

**IDENTIFICATION OF DECEASED PERSONNEL**

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# CHAPTER 1

## INTRODUCTION

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### 1-1. Purpose

This manual provides guidance for the processing of remains to determine the positive identification of deceased military and civilian personnel. It covers all remains processed through US Army facilities during both peacetime and wartime.

### 1-2. Scope

Because of the complexity of the subject matter, prescribed investigative procedures for the identification processing of each recovered remains cannot be established. However, this manual details the technical processing and investigative procedures used to arrive at a positive identification for each remains processed whether the remains is identifiable or unidentifiable.

### 1-3. Recommended Changes

Users of this publication are encouraged to suggest ways in which it can be improved. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be given for each comment to insure clarity and complete evaluation. Comments should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and **forwarded direct to the Commandant, US Army Quartermaster school, ATTN: ATSM-CTD-TL, Fort Lee, Virginia 23801.**

### 1-4. Identification

The process of identifying a deceased person begins when a remains is recovered. Information from witnesses, the decedent's unit, and recovery personnel and medical, dental, and fingerprint records are obtained immediately. This information and recorded data are evaluated throughout the recovery, evacuation, and identification processing stages. The remains and associated identifying media and personal effects are examined and the findings documented. The completed documentation makes up a remains case file. If the completed documentation shows that the remains is that of a named individual or an individual of a group and that all reasonable doubts of the identity have been resolved, final disposition is made of the remains. If the completed documentation shows that the remains cannot be positively identified, the case is continued in an active status so that further attempts at successful resolution can be made.

### 1-5. Responsibilities

a. The US Army Casualty and Memorial Affairs Directorate, TAGO, under the general staff supervision of the US Army Adjutant General Center, has Army staff responsibility for the care and disposition of remains and personal effects of deceased personnel of the Army, and, as directed, for the Navy and Air Force. The Director, Casualty and Memorial Affairs Directorate, TAGO, exercises staff and technical supervision relating to the disposition of personal effects and the final review of individual identification procedures,

b. Commanders of unified and specified commands are responsible for the supervision of the disposition of the remains and their personal effects within their commands, in accordance with policies and procedures established or approved by the US Army Casualty and Memorial Affairs Directorate, TAGO.

c. Subordinate commanders at all echelons are responsible for the preservation of all identifying media associated with the remains within their areas of responsibility. Such identifying media must not be removed from association with the remains until properly documented by qualified personnel during the identification process. Personal effects found in association with the remains are considered identifying media.

### 1-6. Policies and Procedures for Identifying Remains

The US Army Casualty and Memorial Affairs Directorate, TAGO, has established the following policies and procedures for identifying remains.

#### a. Policies.

(1) Eligible deceased personnel must be positively identified as quickly as possible by employing all available means and scientific resources.

(2) **Commingled remains must not be separated arbitrarily.**

(3) Remains must not be classified as unidentifiable until an identification specialist of the US Army Casualty and Memorial Affairs Directorate, TAGO, has made a complete review of the case.

(4) Information used to establish identity must be recorded. When available and applicable,

records must include a visual recognition statement: a description of the effects found on the remains; data on the physical condition of the remains; charts showing dental, fingerprint, and skeletal or anatomical data; the cause of death; the procedures used to recover the remains; and the conclusions reached in the identification process.

(5) All remains from an airplane crash or other major accident must be processed simultaneously.

(6) Information concerning the identification or shipment of remains must not be released to news media before positive identification has been established for all remains and next of kin have been notified. The responsible commander must submit interim progress reports to the Director, US Army Casualty and Memorial Affairs Directorate, TAGO.

*b. Procedures.* When a responsible commander is unable to establish the identity of a deceased person, he requests technical assistance from the US Army Casualty and Memorial Affairs Directorate, TAGO. When a deceased person cannot be identified, the procedures given below are followed:

(1) Prepare DA Form 2773-R (Statement of Identification) and supporting papers ((DD Form 565 (Statement of Recognition) and DD Forms 890 through 894 (Records of Identification Processing)), if possible. The mortuary officer or identification specialist signs the original DA Form 2773-R and distributes copies as indicated on the form. Appendixes B through G give instructions for completing DA Form 2773-R and DD Forms 890 through 894.

(2) Remove clothing from the remains and examine the clothing for laundry markings, sizes, stenciled names, and other information. Record data on DD Form 890 (Record of Identification Processing) (Effects and Physical Data).

(3) Examine remains for scars, tattoos, or other identifying media. Record data on DD Form 890, DD Form 892 (Record of Identification Processing-Skeletal Chart), and DD Form 893 (Record of Identification Processing-Anatomical Chart) as appropriate.

(4) Prepare a complete, accurate, and detailed dental chart on DD Form 891 (Record of Identification Processing-Dental Chart).

(5) If possible, record fingerprints on DD Form 894 (Record of Identification Processing-Fingerprint Chart) for comparison with existing records. If a comparison cannot be made within US Army Facilities, fingerprint impressions of deceased and fingerprint cards from military personnel files should be forwarded to the Director US Army Casualty and Memorial Affairs Directorate, TAGO with the request that the in-

stallation or command be advised of the results of a comparison of the fingerprints by the Federal Bureau of Investigation (FBI).

(6) Insure that fingerprints, if available, for nonviewable remains are sent to the FBI for verification as indicated below:

(a) *Oversea deaths.* Fingerprints must accompany remains to the CONUS port of entry (POE). At the POE, the fingerprints are forwarded to the Director, US Army Casualty and Memorial Affairs Directorate, TAGO, by the most expeditious means for FBI verification before the POE releases the remains for shipment to final destination.

(b) *CONUS deaths.* The installation commander must forward the fingerprints of a decedent direct to the Director, US Army Casualty and Memorial Affairs Directorate, TAGO, with the request that the installation or command be advised of the results of a comparison of the fingerprints by the Federal Bureau of Investigation (FBI).

(7) Request that the Director, US Army Casualty and Memorial Affairs Directorate, TAGO, forward any additional data needed to identify the remains by the fastest means of communication available.

(8) Evaluate all identifying media recorded on DD Forms 890 through 893 and compare the media with medical and dental records obtained from the parent unit of each decedent.

(9) Insure that information on DA Form 2773-R and supporting documents (DD Forms 890 through 894) give conclusive evidence that the identity of the decedent is accurate. All supporting documents must accompany remains returned to the United States from overseas.

(10) After a thorough investigation, submit findings and recommendations for approval of the findings to a board of review appointed by the Director, US Army Casualty and Memorial Affairs Directorate, TAGO. When the board of review approves the findings, forward them to the US Army Casualty and Memorial Affairs Directorate, TAGO, for final approval. Each completed case is placed in one of the following categories:

(a) *Identified remains.* Remains are placed in this category when it is definitely concluded that identifying media compare favorably with a named individual. DA Form 2773-R is completed, including the name, grade, and social security number of the identified decedent.

(b) *Unidentified remains.* Remains are placed in this category if it is concluded that the identifying media do not compare favorably with any individual. An X-number is officially assigned to the remains.

*(c) Group remains—known deceased.*  
This category applies to remains of two or more known deceased personnel that cannot be individually identified.

*(d) Group remains—unknown deceased.*  
Remains of a group of two or more deceased personnel that cannot be associated with any known deceased are placed in this category.

#### **1-7. Records**

The US Army Casualty and Memorial Affairs Directorate, TAGO, is the office of record and the control point through which all information is disseminated in the identification of remains processed through Army facilities. All remains case files and personal effects case files must be kept fully documented at all times. Complete information on all actions taken pertinent to the

investigation and resolution of a case must be a matter of record and available for examination. When all actions are completed on identified remains cases, a copy or an extract of the remains case file must be forwarded for inclusion in the casualty personal history file kept at the joint central graves registration office (JCGRO) or equivalent office. When disposition of personal effects is completed, a copy of the personal effects file or an extract of the inventory and disposition of the effects found on the remains are also forwarded to the JCGRO or equivalent office for inclusion in the casualty personal history file. A sample case file for a known remains case is given in appendix H; one for an unknown remains case is given in appendix I.

## CHAPTER 2

### THE CENTRAL IDENTIFICATION LABORATORY

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#### Section I. GENERAL

##### 2-1. Organization

The central identification laboratory (CIL) is the final processing point through which the remains of personnel of all military services are processed. At the laboratory, positive identification is verified or established before the remains are returned to CONUS or other places for final disposition. The CIL is organized for the final disposition of remains. The theater army commander in a theater of operations and the Director, US Army Casualty and Memorial Affairs Directorate, TAGO, arrange for the CIL and carry out its functions. Central identification units and CIL's are organized under applicable tables of distribution, and allowances are as prescribed under Common Table of Allowances 50-926.

##### 2-2. Functions

The functions of the CIL include recording a complete description of the remains; performing dental, fluoroscopic, and anthropological examinations; making chemical or scientific analyses; and fingerprinting. This information is entered on forms for identification processing. Because positive identification must be made if possible, extreme care is exercised in safeguarding the effects of the decedent and in maintaining the association of the effects with the remains. Particular emphasis is placed on the importance of examining and recording all identifying media on the remains and personal effects from the time the remains are received in the laboratory until they are processed. The following tasks are stressed in processing remains in the CIL:

a. All possible clues for identifying the remains must be examined thoroughly and resourcefully.

b. Care must be exercised in the preservation of all identifying media.

c. Identification forms and reports must be prepared completely and accurately.

##### 2-3. Classification of Remains

Remains are classified as follows:

a. *Current*. Current remains are those received in a nondecomposed state within 72 hours after death.

b. *Flesh Covered*. Remains received in a state of decomposition but with no bones exposed.

c. *Semiskeletal*. Remains received with some flesh on the bones.

d. *Skeletal*. Remains received with no flesh.

##### 2-4. Identifying Media

a. *Categories of Identifying Media*. Certain categories of identifying media are acceptable to memorial activities personnel for the initial association of remains with specific casualties. This evidence, however, is not considered conclusive for positive identification unless it is confirmed by additional evidence developed through exhaustive research and through analysis of documents. Categories of single-item and collective evidence are given below:

(1) *Single-item evidence*.

(a) Identification tags from around the neck of the deceased, in the pockets, or elsewhere on the deceased.

(b) An identification bracelet found on the wrist.

(c) A statement of recognition when an individual who knew the deceased and positively identified the remains signs DA Form 1155 (Witness Statement on Individual).

(d) An official identification card found on the deceased, for example, DD Form 2A (Armed Forces Identification Card).

(2) *Collective evidence*. When facts concerning the date, place, and cause of death of the deceased agree with a known casualty record, the facts, combined with one or more of the following means of identification, are used as the basis for the tentative association of a remains with a casualty:

(a) Identification tags found elsewhere than around the neck or in the pockets of the deceased.

(b) Motor vehicle operator's permit.

(c) Personal papers and letters, such as credit cards, a marriage certificate, a will, money orders, and unofficial identification cards.

(d) Engraved jewelry.

(e) Information obtained from local officials and residents or from civilian cemetery registers,

including information shown on temporary markers or crosses erected over temporary graves.

*b. Inconclusive Evidence.* Evidence other than that listed in a (1) above is insufficient for tentatively identifying remains when unsupported by other evidence. When evidence is inconclusive, the deceased is classified as an unknown. However, all records applicable to the deceased must bear the believed-to-be (BTB) identity, and information recorded on the records must support the BTB identity of the remains.

### 2-5. Receipt of Remains

Remains received for processing are listed on DD Form 1075 (Convoy List of Remains) if they are shipped in a group. Inprocessing personnel verify the list, sign the receipt, and enter information for

each decedent in a laboratory register. Each decedent is assigned a processing number, tagged accordingly, and placed on an individual processing table. An embossed or hand-painted cardboard identification tag is attached to the pouch including the remains, and all items belonging to the remains are properly tagged. Care is taken to insure that identifying media are not lost.

### 2-6. Records of Identification Processing

Records of identification processing, DD Forms 890 through 894, are initialed in pencil for each remains when it enters the processing area. The processing number assigned a particular remains is entered on all processing records associated with the remains.

## Section II. IDENTIFICATION PROCEDURES

### 2-7. Examination and Recording of Data

Persons engaged in processing operations must carefully examine and record exactly all identification data associated with a remains; they must also preserve all identifying media. These tasks are of vital importance to positive identification. Any item received with the remains that may furnish information that will lead to or confirm an identification is completely described and recorded on DD Form 890 (app C).

*a. Individual Clothing and Equipment.* All items of individual clothing and equipment are removed and carefully examined for clues that may be used in identifying the deceased. Particular attention is given to recording the type and size of clothing, distinctive insignia, and laundry markings. Items of individual clothing and equipment are examined and recorded as follows:

(1) All items of clothing are examined under the flouroscope and then usually examined for laundry markings and other clues. When markings are illegible, portions of the clothing are properly tagged and chemically treated to restore the markings.

(2) Official identification attached to the remains, such as identification tags, DD Form 1380 (US Field Medical Card), or death tags, are examined. Any discrepancies in information recorded on the tags are entered on processing records. Identification tags are imprinted in the space provided on DD Form 890. The identification tag is attached to the remains; and the DD Form

1380 or the death tag is attached to the case papers.

(3) Footgear, headgear, the web belt, and the helmet liner are examined for markings as required by AR 700-84. The size of items and any markings which may serve as clues to identification are annotated.

(4) When compared with military records, insignia, decorations, medals, and campaign badges provide means for identifying the deceased. Information recorded must include the type and full description of the item.

(5) Military equipment is examined for identification numbers assigned the equipment. A complete description of the equipment and the numbers assigned to the items are recorded.

(6) Military records are carefully examined and the name, grade, social security number, fingerprint record, or other data pertinent to the deceased recorded.

*b. Personal Effects.* Personal effects and the inventory of personal effects accompanying the remains are removed and carefully examined for identifying information. Particular attention should be given to the following:

(1) *Wallets.* Contents of the wallet which may indicate the identity of the deceased, and names or initials inscribed in the leather.

(2) *Watches.* Type of metal, make, movement number, case number, number of jewels, as well as dates, initials, or numbers scratched or inscribed on either the outside or inside of the watch.

<sup>1</sup>The permanent marking method used in Army fixed laundry plants provides an excellent medium of identification. The marking consists of the first letter of the customer's last name and the last four digits of his social security number. Thus, the clothing of a customer named Jones whose social security number is 296-38-8503 would be marked J8503.

(3) *Identification bracelet.* Type of metal, name, initials, social security number, or inscriptions.

(4) *Rings.* Design of ring: type of ring, metal, and stone; initials; and names and dates engraved on inside of band.

(5) *Pen and pencil sets.* Make and inscriptions, such as owner's name or initials.

(6) *Personal papers.* Name or names of persons indicated on club membership cards; clippings, letters, and notes; credit card numbers; or money order receipt numbers.

(7) *Books.* Names or other identifying information.

(8) *Photographs.* Names or initials written on photographs, the photographer's stamp, and the likeness on the photograph.

(9) *Keys.* Manufacturer's number on house and automobile keys, and identification number attached to keys which may be registered in the name of the owner.

## 2-8. Processing Remains

The identifying media used when the remains are processed are recorded on DD Forms 890 through 894. Reports that support recorded information, resulting from laboratory and anthropological examinations, accompany case papers as enclosures to DA Form 2773-R (app B). Extreme care must be used in recording observations made for each remains to prevent transposition of identifying data. In charting information on anatomy or dentition, it must be remembered that the right side of the charts, as the observer views them, represents the left side of the remains.

*a. Physical Data.* The physical description of remains is recorded on DD Form 890.

(1) *Height.* The condition of the remains determines the method used to obtain the height of the remains.

(a) *Table measurement.* The height of the remains of all current and semiskeletal cases is measured on the processing table when sufficient portions of the upper and lower extremities are intact. When a table measurement cannot be made of current or flesh-covered remains because of massive trauma, the height is estimated.

(b) *Long bone measurement.* The estimated height of skeletal remains is determined by measuring the maximum length of long bones and correlating the data obtained with the scale applicable to the race of the remains being observed (app J).

(2) *Age.* An age estimate if furnished for all remains. In skeletal cases, the estimated age may be determined from bone morphology (app K).

(3) *Race.* An identification specialist usually

makes the racial determination for current evacuation cases. If he is unable to make the determination, the laboratory supervisor decides the race or nationality of the remains. The race of skeletal, semiskeletal, and commingled remains is determined by an anthropologist. He prepares a narrative describing the racial characteristics of the remains. When determining factors are indicative of two races, he points out the predominant racial characteristics.

(4) *Scars, tattoos, and other identifying marks.* A thorough examination is made of remains, and an accurate description is furnished of scars, tattoos, birthmarks, healed fractures, deformities, or any other distinctive identifying clues. Photographs taken of distinctive marks are attached to the case papers.

*b. Dental Chart.* A memorial activities specialist prepares DD Form 891 (app F) for each remains, except when a complete dental chart can be obtained only by mutilating the jaws. In the latter case, a partial dental chart is prepared indicating the dentition that can be recorded without mutilating the jaws. The specialist uses the front of the form to illustrate the defects and restorations as he views them and the back of the form to describe wear, alinement, dentures, and bridges.

*c. Anatomical Chart.* DD Form 893 (app D) is completed for flesh-covered remains. The condition of the remains is indicated in the space provided on the form. An accurate description is recorded of all identifying media, such as tattoos, scars, deformities, wounds, and injuries, to include the exact location of these features on the remains. When an *unknown* current remains has recognizable features, fullface and profile photographs are taken. Supporting evidence attached to DD Form 890, such as photographs and X-rays, accompany case papers.

*d. Skeletal Chart.* DD Form 892 (app E) is completed for skeletal remains. The remains are cleaned and laid out in anatomical sequence. The observer clearly indicated on the record the type and location of deformities, fractures, and shattered bones as well as missing portions of the remains. In recording skull fractures, it should be noted that three views of the skull are illustrated on DD Form 892; therefore, skull fractures affecting more than one view of the skull should be indicated to present a clear picture of the extent of injury observed. For example, a fracture extending from the left parietal region across the frontal surface and ending in the right parietal region must be depicted on all three views of the skull.

*e. Fingerprints.* DD Form 894 (app G) is used

to record impressions of all digits that will give a legible print. All remains are fingerprinted, if possible, regardless of other identifying media present. Every effort must be made to obtain clear legible prints. In all cases where there is an indication that the cause of death is due to other than natural causes or is of a questionable nature and may involve a CID investigation, major case prints should also be obtained from the deceased and released to the local CID office. The major case prints (finger-prints, palmprints, fingertips, and sides of fingers and palms) will be in addition to the fingerprints on DD Form 894 recorded for the US Army Casualty and Memorial Affairs Directorate, TAGO.

*f. Footprinting.* When the remains being processed is believed to be a member of the Air Force, foot impressions are made, if possible, by inking the toes and the balls of the feet and placing the impressions on bond paper. Any available information about the decedent, including name, social security number, and processing number, is entered on the paper. The paper is mounted on a sponge rubber pad secured to a clipboard. After the foot is cleaned, an inked roller is run over it. Then the operator grasps the foot firmly across the instep and presses the clipboard against the entire foot at one time. Although it is not necessary to get an impression of the surface of the entire foot, as much of it as possible should be obtained. Footprint impressions are submitted as an inclosure to DA Form 2773-R.

### 2-9. Blood Grouping of Remains

In cases of group casualties involving tank crews, airplane crashes, or other similar accidents (app L), laboratory tests of whole blood, tissue, or bone marrow may be conducted to determine the blood grouping of remains. The results of the tests along with other identifying media may be used to establish legal evidence that may assist in the identification. Blood grouping of the remains of a single casualty may be indicated when the identification of the individual is not fully supported. The blood of the remains should be type classified.

### 2-10. Photographing Remains

When other identifying media seem insufficient, photographs of the head and of distinguishing marks, such as tattoos and scars, are made for each unknown remains if any features are recognizable. A commissioned officer decides whether photographs are to be taken and screens them to make sure that good taste as well as the dignity of the individual remains has been preserved. Black and white photographs are made

of the torso and the front and side of the head. Photographs are also taken of the fingerprints when suitable inked prints cannot be obtained. Color photographs are made of tattoos and unusual marks.

### 2-11. Anthropological Examination

An anthropologist examines all skeletal, semiskeletal, and commingled remains (app M). He prepares and enters a statement of his findings in the Remarks section of DD Form 892, or he incloses the statement with DA Form 2773-R. He makes sure that his statements are correct and complete and that they correspond to the case number. The anthropologist describes physical and other pertinent characteristics which, in his opinion, will assist in identifying the remains. He includes any findings on the evidence of wounds and his opinion that what appears to be healed fractures. In his summation, he includes a statement as to predominant racial characteristics. If the anthropologist finds that recorded information is insufficient to make a conclusive identification, he may resolve the case by superimposition, the technique of matching a life-photograph with a similar one of the decedent (app N). In processing group burials or associated cases, the anthropologist processes the entire group simultaneously on adjacent tables. Separate DD Forms 892 are prepared for associated and commingled remains, and specific explanations are given to indicate the reasons for segregating or consolidating parts.

### 2-12. Extra Portions of Remains

Extra portions of remains can be kept to a minimum at the laboratory if associated remains from air crashes, tank accidents, or group burials are processed simultaneously. Extra portions of remains are segregated from the remains when parts are duplicated: when parts do not articulate (form a joint): and when race, size, or age differences exist in bone structure.

*a. Parts or Portions That May Be Designated Extra.* The following parts or portions of the human skeleton may be designated extra portions of remains:

- (1) Mandible.
- (2) Clavicle.
- (3) Scapula.
- (4) Humerus.
- (5) Radius.
- (6) Ulna.
- (7) Femur.
- (8) Tibia.
- (9) Fibula.
- (10) Patella.

- (11) Sternum.
- (12) All hand bones.
- (13) All foot bones.
- (14) Vertebrae, excluding the coccyx, may be designated as extra portions of remains if not more than eight vertebrae are segregated from the principal remains. When there are more than eight vertebrae, they are assigned an unknown X-number.
- (15) Ribs may be designated as extra portions of remains if they do articulate with the vertebral column and are not in excess of eight ribs. When there are more than eight ribs or when they do not articulate with the vertebral column, the ribs are assigned an unknown X-number.
- (16) Innominate bone (hipbone), either right or left, may be termed an extra portion of remains. When both innominate bones are segregated from the principal remains, they are assigned an unknown X-number.
- (17) Skull bones, not to exceed one-fourth of the total surface of the skull, may be termed extra portions of remains. These portions are of occipital, parietal, temporal, and frontal

portions are assigned an unknown X-number when the complete skull, or major portions thereof, is segregated from the principal remains.

(18) The sacrum may be designated as an extra portion of remains if it does not articulate with the vertebral column.

**b. Classification.** When conclusive evidence shown that extra portions of remains are a part of a remains already classified as known or unknown, the portions are given the same classification.

**c. Recording.** DD Form 892 is prepared on all extra portions of remains. The forms accompany case papers of the principal remains from which extra portions were segregated.

**d. Storage.** All extra portions of remains are tagged and stored. A quarterly inventory of all such cases indicating the part number and - the remains from which the portions were segregated is furnished, through channels, to US Army Casualty and Memorial Affairs Directorate, TAGO, or, when established, to the Chief, Armed Services Graves Registration Office-CONUS. One copy of DD Form 892 for each case added during the quarter is forwarded with the inventory.

### Section III. LABORATORY EXAMINATIONS

#### 2-13. X-Ray and Fluoroscopic Laboratory

The X-ray and fluoroscopic laboratory examines remains and clothing to determine the presence of metallic or other dense identifying media. In addition, the laboratory attempts, if necessary, proper segregation of commingled skeletal remains.

**a. X-rays.** X-rays are made of parts of the remains when considered necessary to determine healed fractures, bone malformation, abnormal dental structure, or other unusual conditions.

**b. Fluoroscopic Examination.** The fluoroscope reveals the presence of nonporous material, such as identification tags, loose teeth, rings, or wallets, that may contain information which can assist in identifying the remains.

(1) **Clothing.** All clothing removed during processing operations in hand carried to the fluoroscopic laboratory for examination.

(2) **Remains.** As appropriate, remains are given a fluoroscopic examination in an effort to detect objects which may have been overlooked during the physical processing of the remains. When attempts to segregate commingled skeletal remains have failed, the laboratory may be requested to assist in examining the remains by using the ultraviolet ray technique (app M).

**c. Reports.** Reports of X-ray and fluoroscopic

examinations are submitted as inclosure to DD Form 890 along with the X-rays. Negative reports are made, as appropriate.

(1) When X-rays are made of parts of remains, the anthropologist examines the X-rays and submits a report of his findings.

(2) The X-ray technician furnishes a report giving the results of the fluoroscopic examination he conducted.

#### 2-14. Chemical Laboratory

The chemical laboratory examines and treats material bearing identifying information that is illegible because of deterioration, fading, stains, or other causes.

##### **a. Laboratory Operations.**

(1) **Treating marks on clothing.** All laundry marks, stamps, and ink markings on clothing are examined visually. If a marking is covered by a stain, the marking can be brought out by applying an oxidizing agent. The agent affects the overlying strata but has little effect on the ink of the marking.

(a) **Use of calcium hypochlorite.** A 10-percent solution of calcium hypochlorite clarifies organic stains. Residual stains of a mineral origin, however, resist oxidation by the calcium

hypochlorite solution. Small amounts of nascent chlorine remove the stains if a small amount of the hypochlorite solution is applied to the material and a few drops of concentrated nitric acid are added with a pipette or dropper. The action of nascent chlorine should be observed closely, and when the desired effect has been accomplished, the material should be thoroughly washed with water. After the marking has been clarified, covering it with concentrated nitric acid sometimes aids the reading of it. The acid darkens the ink, particularly if it is stamp-pad ink.

(b) *Photographic procedure.* If the methods followed in (a) above are ineffective, the material is transferred to the photographic laboratory where infrared photographs are taken. The photographic prints are attached to the case report.

(2) *Treating metallic objects.* Metallic objects, such as canteens, guns, wrist watches, rings, medals, and keys, are cleaned and examined for markings. The cleaning is accomplished mechanically or by applying a concentrated sodium hydroxide solution. If the cleaning reveals identifying information, a note is made on the chemical laboratory statement. Photographs are made of articles of questionable or foreign origin and are attached to the chemical laboratory statement.

(3) *Treating personal effects.* Personal effects not included in (2) above, such as letters and family photographs, are examined and cleaned. Papers are carefully separated. If the papers and wallet are matted together, they are soaked in water. A wetting agent added to the water helps to separate the papers. Any abrasive action should be avoided, as it removed surface strata along with any writing that may be present.

(4) *Treating writing on paper.* In treating faded markings, ultraviolet or infrared light, if available, should always be used and the results photographed before chemicals are applied. Inks containing iron may often be restored, but as a rule, aniline inks do not respond to chemical treatment.

(a) *Silver nitrate solution.* Silver nitrate is used on paper to disclose faded ink markings. After the paper is treated with a 3- to 4-percent silver nitrate solution, it is dried and exposed to strong sunlight or to ultraviolet light in cloudy weather. Chloride patterns develop, and as many inks contain chloride, the original marking is reproduced. Silver nitrate is generally more effective than other methods and should always be used first.

(b) *Ammonium sulfide and polysulfide vapors.* Steamed or otherwise moistened paper may be exposed to the vapors or ammonium sulfide and polysulfide. The vapors react with

embedded iron deposit in the ink to form a brown or black sulfide. The marking usually shown on the paper unless the paper itself has a great deal of iron deposit.

(c) *Ammonium sulfide and polysulfide liquids.* When the vapors of ammonium sulfide and polysulfide do not bring results, ammonium sulfide and polysulfide liquids may be applied directly to the steamed or otherwise moistened paper. The liquids can be swabbed over the markings, but a general staining of the area treated may result.

(d) *Iodine vapor or solution.* Iodine, either in the form of vapor or a dilute solution of the tincture, sometimes improves the visibility of either pencil or ink markings on dry paper. Restorations should be photographed promptly.

(e) *Tannic acid.* A 2- or 3-percent solution of tannic acid is used on iron inks. Cloths or pieces of white blotting paper moistened with the acid are placed in contact with the markings and pressure applied for a few minutes.

(f) *Ammonia fumes.* Obliterated markings are sometimes restored by using ammonia fumes or by swabbing the markings with ammonium hydroxide.

b. *Laboratory Report.* The laboratory forwards the results of the chemical analysis with the case papers as an inclosure to DD Form 890.

## 2-15. Photographic Laboratory

The photographic laboratory is responsible for completing all photographic material in support of the CIL mission and for furnishing prints for inclusion in the case file.

a. *Functions.* The photographic laboratory photographs personal effects and remains for recording identifying media. Portions of remains which may be considered objectionable should be masked before photographing. Photographs include but are not limited to the following:

(1) Scars, tattoos, bone malformations, healed fractures, abnormal tooth formations, and wounds.

(2) Fullface and profile views of current unknown remains.

(3) Fingerprints.

(4) Personal effects bearing identifying data.

(5) Infrared photographs of any laundry marks which were not made visible by chemical processes.

b. *Records.* The photographic laboratory files and records each photograph taken. Negatives are labeled with the name, grade, social security number, or X-number, and the CIL case number assigned the remains in the laboratory. The file for each photograph contains a brief description of the photograph and the name of the photographer.

**Section IV. REVIEW OF CASE PAPERS AND DISPOSITION OF REMAINS****2-16. Case Papers**

After a remains has been completely processed, it is left on the table while the identification specialist reviews all case papers for conflicting information, omissions, and other inaccuracies. The officer in charge of the laboratory and the identification specialist decide whether to assign a name or unknown X-number to each case received and processed in the laboratory under an evacuation or a search and recovery number. The decision to assign a name or X-number is reached only after careful examination and evaluation of all

available records received and developed in the laboratory. Case papers are prepared in the number of copies that are required in the local zone or area.

**2-17. Disposition of Remains**

The remains are wrapped appropriately and forwarded with all identifying items of clothing and equipment to the section responsible for preparing the remains for shipment or burial in a temporary or permanent cemetery.

## CHAPTER 3

### MAINTENANCE OF IDENTIFICATION DATA

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#### 3-1. Basic Recorded Data

Basic recorded data are contained in the following file and reports:

*a. DA Form 201 (Military Personnel Records Jacket, US Army).*

- (1) Organization to which assigned.
- (2) Date, place, and location of casualty.
- (3) Medical, physical, dental, and fingerprint records.
- (4) Pertinent data relative to the possible recovery location of the casualty.

*b. Command Reports.*

(1) Graves registration service records, accomplished during the initial phase of identification, contain complete information on the recovery, evacuation, and initial processing of remains for identification by memorial activities personnel.

(2) Central identification laboratory retards contain complete information on identifying media found on remains and effects as a result of final identification processing by technical personnel.

#### 3-2. Establishment of Case Files

*a. Casualty Personal History File (726-04).* The casualty personal history file originates with the receipt of basic data indicating the status of an individual killed in action, missing in action, presumed dead, or prisoner of war. A file is established for each person by name, grade, and social security number. It contains case papers received or extracted from the 201 file relating to the decedent's organization; the date, place, and location where the casualty was reported killed or missing; statements of eyewitnesses; and other information pertinent to the deceased, including medical, dental, and fingerprint records and physical characteristics.

*b. Remains Case File (726-04).* The remains case file is initiated upon the receipt of each recovered remains. The file designation is the same as the name or X-number assigned the remains. Case papers contain cumulative information resulting from field investigations during the recovery, evacuation, interment/disinterment phase, and from processing of the remains at a CIL. Also, all additional information that the identification specialist assembled as he investigated the remains should be included.

#### 3-3. Casualty Records

Upon receipt of a DD Form 1300 (Report of Casualty), the 201 file for each decedent is requested from his parent unit. Medical, dental, and physical data extracted from the file for each casualty are entered on DD Form 898 (Record Data (Deceased and Missing personnel)). Recorded information includes name, grade, social security number, organization, date, place and location of casualty (by country and map sheet), statements of witnesses, physical characteristics, dental data, and fingerprint records pertinent to the deceased. As new information is received, a revised DD Form 898 is prepared. The completed form is attached to the case file.

#### 3-4. Assignment of Cases

A person who routinely identifies deceased personnel can be used to best advantage if he is assigned only those cases which originate from certain geographical areas. Such recurring assignments familiarize him with combat operations and casualties sustained in, or remains recovered from, the area involved.

## CHAPTER 4

### INVESTIGATION AND CASE RESOLUTION PROCEDURES

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#### Section I. GENERAL

##### 4-1. Identification Specialist

*a. Responsibilities.* The identification specialist is responsible for the review, analysis, interpretation, and evaluation of factual data contained in reports received from graves registration teams in the field and the central identification laboratory. The identification specialist uses the data to accomplish the following tasks:

- (1) Verify the identification of remains.
- (2) Establish the identification of unknown remains.
- (3) Recommend certain remains be listed as unidentifiable.
- (4) Recommend certain remains be listed as unrecoverable.

*b. Duties.* The identification specialist performs the following duties:

- (1) Conducts necessary research to associate an unknown remains with a given casualty.
- (2) Develops additional data required to substantiate or negate an association already established.
- (3) Summarizes all evidence obtained and recommends to higher authority, on the basis of a case history, the appropriate action to be taken.

##### 4-2. Analysis and Presentation of Completed Cases

*a. Review of Case Papers.* Case papers of all casualties sustained in the area are reviewed by the identification specialist. The purpose of the review is to gather information and clues that may be associated with the remains in question and that

may be used in making a positive identification. The association is established by reviewing the military records of the casualties that occurred in the area and by comparing fingerprints, physical and dental characteristics, laundry markings, personal effects or equipment, and medical records.

*b. Research Conducted.* The extent of research conducted on a case depends on the amount of information available after the case papers have been examined in detail. When the results of the research are insufficient to warrant a positive association, an extensive investigation is made of field reports, military records, the recovery of associated remains and identified casualties, and any other source of information, as applicable, in an effort to strengthen the association.

*c. Case Writeup.* After a case has been thoroughly researched and analyzed, the identification specialist evaluates the data and prepares a comprehensive case history to support his findings. The case history is supplemented by DD Form 897 (Physical and Dental Comparison Chart) for remains recovered and casualties lost within the geographical area involved and by statements obtained from individuals possessing information pertinent to the case. Also included with the case history are military records, to include missing air crew reports, if applicable; cemetery records; cemetery or appropriate map sketches; enemy records; and any additional supporting information.

#### Section II. INVESTIGATIVE PROCEDURES

##### 4-3. Using Identifying Media in the Final Processing of Remains

Identifying media include objects, records, or data which may provide information leading to the establishment of positive identification. Sufficient pertinent data on the remains must be available to furnish a basis for comparison, either positive or negative, before a particular medium can be used. A single source of identifying media is not considered conclusive evidence of identification of a

remains; such a source must be supported by other identifying media. In addition to the use of identifying media, supporting data obtained from sources indicated in paragraphs 4-4 through 4-6 may furnish evidence to assist in establishing the identification. Principal identifying media consist of the following:

- a. Fingerprints.
- b. Identification tag or bracelet.
- c. DD Form 1380.

- d. DD Form 565.
- e. Dental data.
- f. Physical characteristics (race, height, weight, age, hair, and healed fractures).
- g. Military service insignia.
- h. Personal effects.
- i. Military equipment, which usually identifies the branch of service. In air crashes, the type and identifying numbers of aircraft and equipment are of considerable value.
- j. Statements of circumstances, such as geographic-location or eyewitness statements.
- k. Title of organization and location at the time of casualty.

#### 4-4. Field Reports and Records

Field reports and records furnish basic information for all cases, whether the remains are recovered or are nonrecoverable. If the case involves a recovered remains, the reports may consist of the following:

- a. DD Form 551 (Record of Interment).
- b. DD Form 565 (Statement of Recognition).
- c. DD Form 567 (Record of Recovery of Remains).
- d. DD Form 896 (Field Search Record).
- e. DD Form 1076 (Record of Personal Effects—Military Operations).
- f. DD Form 1380 (US Field Medical Card).
- g. Missing aircraft reports, when applicable, which include the crew lists, type of aircraft and numbers, and other information.
- h. Eyewitness statements, both by civilians and survivors.
- i. Map overlay with grid coordinates.
- j. Certificate of area clearance.
- k. Unit historical and operations records.
- l. G3 operations reports.
- m. G2 periodic intelligence reports.
- n. Operation and situation maps and overlays.
- o. Chronological casualty listings, by unit.

#### 4-5. Laboratory Reports

Reports of CIL findings (DD Forms 890 through 894) that result from the technical processing of remains accompany the material in field reports.

#### 4-6. Search for Additional Supporting Data

The identification specialist seeks information, as circumstances require, from sources other than field and laboratory processing reports to support his findings in investigating a case. The sources include those given below:

a. *Enemy Reports.* Reports and records received or captured from the enemy are used. They include lists of prisoners of war, deceased, and escapees; records of interment; material for propaganda broadcasts; and reports of the International Red Cross. Search of these reports and records may

reveal names of persons killed or missing in action and disclose valuable information that may be used in establishing a possible association between a casualty and a given deceased.

b. *Operational and Organizational Reports.* Operational reports furnish information on unit movements; organizational reports furnish the location of units by date and list unit personnel losses. This type of information may provide a tentative association between a casualty sustained in a specific geographical area and remains recovered from it.

c. *Maps and Gazetteers.* The geographical location of the casualty is pinpointed to a specific area by degrees and minutes of longitude and latitude and by grid coordinates. Use of gazetteers, map sheets, overlays, and other material is essential to correlate information from case papers.

d. *Miscellaneous Records.* Tentative associations between remains and casualties may be established by researching civilian and temporary military cemetery records, passenger and crew lists, military history publications, and other miscellaneous office records, including plot maps and indexes of recoveries by map sheet.

e. *Governmental and Civilian Contacts.* When essential data for substantiating or negating an association are missing, the US Army Casualty and Memorial Affairs Directorate, TAGO, or, when established, the Armed Services Graves Registration Office—CONUS, is responsible for obtaining the data. Actions by the US Army Casualty and Memorial Affairs Directorate, TAGO, include transmitting prints obtained from remains to the FBI for comparison with prints on file and contacting other sources of information for essential data not available from service records or case papers.

#### 4-7. Recovered Remains Cases

a. *Potentially Identifiable Cases.* A potentially identifiable case may be a name case, a believed-to-be (BTB) case, or an unknown case.

(1) *Name case.* In a name case, the identifying information found on or with the remains warrants identification beyond a reasonable doubt.

(2) *Believed-to-be case.* Remains in a BTB case may be designated an X-number; however, the case papers reflect information indicating that a tentative identification was made at the time of initial recovery and burial. Investigation of a BTB case is confined to the following:

(a) Establishing the identifying media as furnished in the case papers.

(b) Requesting verification of fingerprints, if obtained, from the FBI.

(c) Reviewing and analyzing casualty