

4.13 RADIOACTIVE MATERIALS SOURCES SURVEILLANCE

Applicability: Applies to leakage testing of by-product, source and special nuclear radioactive material sources.

Objective: To assure that leakage from by-product, source and special nuclear radioactive material sources does not exceed allowable limits.

Specification: Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an agreement State, as follows:

1. Each sealed source, except fission detectors and startup sources subject to core flux or those exempted by Specification 3.11 containing radioactive material, other than Hydrogen 3, with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months.
2. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another user unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested.
3. Startup sources and fission detectors shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux.

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5.2 REACTOR

REACTOR CORE

1. The reactor core contains approximately 71 metric tons of uranium in the form of slightly enriched uranium dioxide pellets. The pellets are encapsulated in Zircaloy - 4 tubing to form fuel rods. The reactor core is made up of 157 fuel assemblies. Each fuel assembly contains 204 fuel rods.
2. The average enrichment of the initial core is a nominal 2.50 weight percent of U-235. Three fuel enrichments are used in the initial core. The highest enrichment is a nominal 3.10 weight percent of U-235.
3. Reload fuel will be similar in design to the initial core.
4. Burnable poison rods are in the form of rod clusters which are located in vacant rod cluster control guide tubes, are used for reactivity and/or power distribution control.
5. There are 45 full-length RCC assemblies and 8 partial-length* RCC assemblies in the reactor core. The full-length RCC assemblies contain a 144 inch length of silver-indium-cadmium alloy clad with the stainless steel. The partial-length* RCC assemblies contain a 36 inch length of silver-indium-cadmium alloy with the remainder of the stainless steel sheath filled with Al_2O_3 .

REACTOR COOLANT SYSTEM

1. The design of the Reactor Coolant System complies with the code requirements.
2. All piping, components and supporting structures of the Reactor Coolant System are designed to Class I requirements and have been designed to withstand:
 - a. The design seismic ground acceleration, 0.05g acting in the horizontal and 0.033g acting in the vertical planes simultaneously, with stress maintained within code allowable working stresses.
 - b. The maximum potential seismic ground acceleration, 0.15g, acting in the horizontal and 0.10g acting in the vertical directions simultaneously with no loss of function.
3. The nominal liquid volume of the Reactor Coolant System, at rated operating conditions, is 9088 cubic feet.

* Any reference to part-length rods no longer applies after the part-length rods are removed from the reactor.

ATTACHMENT 2

No Significant Hazards Consideration

Florida Power and Light Company (FPL) presents this evaluation of the hazards considerations involved with the proposed amendment, focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility licensed under 50.21(b) or 50.22 or for a testing facility involves no significant hazards considerations, if operation of the facility in accordance with a proposed amendment would not:

1. Involve a significant increase in the probability or consequences or 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."

FPL submits that the activities associated with this amendment request do not meet any of the significant hazards considerations standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified. In support of this determination, necessary background information has been provided (Attachment 3). Discussion of each of the above significant safety hazards consideration standards follows.

Evaluation

The following evaluation demonstrates that the proposed amendment does not exceed any of the three significant hazards consideration standards.

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed Technical Specification change is an administrative change that will remove inconsistencies in the amount of special nuclear material that may be on site in the form of fission detectors. The change also clarifies the required surveillance requirements for fission detectors. This change in itself cannot cause an accident nor can it result in additional consequences of an accident previously evaluated. In fact, the additional fission detectors that precipitated the need for the T.S. change are being provided in accordance with NRC requirements to provide additional qualified instrumentation to monitor the reactor core during plant accidents.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes are administrative in nature. As discussed above the changes are being made to remove inconsistencies and provide clarification of the Technical Specifications. Therefore, this change in itself cannot create a new or different kind of accident. These changes are consistent with the Standard Technical Specifications promulgated by the NRC.

3. Involve a significant reduction in a margin of safety.

The proposed administrative changes to the Technical Specifications were precipitated by the need to utilize additional fission detectors for reactor neutron flux monitoring.

This change will achieve consistency in the License and provide clarification of the intent of the surveillance requirements for fission detectors. This change therefore does not involve a significant reduction in any margin of safety.

48 FR 14870 dated April 6, 1983 provided examples of amendments not likely to involve a significant hazards consideration. This proposed change is considered to be most similar to example (i) in that it involves an administrative change, to achieve consistency and provide clarification of the present Technical Specifications.

In summation, it has been shown that the Technical Specification change 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.

Therefore, FPL has determined that the proposed amendment involves no significant hazards considerations.

ATTACHMENT 3

BASIS FOR PROPOSED T.S. CHANGES

INTRODUCTION:

As part of plant improvements required by the NRC pursuant to Reg. Guide 1.97 Rev. 3 and 10 CFR 50 Appendix R, a new excore neutron flux monitoring system will be installed. This system will employ the use of fission chambers mounted external to the core for neutron radiation detection. Each detector will use enriched uranium in small quantities to provide the mechanism for neutron detection. The combined quantity of this material for all required detectors is consistent with Operating License Section II. C., but will exceed that allowed by Technical Specification 5.2.

In addition, to changes to T.S. 5.2, administrative changes to T.S. 4.13 are necessary to clarify the surveillance requirements for fission detectors.

BACKGROUND

In late 1973 the AEC (presently the NRC) began implementing changes in its procedures for licensing the possession of byproduct, source, and special nuclear materials in connection with the operation of power reactors. The standard format for SAR's was amended to request information on an applicant's capabilities, facilities and procedures for handling and storage of this material. In addition, standard language for incorporation into the facility operating license and Technical Specifications was provided.

On September 19, 1974, after discussions with the AEC's Directorate of Licensing, FPL submitted proposed changes to the Turkey Point Facility Operating License. The purpose of the change was to amend Section II.C. of the license and provide two new Technical Specifications (3.11 and 4.13) to ensure that byproduct, source and special nuclear material sources utilized at Turkey Point were maintained in accordance with the AEC's rules and regulations. In support of this amendment request, FPL submitted revisions to the FSAR (dated 9/17/74 and 12/23/74)

describing the radioactive materials safety program at Turkey Point. The staff reviewed and approved the proposed Technical Specification changes since there was reasonable assurance that byproduct, source, and special nuclear material would be stored, used, and accounted for in a manner which met the applicable radiation protection provisions of 10 CFR 20, 30, 40, and 70. As such the Operating License was amended on July 10, 1975 to include (among other changes) the following Section II.C, which licensed FPL:

"Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess, and use at anytime any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;"

This new section of the Operating License conformed with the AEC's standard license format as shown in an interoffice memo from the Directorate of Licensing to Branch Chiefs, Project Managers and Licensing Assistants dated 11/28/73. The intent of this section was to allow the use of the identified materials in amounts as required for reactor operation. Apparently by oversight, Technical Specification 5.2 was not amended to remove the restriction on the number of grams of enriched fissionable material allowed on-site as fission detectors. Indeed, this specification should have been deleted since it is inconsistent with Operating License Section II.C.

The other change to the Technical Specification is to clarify the intent of T.S. 4.13. The surveillance requirements specified for sealed source in use is to identify leakage that may have resulted from handling of the sealed source. Since the fission detectors, like startup sources, are not routinely handled the necessary surveillance intervals is not intended to be six months. This intent is clearly demonstrated in the NRC's Standard Technical Specifications 4.7.10 and B4.7.10, where surveillance for startup sources and fission detectors are required to be tested prior to use and following repair or maintenance. Therefore this change to the Technical Specification is considered purely administrative since it merely clarifies the surveillance requirements for fission detectors.

CONCLUSION

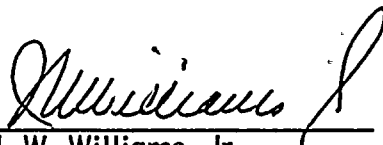
As evidenced by the discussion above, the described changes are purely administrative. As such, FPL concludes that: (1) that amendments do not involve a significant hazards consideration; (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed changes and (3) these changes are in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

STATE OF FLORIDA)
)
COUNTY OF DADE) ss.

J. W. Williams, Jr. being first duly sworn, deposes and says:

That he is a Group Vice President of Florida Power & Light Company, the Licensee herein;

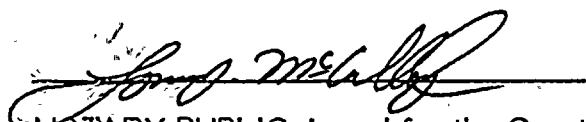
That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee.



J. W. Williams, Jr.

Subscribed and sworn to before me this

2 day of MARCH, 1985.



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

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. FEB 14, 1988
BONDED THRU GENERAL INS. UND.

My Commission expires: 2/14/88

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