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SUBJECT:
LICENSE NO DPR-67 APPL FOR AMEND: TECH SPECS PROPOSED CHANGE CONCERNING REPLACEMENT OF SELECTED SAFETY-RELATED HYDRAULIC SNUBBERS WITH MECHANICAL SNUBBERS DURING THE UPCOMING REFUELING OUTAGE...W/ATT SAFETY EVALUATION.

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FLORIDA POWER & LIGHT COMPANY

March 10, 1978
L-78-87

Director of Nuclear Reactor Regulation
Attention: Mr. Victor Stello, Director
Division of Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stello:

Re: St. Lucie Unit 1
Docket No. 50-335
Proposed Amendment to
Facility Operating License DPR-67

In accordance with 10 CFR 50.30, Florida Power and Light Company submits herewith three (3) signed originals and forty (40) copies of a request to amend Appendix A of Facility Operating License DPR-67.

The purpose of this amendment is to support the replacement of selected safety-related hydraulic snubbers with mechanical snubbers during the upcoming refueling outage. This proposal essentially modifies a request made in a previous proposal. Our letter L-76-207 of May 20, 1976 proposed, in part, that changes to Table 3.7-2 be permitted without prior license amendment provided that the conditions of 10 CFR 50.59 be met and the Table be revised by a future amendment. The May 20, 1976 proposal, which was intended to support hydraulic snubber replacement during the refueling outage, has been the subject of several discussions with the Commission Staff during recent weeks. The Staff, however, has declined to authorize changes to Table 3.7-2 without prior approval. Therefore, in order to support the planned replacement of several of the smaller sized hydraulic snubbers with mechanical snubbers, we have prepared the present request. Timely Staff review is requested so that we can implement the proposed changes during the first refueling outage which is scheduled to begin about April 1, 1978.

The proposed Technical Specification changes are described below and shown on the accompanying Technical Specification pages bearing the date of this letter in the lower right hand corner.

A001/S
3/40

Pages 3/4 7-32 through 3/4 7-37

41 entries are deleted from Table 3.7-2 (SAFETY RELATED HYDRAULIC SNUBBERS). These hydraulic snubbers are scheduled to be replaced with equivalent or better mechanical snubbers during the first refueling outage.

All operating parts in mechanical snubbers are metallic and positive acting. Replacement of the hydraulic snubbers proposed with mechanical snubbers would represent an improvement over hydraulic snubbers which can experience seal failure and loss of hydraulic fluid. Use of mechanical snubbers is expected to result in reduced maintenance and to minimize possible downtime, thereby resulting in cost savings to our customers.

The proposed amendment has been reviewed by the St. Lucie Facility Review Group and the Florida Power & Light Company Nuclear Review Board. They have concluded that it does not involve an unreviewed safety question. A safety evaluation is attached.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President

REU/MAS/sl
Attachment

cc: Mr. James P. O'Reilly, Region II
Harold F. Reis, Esquire

TABLE 3.7-2

SAFETY RELATED HYDRAULIC SNUBBERS*

FPL LOCATION NUMBER	MARK NUMBER	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE (Yes or No)	ESPECIALLY DIFFICUL TO REMOVE (Yes or No)
017	1A1	RC, RCP Motor 1A1, Elev. 57'	I	No	No
018	1A2	RC, RCP Motor 1A2, Elev. 57'	I	No	No
019	1B1	RC, RCP Motor 1B1, Elev. 57'	I	No	No
020	1B2	RC, RCP Motor 1B2, Elev. 57'	I	No	No

TABLE 3.7-2

SAFETY RELATED HYDRAULIC SNUBBERS*

FPL LOCATION NUMBER	MARK NUMBER	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
033	MS 649-319	MS, Reactor Bldg, Elev. 82'	A	No	No
034	MS 548-5	MS, Reactor Bldg, Elev. 82'	A	No	No
035	MS 1076-3164	MS, M.S. Trestle, Elev. 62'	A	No	No
036	MS 649-314	MS, Reactor Bldg, Elev. 55'	I	No	No
037	MS 649-314	MS, Reactor Bldg, Elev. 55'	I	No	No
038	MS 649-310	MS, Reactor Bldg, Elev. 50'	I	No	No
039	MS 649-304A	MS, Reactor Bldg, Elev. 30'	A	No	Yes
040	MS 548-9	MS, Reactor Bldg, Elev. 50'	I	No	Yes
041	MS 548-9	MS, Reactor Bldg, Elev. 50'	I	No	Yes
042	BF 549-7	BF, Reactor Bldg, Elev. 40'	I	No	No
043	BF 549-7	BF, Reactor Bldg, Elev. 40'	I	No	No
044	BF 549-8	BF, Reactor Bldg, Elev. 40'	I	No	Yes
047	BF 549-17	BF, Reactor Bldg, Elev. 36'	A	No	Yes

TABLE 3.7-2

SAFETY RELATED HYDRAULIC SNUBBERS*

FPL LOCATION NUMBER	MARK NUMBER	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
052	BF 549-17	BF, Reactor Bldg, Elev. 36'	A	No	No
053	SI 968-210	SI, Reactor Bldg, Elev. 16'	I	No	No
058	SI 969-1216	SI, Reactor Bldg, Elev. 18'	A	No	No
061	MS 549-11	SI, Reactor Bldg, Elev. 18'	A	No	No
066	MS 549-11	SI, Reactor Bldg, Elev. 20'	I	No	No

TABLE 3.7-2

SAFETY RELATED HYDRAULIC SNUBBERS*

FPL LOCATION NUMBER	MARK NUMBER	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE (Yes or No)	ESPECIALLY DIFF TO REMOVE (Yes or No)
073	SI 972-6240	SI, Reactor Bldg, Elev. 16'	I	No	No
074	SI 973-240	SI, Reactor Bldg, Elev. 18'	A	No	No
076	SI 973-6224	SI, Reactor Bldg, Elev. 18'	A	No	No
077	SI 868-64	SI, RAB, Elev. 4'	A	No	No
079	SI 868-163	SI, RAB, Elev. 4'	A	No	[illegible]
080	SI 868-410	SI, RAB, Elev. 4'	A	No	No
081	SI 676-67	SI, RAB, Elev. 4'	A	No	No
082	SI 676-67	SI, RAB, Elev. 4'	A	No	No
083	SI 676-105	SI, RAB, Elev. 4'	A	No	No

TABLE 3.7-2

SAFETY RELATED HYDRAULIC SNUBBERS*

FPL LOCATION NUMBER	MARK NUMBER	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
084	SI 676-105	SI, RAB, Elev. 4'	A	No	No
086	SI 676-129	SI, RAB, Elev. 4'	A	No	No
087	SI 676-2481	SI, RAB, Elev. 24'	A	No	No
110	SI 676-247	SI, RAB, Elev. 30'	A	No	No
111	SI 676-2475A	SI, RAB, Elev. 30'	A	No	No
112	SI 676-4505	SI, RAB, Elev. 7'	A	No	No
113	SI 971-6236	SI, RAB, Elev. 4'	A	No	No
114	SI 972-6240	SI, RAB, Elev. 4'	A	No	No
091	SPS-417	Pressurizer Spray, Reactor Bldg, Elev, 50'	I	No	No
090	SPS-27	Pressurizer Spray, Reactor Bldg, Elev, 50'	I	No	No
092	SPS 467	Pressurizer Spray, Reactor Bldg, Elev. 80'	A	No	No
093	SPS-777	Pressurizer Spray, Reactor Bldg, Elev. 80'	A	No	No

TABLE 3.7-2

SAFETY RELATED HYDRAULIC SNUBBERS*

FPL LOCATION NUMBER	MARK NUMBER	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
096	CC-1865-9	CC, Reactor Bldg, Elev. 25'	A	No	No
088	CC-1899-48	CC, Reactor Bldg, Elev. 25'	A	No	No
089	CC-1852-6241	CC, Reactor Bldg, Elev. 25'	A	No	No
101	CC-17-1	CC, RAB, Elev. 20'	A	No	No
102	MS-649-313	CC, RAB, Elev. 26'	A	No	No
104	CC-21-1	CC, RAB, Elev. 20'	A	No	No
103	BF-549-7	CC, RAB, Elev. 26'	A	No	No
105	CC-23-2	CC, RAB, Elev. 26'	A	No	No
106	CH-3-40	CH, RAB, Elev. 34'	A	No	No
107	CH-3-75	CH, RAB, Elev. 23'	A	No	No

SAFETY EVALUATION

Re: St. Lucie Unit 1
Docket No. 50-335
Snubbers

I. Introduction

This evaluation supports a proposed change to Table 3.7-2 (SAFETY RELATED HYDRAULIC SNUBBERS). A number of snubbers on the list are deleted because they are scheduled to be replaced by mechanical snubbers during the first refueling outage (Spring 1978). Only smaller snubbers of the 3 kip (3000 inch-pounds) and 10 kip size will be affected by the changeover (see attached list).

II. Evaluation

The snubbers in question are used for seismic restraint That is, they should accommodate pipe movement caused by slow thermal expansion, but they should "lock-up" to prevent potentially damaging transient movement during a postulated seismic event of sufficient magnitude. The Pacific Scientific (PSA) mechanical snubbers which we propose to use operate on an "acceleration limiting" basis. PSA snubbers permit thermal movement since the acceleration associated with thermal movement is very low, but they limit seismic induced acceleration to 0.02g in either direction. Mechanical snubbers would actually allow less to movement than hydraulic snubbers under seismic

conditions because of hydraulic snubber lockup delays associated with achieving the lockup velocity, activation of the lockup mechanism, and compression of the hydraulic fluid. Therefore, based on seismic functional requirements, the planned replacement of hydraulic snubbers with mechanical snubbers would be an improvement.

Pacific Scientific performed extensive testing in developing the PSA 3 (3 kip) and PSA 10 mechanical snubbers. The purpose was to evaluate their operability under the adverse conditions expected in many applications, such as high humidity, high temperature, and vibration. The snubbers operated favorably under all test conditions.

PSA 3 and PSA 10 mechanical snubbers are currently in use at Turkey Point Units 3 and 4 and at other reactor sites. To our knowledge there have been no malfunctions of these snubbers in operating plants. Also, a PSA 3 snubber from each Turkey Point nuclear unit was removed for inspection and testing after 1 year of service. Both snubbers were from the containment environment. The inspection and test results showed that the snubbers were performing properly and had not degraded operating conditions.

III. Conclusions

Based on testing and operating experience, the use of PSA mechanical snubbers should improve the operability of the

seismic support system. In conclusion, (1) the proposed change does not increase the probability or consequences of accidents or malfunctions of equipment important to safety and does not reduce the margin of safety as defined in the basis for any technical specification, therefore, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Snubber Changeout (PSL)

The following hydraulic snubbers are scheduled to be replaced by mechanical snubbers during the Spring 1978 refueling outage:

3 kip Size			10 kip Size		
Tag No.	Mark No.		Tag No.	Mark No.	
021	RC	005-34A	023	RC	005-36
022	RC	005-34B	024	RC	005-12A
025	RC	005-12B	028	RC	005-55C
026	RC	005-12B	045	BF	549-11
027	RC	005-55B	046	BF	549-11
029	RC	005-62A	048	BF	661-407
030	RC	005-89	049	BF	661-407
031	RC	005-90	050	BF	661-416
032	RC	005-98	051	BF	661-416
054	SI	968-565	057	SI	969-1190
055	SI	968-1205	063	SI	969-6217
056	SI	968-1207	064	SI	969-6217
059	SI	969-6193	065	SI	970-1210
060	SI	969-6195	068	SI	971-6
062	SI	969-6201	069	SI	971-1229
067	SI	970-1251	070	SI	971-6229
071	SI	971-6236	072	SI	972-1243
094	CS	832-118	075	SI	973-6219
095	CS	878-115	078	SI	868-111
			085	SI	676-127
			098	CC	1899-2208
			100	CC	1865-2207

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

Robert E. Uhrig, being first duly sworn, deposes and says:

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

That he has executed the foregoing document; that the statements made in this said 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.

Robert E. Uhrig

Robert E. Uhrig

Subscribed and sworn to before me this

13 day of March, 19 78

Theresa M. Miranda

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

My commission expires: NOTARY PUBLIC STATE OF FLORIDA AT LARGE MY COMMISSION EXPIRES MAY 5, 1981 BONDED THRU MAYNARD BONDING AGENCY