UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

JUL 20 1994

Intergrated Industrial Systems
ATTN: Randy S. Stevens
Project Coordinator
475 Main Street
Yalesville, CT 06492

Dear Mr. Stevens:

This letter is in response to your application dated October 7, 1993, requesting registration of the Model RSS-06 thickness gauge. We are in the process of evaluating your request. However, in order to continue our evaluation, the following information is necessary:

1. Please indicate whether you intend to distribute the device to specific licensees as well as general licensees. If so, please provide copies of the labeling that will be included on the specifically licensed devices. The labeling for a specifically licensed device must not include a statement that receipt, possession, use and transfer of the device are subject to a general license.

2. Please verify that the size of the labels printed in appendix C of your application are the actual size of the labels. If not, please provide the actual size of the labels.

3. Please commit to correct the misspellings on the labels printed in appendix C of your application.

To label 4. Please indicate how the isotope, activity, model number, and serial number are permanently affixed to the label (e.g. etched, engraved).

5. Please indicate the method used to permanently attach the labels to the device.

6. You indicate that the device "...will not be subject to extremes of environmental and operating conditions." (page 6 of your application). Please provide the maximum and minimum temperatures to which the device will be subjected and the maximum vibration and impact the device may encounter. Your response must include information which provides reasonable assurance that the device will not experience environments outside the stated ranges and will maintain its integrity when subjected to environments within the ranges.

7. The drawings provided indicate that the source housing is not sealed. It appears that foreign objects, such as dirt or moisture, can enter the cavity where the shutter is located. Please explain how this will effect the operation of the shutter mechanism, the integrity of the sealed source, and the working life of the device. Your response must include the effects of corrosion on the source and the operation of the shutter.

8. Your application indicated that a prototype of the device was not tested. It indicated that the majority of the construction of the device is identical to the LFE Model SU-S3 device that you are currently distributing. Please provide information that shows the similarities and differences between the source housings used in the devices. The information must demonstrate that the design of the Model RSS-06 is similar enough to the Model SU-S3 so that the operational history of the Model SU-S3 would apply to the Model RSS-06.

9. Your application indicates that the C-frame is mounted on a track. Please provide information concerning the purpose of the track, when and how the device would move on the track, and the effect on the device if it is impacted by the steel plate which it is designed to measure.

10. Please describe how the collimator frame and tube and the source target holder are attached to the source housing. It is unclear from the drawings provided.

11. Some of the drawings provided indicate "substitutions allowed unless otherwise noted." It should be noted that any substitution of materials must be approved by NRC prior to distribution of the device. Please either provide a list of substitutes or commit that you will not allow the use of substitutes.

12. Please provide information which indicates that the source locking bolt cannot be overtightened.

13. Please describe the fail-safe features of the device which will decrease exposures. The features may include automatic closure of the shutter when no material is present within the air gap and when the C-frame is knocked off its rails.

14. Please provide the information required by 10 CFR 32.51 which provides reasonable assurance that under ordinary or accident conditions of handling, storage, and use of the device no person would receive a radiation dose which would exceed the limits specified in 10 CFR 32.51(a)(2)(ii) and (iii), respectively.

15. The radiation levels submitted made no reference to levels taken when material was present in the measuring gap. Please provide the effects this would have on the radiation levels.

16. The measurement of the radiation levels was performed with a device with a 10 cm (3.94") air gap between the detector and the source housing. Drawing 300-563 indicates that the device has a 6.35 cm (2.5") air gap. Please indicate whether the air gap is variable size and provide the range of the size of the air gap. In addition, please verify that the C-frame with a 10 cm (3.94") air gap provides the highest radiation levels around the device or provide the highest radiation levels around the device and the corresponding air gap.

17. Please provide the minimum dimensions of the C-frame and the effect this would have on the radiation levels around the C-frame.

18. Please address the following deficiencies that appear in the documentation you indicate that you will provide to your customers:

    a. It does not contain a listing of the Agreement State agencies.

    b. It discusses use of the device under a specific license. However, you state you plan to distribute the device to general licensees.

    c. The document discusses requirements for NRC general licensees but does not provide guidance to Agreement State general licensees.

    d. The manual instructs the general licensee to perform maintenance and replacement of the receiver unit. However, this unit is an essential part of the shielding when the device is in the ON position.

    e. The maintenance section of the manual does not clearly indicate that servicing of the device may only be performed by someone specifically licensed by NRC or an Agreement State.

Please provide the requested information as soon as possible. If you have any questions, please contact me at (301) 415-7868 or Mr. Steven Baggett at (301) 415-7273.

Sincerely,

Original Signed by

John W. Lubinski, Mechanical Engineer
Sealed Source Safety Section
Source Containment and
Devices Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

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