

February 6, 1989

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Docket No. 50-416

Mr. W. T. Cottle
Vice President, Nuclear Operations
System Energy Resources, Inc.
Post Office Box 23054
Jackson, Mississippi 39205

Dear Mr. Cottle:

SUBJECT: TRANSMITTAL OF ENVIRONMENTAL ASSESSMENT - GRAND GULF NUCLEAR
STATION, UNIT 1 (TAC NO. 71438)

Enclosed is a copy of an Environmental Assessment and Finding of No
Significant Impact relative to the Grand Gulf Nuclear Station, Unit 1, for
your information. This assessment relates to your December 6, 1988 request
for amendment.

This assessment has been forwarded to the Office of the Federal Register for
publication.

Sincerely,

LSI

Lester L. Kintner, Senior Project Manager
Project Directorate II-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosure:
Environmental Assessment

cc w/enclosure:
See next page

[GGNS EA 71438]

OP-1

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System Energy Resources, Inc.

Grand Gulf Nuclear Station (GGNS)

cc:

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UNITED STATES NUCLEAR REGULATORY COMMISSIONSYSTEM ENERGY RESOURCES, INC., et al.GRAND GULF NUCLEAR STATION, UNIT 1DOCKET NO. 50-416ENVIRONMENTAL ASSESSMENT ANDFINDING OF NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (NRC or the Commission) is considering issuance of an amendment to Facility Operating License No. NPF-29 issued to the System Energy Resources, Inc., et al. (the licensee), for operation of Grand Gulf Nuclear Station, Unit 1, located in Claiborne County, Mississippi.

ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action:

The proposed amendment would revise the provisions in the Technical Specifications (TS) relating to extended fuel irradiation. The proposed action was requested in the licensee's application dated December 6, 1988.

The Need for the Proposed Action:

The proposed changes are needed to allow the licensee the flexibility of extending the fuel irradiation, thereby permitting operation for longer fuel cycles.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed revisions to the TS. The proposed revisions would permit use of fuel which would be irradiated to levels above 33 gigawatt days per metric ton (GWD/MT) but not to exceed 39 GWD/MT.

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The safety considerations associated with reactor operation with extended fuel irradiation have been evaluated by the NRC staff. The staff has concluded that such changes would not adversely affect plant safety. The proposed changes have no adverse effect on the probability of any accident. The increased burnup may slightly change the mix of fission products that might be released in the event of a serious accident, but such small changes would not significantly affect the consequences of serious accidents. No changes are being made in the types or amounts of any radiological effluents that may be released offsite. There is no significant increase in the allowable individual or cumulative occupational radiation exposure.

With regard to potential nonradiological impacts of reactor operation with extended irradiation, the proposed changes to the TS involve systems located within the restricted area, as defined in 10 CFR Part 20. They do not affect nonradiological plant effluents and have no other environmental impact.

The environmental impacts of transportation resulting from the use of higher enrichment fuel and extended irradiation are discussed in the staff assessment entitled, "NRC Assessment of the Environmental Effects of Transportation Resulting from Extended Fuel Enrichment and Irradiation," which was published in the Federal Register on August 11, 1988 (53 FR 30355). This action was in connection with the Shearon Harris Nuclear Power Plant, Unit 1, Environmental Assessment and Finding of No Significant Impact. As indicated therein, the environmental cost contribution of transportation of the increases in the fuel enrichment up to 5% and irradiation limits up to 60 GWD/MT are either unchanged or may, in fact, be reduced from those summarized in Table S-4, as set forth in 10 CFR 51.52(c). These findings are applicable to the proposed amendment for the Grand Gulf Nuclear Station, Unit 1.

Therefore, the Commission concludes that there are no significant radiological or nonradiological environmental impacts associated with the proposed amendment.

Alternative to the Proposed Action:

Since the Commission has concluded that there are no significant environmental effects that would result from the proposed action, any alternatives with equal or greater environmental impacts need not be evaluated.

The principal alternative would be to deny the requested amendment. This would not reduce environmental impacts of plant operation and would result in reduced operational flexibility.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the "Final Environmental Statement related to the operation of Grand Gulf Nuclear Station, Units 1 and 2," dated September 1981.

Agencies and Persons Consulted:

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for the proposed license amendment.

Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment.

For further information with respect to this action, see the application for the amendment dated December 6, 1988, which is available for public inspection at the Commission Public Document Room, 2120 L Street, N.W., Washington, D.C. 20555 and at the Hinds Junior College, McLendon Library, Raymond, Mississippi 39154.

Dated at Rockville, Maryland, this 6th day of February, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

Edward A. Reeves, Acting Director
Project Directorate II-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

[GGNS EA 71438]

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