DCS-MS-016

JUL 26 1982

DISTRIBUTION:
Docket File
NRC PDR
L PDR
NSIC
ORB#3 Rdg
DEisenhut
JHeltemes
OELD
I&E
ACRS-10
PMKreutzer-3
RAClark
ETourigny
Gray File
ORothberg
JRidgely
TCain
JMinns
WBrooks
BTurovlin
MWohl
PStoddart

Docket No. 50-285

Mr. W. C. Jones
Division Manager, Production
Operations
Omaha Public Power District
1623 Harney Street
Omaha, Nebraska 68102

Dear Mr. Jones:

In conducting our review of your March 12, 1982 request relating to Spent Fuel Storage Modification for Increased Storage Capabity at the Fort Calhoun Station, Unit No. 1, we have determined that we will need the additional information identified in the enclosure to continue our review.

In order for us to maintain our review schedule, your response is requested within 30 days of your receipt of this letter.

The information requested in this letter affects fewer than 10 respondents; therefore OMB clearance is not required under P.L. 96-511.

Please contact us if you have any questions concerning this request.

Sincerely,

Original signed by
Robert A. Clark
Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

8208090038 820726
PDR ADOCK 05000285
P PDR

OFFICE	ORB#3:DL	ORB#3:DL	ORB#3:DL				
SURNAME	PMKreutzer	ETourigny/pm	RAClark				
DATE	7/26/82	7/26/82	7/26/82				

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-960

Omaha Public Power District

cc:

Marilyn T. Shaw, Esq.
LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, D. C. 20036

Mr. Jack Jensen
Chairman, Washington County
Board of Supervisors
Blair, Nebraska 68023

U.S. Environmental Protection Agency
Region VII
ATTN: Regional Radiation
Representative
324 East 11th Street
Kansas City, Missouri 64106

Mr. Frank Gibson
W. Dale Clark Library
215 South 15th Street
Omaha, Nebraska 68102

Alan H. Kirshen, Esq.
Fellman, Ramsey & Kirshen
1166 Woodmen Tower
Omaha, Nebraska 68102

Mr. Larry Yandell
U.S.N.R.C. Resident Inspector
P. O. Box 309
Fort Calhoun, Nebraska 68023

Mr. Charles B. Brinkman
Manager - Washington Nuclear
Operations
C-E Power Systems
Combustion Engineering, Inc.
4853 Cordell Avenue, Suite A-1
Bethesda, Maryland 20014

Regional Administrator
Nuclear Regulatory Commission, Region IV
Office of Executive Director for Operations
611 Ryan Plaza Drive Suite 1000
Arlington, Texas 76011

ENCLOSURE

QUESTIONS CONCERNING FT. CALHOUN PROPOSED SPENT FUEL STORAGE EXPANSION

All questions refer to Omaha Public Power District Report entitled "Fort Calhoun Station, Unit Number 1, Spent Fuel Storage Rack Modification Licensing Submittal, NR-FC-80-25" dated March 1982 unless otherwise noted.

220.01 Provide structural drawings of the spent fuel pool, liner and pool support structure.

220.02 Is the analysis of the pool/rack system in complete compliance, in all respects with the documents listed in Table 6.1. If not, state and justify any and all deviations.

220.03 Is all material, fabrication, welding, and inspection of the racks in accordance with the ASME Code, Section III, Division 1, Subsection NF? If not, describe and justify the deviations.

220.04 What damping values were used in the design/analysis?

220.05 How were seismic responses to three directional components of loading combined?

a. for the design of the racks?
b. for the analysis of the forces on the pool structure?

220.06 Were thermal loads considered in the design of the racks, and for the analysis of the pool floor? If so, describe the design and analysis procedures. If not, provide an explanation and justification.

220.07 Indicate factors of safety against both tipping and sliding of the rack assemblies. Explain in detail how the values were obtained.

220.08 In the discussion of spot welding in Section 6.3, 6.4 and 6.5, you discuss factors of safety with respect to a "limiting stress". Define the limiting stress: Is it yield or ultimate; what are the values; what are the actual stress values. Justify the factors of safety used by comparing with NRC acceptance criteria. Is the welding in accordance with all ASME code requirements?

220.09 What response spectra was used in the analysis? Explain and provide justification for its use. Provide the curves of the response spectra.

220.10 What time history was used in the analysis: Explain and justify its use. Provide the time history curves.

220.11 What are the factors-of-safety for the pool structure components? Explain your answers in detail for all loading conditions.

220.12 Provide details of your drop accident analysis. Provide a list of potential "drop-objects". Provide results of calculations which led to your conclusion that dropped-object damage would be "minimal".

220.13 Was the effect on the racks due to uplift loads of a stuck fuel assembly considered? Explain.

220.14 Provide sketches of the mathematical model(s) used in the seismic analysis of the racks.

220.15 Provide a detailed discussion of the seismic analysis of the pool structure. Include numerical results of stress/strain calculations.

220.17 Justify the use of a "static analysis" of the vertical seismic response of the rack. How was it determined that such an analysis is "sufficient"?