



GENERAL NUCLEAR SYSTEMS, INC.

A CHEM-NUCLEAR COMPANY

135 Darling Drive • Avon, Connecticut 06001 • 203/677-0457

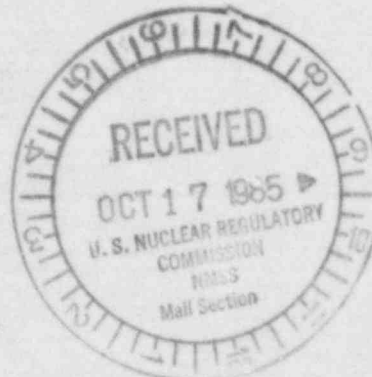
RETURN TO 396-SS

PDR

October 10, 1985

C8510-04

Mr. John P. Roberts, Project Manager
Advanced Fuel and Spent Fuel
Licensing Branch
Division of Fuel Cycle and
Material Safety
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555



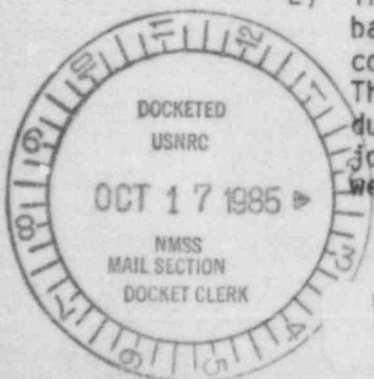
SUBJECT: CASTOR V/21 Testing at INEL

Gentlemen:

This is to notify you that on Thursday October 3, GNSI was notified by E G & G Idaho, Inc. of several indications observed on the top end of the CASTOR V/21 fuel basket. The observations are described in Attachment One based on documents and video tape provided by E G & G. These observations were made during a fuel inspection conducted after cask performance testing at Idaho National Engineering Laboratory. The performance testing of the CASTOR V/21 was conducted as part of a DOE/Virginia Power cooperative agreement and included certain test conditions which are not representative of practices to be followed at utility installations licensed under 10 CFR 72.

Based on our preliminary evaluation, we have determined that this condition does not constitute a defect as defined by 10 CFR 21. This determination is based on the following two main points:

- 1) The fuel selected for the demonstration program exceeded the cask design heat load capacity allowed for in the Topical Safety Analysis Report. The actual heat load in the test program was approximately 28.4 KW as compared to the cask design capacity of 21 KW. Our initial evaluation shows that the indications resulted from higher than normal thermal stresses. The thermal stresses in a basket loaded with 21 KW will be considerably lower than in a basket loaded with 28.4 KW. Our detailed analysis will quantify the relative differences.
- 2) The observed indications are in locations which are not required for basket structural integrity under normal or hypothetical accident conditions. There also is no effect on nuclear criticality safety. The welds at the affected joints are made to maintain plate alignment during the fabrication process. Also at several of the affected joints, plates are butted together and no welding was performed nor is welding required.



8511140106 851010
PDR PROJ PDR
M-37

FEE EXEMPT

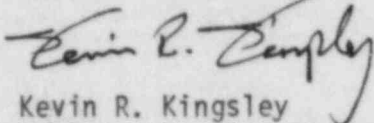
25887

GNSI is presently performing a complete technical analysis of this situation and a report will be submitted to you on or about October 25. This analysis must necessarily include temperature data and other pertinent information collected during the testing at INEL. We are relying on the cooperation of DOE to provide this information.

We will keep you apprised of any new developments that come to our attention during this period of evaluation and resolution.

Very truly yours,

GENERAL NUCLEAR SYSTEMS, INC.

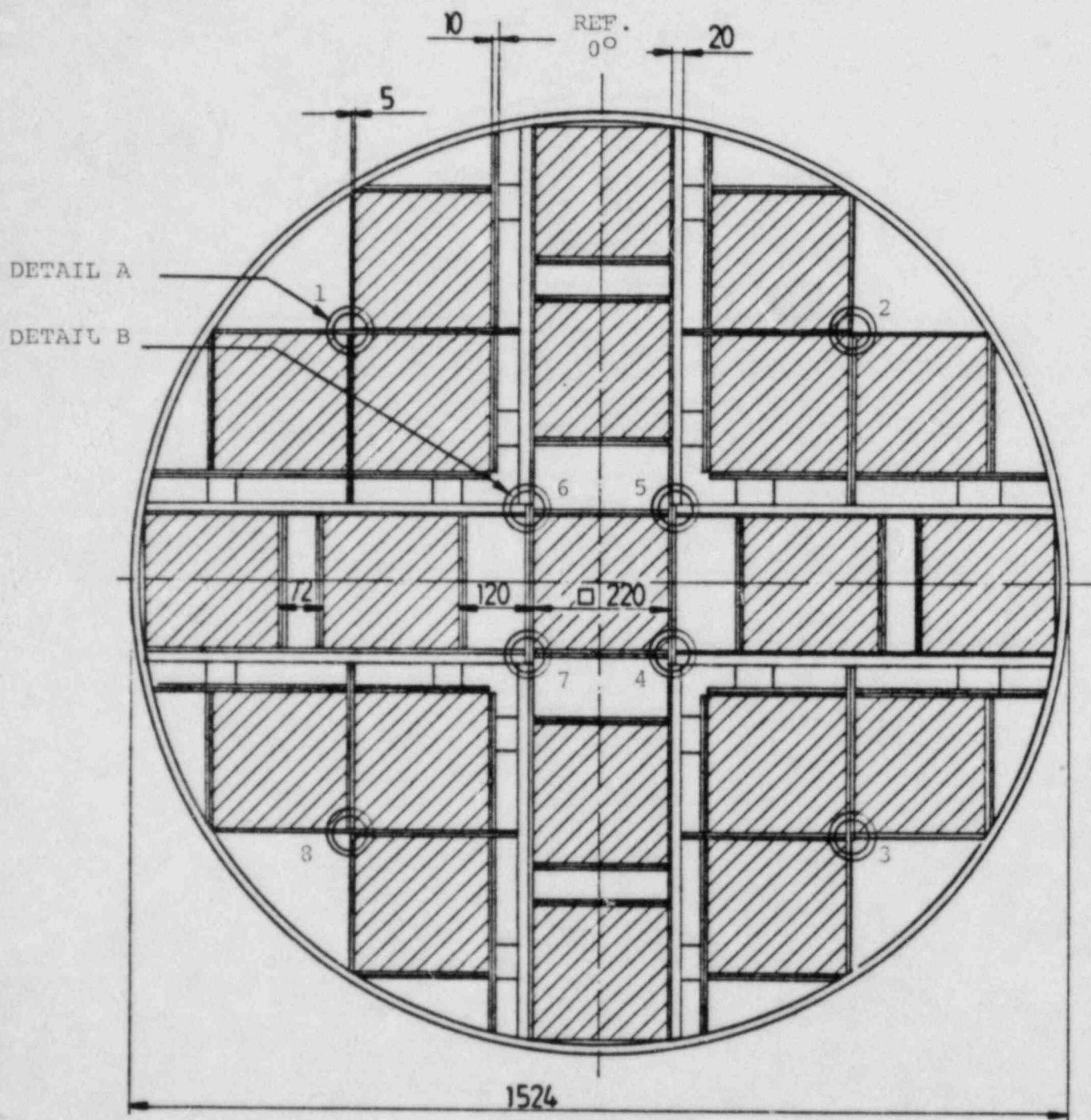


Kevin R. Kingsley
Senior Licensing Engineer

/gfs
0782V

CC: VA PWR-J. A. Ahladas, Attn: H. S. McKay
J. M. Davis, Attn: M. L. Smith
G. W. Fisher/T. W. Tarkington
E G & G-D. H. Schoonen

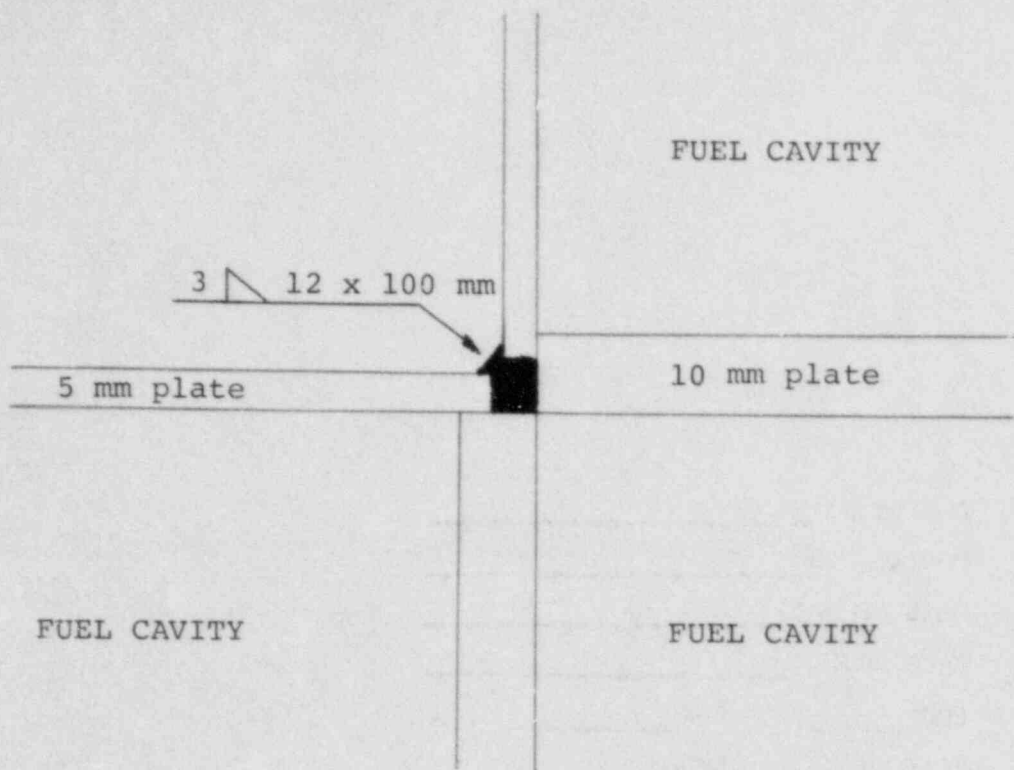
ATTACHMENT ONE



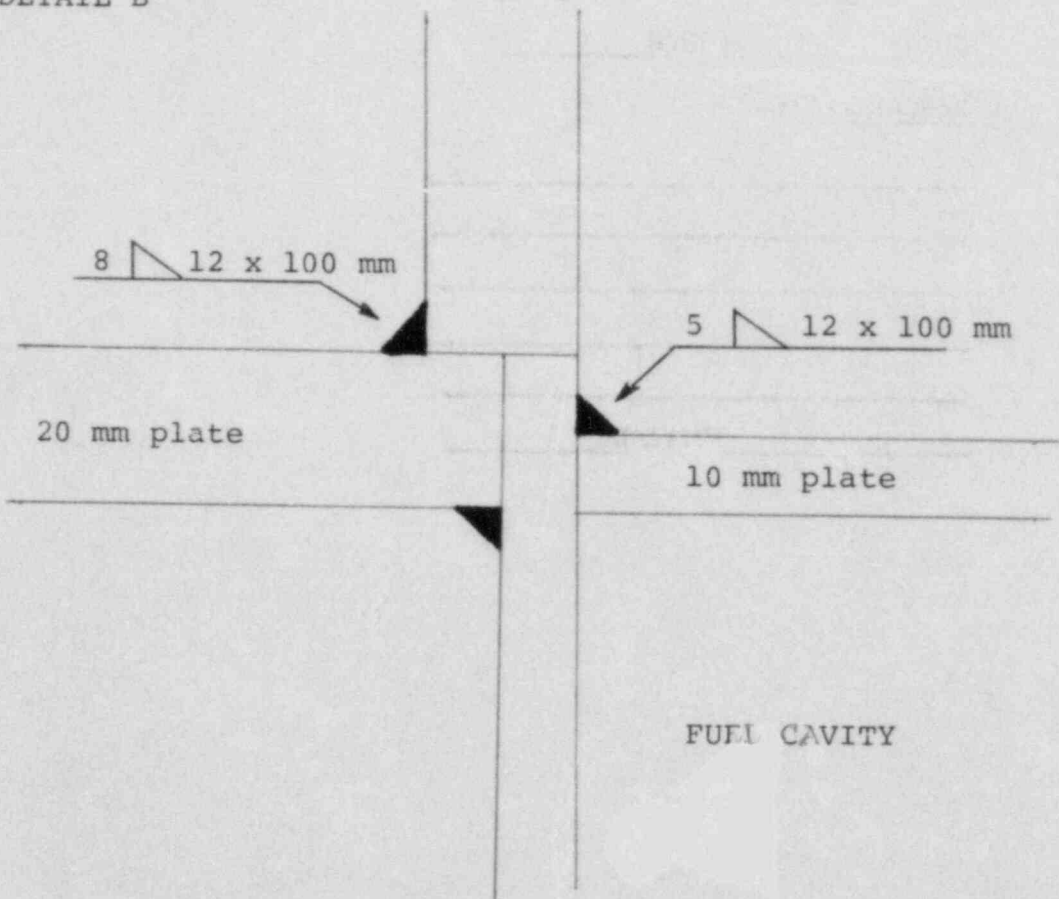
⊙ - location of observed indications

CASTOR V/21 FUEL BASKET

DETAIL A



DETAIL B



The indications appear as gaps (approx. 1 mm wide) between certain plates at the joint areas.

DOCKET NO. M-37
CONTROL NO. 25887
DATE OF DOC. 10/10/85
DATE RCVD. 10/17/85
FCUF _____ PDR _____
FCAF ☒ _____ LPDR _____
WM _____ I&E REF. ☒ _____
WMUR _____ SAFEGUARDS ☒ _____
FCTC ☒ _____ OTHER _____

DESCRIPTION:

notifying you that
on 10/13/85 observations
are described in
attachment one

10/17/85 INITIAL CEC