

Florida Power
CORPORATION

December 19, 1980
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3-120-35

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Mr. Robert W. Reid
Chief
Operating Reactors Branch #4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Use of BUNA-N in Hydraulic Snubbers

Dear Mr. Reid:

This letter is to obtain NRC approval to use BUNA-N seal material in the hydraulic snubber at Crystal River Unit 3 until the refueling outage in the Fall of 1981. This approval is necessary for Florida Power Corporation to use Technical Specification 4.7.9.1(a) for the visual surveillance of hydraulic snubbers in lieu of Specification 4.7.9.1(b) which requires an inspection every thirty-one (31) days. As this material is in both Accessible and Inaccessible snubbers, the 31-day inspection would require the unit to shut down to perform the inspection.

The characteristics of BUNA-N are similar to Ethylene Propylene (EP) and are as follows:

Material	BUNA-N Compound C-90 National Seal Co. (5% plasticiser)	EP
Heat Resistance (Containment design temperature = 281°F)	Continued use <257°F	Continued use <300°F
Radiation Resistance (25% damage at an absorbed dose)	>1.5 x 10 ⁷ Rad	>5 x 10 ⁶ Rad
Compatability with hydraulic fluid (SF-9650)	5% shrinkage	Negligible

The above tabulation shows:

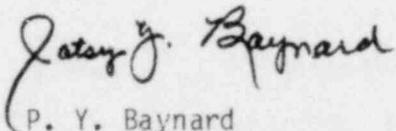
1. The heat resistance of the BUNA-N and EP material are comparable. Specifically, the BUNA-N material is designed for the normal operating temperatures at CR-3 and will not deteriorate appreciably during the short-term operability period for the snubbers during accident conditions,
2. The radiation resistance of the BUNA-N material is consistent with the EP material, and
3. The compatibility with the hydraulic fluid shows an expected 5% shrinkage for the BUNA-N material vs. negligible shrinkage for the EP material. Considering the static application of the o-rings and the fact that only a small amount of the seal is exposed to the fluid as the o-rings are used as an outside seal under compression, the 5% shrinkage should not affect the operability of the snubbers.

It is probable that some of this material was installed during the Spring 1979 refueling outage and inspected during the Spring 1980 refueling outage. It has been confirmed that the seal material was installed in the Spring 1980 refueling outage and a partial visual inspection of at least one of these snubbers was performed in 1980. No snubber has ever been declared inoperable due to a failed seal, where this seal material is located. This operating history further supports the above tabulation and conclusions that the BUNA-N material is an acceptable material in lieu of the EP material until the Fall 1981 outage.

Your most expeditious review of this approval request is appreciated.

Very truly yours,

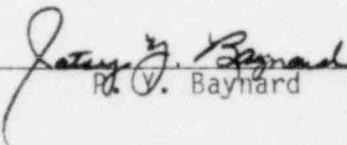
FLORIDA POWER CORPORATION



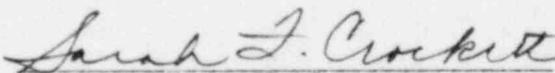
P. Y. Baynard
Manager
Nuclear Support Services

STATE OF FLORIDA
COUNTY OF PINELLAS

P. Y. Baynard states that she is the Manager, Nuclear Support Services of Florida Power Corporation; that she is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of her knowledge, information and belief.


P. Y. Baynard

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 19th day of December, 1980.


Notary Public

Notary Public, State of Florida at Large,
My Commission Expires: August 24, 1983

CrockettNotary (D12)