

DLR:KEL  
70-58

JAN 28 1964

Martin Company  
Nuclear Division  
Baltimore 3, Maryland

Attention: Mr. R. D. Bennett  
Vice President  
Your reference: LSN-23

Gentlemen:

This refers to the discussion on December 3, 1963, between your Mr. Charles Keller and Miss F. K. Durkan and Mr. K. E. Lauterbach of this Division, regarding your application dated March 28, 1963 for renewal of License No. SMM-53. As a result of this discussion, we understand that you will re-submit this application to provide additional information, including the following:

1. A detailed description of all processes conducted under this license involving uranium enriched in the U-235 isotope, U-233 and plutonium.
2. The specific locations at which each of the special nuclear materials will be received, handled, used, or stored.
3. Further description and identification of the plutonium and U-233 including source specifications, chemical and physical form, isotopic content and the maximum quantity of each material to be possessed at any time.
4. Technical qualifications of personnel who will have health and safety responsibility for the use of licensed material.
5. Handling and shielding devices for using and storing plutonium neutron sources and U-233.
6. A detailed description (including a plan view) of the ventilating system for the control of airborne radioactivity in each process area, including the specifications of glove boxes and hoods, building exhaust fans, dust collecting and air cleaning systems and air discharge stacks.

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7. A description of the air sampling program to determine the concentrations of airborne radioactivity in work areas and effluents, including the locations at which air samples are taken, the frequency of such surveys and instrumentation used.
8. Procedures for controlling surface contamination, including the method of preventing the spread of contamination to unrestricted areas and procedures for decontamination of floors and equipment.
9. Procedures and equipment for surveying the work area for fixed and removable radioactive contamination, the locations and frequency of such surveys and the contamination criteria which will be applied.
10. A description in further detail of the types and quantities of radioactive waste, the methods of collection and storage, and procedures for ultimate disposal, including procedures for determining concentrations of radioactive material released to unrestricted areas.
11. An evaluation of the effects of fire, explosion and other accidents and the probability of release of radiation or radioactive material as a result of such accidents.
12. Confirmation that all special nuclear material held under the authority of this license will be isolated from other special nuclear material in accordance with the provisions of Section III of the Renewal Application Guide, copy enclosed.
13. A nuclear safety analysis of procedures for receiving special nuclear material in the facility and inspecting the shipment on receipt, including the information contained in Section II, B, 1. of the Renewal Application Guide.
14. Further information on the parameters used to calculate mass limits in Table IV-B-1d, including percent enrichment, physical form of material, percent void fraction, moderation control and reflector description. We suggest presentation of the data by categories, e.g. percent enrichment (0-5, 5-10, 10-20, 85-93), physical form of material (oxide, pellets, metal, etc.). Also please clarify the steps followed in the use of basic formula and submit your derived curves, including representative calculations, for mass versus fuel density and volume percent of fuel.
15. Clarification of the definition of "work area" and "operational work area" in terms of the quantity of material assigned to these

areas. Include also plan drawings showing the locations of the various work areas.

16. Procedures for preventing unsafe U-235 concentrations during pickling, cleaning and other operations in which U-235 may be dissolved, and a nuclear safety analysis taking into consideration the reactivity of materials being treated when immersed in solutions containing U-235.
17. The information on shipment of special nuclear material contained in Section IV of the enclosed Renewal Application Guide, and an engineering appraisal of your shipping containers demonstrating that they meet the structural integrity criteria of Section V.
18. A more detailed description and nuclear safety analysis of each storage area and vault, including the information contained in Section II, B, 2 of the enclosure.
19. A further description of the monitor alarm system including the information in Section II, B, 5 of the enclosed Renewal Application Guide.
20. A description of the procedures for handling and storing pyrophoric special nuclear materials.

Distribution

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 Compliance  
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Very truly yours,

Donald A. Nussbaumer, Chief  
 Source & Special Nuclear Materials Branch  
 Division of Licensing and Regulation

Enclosure:  
 Renewal Application Guide

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| SURNAME ▶ | <i>R. F. L.</i><br>C. L. Lauterbach/<br>cvd | <i>DN</i><br>D. Nussbaumer |     |  |  |  |
| DATE ▶    | 1/28/64                                     | 1/ 28 /64                  |     |  |  |  |