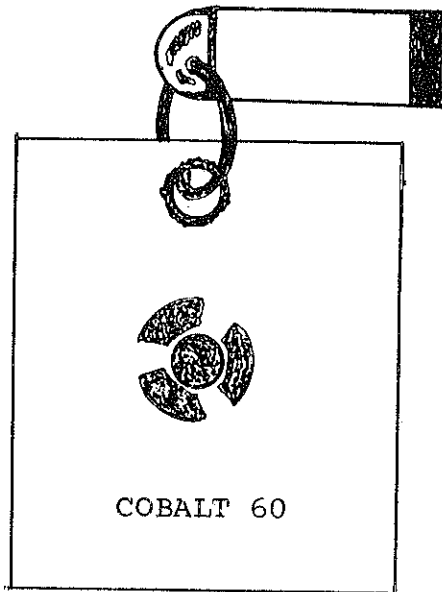


172  
cop. 1

IOWA  
CIVIL DEFENSE DIVISION



RADIOLOGICAL DEFENSE  
DCPA TRAINING SOURCE SET  
PROCEDURES MANUAL



Prepared by: Radiological Defense Officer

## TABLE OF CONTENTS

I.	Licensing, Certification, and Custody.....	1
II.	Qualification for Certification and Custody.....	1-2
III.	Program Scope.....	2-5
IV.	Instructions Regarding Handling and Use of..... Sealed Sources	5-9
V.	General.....	9-10
	Storage Sites.....	11-14
	Radiation Exposure Records.....	15
	Worksheet for Survey.....	16
	User Certificate Form.....	17
	Receipt and Transfer Form.....	18
	Radiation Area Sign.....	19
	Radioactive Materials Sign.....	20

### Distribution:

- 1 copy to each user who has been issued a certificate
- 1 copy to each County Civil Defense Director
- 1 copy to CDAE
- 1 copy to University Extension Program
- 2 copies to DCPA, Region Six
- 1 copy to the Executive Director of Public Defense

## SOURCE HANDLING

Radioactive by-product materials contained in sealed capsules are necessary for training radiological monitors in the principles and procedures for the detection, measurement, and control of radiation.

The controls and supervision which follow govern the use of Cobalt 60 Source Sets loaned to the State of Iowa by the Defense Civil Preparedness Agency, Department of Defense, for use in radiological defense training programs conducted within the State of Iowa.

### I. Licensing, Certification, and Custody

The Atomic Energy Commission has issued By-Product Material License Number 14-12501-01 to the Iowa Civil Defense Division, hereinafter called the "Division." This license authorizes the Division to receive, possess, acquire, use, transfer, or otherwise dispose of by-product material under the control of the Atomic Energy Commission within certain limitations. The purpose of these instructions is to provide for the use of by-product material in the State of Iowa radiological defense program in accordance with the requirements established by the Atomic Energy Commission. The State Radiological Advisory Committee will exercise strict control over and accountability for all by-product material in its possession. In this connection, the State Radiological Advisory Committee will issue user certificates to all State employees and Civil Defense personnel of political subdivisions who are qualified to receive, handle, and use such by-product material.

Under the terms of By-Product Material License Number 14-12501-01, the Division is authorized to have in its possession forty (40) DCPA Cobalt 60 source sets, each consisting of up to 30 millicuries of Cobalt 60 sealed in standard Oak Ridge-type capsules. The maximum quantity in the possession of the Division at any one time will not exceed 1,200 millicuries of Cobalt 60. These source sets will be stored in various locations throughout the State. (See "Storage" part of this manual.)

### II. Qualification for Certification and Custody

The State Radiological Advisory Committee has specified the level of training that will qualify an individual for certification to use Cobalt 60 source sets.

#### A. Certification

The State Radiological Advisory Committee shall issue user certificates to individuals qualified to receive, handle, and use Cobalt 60 source sets.

1. To be eligible to obtain a users certificate, the individual must graduate from the DCPA-sponsored course for Radiological Monitor Instructors (32 hours).
2. Selection criteria for potential RMI enrollees will include the factors of interest, competency, dependability, and expected performance of service with the Division and/or Civil Defense activity of a political subdivision. Each County Civil Defense Director or concerned State or Federal agency director will determine their candidates enrollment qualifications with regard to the aforementioned factors.
3. Enrollment in the RMI Course should be limited to individuals competent in high school science and algebra and where practical to college graduates with aptitude in physics, physical science, and biology.
4. Potential users shall, upon application, meet with the State Radiological Advisory Committee in a personal interview before a users certificate is awarded.

#### B. Custody

1. Custody of sealed source sets will be vested only in persons certified as in "A" above to receive, handle, and use such sets, and who are further officially designated as authorized users by the State Radiological Advisory Committee. User certificates will be issued by the State Radiological Advisory Committee to qualified personnel and will be signed by the Director and the Division Radiological Defense Officer.
2. Custody of no more than one (1) sealed source set (no more than 30 millicuries of Cobalt 60) shall be vested in the same authorized user, except where provision has been made for storing and using such further sets separately therefrom, and so that no more than two (2) source sets (no more than 60 millicuries of Cobalt 60) will be at the same storage location at one time. Exception to the above will be storage at the Lucas State Office Building, which is authorized storage of five 30 millicurie source sets (not to exceed 150 millicuries). Permanent storage areas will not be changed without written approval of the State Radiological Advisory Committee and DCPA, Region Six.

### III. Program Scope

#### A. Users Certificates

1. The State of Iowa Civil Defense Division will make a blanket issue of users certificates to all individuals who currently possess or who are listed as users on a current AEC By-Product Material License. The individual or county licensees will have their present AEC By-Product Material Licenses cancelled with the concurrent issue of users certificates.

2. Users certificates will be in force three years from the date of blanket issue. Re-issue will be made 30 days prior to the expiration date of the former certificate. User certificates will remain in force for three years, unless circumstances arise that would warrant revoking or cancelling the certificate, e.g., infringement of AEC Rules and Regulations, user leaving the State, user requesting to have the certificate withdrawn for personal reasons.

3. A memorandum will be circulated to all County Civil Defense Directors and interested agencies requesting the submission of the names of candidates for a user certificate. Evidence of successful completion and graduation from the Radiological Monitor for Instructors Course must accompany the request. Upon review and approval of the State Radiological Advisory Committee, the candidate will be issued a certificate. Certificates issued subsequent to the blanket issue will be reviewed and issued quarterly - January 1, April 1, July 1, and October 1.

#### B. Source Set Location

1. The permanent source set storage locations for Iowa are included as part of this plan. The sets are geographically located so as to provide surrounding counties ready access. No county will be in excess of 30 miles from an available source set. When a source set is borrowed by a user and removed from its permanent storage area, it must be returned to the permanent storage area after the training period has terminated and/or not more than 30 days after the set has been removed from the permanent storage area.

2. The individual who has signed for the source set at each permanent storage area shall have the responsibility of insuring that the borrower has a users certificate and is qualified to use the Cobalt 60 source set. If the person wishing to borrow the source set does not have a valid users certificate, he will not be authorized use of the source set, even though he may be a graduate from a DCPA-sponsored Radiological Monitor for Instructors Course. The source sets are presently stored at areas that were selected on a geographical and frequency of use basis. If the individual who has signed for the source set does not have a use scheduled for the set during the time a would-be borrower would like to use it, he is obligated to loan the source set. The Receipt, Transfer, and Leak Test form must be filled out before the source set can be loaned. Three copies of the form must be made--one copy goes to the State Civil Defense Office and one copy each to past and present users. No person other than the person who has originally signed for the source set or the State Radiological Advisory Committee can reassign or loan the source set.

3. Any temporary storage area shall be chosen on the basis of source set security and health protection.

## C. Records

1. Each permanent source set location shall have a custodian who is qualified to use the Cobalt 60 source set. The custodian will be the individual who is presently assigned this responsibility under the old AEC licensing procedure. \* He will be responsible for performing the periodic leak test. On a to-be-announced date, all source sets shall be leak tested and the results mailed to the Lucas State Office Building, Iowa Civil Defense Division. \*\* The Radiological Defense Officer for the State shall maintain a file of all leak tests performed. If all the source sets in Iowa are leak-tested on the same date, they shall all come due again six months later. This system will provide the Civil Defense Division and the authorized user an appropriate leak test history for each source set. Current leak test scheduling shall prevail until the announcement date for collective leak testing is disseminated. A leak test and inventory must be performed when the source set is transferred to another authorized user. A copy of the Receipt, Transfer, & Leak Test Form will be mailed to the State Civil Defense Office and a copy will be on file with both past and present users. (See copy of Receipt, Transfer, & Leak Test Form in the back of this manual.)
2. The custodian will keep a record of the dates the source set was used for training. These records will be kept on file by the custodian at the permanent source set storage area.
3. The custodian shall make a survey of the permanent source set storage area. This should be done immediately after the source set is placed in location for the first time. Further surveys will depend on whether the storage area has been altered or the source set was determined to be leaking as a result of the six-month leak test. Determination of the radiation level in the immediate storage area shall be made with a CDV-700 and the readings recorded, dated, and filed. Records will be retained at the permanent storage location. Readings 12 inches from the CDV-792 lead container should not read in excess of 5 mr/hr. and readings outside of the access door or any exterior wall should not exceed 2 mr/hr. Any reading in excess of these shall be reported to the State Radiological Defense Officer for further action.
4. Each authorized user will maintain an exposure record for any individual who has an exposure history which extends for a time period of two weeks or fourteen consecutive days. These records will be given to the permanent source set storage area custodian. No individual shall be

\*The source set custodian will have a "(C)" after his name on the user certificate.

\*\*Results should be mailed to the State Civil Defense Office no later than five days after the leak test was performed.

exposed to more than 100 MR during any period consisting of seven consecutive days. No individual shall be exposed to more than 5r in any one year period. No individual less than 18 years old will be allowed to enter a training seminar where Cobalt 60 source sets are used. If any exposure history exceeds these two levels, they should be reported at once to the State Radiological Defense Officer for further action. Form AEC 4, "Occupational External Radiation Exposure History," will be available from this office.

#### IV. Instructions Regarding Handling and Use of Sealed Sources

- A. Remote handling tongs, 18 inches long, will be used whenever the sealed capsules are handled. Sources will not, under any circumstances, be removed from sealed capsules.
- B. Source sets transferred will be handled and transported by either an authorized user or an ICC licensed carrier. A Receipt and Transfer Form will be completed and forwarded to the Iowa Civil Defense Division, Lucas State Office Building, Room B-33, Des Moines, Iowa 50319, whenever a source set is transferred from one authorized user to another. When not in use and during transport, sources will be enclosed in padlocked, standard lead containers, CDV-791 and CDV-792. Standard "Dangerous, Radioactive Materials" markers will be displayed with source set while in transit. Areas in which source sets are in use or in storage will be restricted and posted with standard "Caution---Radiation Area" markers. Each CDV-778 radiation training source set is equipped with eight similar markers which may be used to post a storage area or an in-transit carrier. Markers which read "Danger" rather than "Caution" may be used.
- C. Whenever Cobalt 60 capsules are removed from the standard containers, surveys will be made, using low-range rate meters (CDV-700 or equivalent), and recorded, showing the dose rate for each radial yard from the source to the outer edge of the restricted area. After use, the capsules will be returned promptly to the containers and a survey made to establish that no Cobalt 60 from the set remains exposed in the area. Capsules will be counted when returned to the container and will be secured in the containers before classes are dismissed. If the final survey indicates that Cobalt 60 remains outside of the container or if any capsule is unaccounted for, the authorized user will immediately notify the Division's Radiological Defense Officer, Lucas State Office Building, Room B-33, Des Moines, Iowa 50319, phone 515-281-3231. Initial notification will be made by telephone and confirmed by registered letter. The confirming letter will also indicate if capsule defect led to the loss of Cobalt 60. The authorized user will secure the remainder of the source set pending further instruction from the Division's Radiological Protection Officer. Immediate notice will be given to Region III, Division of Compliance, U.S. AEC, Glen Hill Office Park, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, phone 312-858-2660.

D. Dosimeters (CDV-138) will be worn by instructors and students using the sources, and dosages will be recorded. Exposure to radiation will be kept to a minimum at all times.

E. The source set will be leak-tested according to the following procedures:

1. Wipe the inside of the CDV-792 lead container with a damp, high strength, piece of filter or paper towel.
2. Check the wet paper with the CDV-700 (shield open and ear-phones attached). Make sure the test is conducted away from the capsules in the CDV-791 lead container. Any constant reading above .05 mr/hr. should be considered as leakage.
3. Each capsule should be wiped with a wet towel also. Use the handling tongs to remove and wipe the capsules. Wipe one capsule and test it at any one time so as to locate the capsule that is leaking. Any constant reading above .05 mr/hr. should be considered as leakage.
4. Wipe the small lead container in the same manner as was used to wipe the larger container. Any excessive readings should be reported at once to the State Radiological Protection Officer.

F. Replacement of tags and rings will be the responsibility of the source set custodian. Notify the State Radiological Defense Officer if tags or rings are needed.

1. Tags should be replaced in accordance with the following step-by-step procedure:
  - a. Place the CDV-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 a screwdriver, long-nosed pliers, and the new tag on a table where they can be easily and quickly reached when needed.
  - c. Place the untagged source in the one-inch deep hole with the slot. Use the handling tongs when moving the source. Make sure 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.
2. Rings should be replaced in accordance with the following step-by-step procedures:
- a. Place the CDV-792 on a strong enough table to support it.
  - b. Place a screwdriver, long-nosed pliers, tag, and ring on a 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 3/8-inch deep hole in the CDV-792 lead container.
  - 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.

G. Sealed sources will be attended by an authorized user when they are not in the standard containers and secured under lock and key.

H. Sealed sources will not be used unless they are properly tagged.

I. Where source sets are stored in restricted areas, they shall be secured against unauthorized removal (under lock). The entrance of the storage room must be prominently marked with appropriate caution signs or labels and the custodian's name, address, and telephone number.

J. In the event that an empty capsule is discovered, the remaining capsules 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 CDV-700 until the Cobalt 60 is located. The area should also be secured from personnel entry, except for personnel to be used to locate the Cobalt 60.

K. If the Cobalt 60 needle is visible to the naked eye, as it should be on a hard, smooth surface such as concrete, the Cobalt 60 should be picked up, using a broom and a long-handled dust pan, the CDV-788 source handling tongs, long-handled forceps or any other method which will enable the individual to keep the Cobalt 60 away from his person. The empty capsule and the other Cobalt 60 capsules should be secured in the lead containers and marked as unusable.

L. If the general area has an earth, sand, or gravel surface, the monitoring of the area must be very thorough because the Cobalt 60 may have been trampled beneath the surface, making it more difficult to locate. If the Cobalt 60 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 Cobalt 60. This shovelful of earth, etc., containing the Cobalt 60 should be carefully placed in the large CDV-792 lead container after removing the small CDV-791 lead container containing the other source capsules. The earth, etc., inside the CDV-792 should then be monitored to ensure that the Cobalt 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 Cobalt 60 from the earth, sand, or gravel in which it is located.

M. Upon completion of locating the Cobalt 60 and placing it in a lead container, the lead container should be wipe tested and all personnel and equipment involved in picking up the Cobalt 60 should be thoroughly monitored to ensure that no radioactive 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 user 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.

N. Immediately after an incident of this type occurs, the source set user should contact his State Civil Defense authorities. The source set should be placed in storage and should be considered the same as a leaking source set. This set should not be removed from its lead container nor used for any purpose by the authorized user.

O. In the event the Cobalt 60 cannot be located or contamination and/or radioactivity appears to be present, the authorized user should immediately contact the State Radiological Defense Officer:

Mr. Donald Hinman  
State Radiological Defense Officer  
Lucas State Office Building, Room B-33  
Des Moines, Iowa 50319  
Office: 515-281-3231  
Residence: 515-964-0352

P. Instructions for disposal and/or the replacement of source sets must be obtained from the DCPA, Region Six Office through the State Civil Defense Office.

V. General

A. Each authorized user shall be familiar with the following documents:

1. Code of Regulations, 10 CFR 20 and 30.
2. Form AEC-3, "Notice to Employees."
3. Form AEC-4, "Occupational External Radiation Exposure History."
4. "Procedures and Regulations for Care and Use of the DCPA CDV-778, Radiation Training Source Set."

B. The State Radiological Defense Officer will be the Protection Officer for the State. His responsibilities will be as follows:

1. Shall have indirect responsibility for administering the program. The State Radiological Advisory Committee will have direct responsibility.
2. Shall be responsible for having DCPA source sets disposed of when applicable or at the direction of the State Radiological Advisory Committee.
3. Shall maintain a file of names of personnel that have been issued a users certificate.
4. Shall maintain a file of leak test records and of Receipt and Transfer Forms.
5. Shall maintain liaison with the State Radiological Advisory Committee; Region III, Division of Compliance; and DCPA, Region Six.
6. Shall make occasional on-site inspections of source set storage areas and training sessions.
7. Shall be responsible for reporting any condition that may jeopardize the health of any individual to the proper authorities.

8. Shall be responsible for putting source sets that fall into category C.3 below into temporary storage at the Lucas State Office Building until approval is granted from the State Radiological Advisory Committee and Region Six to move it to another permanent storage area. If a custodian moves and another cannot be assigned, the source set will go into storage until the condition is remedied.

9. Shall report all Cobalt 60 accidents or losses to the State Radiological Advisory Committee.

C. The State Radiological Advisory Committee will have the following responsibilities:

1. Shall determine a users certificate applicant's individual qualifications. The Committee must be unanimous in their selection of individuals who are to be issued users certificates. A personal interview with the applicant will be conducted.

2. Shall have overall responsibility for administering the program.

3. Shall be responsible for redesignating a permanent storage position under the following conditions:

a. Infringement of AEC Rules and Regulations.

b. Pre-empted space.

c. Geographical location providing limited access to users.

d. Building renovated.

e. Source set custodian moves out of the general area in which the source set is stored.

4. Determine what measures should be taken in the event a capsule is lost or an individual is overexposed.

5. Shall make occasional on-site inspections of source set storage areas and training sessions.

6. The Committee will convene the first working day of each quarter (quarters starting in January, April, July, and October) to consider potential users and discuss program safety measures and procedures. The Committee may convene at other times if the situation dictates, e.g., lost source, source set must be relocated, AEC rules violation, etc.

7. Shall determine the need for and approve requests for additional source sets in the State and shall recommend the disposal of those sets not needed.

## STORAGE

By-product material in amounts not to exceed two (2) source sets (60 millicuries total) shall be stored in locked store rooms and/or vaults, as indicated below, except for temporary storage at locations where training courses and/or instrument calibration exercises are conducted.

<u>LOCATION</u>	<u>CUSTODIAN</u>
<del>Sheriff's Department County Courthouse Corning, Iowa 50841</del>	<del>Mr. Eldon C. Muchling 1201 Polk Street Bedford, Iowa 50833</del>
City Hall 715 Mulberry Waterloo, Iowa 50705	Mr. Frank W. Starr 2415 Tremont Cedar Falls, Iowa 50613
Police Office Boone City Hall Boone, Iowa 50036	Mr. Earl R. Scheurman 1622 Crawford Street Boone, Iowa 50036
Wartburg College Chemistry Department Waverly, Iowa 50677	Mr. Henry Behrends, Jr. Clarksville, Iowa 50619
County Courthouse Allison, Iowa 50602	Mr. Henry Behrends, Jr. Clarksville, Iowa 50619
County Courthouse Carroll, Iowa 51401	Mr. Paul A. Wentworth Manning, Iowa 51455
Clinton Co. /Mun. CD Agency City Hall, P. O. Box 103 Clinton, Iowa 52732	Mr. Mark E. Barnes P. O. Box 103 Clinton, Iowa 52732
Sheriff's Office County Courthouse Denison, Iowa 51442	Mr. Dennis R. Lamport 606 Sunset Drive Denison, Iowa 51442
Des Moines Co. /Mun. CD Agency 351 Belmont Court Burlington, Iowa 52601	Mr. Edward Bresch 309 Winter Street West Burlington, Iowa 52655

Loras College  
Department of Physics  
Dubuque, Iowa 52001

Floyd County Courthouse  
101 S. Main Street  
Charles City, Iowa 50616

Guthrie County Courthouse  
Fifth & Main Streets  
Guthrie Center, Iowa 50115

Fire Station and Police Hqs.  
No. 18, North Sixth Street  
Humboldt, Iowa 50548

Johnson County Courthouse  
Iowa City, Iowa 52240

City Hall  
Ottumwa, Iowa 52501

Physics Department  
Central College  
812 University Street  
Pella, Iowa 50219

City Hall  
24 N. Center  
Marshalltown, Iowa 50158

O'Brien County Courthouse  
Primghar, Iowa 51245

Palo Alto County Courthouse  
Courthouse Square  
Emmetsburg, Iowa 50536

Rev. Donald Hutchinson  
Loras College  
Dubuque, Iowa 52001

Mr. W. H. Olson  
Bill Dell Ranch  
R. R., Highway 14 West  
Charles City, Iowa 50616

Mr. Melford Jay Sheley  
Guthrie Center, Iowa 50115

Mr. Erwin M. Beenken  
1514 Seventh Avenue North  
Fort Dodge, Iowa 50501

Mr. Wayne D. Walters  
Route 2  
Solon, Iowa 52333

Mr. Park L. Sullivan  
612 Lamborn  
Ottumwa, Iowa 52501

Mr. Ronald E. Byers  
Physics Department  
Central College  
812 University  
Pella, Iowa 50219

Mrs. Nancy Holster  
City Hall  
Marshalltown, Iowa 50158

Mr. Arvin Verburg  
Primghar, Iowa 51245

Mr. Jack Daniels  
3202 Fifth Street  
Emmetsburg, Iowa 50536

Westmar College  
Department of Physics  
Le Mars, Iowa 51031

Mr. Sheldon L. Cram  
Department of Physics  
Westmar College  
Le Mars, Iowa 51031

Drake University  
Chemistry Department  
Des Moines, Iowa 50311

Mr. William H. Coppock  
3930 Douglas  
Des Moines, Iowa 50310

~~Des Moines Ind. Comm. Schl. Dist.  
1800 Grand  
Des Moines, Iowa 50312~~

~~Mr. William J. Kacena, Jr.  
1822 47th Street  
Des Moines, Iowa 50310~~

Building W-6  
Camp Dodge  
Grimes, Iowa 50111

Major James E. Phipps  
6701 Hickman Road  
Des Moines, Iowa 50210

City Hall  
209 Pearl Street  
Council Bluffs, Iowa 51501

Mr. Irvin Lidgett  
2718 S. 11th Street  
Council Bluffs, Iowa 51501

Scott County Courthouse  
416 West Fourth  
Davenport, Iowa 52800

Mr. Joseph B. Dooley  
2603 College Avenue  
Davenport, Iowa 52800

Cerro Gordo County Courthouse  
217 N. Washington  
Mason City, Iowa 50401

Mr. W. G. Davison  
407 S. Louisiana  
Mason City, Iowa 50401

Iowa State University (2)  
Ames, Iowa 50010

Mr. Jay Murray  
2007 Douglas  
Ames, Iowa 50010

City Hall  
First & Ashland Streets  
Indianola, Iowa 50125

Mr. Clifford L. Meints  
Department of Chemistry  
Simpson College  
Indianola, Iowa 50125

City Hall  
Audubon, Iowa 50025

Mr. Russell McLaughlin  
612 E. Division  
Audubon, Iowa 50025

Luther College  
Department of Chemistry  
Decorah, Iowa 52101

Mr. Adrian Docken  
Chemistry Department  
Luther College  
Decorah, Iowa 52101

Morningside College  
Physics Department  
Sioux City, Iowa 51100

Mr. Ira J. Gwinn  
Morningside College  
Physics Department  
Sioux City, Iowa 51100

Lucas State Office Building  
Room B-33  
Des Moines, Iowa 50319

Mr. Donald C. Hinman  
406 Grant  
Ankeny, Iowa 50021

Iowa County Courthouse  
Court Avenue  
Marengo, Iowa 52301

Mr. Robert C. Gunzenhauser  
702 Short Avenue  
Marengo, Iowa 52301

The State Radiological Advisory Committee shall reserve the right to relocate a permanent storage area within the State according to provisions of 10-CFR-20 and paragraph A. 30 of TM-67-1, "Procedures and Regulations for the Care and Use of the DCPA CDV-778, Radiation Training Source Set."

Some conditions that would warrant relocating a permanent storage site are as follows:

1. Infringement of AEC Rules and Regulations.
2. Pre-empted space.
3. Geographical location providing limited access to users.
4. Building renovated.
5. Custodian moves away from permanent storage location.



# RADIATION EXPOSURE RECORD

Name \_\_\_\_\_

Age \_\_\_\_\_ Date of Birth \_\_\_\_\_

Social Security Number \_\_\_\_\_ Dosimeter Serial No. \_\_\_\_\_

Date	Initial Reading	Final Reading	Dose
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Date \_\_\_\_\_ Total Exposure \_\_\_\_\_

Signature \_\_\_\_\_

AREA SURVEY RECORD

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							
8							

\*\* Use for each training session to survey training area. Do not use for normal storage area leak testing.

IOWA  
Civil Defense Division  
BY-PRODUCT MATERIAL USER'S CERTIFICATE

Number \_\_\_\_\_

Name \_\_\_\_\_ Address \_\_\_\_\_

This certificate is issued under AEC License Number \_\_\_\_\_ by authority of the State Radiological Advisory Committee. The holder is authorized by this certificate to receive, possess, and transfer by-product material as follows:

By-Product Material (Element and Mass No.): Cobalt 60

Physical Form: DCPA CDV-786 or CDV-784 Sealed Source Set

Maximum Amount of Radioactivity User May Possess: 30 Millicuries

The above by-product material will be obtained from the Iowa Civil Defense Division for approved Civil Defense training and demonstration purposes.

This certificate is subject to the conditions for use and control of by-product material, as indicated in the State of Iowa Radiological Defense Source Handling and Training Manual. This certificate may be revoked without notice if the above conditions are violated.

This certificate will remain valid until \_\_\_\_\_ unless revoked.

Albert R. Maricle, Director  
Iowa Civil Defense Division

Radiological Defense Officer

Date

Date \_\_\_\_\_

To: Iowa Civil Defense Division  
Room B-33, State Off. Bldg.  
Des Moines, Iowa 50319

From: \_\_\_\_\_ Permit No. \_\_\_\_\_  
(authorized user)

\_\_\_\_\_  
Address

Subject: Receipt, Transfer & Leak Test of Civil Defense Source Set

I hereby acknowledge receipt of Cobalt 60 Source Set--Serial number \_\_\_\_\_ from \_\_\_\_\_ (authorized user). Change your records to reflect temporary transfer of custody.

Leak test of set is  negative  positive.

When a source set is transferred, the following items are part of the set:

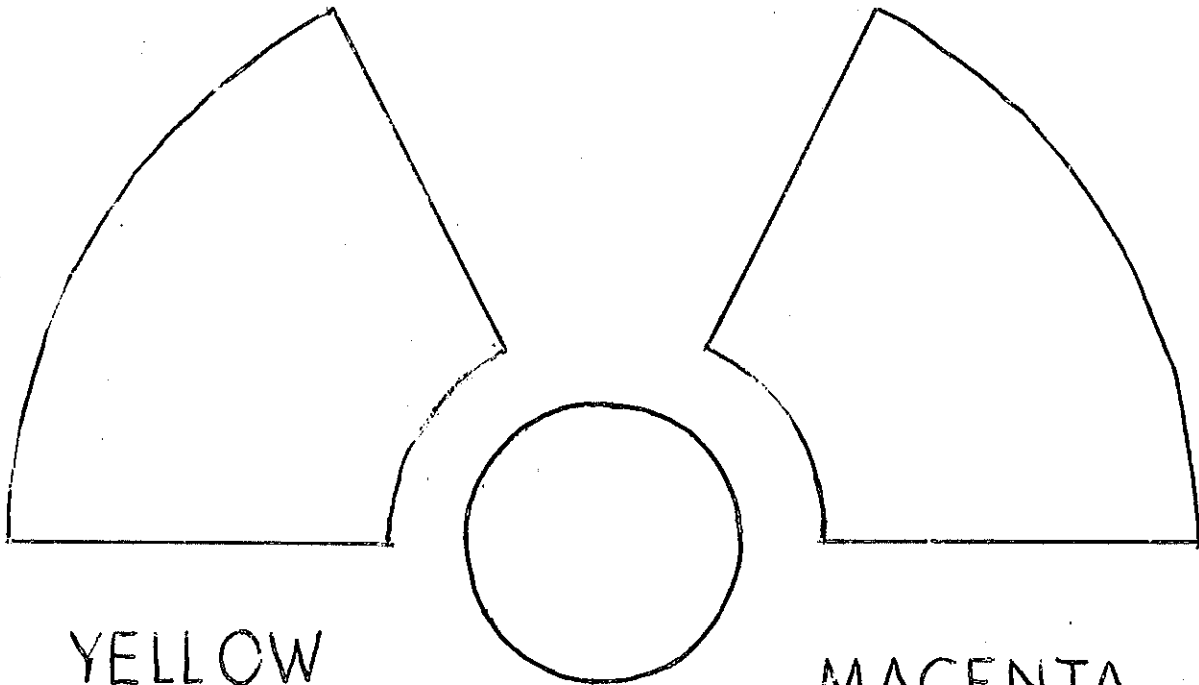
		Number of each received
5 mc Co <sup>60</sup> Sealed Sources	6 or 12	_____
Small Lead Container CDV-791	1	_____
Large Lead Container CDV-792	1	_____
Locks for Lead Container	2	_____
Long-handled tongs CDV-788	1	_____
Radiation Hazard Signs	8	_____
0-200 mr. Dosimeters 138	2	_____
Dosimeter Charge CDV-750	1	_____
Geiger Counter CDV-700	1	_____
	Other	_____

\_\_\_\_\_  
Signature of Receiver

-----  
Instructions:

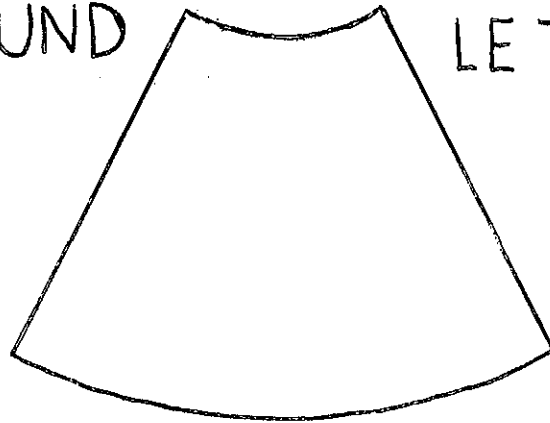
Prepare in triplicate.  
Original to State Civil Defense Office  
1 copy each to past and present users.

CAUTION



YELLOW  
BACKGROUND

MAGENTA  
LETTERING



RADIATION AREA