



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND  
AND FORT MONMOUTH  
FORT MONMOUTH, NEW JERSEY 07703-5000

MS 16  
K-4

April 2, 1998

Directorate of Safety Risk Management

U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, Pennsylvania 19406-1415

Attention: Licensing Assistance Section

This refers to U.S. Nuclear Regulatory Commission (NRC) License Number 29-01022-07, Docket Number 030-06989, Control Number 125086, our letters of February 13, 1998, March 10, 1998 and March 13, 1998, and the April 2, 1998 telephone conversation between Messrs. Steven A. Horne and Barry J. Silber of this Directorate and Mr. Eric Reber, NRC Region I.

The following additional information is provided in support of our NRC license amendment requests to authorize possession and use of the J.L. Shepherd and Associates (JLS) Model 81-22 Calibrator.

a. Training: Enclosures 1 and 2 are the Answer Keys for the initial operator training final examination and annual training examination, respectively. These answer keys were unintentionally omitted from our March 13, 1998 response to you.

b. Conditions of Use: Our staff will perform the manufacturer's recommended routine maintenance of the calibrator. Biennial preventive maintenance will be performed by the manufacturer or other person specifically licensed for this purpose.

c. This is to confirm that our Radiation Control Committee or Radiological Engineering staff will evaluate the procedures used for irradiation of materials, including the types of material irradiated, to determine whether special procedures will be required specific to the types of material irradiated.

125086

APR - 2 1998

Printed on Recycled Paper

OFFICIAL RECORD COPY

ML 10

FAX REC'D

2

Your expeditious processing of this amendment request is appreciated.

Our Point of Contact is Mr. Joseph M. Santarsiero or the undersigned, Facsimile on (732) 532-6403 or (732) 542-7161; Voice on (732) 427-4427/3112.

Sincerely,



STEVEN A. HORNE  
Director, Safety  
Risk Management

Enclosures

Copy Furnished:

Commander, U.S. Army Materiel Command, ATTN: AMCSF-P, 5001  
Eisenhower Avenue, Alexandria, Virginia 22333-0001

**SAMPLE**  
**ANSWER KEY for**  
**OPERATOR FINAL EXAMINATION**  
**J.L. SHEPHERD MODEL 81 MULTI GAMMA**  
**SOURCE CALIBRATOR**

**NAME** \_\_\_\_\_**DATE** \_\_\_\_\_**CIRCLE THE CORRECT CHOICE**

- |                             |   |  |
|-----------------------------|---|--|
| 1. a b c d                  | 13. a b c <b><i>d</i></b> e                 | 24. <b><i>a</i></b> b c d                    |
| 2. a b c d                  | 14. <b><u>Master</u></b>                    | 25. a <b><i>b</i></b> c d                    |
| 3. a <b><i>b</i></b> c d    | 15. a b c d                                 | 26. <b><i>a</i></b> b c d                    |
| 4. <b><i>a</i></b> b c d    | 16. <b><i>a</i></b> b c d                   | 27. a <b><i>b</i></b> c d                    |
| 5. a b c <b><i>d</i></b>    | 17. a <b><i>b</i></b> c d                   | 28. a b c <b><i>d</i></b>                    |
| 6. a <b><i>b</i></b> c d    | 18. a <b><i>b</i></b> c d                   | 29. a b c d                                  |
| 7. a <b><i>b</i></b> c d    | 19. <b><u>Check Batteries/Cal Label</u></b> | 30. a <b><i>b</i></b> c d                    |
| 8. <b><u>Motion</u></b>     | <b><u>Inspect Meter/Check Response</u></b>  | 31. a b c <b><i>d</i></b>                    |
| 9. a b c d                  | 20. a b c d                                 | 32. <b><i>a</i></b> b c d                    |
| 10. <b><i>a</i></b> b c d   | 21. a <b><i>b</i></b> c d                   | 33. <b><u>Source is in "up" position</u></b> |
| 11. a b c d                 | 22. a b c d                                 | <b><u>Do not enter room</u></b>              |
| 12. a b c <b><i>d</i></b> e | 23. <b><u>Return Source to "Closed"</u></b> | 34. <b><u>Spring Return Assembly</u></b>     |
|                             | <b><u>Survey Area with Meter</u></b>        |  |
|                             | <b><u>Reinstall Plug</u></b>                | 35. <b><i>a</i></b> b c d                    |
|                             | <b><u>Remove Key and Secure Room</u></b>    |  |

Encl 1

**SAMPLE****APPENDIX C**

**ANSWER KEY for  
ANNUAL OPERATOR EXAMINATION  
FOR USE OF THE  
J.L SHEPHERD MULTI GAMMA SOURCE CALIBRATOR**

1. Do gamma rays induce radioactivity? Y or N
2. During a test you notice that a visual warning light is not operating, you should: (circle one answer)
  - a. Ignore it, this is only a test.
  - b. Fix it on the spot.
  - c. Report it to the area supervisor.
  - d. Report it to the RPO or his designee.
3. Before using a survey meter, list 4 checks you should perform to ensure it is operating properly.
  - a. Check Batteries
  - b. Visual inspection of meter & cable
  - c. Check calibration label
  - d. Test meter response with check source
4. Are TLD whole body and pocket dosimeters required to be worn when operating the source?

Y or N
5. When all interlocks are closed, the Master light is illuminated.
6. Briefly describe the significance of the "red warning light" located at the entrance to the calibration room.

The source is in the "up" position and the room must not be entered.

Encl 2

7. If the source does not return to its shielded position, you should: (circle one answer)

- a. Attempt to fix the problem immediately.
- b. Report the malfunction to the RPO or his designee.**
- c. Call 911.

8. The Motion detector is located at the down range barrier and places the source in the "STORED" position when the beam is interrupted.

9. In the event of an air pressure loss, the automatic Spring Return Assembly which are mounted on the pneumatic cylinder, allows the source to return to the "CLOSED" position.

10. List the steps necessary to shut down the source and exit the calibration range.

- a. Return the source to its "closed" position
- b. Survey the area with meter
- c. Reinstall transportation plug
- d. Remove keys from panel and secure area