

APR 09 1985

License No. 29-14171-01  
Docket No. 030-08048  
Control No. 12765

Advanced Radiation Services, Inc.  
ATTN: Anton S. Kurtz  
President  
271 Plainfield Road  
Edison, New Jersey 08820

Gentlemen:

This is in reference to your letter dated March 12, 1985 in answer to our letter dated August 6, 1984. In order to continue our review, we need the following additional information:

1. With regard to your answer to Item 3.D. of our letter dated August 6, 1984

Please note that we specifically stated

1. "Your Training Program for Assistant Radiographer's does not include a training session for instruction in the use of equipment. Since the NRC does not find it acceptable for a potential radiographer's assistant to receive training, and instruction in use of the equipment during actual radiographic operations, you should add a training session on use of equipment as part of your Initial Classroom Instruction as stated in your Administrative Manual, 8, B., i."

It appears that you misread our question in that your statement of "4 hours - "Hands on" training and instruction in use of radiographic equipment during actual radiographic exposures" is not acceptable.

You should add a training session on use of equipment. The "trainees" are observing a classroom type demonstration of equipment, not handling the equipment during the performance of an actual radiographic exposure. A "trainee" may only handle radiographic equipment after passing the Radiographer's Assistant examination and being designated as a Radiographer's Assistant.

2. Your revised answer to question 41 is still incorrect. Your answer to Item 3.E.e. page 5 of our letter dated August 6, 1984 states

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"e) Question 41

"The radiation from 1 curie of  $\text{CO}^{60}$  is attenuated in air to approximately 5 mr/hr at a distance of: 30 feet, 50 feet, 100 feet.

E.A. - 30 feet.

Amended Question/Expected Answer:

"The radiation from 1 curie of  $\text{CO}^{60}$  is attenuated in air to approximately 5 mr/hr at a distance of: approx. 50 feet, approx. 120 feet, approx. 170 feet E. A. - approx. 170 feet."

Using the inverse square law equation  $D = D_0 \frac{(r_0)^2}{r^2}$  and gamma Ray factor

for Cobalt 60 of 14.4 R/hr at 1 foot ( $14.4 \text{ R/hr/ft} \times 1000 \text{ mR/r} = 14,400 \text{ mR/hr/ft}$ ) the equation gives the following answer

$$5 \text{ mR/hr} = 14,400 \text{ mR/hr} \frac{(1 \text{ ft})^2}{r^2}$$

$$r^2 = \frac{14,400}{5} \text{ ft}^2$$

$$r^2 = 2880 \text{ ft}^2$$

$$r = \sqrt{2880} = 52.9 \text{ ft.}$$

Therefore please correct your answer to question 41 in your examination to approximately 50 feet.

3. Your letter dated March 12, 1985 did not include the correction of Question 42 as requested in Item 3.E.f. page 5 of our letter dated August 6, 1984. Please submit the corrected answer for Question 42 of your test.
4. We note that our records do not include a response to our letter dated June 6, 1984 concerning items of noncompliance noted during an inspection on April 12, 1984. We will not take final action on your application until a response to the June 6, 1984 letter is received.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 12765. If we do not receive a reply within 30 days, it may be necessary to deny your application and terminate your license. Such action would require that you divest yourself of all licensed material.

Sincerely,

Original Signed By:

John E. Glenn

John E. Glenn, Ph.D., Chief  
Nuclear Materials Safety Section B  
Division of Radiation Safety  
and Safeguards

Enclosure: Letter dated June 6, 1984

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