

FEB 25 1971

Docket No. 50-302

John A. Blume & Associates, Engineers
612 Howard Street
San Francisco, California 94105

Gentlemen:

Contract No. AT(49-5)-3011

John A. Blume & Associates, Engineers is hereby requested, pursuant to the conditions of Contract No. AT(49-5)-3011, to perform the following services for the Commission concerning the operating license review of Florida Power Corporation's Crystal River Unit 3 Nuclear Generating Plant.

1. Perform an overall review of the seismic design and analyses for Class I (seismic) structures, systems, components, and equipment to determine if the specified seismic design criteria have been adequately and appropriately applied.
2. Perform a review of the following specific areas related to the seismic design and analyses of Class I structures, systems, components, and equipment to determine:
 - a. The adequacy of the seismic-system dynamic analyses which have been used to determine the capability of the nuclear power plant to withstand the specified seismic inputs at the site, taking into account soil-structure interaction and coupled horizontal and vertical motions.
 - b. The adequacy of seismic analyses which have been used to determine the capability of the structures, systems, components, and equipment to withstand the loadings which employ the inputs and responses as may be derived by the seismic-system dynamic analyses.
 - c. The suitability of the specified damping factors as applied to the design of structures, systems, components, and equipment, taking into account the influence of the specified design stress levels which have been used under the various seismic design loading combinations.

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- d. The adequacy of the design loading combinations (which include a seismic load) and the associated limits of allowable design stresses which have been used for the various construction materials of the Class I structures only.

The adequacy of specific testing methods used, if any, in lieu of design analyses or seismic analytical methods.

3. Prepare and furnish a "Seismic Design Consultant Report for Crystal River Unit 3 Nuclear Generating Plant" containing a summary of the conclusions reached from the evaluation of the final design within the scope of 1 and 2 above, taking into account (a) the information submitted by the applicant, (b) discussions held with AEC regulatory staff, and (c) AEC meetings with the applicant and its contractors in which you may have participated.
4. Prepare and furnish, in a separate report, discussions of the summary conclusions in 3 above, and their bases.
5. Perform a site visit of completed Class I structures, systems, components, and equipment if evaluation of specified design adequacies within the scope of 1 and 2 is required or will be commensurately facilitated by inspection.
6. Participate, if required, as an expert witness, within the scope of 1, 2, 3, and 5 above, in the event of a public hearing on the facility.

Your initial review of the FSAR volumes should include the identification of areas of concern and areas requiring additional information, within the scope of 1 and 2 above. Our present schedule requires that you provide us with any questions or requests for additional information by one month after receipt of this Work Directive. Copies of the amendments prepared by the applicant in response to these AEC requests for supplemental information will be forwarded to you as appropriate.

All correspondence and reports as may be required to comply with this Work Directive shall be addressed to Mr. Edson G. Case, Director, Division of Reactor Standards, U. S. Atomic Energy Commission, Washington, D.C. 20545. All costs shall be itemized and requests for reimbursement shall be submitted.

The initial amount payable to your firm in order to perform the services requested is \$3,000; additional funding will be made available. Item 6, if required, will be costed separately.

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John A. Blume & Associates,
Engineers

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This constitutes a Work Directive pursuant to Article 1, paragraph (b) of Contract No. AT(49-5)-3011. All other requirements specified in Contract No. AT(49-5)-3011 remain unchanged. Volumes of the Final Safety Analysis Report are enclosed for your review.

Sincerely,

Original signed by
E. G. Case

Edson G. Case, Director
Division of Reactor Standards
(Authorized Representative
for the Contracting Officer)

Enclosures:
Volumes 1 through 5 of the FSAR

bcc: HKShapar, OGC
EGCase, DRS
JLSmith
RRMaccary, DRS
AWDromerick, DRS
JLSullivan, DR
DFLange, DRS
Joan Lee, DRS
PW-?, DRL
FKaras, DRL
NDavison, DRS
OC
RGSmith

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DRS DRS:SADSG
Lee Smith

2/15/71 2/16/71

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