

MARTIN COMPANY

70-58
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DIVISION
Baltimore,
Maryland
21203

Refer to:
ACC-266

April 1, 1964

U. S. Atomic Energy Commission
Source and Special Nuclear Materials Branch
Washington, D. C.

Attention: Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch

Subject: Proposed Amendment No. 21 to Martin Marietta
Special Nuclear Material License No. 53

Enclosure: (1) Proposed Amendment No. 21 to SMM-53
(six (6) copies)

Gentlemen:

We submit as Enclosure (1) our application to amend the Martin Marietta Special Nuclear Material License No. 53. This submission describes the fabrication steps and control criteria to be employed in the fabrication of a nuclear core of tubular design employing approximately 5% enriched uranium dioxide pellets. Immediate application will be for the MH-1A Floating Nuclear Power Plant. We intend to include this amendment as part of the overall revision of our Special Nuclear Material License No. 53, but are submitting this amendment at this time, because of delays encountered in editing our license revision.

You have recently approved an allocation of 250kgs U-235 for the MH-1A fabrication and we will appreciate receiving your approval of this proposed amendment by April 24, 1964.

Very truly yours,

C. W. Keller

C. W. Keller
Nuclear Materials Manager

CWK/nj

Encls.

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ACKNOWLEDGED

A DIVISION OF
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PROPOSED AMENDMENT NO. 21
TO SPECIAL FUEL ELEMENT LICENSE NO. 59

It is the purpose of this proposed Amendment No. 21 to SR-55 to describe the program and control criteria, which will be used in the fabrication of a nuclear core of cellular design employing slightly enriched uranium oxide pellets.

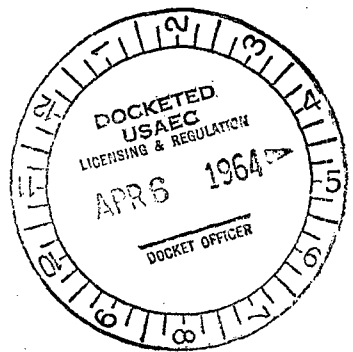
Design and Nuclear Parameters:

1. Core loading approximately 1000 lbs U-235
2. Enrichment - 2% uranium with less than 5%
3. Fuel cell diameter - 0.5 inch
4. Active length of core - 56 inches
5. Fuel cell diameter - 0.5 inch
6. Fuel cell length - 56 inches
7. Fuel cell diameter - 0.5 inch
8. Fuel cell length - 56 inches

U-235

The following information is being provided for your information and is not intended to be used as a basis for any action on your part.

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- 7. Dimensional inspection
- 8. Chiseling
- 9. In process storage of finished
- 10. Assembly of finished
- 11. Storage of finished

APPENDIX B

The work area is a large open area with a concrete floor and a high ceiling. The area is divided into several sections by low walls and partitions. The work area is used for the assembly and storage of finished products. The work area is well lit and has a clean, organized appearance. The work area is used for the assembly and storage of finished products. The work area is well lit and has a clean, organized appearance. The work area is used for the assembly and storage of finished products. The work area is well lit and has a clean, organized appearance.

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Completed fuel elements will be stored in the nuclear storage area in the D Building. Since safe geometry is the controlling factor for individual elements, a maximum total solid angle of 1.0 steradians is required. Vertical storage of the elements on five foot centers will be maintained by Martin Nuclear Materials Management, which has jurisdiction over the storage area. Calculation of the storage array is presented in Figure 5.

Pages 5 through 9 redacted for the following reasons:

(b)(4)