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 FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316  
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 COPELAND, R.A.                  Advanced Nuclear Fuels Corp. (formerly Exxon Nuclear Co., I,  
 RECIPIENT AFFILIATION  
 RECIP. NAME                      Office of Nuclear Reactor Regulation, Director (Post 870411)

SUBJECT: Forwards listed topical repts, providing fuel storage facility thermal hydraulic & criticality analysis results.

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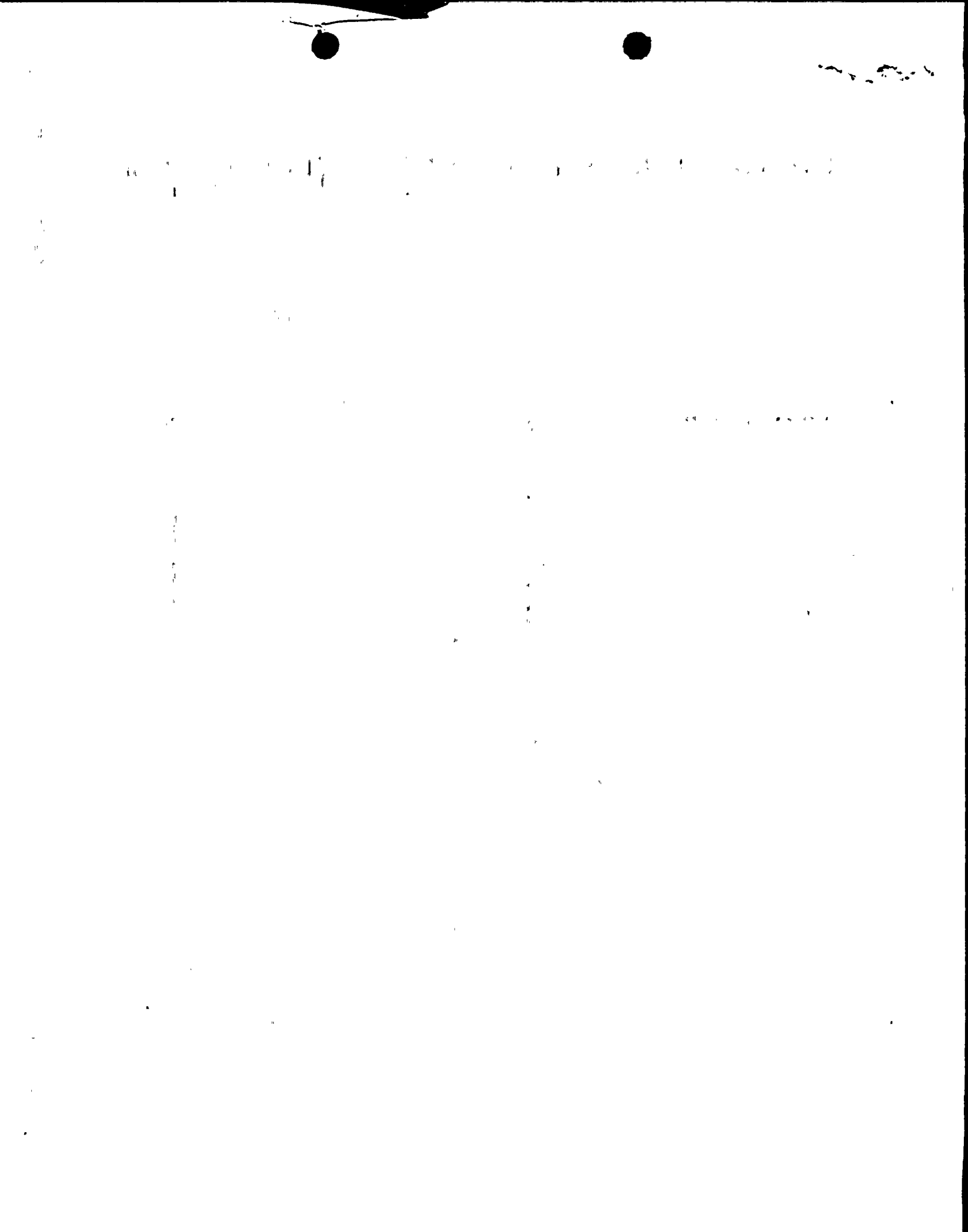
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FUEL ENGINEERING &  
TECHNICAL SERVICES

July 22, 1988  
RAC:048:88

Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

Dear Sirs:

Subject: Transmittal of the Donald C. Cook Unit 2 Fuel Storage Facility  
Thermal Hydraulic and Criticality Analysis Results

Ref.: Donald C. Cook Nuclear Plant No. 2; Docket No. 50-316; License No.  
DPR-74

- (1) ANF-88-09, "Thermal-Hydraulic Analysis of the D.C. Cook Spent Fuel Pool"
- (2) ANF-88-112, "Criticality Safety Analysis D.C. Cook Spent Fuel Storage Racks with 15x15 and 17x17 Fuel Enrichments up to 5.0 Percent
- (3) ANF-88-057, "Final Report Criticality Safety Analysis D.C. Cook New Fuel Storage Vault with 5.0% Enriched 17x17 Fuel"

Enclosed are five (5) copies of each of the Advanced Nuclear Fuels Corporation (ANF) topical reports listed above. These topicals report the results from the criticality and thermal hydraulic analyses that support the storage of 17X17 and 15X15 fuel assemblies with burnups to 50.0 GWD/MT and initial enrichment levels up to 5.0% U-235 in the spent fuel storage facility at D.C. Cook Unit 2 (ANF-88-09 and ANF-88-112). The third document (ANF-88-057) reports results from a criticality analysis that supports the storage of 17X17 fuel assemblies containing an enrichment level up to 5.0% U-235 in the new fuel storage vault at D.C. Cook Unit 2. At the request of American Electric Power Service Company (AEPSC), these reports are being transmitted directly by ANF.

If you have any questions regarding this transmittal, please contact Mr. Tom Georgantis of AEP at (614) 223-2059.

Sincerely,



R.A. Copeland  
Manager, Reload Licensing

gf

cc: Mr. T. Georgantis (AEPSC)  
Mr. John Stang (NRC) (w/Enclosures)

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