

April 15, 1963

PROCEDURES AND REGULATIONS FOR THE CARE AND USE OF  
THE OCD CD V-778 RADIATION TRAINING SOURCE SET

A.1 Only those source handling and maintenance techniques which are directly related to the specific handling of the Office of Civil Defense CD V-778 Radiation Training Source Sets will be discussed in this publication. These will include information on the equipment in the sets, preparation, and activity of the sealed sources, Atomic Energy Commission and Office of Civil Defense rules and regulations governing the receipt, use, storage, and transfer of the sets, and instructions for the replacement of rings and tags, and for leak testing the sealed sources. This publication supersedes "Procedures and Regulations For the Care and Use of OCD Training Source Sets" issued October 1, 1961.

EQUIPMENT

A.2 The OCD CD V-778 Radiation Training Source Set consists of the following items:

- 6 5.0 mc Cobalt 60 Sealed Sources totaling 30 mc  
(CD V-784)
- or
- 12 0.5-5.0 mc Cobalt 60 Sealed Sources totaling  
30 mc (CD V-786)
- 1 Lead Container, small (CD V-791)
- 1 Lead Container, medium (CD V-792)
- 2 Locks for Lead Container CD V-792
- 1 Long-Handled Tongs for Handling Sources  
(CD V-788)
- 8 Radiation Area Signs
- 2 0-200 mr Dosimeters (CD V-138)
- 1 Dosimeter Charger (CD V-750)
- 1 Geiger Counter (CD V-700)

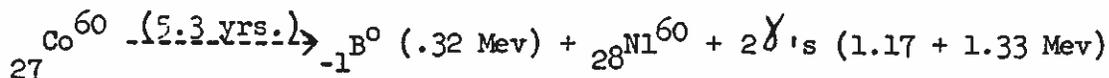
A.3 This Training Source Set has been designed specifically for use in training exercises and is not intended as an accurate calibration source. You will note that two different training source sets have been procured by OCD which differ only in the number and activity of the individual sealed sources. In this publication, reference will be made to the CD V-784 and CD V-786 to distinguish between the two sets. ISSUANCE OF A PARTICULAR SET WILL BE AT THE DISCRETION OF OCD.

PREPARATION OF THE SEALED SOURCES

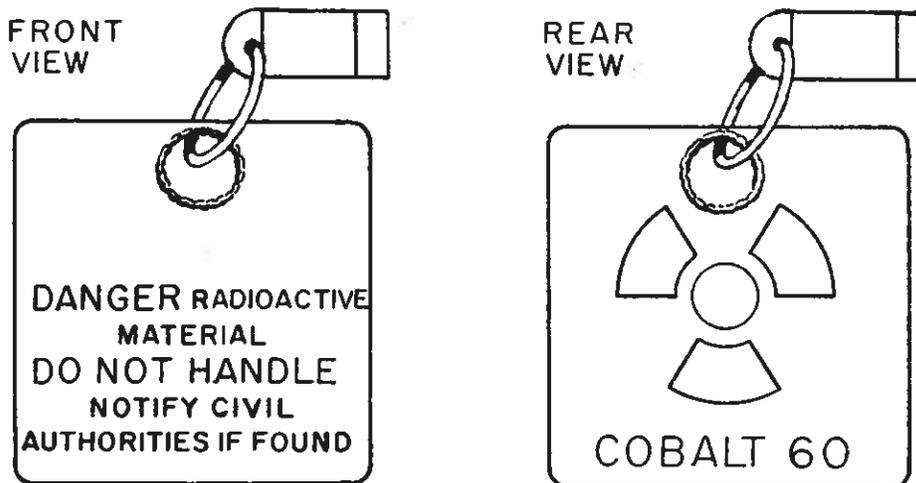
A.4 Any radioactive material that is encased in, and is to be used in, a container in a manner intended to prevent leakage of the radioactive material, or any of its daughter products, is referred to as a sealed source. The sources in the OCD Training Source Set are of such a nature. The radioactive material is Cobalt 60, which was prepared by the neutron irradiation of Cobalt 59, in a nuclear reactor.



A.5 The Cobalt 60 decays with a 5.3 year half-life by beta and gamma emission to Nickel 60.



A.6 The Cobalt 60 is gold or nickel plated and is encapsulated in a standard Oak Ridge screw-type capsule. The CD V-784 capsules have a nonmagnetic stainless steel base with a magnetic noncorrosive stainless steel screw-type cap. The CD V-786 capsules are brass. As a minimum, the cap is sealed to the base of each capsule with silver solder having a melting point of 1,100° F or above. Each capsule has an approximately one inch square yellow warning tag attached to it.



An OCD Sealed Source

ACTIVITY OF TRAINING SOURCE SETS

A.7 Each of the six CD V-784 sealed sources was 5 millicuries plus 20% or minus 10% on the date of encapsulation. This date and activity is marked on the tag attached to each source. As indicated in the following example, the table below can be used to compute the total activity of the set or the activity of an individual capsule at any time after encapsulation.

Example:

What will be the activity of one of the 5 millicurie sealed sources (CD V-784) and the total activity of the set nineteen months after the date of encapsulation?

Source activity on date of encapsulation = 5 millicuries  
 Elapsed time = 19 months  
 Decay correction factor from table in A.7 = .812  
 Source activity 19 months after encapsulation  
 $.812 \times 5 = 4.06$  = 4.1 mc + 20% - 10%  
 Total activity of the CD V-784 Set  
 6 capsules x 4.1 mc/capsule = 24.6 mc + 20% - 10%

Months	0	1	2	3	4	5	6	7	8	9
0	1.000	.9891	.9783	.9676	.9571	.9467	.9363	.9262	.9160	.9061
10	.8962	.8864	.8768	.8673	.8578	.8484	.8391	.8300	.8209	.8120
20	.8032	.7944	.7858	.7772	.7687	.7603	.7520	.7439	.7357	.7277
30	.7198	.7120	.7042	.6965	.6889	.6814	.6739	.6666	.6594	.6521
40	.6451	.6380	.6311	.6242	.6174	.6107	.6040	.5974	.5909	.5844
50	.5781	.5718	.5655	.5594	.5533	.5473	.5413	.5354	.5296	.5238
60	.5181	.5124	.5068	.5013	.4958	.4905	.4851	.4798	.4746	.4694
70	.4643	.4592	.4540	.4493	.4444	.4396	.4347	.4300	.4253	.4207
80	.4161	.4116	.4071	.4026	.3982	.3939	.3896	.3854	.3812	.3770

Table of Decay Correction Factors For Cobalt 60

A.8 The CD V-786 sealed sources were procured in January 1956, and at that time each set was 30 millicuries  $\pm 25\%$ . Present activity of a CD V-786 Set can be computed from the table above, as indicated in the following example.

Example:

What was the total activity of a CD V-786 Training Source Set in January 1960?

$$\begin{aligned} \text{Elapsed time} &= 48 \text{ months} \\ \text{Decay correction factor: from table} & \\ \text{in A.7 (page 3)} &= .591 \\ \text{Activity in January 1960} &= 30 \text{ mc} \times .591 = 17.7 \text{ mc} \pm 25\% \end{aligned}$$

A.9 The individual sources in the CD V-786 Sets are not calibrated. However, they can be calibrated using the CD V-138, 0-200 mr dosimeters. For the calibration range, select a point and lay out a circle with a radius of one to two feet. This point should be in a large open area to minimize the contribution from scattered radiation. Zero the two CD V-138 dosimeters which are component parts to the set, and several additional CD V-138's if they are available. Check all dosimeters for leakage. Locate the lead container with the sources at such a distance from the calibration range that they will not affect the dosimeter readings. Place the dosimeters in an upright position on the circle. Make certain that nothing shields the dosimeters from the source. Place one source in position and expose the dosimeters for as long as necessary to obtain at least a 50 mr exposure. The time will vary depending on the size of the source. Compute the activity of the source as indicated in the following example. Remember to keep radiation exposures of individuals to a minimum. All calculations should be done before the sources are used, or after they have been returned to the storage area.

Example:

$$\begin{aligned} \text{Average reading of dosimeters placed at one foot} \\ \text{for 1.5 hours} &= 96 \text{ mr} \\ \text{Dose rate (mr/hr)} &= \frac{\text{Dosimeter reading (mr)}}{\text{Time (hr)}} = \frac{96 \text{ mr}}{1.5 \text{ hr}} = 64 \text{ mr/hr} \\ \text{Calibration formula} &= \text{dose rate (mr/hr)} = \frac{13.2 \times \text{Co}^{60} \text{ activity (mc)}}{\text{distance}^2 \text{ (ft)}} \\ 64 \text{ mr/hr} &= \frac{(13.2) (\text{Co}^{60} \text{ activity})}{(1)^2} \\ \text{Co}^{60} \text{ activity} &= \frac{(64) (1)}{(13.2)} \\ \text{Co}^{60} \text{ activity} &= 4.9 \text{ mc} \end{aligned}$$

A.10 Once a source is calibrated, it should be marked to indicate its activity, and the date of calibration should be recorded. A grease pencil or paint can be used to mark the activity on the yellow warning tags attached to the CD V-786 sources. Mark the source very quickly to keep your exposure to a minimum. The activity of each source at a later date can be determined as outlined in paragraph A.7.

PROCEDURES FOR INITIAL CHECK ON RECEIPT OF AN OCD TRAINING SOURCE SET

A.11 The transportation of radioactive materials moving in interstate commerce by rail, water, or by public highway (except in U. S. Mail), is regulated by the Interstate Commerce Commission, and some States extend the ICC regulations to intrastate transportation. In addition, local authorities may impose additional limitations on the transportation of radioactive materials, as in the case of their movement through tunnels or within port areas. (See paragraph A.49 and A.50.)

A.12 The OCD Training Source Sets are normally shipped to the licensed custodian by motor freight or railway express with the auxiliary equipment being packed separately from the lead containers. The keys to the sets are sent to the licensee by registered mail, return receipt requested. The step-by-step procedure listed below should be followed when a Training Source Set is received by a licensee from OCD or on permanent transfer from another licensee. The licensee must wear a CD V-138 dosimeter at all times when the Training Source Set is being used, checked, or repaired. Remember to keep radiation exposures to a minimum.

- a. Check to see that each of the lead containers, CD V-791 and CD V-792, bears a label including the following information: radioisotope, number of sealed sources, total activity of the sources, and the date of encapsulation, or date of last calibration.
- b. Count the number of sealed sources, and place them on disposable paper. The CD V-784 set should contain six sources. The CD V-786 set should contain 12 sources. If the set is issued directly from OCD, any discrepancy should be noted on Form DD 1149-2, Requisition and Invoice/Shipping Document (EAM). If the set is permanently transferred from another licensee, the new custodian should note any discrepancies on the letter of receipt furnished OCD. (See paragraph A.45.) In both cases, the custodian should also advise the State of any discrepancy.
- c. Leak test each sealed source in accordance with the instructions, beginning with paragraph A.13. Record the results of the initial leak test and keep them on file. Each sealed source must be leak tested every six months from the date of the initial test.

- d. Replace rings or tags on any sealed source which is not properly ringed or tagged. Replace rings and/or tags in accordance with the instructions beginning with paragraph A.21.
- e. Return the sources to the lead containers, and place the OCD Training Source Set in the authorized storage area.

#### LEAK TESTING PROCEDURES FOR OCD TRAINING SOURCE SETS

A.13 Immediately upon receipt and thereafter at intervals not to exceed every six months, each recipient of an OCD Training Source Set, in accordance with a condition on his byproduct material license, is responsible for performing the following test for external leakage, and/or contamination of individual sources. Records of leak tests must be maintained by the licensee.

A.14 Remove the CD V-791 lead container from the CD V-792 lead container. Moisten a piece of paper which has a high wet strength, such as filter paper or a paper towel, and wipe the inside of the CD V-792 lead container.

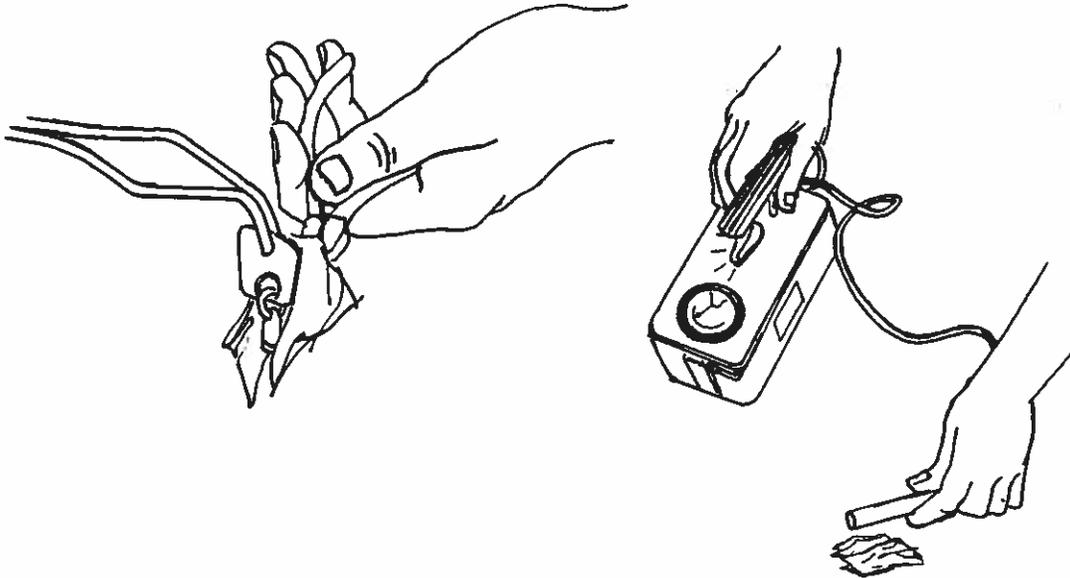
A.15 Using a CD V-700 Geiger Counter, with the shield open, the ear-phones attached, the range set to the most sensitive scale (X1), and the window as close as possible to, but not in contact with, the filter paper or paper towel, thoroughly monitor the paper. Since gamma radiation is of primary interest, the filter paper can be measured while wet. A careful check of the background radiation should be made prior to monitoring the paper. Care should be taken that the monitoring be performed at a distance from the sealed sources where they do not affect the CD V-700 natural background readings during the monitoring operation.

A.16 Any average reading of the CD V-700 above normal background must be attributed to contamination. Do not be concerned with an apparent momentary slight increase in the counting rate of the paper as the variation in normal background and meter deflections may cause this.

A.17 If the test reveals any removable radioactive material, the licensee must take immediate action to prevent the spread of contamination. The sources and the contaminated filter paper must be placed in the lead container, and the licensee must immediately notify the CBR Defense Officer in his OCD Region. The entire set must be kept secure and locked pending disposition instructions. In accordance with the leak test condition on his license, the licensee must also notify the AEC of the leaking capsules within 30 days after the completion of the test.

A.18 If the CD V-792 shows no evidence of radioactive contamination, remove one of the sealed sources from the CD V-791 container, using the 18" handling tongs (CD V-788). Using the tongs and/or pliers, so the licensee's hands will not come close to or in contact with the source, wrap and wipe each individual source on a piece of the high wet strength paper which has been moistened with water. Sufficient pressure to effect a thorough removal of any contamination should be applied. A separate paper should be used for each source.

A.19 Remove the sealed source from the paper, and place it on disposable paper. Using the CD V-700, thoroughly monitor the paper to determine if the source is leaking or contaminated. Any average reading of the CD V-700 above normal background must be attributed to leakage and/or contamination. As the test for each capsule is completed, place the capsule in the CD V-792 lead container until all capsules have been tested. This will further reduce exposure doses.



Leak Testing of Sealed Sources

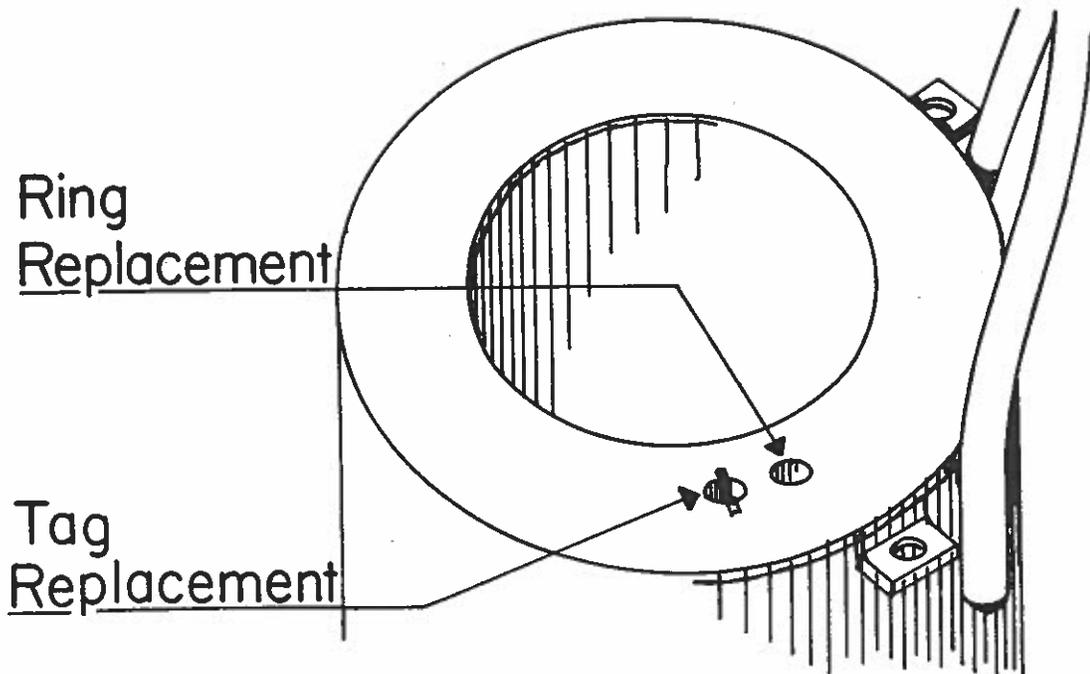
A.20 Leak test each source and wipe test the CD V-791 small lead container in the same manner as the CD V-792. If the leak test results are negative, return the sources to the CD V-791 small lead container, and place the set in its normal storage location.

#### REPLACEMENT OF RINGS AND TAGS ON SEALED SOURCES

A.21 A second condition on byproduct material licenses issued to civil defense organizations or personnel requires the replacement of the one inch yellow warning tag and/or ring attached to each source, should they become detached through usage or accident. It is the responsibility of the licensed custodian of the Training Source Set to replace the rings and tags in accordance with the following instructions. New tags and rings and new radiation area signs may be obtained from:

Defense General Supply Center  
Civil Defense Supply Division  
Richmond 12, Virginia

A.22 The CD V-792 lead container housing the CD V-784 sources is equipped with special holes for the replacement of tags and rings. See the following illustration.



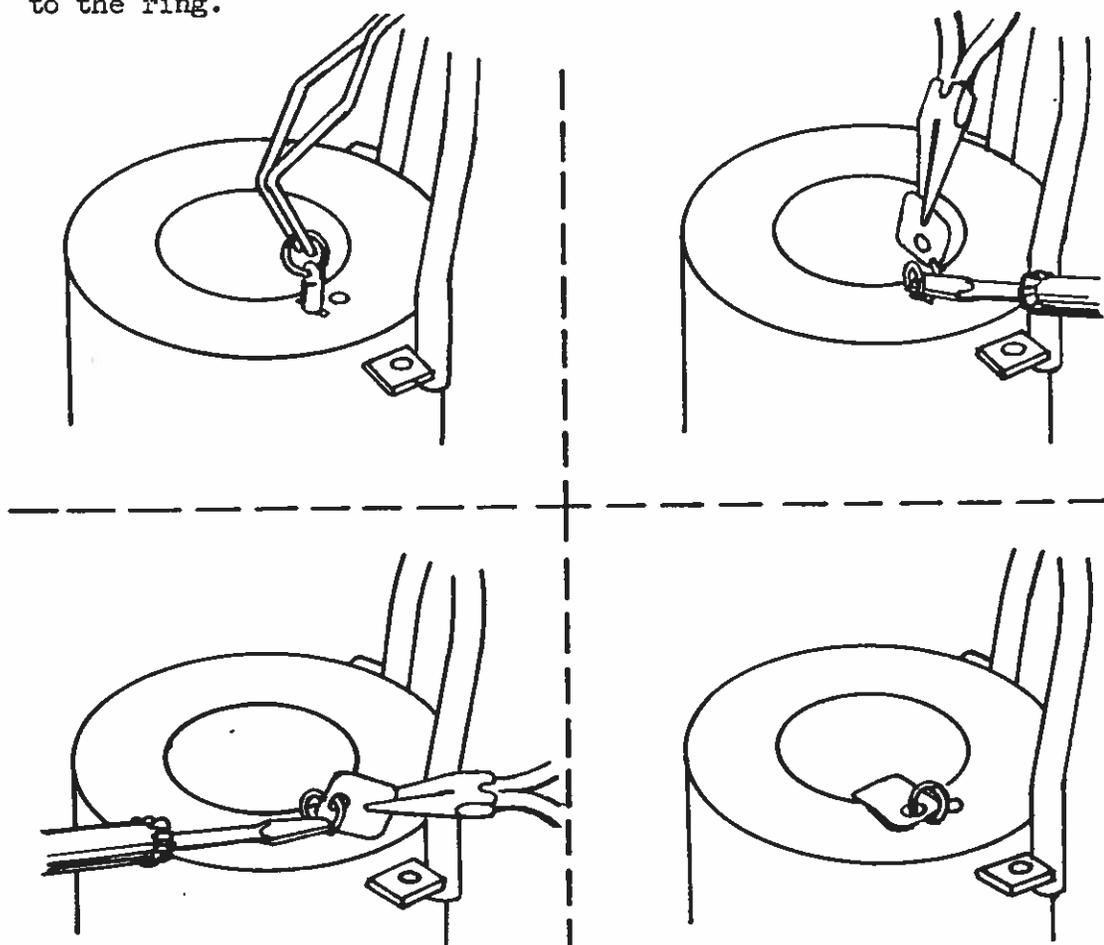
Location of Tag and Ring Replacement Holes in the CD V-792

A.23 The CD V-792 lead container housing the CD V-786 sources does not provide similar holes. Therefore, the licensee must prepare them. Using an ordinary power drill make a one inch deep  $3/8$ " hole in the top of the CD V-792. The hole should be placed about  $1/2$  inch from the inside rim. With a screwdriver make a small slot on each side of the hole to accommodate the metal ring on the source. This hole is for the replacement of tags and will allow you to work on the ring in an upright position. (Note: The slot should not be so deep that it hinders the separation of the ring in replacing the tag.)

A.24 A second hole  $3/8$ " deep and  $3/8$ " in diameter should be drilled adjacent to the tag replacement hole. This second hole will hold the source in an upright position, yet will expose the hole in the source which accommodates the ring. The slots on the tag replacement hole will distinguish it from the ring replacement hole.

A.25 Tags should be replaced in accordance with the following step-by-step procedure:

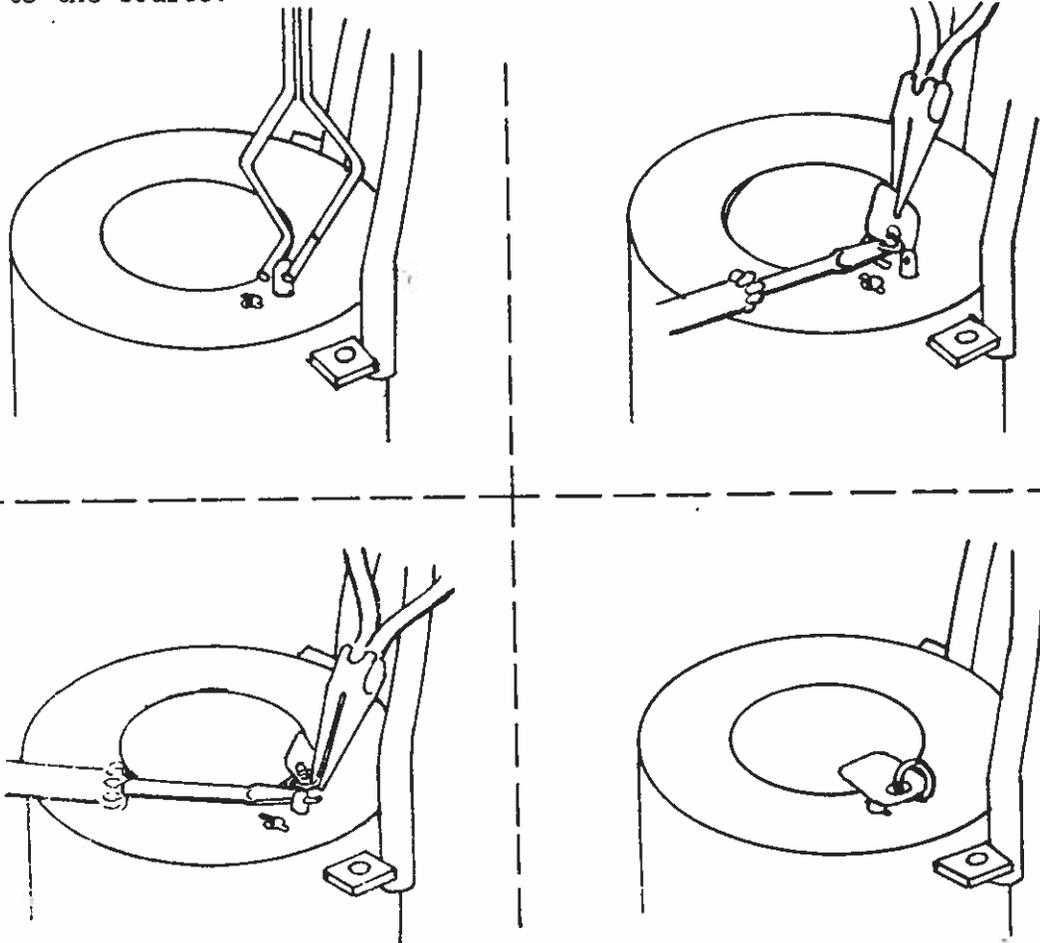
- a. Place the CD V-792 on a table strong enough to support it. In this position you will be able to work on the sealed source and keep your radiation exposure to a minimum.
- b. Place the screwdriver, long-nosed pliers, and new tag on the table where they can be easily and quickly reached when needed.
- c. Place the untagged source in the proper hole with the aid of the 18 inch handling tongs. Make certain that the separation portion of the ring is at the top. Make no attempt to remove any portion of the old tag from the sealed source.
- d. With the source and ring in position, insert the blade of the screwdriver into one end of the separation portion of the ring.
- e. Place the new tag on the ring with the aid of the long-nosed pliers.
- f. Remove the screwdriver and with the long-nosed pliers carefully slide the tag along the separation portion until it is permanently attached to the ring.



Replacement of Tags

A.26 Rings should be replaced in accordance with the following step-by-step procedure.

- a. Place the CD V-792 on a table strong enough to support it.
- b. Place the screwdriver, long-nosed pliers, tag, and ring on the table where they can be easily and quickly reached when they are needed.
- c. Place the one inch yellow warning tag on the new ring.
- d. Using the 18 inch handling tongs, place the source without the ring into the proper hole in the CD V-792.
- e. Insert the blade of the screwdriver into one end of the separation portion of the ring.
- f. Insert the ring through the hole in the source.
- g. Remove the screwdriver and with the long-nosed pliers carefully slide the ring through the hole until it is permanently attached to the source.



Replacement of Rings

A.27 The replacement of rings and tags should be completed as quickly as possible to keep radiation exposures to a minimum. As much as possible, perform the operations at arm's length. Only the individuals whose names appear on the byproduct material license as individual users should replace either the rings or tags on the sealed sources.

#### REGULATIONS GOVERNING THE USE AND STORAGE OF OCD TRAINING SOURCE SETS

A.28 An Atomic Energy Commission Byproduct Material License requires the licensee to be responsible to the AEC for the proper care, handling, and storage of the OCD Training Source Set in his custody as well as reporting to the AEC any loss, damage, or accident resulting from violations of AEC standards. The acceptance of the license binds the licensee (not OCD) to the conditions set by the AEC under which the Training Source Set is placed in his jurisdiction. These regulations are clearly outlined in Title 10, Chapter 1, Part 20, of the Code of Federal Regulations entitled, "Standards for Protection Against Radiation." A copy of these regulations (10-CFR-20) is issued to each licensee with his byproduct material license.

A.29 In addition to the AEC requirements, OCD requires each licensee possessing an OCD Training Source Set loaned to him through the State Civil Defense Office to comply with additional regulations. This means the licensee is responsible to the AEC for the proper care, use, and storage of the Training Source Set but is responsible to the State which in turn is responsible to OCD for the property accountability of the set. Important AEC regulations and all OCD regulations are contained in the remaining paragraphs of this appendix. The licensee is referred to 10-CFR-20 for the additional AEC regulations.

A.30 Storage. The preferred location for the storage of the Training Source Set is in a locked, unoccupied, and isolated area. Only work necessary to normal storage operations shall be performed in the storage area. Only authorized personnel shall be allowed to enter the storage area and their duration of occupancy shall be kept to a minimum. Determination of the radiation levels in the immediate storage area shall be made with a CD V-700 and the readings recorded, dated, and filed. Normally, the set shall be stored only at those locations specifically authorized on the license. Temporary storage is permitted at other locations when training activities make it impractical to return the set to its normal storage site after each use.

A.31 Posting. Each area or room in which an OCD Training Source Set is used or stored, regardless of whether it is the normal or a temporary storage area, will be considered a restricted area and shall be conspicuously posted with the radiation area signs issued with the Training Source Set. Restricted area means any area to which access is controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials. Restricted area

shall not include any area used as residential headquarters, although a separate room or rooms in a residential building may be set apart as a restricted area. The following information must be posted on all entrances to the storage area: (1) radioisotopes stored, (2) number of sets and number of sources per set, (3) total activity and date of calibration, and (4) whom to call in case of an emergency. In addition, the standard radiation area signs which are included with the OCD Training Source Set will be posted in conspicuous places in areas where the Source Set is used or stored. Signs will be sufficient in number and placed so as to be clearly visible from any approach to the area.

A.32 Caution Signs. Standard radiation area signs shall include the conventional three-bladed symbol and the words, "Caution (or Danger) Radiation Area," printed in magenta on a yellow background. The signs included with the Training Source Sets meet these requirements.

A.33 Uses. The licensee shall use the Training Source Set for only those activities specifically authorized under item 9 of his byproduct material license. An authorized use which reads: "To be used in training of instrument operators, and for instrument calibration purposes" does NOT allow the licensee to use the Training Source Set for the training of radiological defense instructors.

A.34 Supervision. The OCD Cobalt 60 Sealed Source Set may only be used for the purposes stated in the AEC byproduct material license. It must be used by, or under the supervision and in the physical presence of, one of the individual users designated in the license.

A.35 Instruction of Personnel. Before entering a restricted area, all individuals shall be informed of the presence of radioactive materials and shall be instructed in the hazards of excessive exposure to such materials and in precautions or procedures to minimize exposure.

A.36 Exposure of Individuals. Under no circumstances shall the licensee use the Training Source Set in such a manner as to cause any individual in a restricted area to receive in any period of seven consecutive days from radioactive material and other sources of radiation in the licensee's possession, a whole body gamma dose in excess of 100 mr, or a whole body gamma dose in excess of 5 r in any one year. No licensee shall use the Training Source Set in training exercises or classes involving individuals under 18 years of age.

A.37 Personnel Monitoring Equipment. Each licensee shall issue a CD V-138 dosimeter or an equivalent dose recording instrument to each individual entering a restricted area.

A.38 Records. Each licensee shall maintain records showing the radiation exposure of all individuals exposed to radiation from radioactive materials in his possession. These records shall show the name, age, date of birth,

Social Security number, method of determining the dose (i.e., film badge, CD V-138 dosimeter, etc.) and the total weekly whole body gamma radiation dose of each individual. Summaries of the total whole body gamma dose for each calendar quarter, or three-month period, and the total yearly whole body gamma dose shall be maintained for each individual who has an exposure history which extends for a time period of two weeks or fourteen consecutive days or more. When the exposure history of an individual exceeds one year, totals of the yearly accumulated whole body gamma dose and calculations of the permissible accumulated gamma dose shall also be maintained. The permissible accumulated dose to gamma radiation can be obtained from the formula,

$$PAD = 5(N-18)$$

where PAD is the permissible accumulated gamma dose in roentgens (r) and N is the age of the individual being considered in years and is greater than eighteen. These radiation exposure records of each individual must be preserved by the licensee until December 31, 1965, or until 5 years after the date of the last exposure of the individual to radioactive material in the custody of the licensee. Each licensee shall maintain records showing the results of surveys as required by paragraph A.30. Each licensee shall keep records showing the use, receipt, and transfer of an OCD Training Source Set. It is suggested that the licensee maintain a log of the activities involving the set issued to him.

A.39 Inspection. Each licensee shall afford to the AEC and to OCD at all reasonable times opportunity to inspect the Training Source Set, the premises, and the facilities where the set is used or stored, and shall make available for inspection, upon reasonable notice, required records kept by him.

A.40 Inspection of Source Capsules. When the sources are returned to their lead containers after being removed for any purpose each source must be monitored with a CD V-700 to insure that the Co<sup>60</sup> source material is contained inside each capsule. This monitoring should be performed at a distance from the other sources where the gamma radiation levels are not significantly above natural background. Each source capsule must be inspected each time the source set is used.

A.41 Loss or Theft of Sealed Sources. The licensee is required to report promptly to the AEC any loss or theft of radioactive material in such quantities and under such circumstances that it appears to the licensee that a substantial hazard may result to persons in unrestricted areas. However, the licensee is requested to notify the OCD Regional Radiological Defense Officer immediately in the event of a suspected loss or theft of a sealed source or sources or of an accident resulting from a leaking source. This will enable the Radiological Defense Officer to assist the licensee in determining whether or not a loss has occurred, in determining the seriousness of an accident, and in notification of the AEC, if required.

A.42 Loss of Co<sup>60</sup> Source Material from the Capsule. In the event that an empty source capsule is discovered during the inspection, required by paragraph A.40, the remaining source capsules should be secured in the lead containers. After monitoring personnel in the area for possible contamination and wipe testing the outside of the CD V-792 to insure that it is not contaminated, move the sources in the lead containers out of the general area where the sources were in use. Using a CD V-700, monitor the entire area until the Co<sup>60</sup> is located within a small area (less than one square foot). If the Co<sup>60</sup> material, which is a small needle, can be seen with the naked eye, it should be picked up and placed in the lead container along with the other sources and the empty source capsule using the CD V-788 handling tongs or a pair of long-handled forceps or pliers. The Co<sup>60</sup> material should not be picked up with the fingers under any circumstances, nor should any attempt be made to return the Co<sup>60</sup> needle to the empty source capsule. If the Co<sup>60</sup> material is on an earth, sand, or gravel surface, it can be carefully scooped up with a shovel and placed along with the earth, etc., in the large CD V-792 container. No attempt should be made to separate the Co<sup>60</sup> needle from the extraneous material. Once the Co<sup>60</sup> material is inside the lead containers they should be marked, sealed, and the sources treated as if they were leaking, as described in paragraph A.17.

A.43 After completing the operations described in paragraph A.42, the general area and the personnel and equipment used to pick up the Co<sup>60</sup> material should again be monitored to insure that they are free of radioactive contamination. Until the Co<sup>60</sup> material is found, the general area should be restricted to all personnel except those involved in the monitoring operations. If monitoring of the area fails to indicate the presence of contamination after the Co<sup>60</sup> material has been located and removed, the area may be returned to unrestricted status if necessary. However, it is suggested that the area be monitored by someone qualified in the field of health physics, at the request of the licensee, prior to returning it to unrestricted use. The licensee must report the incident to the OCD Regional Radiological Defense Officer as soon as possible to request disposition and replacement of the source set. In accordance with the conditions of his license, the licensee must also report the incident to the AEC within thirty days.

A.44 If the Co<sup>60</sup> source material cannot be located, or the presence of radioactive contamination is detected as a result of the incident, the OCD Regional Radiological Defense Officer must be contacted immediately for assistance.

A.45 Transfer. Temporary loan of OCD Training Source Sets to other licensees within the United States authorized to receive such material is allowed. However, if a licensee possessing an OCD Training Source Set anticipates moving from his present location to another, and, if the new location will prohibit him from exercising the required control and supervision of the Source Set, he must report this intention as soon

as possible to the State Civil Defense Office. The State Office may permanently transfer the set to another licensee with the approval of OCD or return the set to OCD. If it is transferred to another licensee, the new custodian must furnish to the State Civil Defense Office for transmittal to OCD: (1) a copy of his byproduct material license and (2) a letter indicating receipt of the Training Source Set and acceptance of responsibility for it. If the set is to be returned to OCD, the State must notify the OCD Regional Office and action will be initiated for the return of the set directly from the custodian.

A.46 Renewal of Byproduct Material Licenses. A Training Source Set custodian must make application for renewal of his license 60 days prior to its expiration or he must notify OCD, through the State Civil Defense Office, of his intentions not to initiate license renewal and request disposition instructions for the set.

A.47 Violations. The licensee is responsible to the AEC for the proper use and storage of the Training Source Sets and for compliance with 10-CFR-20, Standards for Protection Against Radiation, or 10-CFR-30, Licensing of Byproduct Material.

A.48 Return of Sets. All OCD Training Source Sets loaned to the States shall be returned to OCD when the licensee and the State desire to be relieved of the responsibility for the sets. Arrangements for the disposition of the source sets should be made with the OCD Regional Office through the State Civil Defense Office.

A.49 Transport of Training Source Sets. The OCD Training Source Sets may be transported to the training site in a vehicle, provided the source set is padlocked, the vehicle is locked, and the vehicle is posted on both sides and the rear with radiation signs with the statement "Dangerous -- Radioactive Material" in 3 inch letters on a contrasting background. This type of sign may be obtained from your local trucker's association. The automobile should be monitored to determine radiation levels within it, and the occupants should wear CD V-138 dosimeters to measure their exposure during transport of the set. (See paragraph A.50.)

A.50 State and City Regulations. In addition to AEC and OCD regulations, many States and cities have additional requirements which govern the use, storage, and particularly the transportation of radioactive materials. It is the licensee's responsibility to contact the appropriate State and city departments for information on such regulations.