



Entergy  
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January 15, 1991

2CAN019108

U. S. Nuclear Regulatory Commission  
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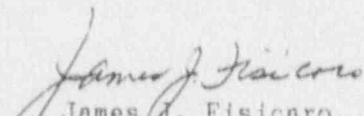
Subject: Arkansas Nuclear One - Unit 2  
Docket Nos. 50-386/  
License Nos. NPF-6  
Response to Request for Additional Information  
on Spent Fuel Pool Technical Specification Change

Gentlemen:

In our letter of October 19, 1989 (2CAN108903), Proposed Technical Specification Change - Spent Fuel Pool Surveillance Interval, Entergy Operations requested an amendment to the Arkansas Nuclear One, Unit 2 Technical Specifications for inspection frequency of the Spent Fuel Pool. In your letter of August 30, 1990 (2CAN1089004), the Staff requested additional information in order to complete its evaluation. Provided as an attachment to this letter is our response to your request. Also we have provided a copy of our current procedure for inspection of the Spent Fuel Pool to further assist you in your evaluation.

Should you or your staff have questions regarding this response, please do not hesitate to call.

Very truly yours,

  
James J. Fisicaro  
Manager, Licensing

JJF/CWT  
Attachments

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ATTACHMENT TO 2CAN019108

1. Relative to your inspection of the fuel pool, define what is considered to be a significant crack.

The inspection and mapping of deterioration in the spent fuel pool concrete surface is accomplished in accordance with ANO Procedure 2306.010 (attached). The significance associated with a crack is dependent upon its size and an evaluation of its impact upon the integrity of the spent fuel pool. This is discussed further in response to question 2.

2. What actions are to be taken when a significant crack is identified?

Procedure 2306.01 provides the following guidance with respect to the inspection of the spent fuel pool concrete surface.

- A. All cracks greater in width than 0.01" are measured and mapped.
- B. All crack changes or deficiencies are evaluated to determine its impact upon spent fuel pool integrity (Section 8.3.3 and 8.3.4 of procedure 2306.010).
- C. Any cracks which impact the fuel pool integrity based upon the Engineer's evaluation will require that appropriate reporting requirements and corrective action be initiated.

3. What are the acceptance values for all recorded measurements?

Procedure 2306.010 requires that changes in crack patterns be evaluated by the engineering section. Cracks will have to be .01" or greater in width before changes will be recorded.

4. What are the criteria used to determine the structural integrity of the spent fuel pool?

Procedure 2306.010 provides limits which represents criteria to determine appropriate response based upon the size of the crack. Any significant crack discovered would be evaluated on a case by case basis considering the specific location of the crack and the load bearing characteristic of the pool structure at that location. Other factors which may be considered include the calculated stresses within the reinforcing steel and concrete, associated allowable stresses, and the amount of reinforcing steel concrete cover. Any detailed evaluation would probably reference the original evaluation and the documentation of the initial test results.

5. Does your inspection procedure include all of the above information?

Our inspection procedure requires different responses for different size cracks but does not specify criteria to be used when evaluating larger cracks.

6. How will the five year frequency of inspection interval ensure the structural integrity of the spent fuel pool? Additional justification is necessary to extend the surveillance inspection frequency to once per five years. According to the inspection records, some new cracks or spallings have been found every three years.

The Proposed Technical Specification Change will require an inspection of spent fuel pool concrete surface at five year intervals instead of 18 month intervals if no abnormal degradation or indications of structural distress are detected.

Thirteen inspections of the spent fuel pool concrete have been conducted over the last eleven years without observance of abnormal degradation or structural distress. This record provides assurance that the structural integrity of the spent fuel pool is maintained. The lack of any abnormal degradation or indication of structural distress during the past eleven years leads one to conclude that very little change is to be expected.

With the exception of five cracks observed during the inspection conducted on March 20, 1985, all cracks observed were smaller than .01" wide (.01" width is the limit provided by Procedure 2306.010) and most were not structural related (such as the spalling reported in surface material placed over an expansion joint and cracks in grout topping placed upon the structural element.) All cracks evaluated have been found not to impact the structural integrity of the spent fuel pool. The five cracks found in 1985 which exceeded the screening limit width have not grown.