

August 3, 1978

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Docket No.: 50-302

Florida Power Corporation  
 ATTN: Mr. W. P. Stewart  
 Director, Power Production  
 P. O. Box 14042, Mail Stop C-4  
 St. Petersburg, Florida 33733

Gentlemen:

We have reviewed your July 7, 1978 submittal regarding Decay Heat Pump-1A shaft failure and have determined that the additional information listed in the enclosure is necessary to continue our review. This information should be submitted as soon as possible.

Sincerely,

*Stuetz*  
 Robert W. Reid, Chief  
 Operating Reactors Branch #4  
 Division of Operating Reactors

Enclosure:  
 Request for Additional  
 Information

cc w/enclosure: See next page

POOR ORIGINAL

AP 3  
GD

OFFICE	ORB#4: DOR	EB:DOR	C-ORB#4: DOR		
SURNAME	CNelson:rm		RReid	8008040761	
DATE	8/3/78	8/3/78	8/3/78		

Florida Power Corporation

cc: Mr. S. A. Brandimore  
Vice President and General  
Counsel  
P. O. Box 14042  
St. Petersburg, Florida 33733

Crystal River Public Library  
Crystal River, Florida 32629

REQUEST FOR ADDITIONAL INFORMATION

CRYSTAL RIVER 3 DHP-1A SHAFT FAILURE

1. Additional assurance is needed that the corrective action proposed for DHP-1A will restore the ability of this pump to perform its intended function. Therefore testing in the following areas is requested:
  - (1) Verification that the minimum required flow and head characteristics are maintained.
  - (2) Verification that impeller rubbing has been eliminated and that excessive vibration levels do not exist at flow rates at which this pump may operate. This should be accomplished using accelerometer data taken from the bearing housing in the velocity mode, to ascertain peak values at various frequencies, and demodulated acceleration data taken for the pump casing, to ascertain the degree of pump rubbing or impact with the stationary wear rings or casing.
  - (3) A thorough inspection of the pump at the conclusion of testing.

Please inform us, within seven days from the date of this letter, of the tests of DHP-1A that you intend to perform. It will be necessary for us to review the results of these tests prior to restart of CR-3.

2. What is the maximum time that the decay heat pumps must operate in the recirculation mode following a loss of coolant accident and approximately how long had DHP-1A operated in the recirculation mode prior to the most recent failure?
3. Provide the information or data which supports the revised restrictions for operation at minimum or recirculation flow rates.
4. In order to facilitate our review of DHP-1A and the corrective actions to be taken, please provide detailed engineering drawings of the DHP showing critical dimensions.

5. Because a similar but less severe misalignment between impeller and casing on DHP-1B is not precluded by its operating history and because inspection of the previous DHP-1B shaft at the time of its replacement "revealed indications that could be interpreted as initiation of fatigue damage" (B&W Preliminary Significant Deficiency Report 5-77, May 3, 1977), you are requested to verify by inspection proper alignment between the DHP-1B impeller and casing and report the results of this inspection. Please inform us, in your seven day response to question 1, of your intent with respect to inspection of DHP-1B. You are also requested to provide the pump signature of DHP-1B which you refer to in your letter.