permit a more flexible schedule for containment leak rate testing than provided for under the current regulations and result in significant cost savings.

Environmental Impacts of Proposed Action

The proposed action would not increase the probability or consequences of accidents previously analyzed. Prior testing has verified the ability of the reactor containment to maintain leakage far below established limits with no increasing leak rate trends. The existing type B and C testing programs would not be modified and would continue to effectively detect containment leakage caused by any degradation of active containment isolation components and any containment penetrations. Experience at the facility reflects that Type A test results are only confirmatory of the results of Type B and C tests. Therefore, application of



the regulation in this particular circumstance would not serve, nor is it necessary to achieve, the underlying purpose of the rule.

Grant of the requested exemption will neither increase the probability of any accident, nor will it increase the amount of any post accident radiological release above that previously determined. In addition, there is no increase in allowable individual or cumulative occupational radiation exposure. Accordingly, there are no significant radiological environmental impacts associated with the proposed action.

With regard to non-radiological environmental impacts, the proposed exemption involves only a change to surveillance and testing requirements applicable within the restricted area as defined in 10 CFR Part 20. It does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no non-radiological environmental impacts associated with the proposed exemption.

Alternatives to Proposed Action

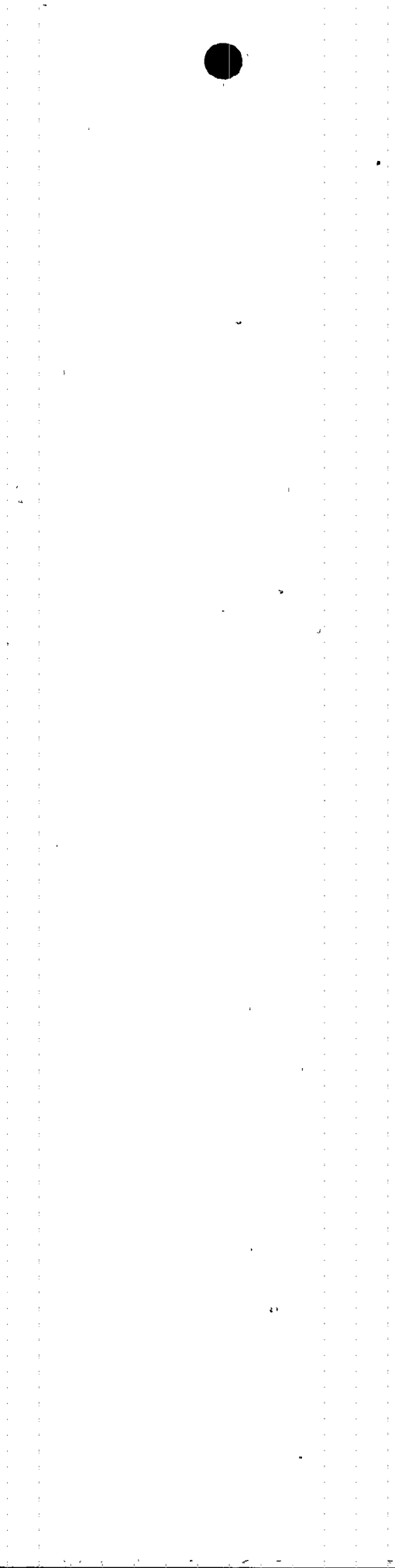
Since there is no measurable environmental impact associated with the proposed action, alternatives would have equal or greater environmental impact and need not be evaluated. Denial of the application would result in no change in current environmental impact. The environmental impact of the proposed action and the no-action alternative are the same.

Alternative Use of Resources

The proposed action does not involve the use of any resources not previously considered in the Final Environmental Statement Related to Operation of Turkey Point Plant, dated July 1972. In fact, grant of the requested exemption would result in the conservation of significant resources that otherwise would be expended.

Conclusion

Based on the foregoing environmental evaluation, FPL concludes that the proposed action would not have a significant impact on the quality of the human environment. Accordingly, it is not necessary to prepare an environmental impact statement in connection with the granting of the requested exemption.



ISI 10-Year Interval	Second										Third									
Year	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
ILRT Performed (Month/Year)	3/86			3/89			10/91				3/96 (scheduled)			4/99 (approximate)			5/02 (approximate)			
Interval Between ILRTs (Months)	36			31			53				37			37						

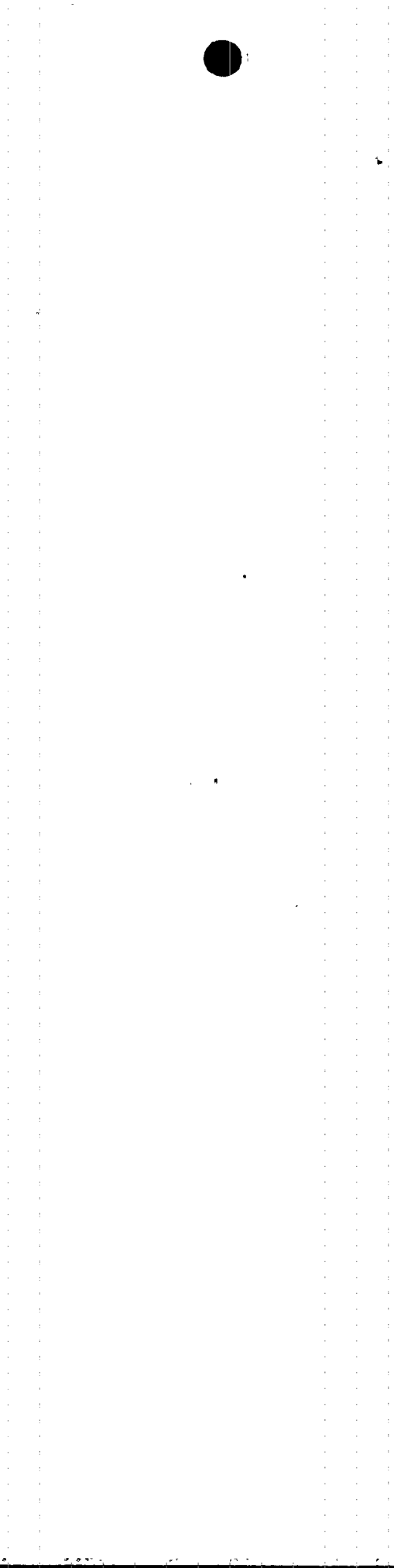
Table 1

Current Second and Third ISI Intervals; Turkey Point Unit 4 ILRT Schedule

ISI 10-Year Interval	Second										Third									
Year	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
ILRT Performed (Month/Year)	3/86			3/89			10/91				10/97			10/00 (approximate)			5/02 (approximate)			
Interval Between ILRTs (Months)	36			31			72				36			19						

Table 2

Proposed Second and Third ISI Intervals; Turkey Point Unit 4 ILRT Schedule



TEST DATE	TOTAL TIME LEAK RATE	TOTAL TIME 95% UCL	MASS POINT LEAK RATE	MASS POINT 95% UCL
March 1982	0.097 %	0.135 %	0.099 %	0.107 %
June 1985	0.044 %	0.140 %	0.060 %	0.070 %
May 1989	0.070 %	0.126 %	0.060 %	0.062 %
Nov. 1992	0.087 %	0.132 %	0.098 %	0.106 %
Average leak rate	0.075 %	0.133 %	0.079 %	0.086 %

TABLE 3
TEST RESULTS FOR TURKEY POINT UNIT 3

TEST DATE	TOTAL TIME LEAK RATE	TOTAL TIME 95% UCL	MASS POINT LEAK RATE	MASS POINT 95% UCL
Jan. 1981	0.047 %	0.130 %	0.032 %	0.037 %
May 1983	0.054 %	0.170 %	0.070 %	0.076 %
March 1986	0.077 %	0.109 %	0.080 %	0.084 %
March 1989	0.069 %	0.118 %	0.063 %	0.067 %
Oct. 1991	Note 1	Note 1	0.048 %	0.054 %
Average leak rate	0.062 %	0.132 %	0.059 %	0.064 %

TABLE 4
TEST RESULTS FOR TURKEY POINT UNIT 4

Notes:

1. Test duration was 24 hours instead of 8 hours as described in Bechtel Topical Report BN-TOP-1. In accordance with ANSI N45.4 - 1972, data analyzed using mass point analysis only.
2. Total time and mass point 95% upper confidence levels (UCL) listed in the tables above are the result of adding the error tolerances to the calculated leak rate to arrive at a leak rate which has a 95% confidence level of being accurate.
3. Leakage results expressed in tables are in units of percentage, by weight, of containment atmosphere at accident pressure per day.



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