

STANDARD OPERATING PROCEDURES  
for  
CUSTODIANS OF CD V-784 OR CD V-786 RADIATION SOURCE SETS

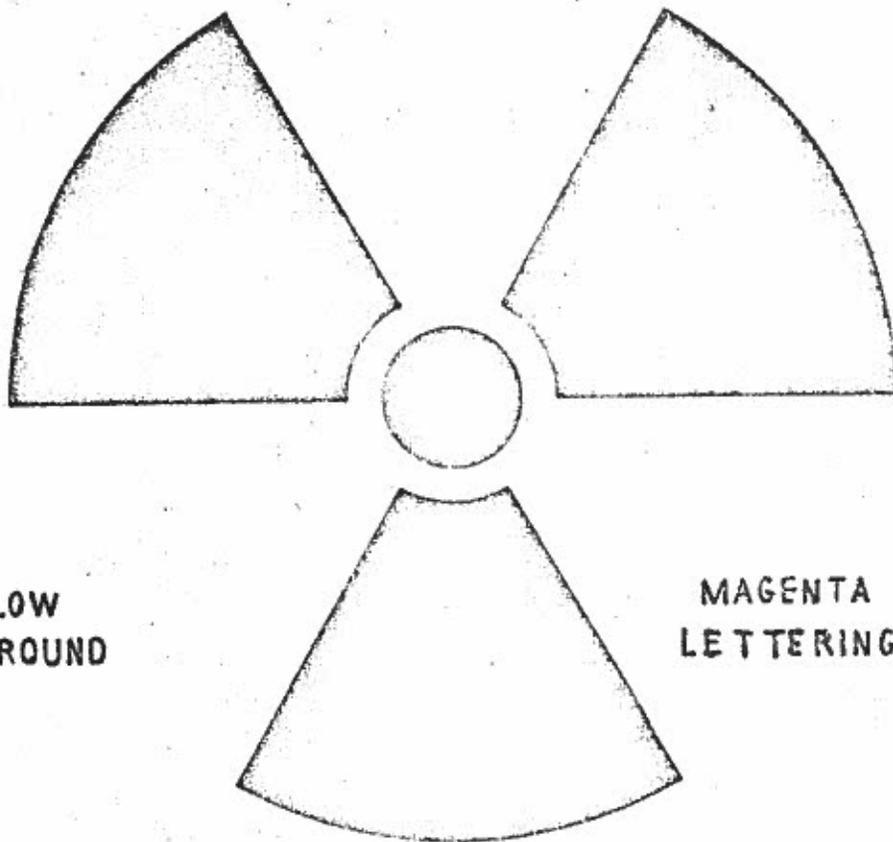
1. Each source capsule should be checked with a CD V-700 at the completion of each training exercise, demonstration, semi-annual wipe test or other use to ensure that the  $\text{Co}^{60}$  source material is in the capsule. This check should be performed at a distance from the other sources and the lead containers where the gamma radiation levels are at about background levels.
2. In the event that an empty capsule is discovered, the remaining sources should be secured in the lead container and removed from the general area where they were being handled. The general area should then be surveyed very carefully with a CD V-700 until the  $\text{Co}^{60}$  source material is located. The area should also be secured from personnel entry except for personnel to be used to locate the  $\text{Co}^{60}$  source material.
3. If the  $\text{Co}^{60}$  needle is visible to the naked eye, as it should be on a hard smooth surface such as concrete, the  $\text{Co}^{60}$  should be picked up using a broom and a long handled dust pan, the CD V-788 source handling tongs, long handled forceps or any other method which will enable the individual to keep the  $\text{Co}^{60}$  away from his person. The source material, empty capsule and other source capsules should be secured in the lead containers and marked as unusable.
4. If the general area has an earth, sand or gravel surface, the monitoring of the area must be very thorough because the  $\text{Co}^{60}$  may have been trampled beneath the surface making it more difficult to locate. If the source material can be located within a small area (less than one square foot), a spade or shovel should be used to remove the surface layer of this small area. Each shovelful of earth, etc. and the area from which it was removed should be thoroughly monitored until it is determined that a particular shovelful contains the  $\text{Co}^{60}$  material. This shovelful of earth, etc. containing the  $\text{Co}^{60}$  should be carefully placed in the large CD V-792 lead container after removing the small CD V-791 lead container containing the other source capsules. The earth, etc. inside the CD V-792 should then be monitored to ensure that the  $\text{Co}^{60}$  is still mixed in with this material. Then both lead containers should be thoroughly secured and marked as unusable. The dose rates and the date should be clearly marked on the outside surfaces. No attempt should be made to separate the  $\text{Co}^{60}$  source material from the earth, sand or gravel in which it is located in the CD V-792.

5. Upon completion of locating the Co<sup>60</sup> source material and placing it in a lead container, the lead container should be wipe tested and all personnel and equipment involved in picking up the Co<sup>60</sup> should be thoroughly monitored to ensure that no radiation contamination is present. If no contamination is detected, the source set should be completely removed from the area and the entire area in use when the incident occurred should be remonitored to ensure that the levels of gamma radiation do not exceed normal background. If the area appears to be free of radioactivity above background levels, the area can be returned to normal use, if absolutely necessary. However, if possible, the source set licensee should obtain the assistance of someone qualified in the field of health physics to check the area prior to allowing it to be returned to normal use.
6. Immediately after an incident of this type occurs, the source set licensee should contact his State Civil Defense authorities. The source set should be placed in storage in accordance with the provisions of 10CFR, Part 20, and should be considered the same as a leaking source set. This set should not be removed from its lead containers nor used for any purpose by the authorized user.
7. In the event the Co<sup>60</sup> source material cannot be located or contamination and/or other radioactivity appears to be present, the authorized user should immediately contact the appropriate State Civil Defense officials. The Agency will contact the following:

Region 6, Radiological Assistance Team  
Colorado-Idaho-Montana-Utah-Wyoming  
Idaho Operations Office  
U.S. Atomic Energy Commission  
Idaho Falls, Idaho  
Telephone-208-522-4400, Ext 1515

8. Instructions for disposal and/or the replacement of this source set must be obtained from the OCD Region 6 Office.

# CAUTION

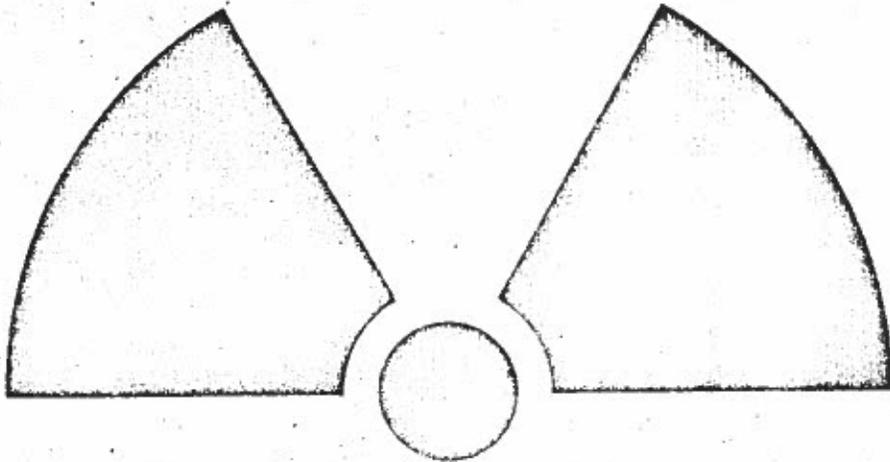


YELLOW  
BACKGROUND

MAGENTA  
LETTERING

# RADIOACTIVE MATERIALS

# CAUTION



YELLOW  
BACKGROUND

MAGENTA  
LETTERING

# RADIATION AREA

IN CASE OF EMERGENCY

CONTACT THE FOLLOWING PERSONS

Name

Phone

Source Material	Serial	Number of Capsules	Total Activity	Date of Activation
Co <sup>60</sup>	187	12	30mc	1956

SAMPLE

Attach to bottom of "Caution - Radiation Area"  
sign and post to entrance door of storage area.