

R. M. WESTER & ASSOCIATES

*1 LONE EAGLE TRAIL ST. CHARLES, MISSOURI 63301

314-469-1 45

314-447-3945

March 3, 1981

U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Att: Dr. John W. Cooper, Chief,
Regional Licensing Section

CONTROL NO. 04359

Dear Dr. Cooper:

The following information is provided to you to further assist with my recently submitted application for an N. R. C. license for a Cs-137 calibration facility.

Item 1

Your calibration procedure should also include a check for instrument drift.

My procedure shall include that all points checked during routine calibration shall be allowed to stabilize for no less than one (1) minute after final adjustments. In addition, after completing the calibration, one point on each range shall be rechecked to determine that the instrument is responding consistently. Each of these points shall also be allowed to stabilize for one (1) minute.

Item 2

Please describe your area designated for source storage in greater detail. This area should be restricted so that access to the radiation field around the source (in storage) is restricted.

J.L. Shepherd & Associates state that the radiation levels at 12" from the surface of the calibrator is not greater than 1.5 mR/hr. I shall reduce the radiation level to .06 mR/hr. by constructing a lead and plywood cabinet for the calibrator. I believe that the combination of approximately 1" of lead and a distance of approximately 2' will reduce the radiation level to well below the .06 mR/hr. limit for an unrestricted area.

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Item 2 continued

The lock on the calibrator and the lock I will install on the cabinet will be kept secure whenever the calibrator is not in use.

Item 3

Please describe the facilities that will be made to evaluate your facility when use is begun. This should include the unrestricted areas around the facility and on the floor above. This need only be done to establish the radiation profile.

Using either one of the two instruments listed in Item 10 of this application, a radiation profile shall be performed and documented. This profile survey shall be performed to include the surface of the calibrator in both the open and the closed positions. The survey profile shall include the calibration facility, the rooms adjacent to the facility, and the floor above the calibrator.

Item 4

Please describe your handling procedures during calibration, to show that exposure to the direct radiation beam is not necessary.

The general handling procedure for calibration of survey meters shall be as follows:

1. The detector portion of the survey instrument will be placed directly in line with the beam at the appropriate distance prior to turning the calibrator to the on position.
2. The portion of the survey instrument housing the adjustment potentiometers shall be removed from the beam as far as possible, the cable length being the limiting factor.
3. The calibrator will be turned on to expose the detector to the radiation source. Necessary adjustments will be made at this time.
4. The calibrator will be turned off before moving the detector to the next check point, as long as the exposure rate at the current point is greater than 5 mR/hr. Steps 1 through 3 shall be repeated until all of the points on all ranges have been calibrated.
5. After calibrating the instrument, one point on each range should be rechecked to reassure accuracy and consistency. The exposure time shall be for one minute. The same handling precautions stated above apply during this portion of the procedure.

Thank you for your prompt attention to this matter.
I do hope that the above information sufficiently aids
you with your review of my license application.

Sincerely,

Robert M. Wester

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