



ARKANSAS POWER & LIGHT COMPANY

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March 24, 1983

ØCANØ38326

Director of Nuclear Reactor Regulation
ATTN: Mr. J. F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Director of Nuclear Reactor Regulation
ATTN: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Units 1 & 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Additional Information Concerning
Spent Fuel Storage Expansion
Environmental Area

Gentlemen:

A telecon on March 18, 1983, with Mr. Guy Vissing and Mr. Tom Cain of the NRC resulted in the request for additional information to our original submittal of November 5, 1982, (ØCAN118305) concerning the proposed spent fuel storage expansion. Specifically, Mr. Cain requested information concerning any non-radiological wastes to be discharged as a result of the reracking. Also, information was requested to specify the additional heat being dissipated to the environment due to the increase of spent fuel stored in the fuel pool. Attached is our response to this request.

Very truly yours,

John R. Marshall
Manager, Licensing

JRM:MD:s1

Attachment

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Question

Will there be additional non-radiological wastes discharged as a result of the reracking (construction or operations), and will a change to the NPDES permit be submitted?

Response

We have checked with our vendors and received confirmation that all waste material generated from the reracking of our spent fuel pool will be treated as radwaste. Therefore, there will be no changes to the NPDES since we anticipate no known non-radiological discharges.

Question

What is the difference in heat dissipation from the normal rejected heat from the plant minus the normal rejected heat from the plant including the additional heat rejected by the increased fuel storage?

Response

The additional heat dissipated by the expanded versus the existing fully loaded spent fuel pool is insignificant when compared to the normal heat dissipated to the environment due to typical steam plant inefficiencies. During normal full power operation, the heat dissipated by Unit 1 is more than 5.7 billion BTU/hr while Unit 2 is approximately 6.2 billion BTU/hr. The difference between the expanded and existing fuel pool is approximately five batches. These additional batches represent an increase heat load of 3.1×10^5 BTU/hr for each spent fuel pool. This percentage increase of heat released to the environment due to the fuel pool expansion is approximately .005%.

The information used to answer this question was obtained from different sources, all of which are on docket. The total heat dissipated by Unit 1 (5.7 billion BTU/hr) was calculated using information contained on page 52 of the Unit 1 Environmental Report. This document provided the volumetric flow rate of the circulating water (1700 cubic feet per second) and the delta temperature (15°F) from which the waste heat was calculated. The Unit 2 Environmental Report noted on page 3.4-1 that 6.2 billion BTU/hr are dissipated through the cooling water system.

The additional heat loads due to the expanded fuel pools were calculated by summing the heat loads from the first five batches as provided in our response to question 4 of our March 7, 1983 letter (ØCANØ383Ø7) to the Commission (see pages 4 and 5).