

MARTIN COMPANY

NUCLEAR
DIVISION
Baltimore,
Maryland
21203

Refer to:
ACC-332

Mail No. 845
September 11, 1964

U. S. Atomic Energy Commission
Division of Material Licensing -
Washington, D. C. 20545

DOCKETED

70-58

File Copy

Attention: Mr. Kenneth Lauterbach

Subject: Additional Information for Amendment No. 21
to SNM-53

Gentlemen:

In our August 4 and 19, 1964 letters to you we described the process and control criteria to be used in the fabrication of a nuclear core of tubular design employing slightly enriched uranium oxide pellets. These criteria were approved by your telegram dated August 28, 1964.

Anticipating possible production bottlenecks in several of the operations, the Martin Manufacturing Department has requested that we obtain AEC approval for increased limits in several of the previously approved process steps. We have also included several additional steps which have been added in the processing. Changes in this submission from previous submissions are appropriately indicated in the flow chart and in the nuclear safety evaluation.

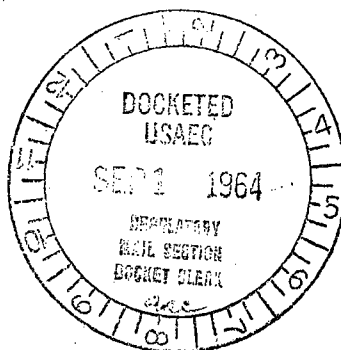
Since the approved possession limit of 127 kgs U-235 includes only the quantity which will be contained in the fabricated core, we request that this limit be increased to 175 kgs U-235 to provide proper approval for excess fuel which may be required. This increase in U-235 limit does not affect the overall possession limit for the Martin Marietta facility under SNM-53.

To afford proper coordination of the revised limits in the processing schedule, we will appreciate receiving your approval by September 23, 1964.

Very truly yours,

C. W. Keller

C. W. Keller
Nuclear Accountability &
Licensing Representative



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104 CB, 104 PDR, K&L, 9/17/64

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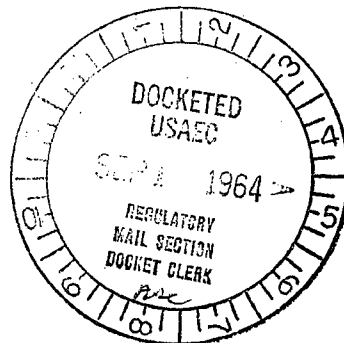
NUCLEAR SAFETY EVALUATION

Introduction

A nuclear safety evaluation was performed in support of a request from the Martin Manufacturing Department for increased U.S.S. limits in various processing steps to be utilized in the fabrication of a nuclear core of tubular design employing slightly enriched uranium oxide pellets. A discussion of each process step involving a change of limits is discussed.

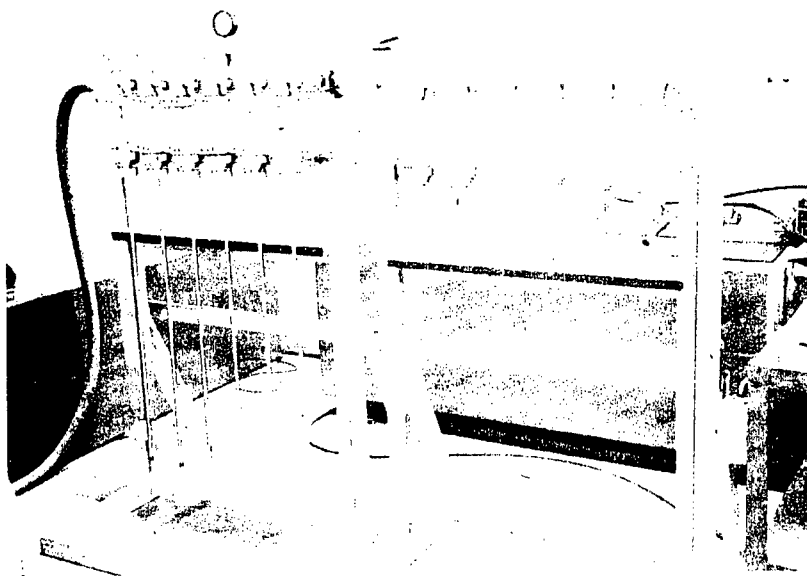
Conclusion

Current U.S.S. limits have been shown to be safe through design, size and geometry considerations.

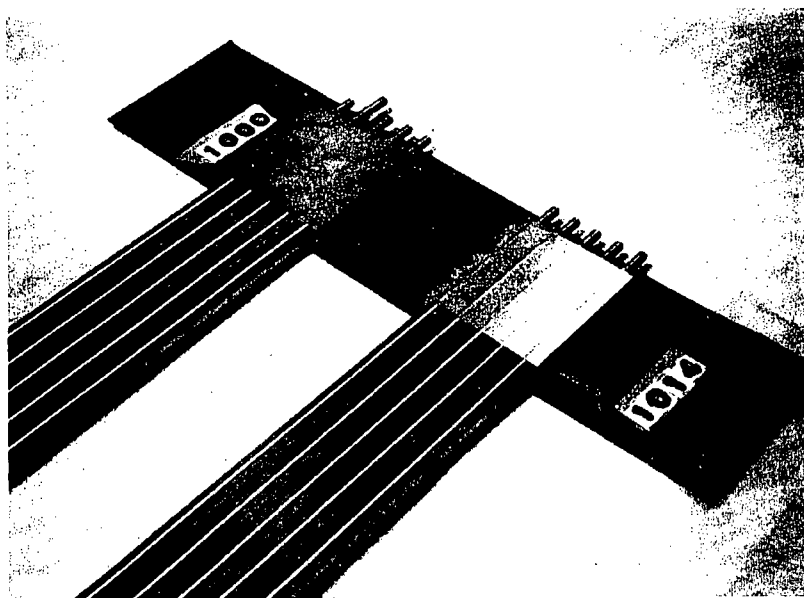


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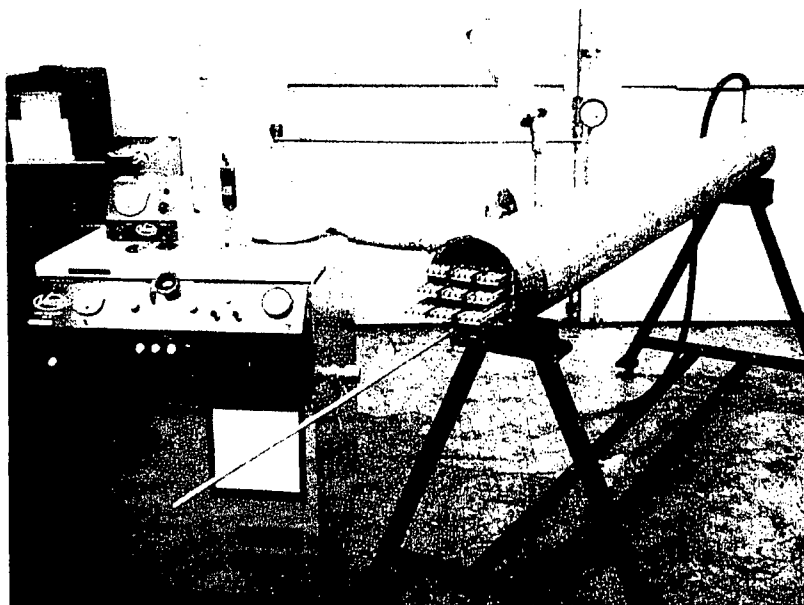
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Welding Rack



Typical
Radiography
Racks



Helium Leak
Test Chamber