

EXHIBIT B

KENYON INTERNATIONAL EMERGENCY SERVICES
PROCEDURE FOR US DOD WAR GRAVES:

Background:

Utilizing over 100 years of international experience and relationship building in the funeral and death care industry, Kenyon has partners in every corner of the world. Repatriation services include the appropriate paperwork, death certificates, and transport documents for both shipping and receiving officials. Kenyon can also provide turn-key internment services for families.

Returning the mortal remains from an incident site, remote location or foreign country can be a daunting task for many local funeral professionals and even more so for human resources organizations.

In addition to the many requirements of the country of death, transit countries and county of disposition, there are cultural and family requirements to know and observe. There is also the challenge of working with different family members who may not agree on disposition instructions, or even accept identification.

Success depends on meeting the individual needs and desires of families, while ensuring compliance with national and international laws for the transport of human remains.

During mass fatality or large scale incidents, Kenyon can deploy a team of trained specialists who will work with Kenyon morgue teams or government agencies to arrange for the release and transportation of the remains to the location directed by the family (legal next of kin). This team can include licensed and trained funeral service professionals to properly prepare the deceased, or can work with local resources ensuring best practice and international standards are met.

Kenyon begins this process by communicating with the family to elicit their personal desires. Kenyon then establishes a database of family desires, religious and cultural requirements, and legal requirements for jurisdictions that are involved or crossed during the operations. Above all else, our professionals work with families to find out their needs, treat them as individuals and not just numbers in a system, or force them to accept a group solution.

Kenyon then coordinates the return with commercial or charter aircraft, ground vehicles and receiving funeral homes, and government agencies involved in this process, each step of the way to confirm the smooth movement of the deceased.

For other losses, such as small group or individual, Kenyon can dispatch a small team to properly prepare the deceased, complete required documentation, collect their personal belongings and arrange transportation to a desired location. In some cases, Kenyon will be able to coordinate these activities with local agents without deploying any teams.

Kenyon can also provide escorts to oversee and accompany the deceased's movements throughout the journey. In cases requiring confirmation of identification, Kenyon can also deploy forensic experts to answer family questions or provide a second verification and confirmation. Like other Kenyon operations, throughout this process, constant personal communication is maintained with the families of the deceased or their representatives to keep them fully informed of the process and the status of the repatriation.

Repatriation of deceased from mass disasters or foreign locations is a difficult process, requiring coordination, and knowledge of various laws, customs and regulations. Every mistake or incorrect document slows the process down and ultimately creates additional burdens for the family. Kenyon can avoid this using our trained professionals.

Proposal:

Kenyon International Emergency Services (KIES) ensures that recovery of human remains and subsequent forensic analysis and identification is conducted with the highest scientific standards.

KIES proposes to complete the exhumation, recovery, identification and repatriation of three service members buried in marked graves in an American Military Cemetery on the island of the Philippines. Extensive research has been undertaken by the relatives of the deceased in these 3 cases and they have identified with high certainty the location of burial of their loved ones within the American Military Cemetery in Butuan, Philippines.

The Department of Defense has dictated that the Identification of remains of fallen US Personnel should meet the standard of 'Clear and Convincing'.

The identification of individuals as a consequence of battle/conflict can be less than straightforward. The demographic is such that they are majority male, with a fairly narrow age range. The remains are (as also found following a mass disaster) often damaged beyond visual recognition and may also be fragmentary and commingled.

In addition these cases are decades old, which causes further complication in DNA degradation and tracing surviving relatives for AM comparison.

Kenyon provides over a century of experience in disaster response and victim identification, including the processing of war crime mass graves in Bosnia. As the only company with this experience base, Kenyon brings expert anthropologists and forensic investigators to assist on the locating, exhumation, identification and repatriation of deceased individuals from historical and contemporary mass grave sites. Utilizing our patented Kenyon Response™ software ante mortem data from missing persons are entered and compared to the post mortem data collected from the human remains to identify the dead body.

Process:

1. Documentation, Certification, Ante Mortem information and samples
2. Exhumation and Recovery
3. Case Transfer (chain of custody) completed at each stage for both remains and DNA Samples
4. Transport to Funeral Home (Local) for preparation
5. Repatriation to US using Flag Carrier
6. Examination by Forensic Anthropologists
7. Examination by Forensic Odontologists
8. DNA Samples submitted to DNA Testing Facility
9. (Notification of failed DNA samples and resampling)
10. Identification process
11. Identification Committee Review and formal identification

Guiding principles:

The principles that all those involved in the response must follow are:

- Provision of honest, and as far as possible, accurate information at all times and at every stage;
- Respect for the deceased and the bereaved;
- A sympathetic and caring approach throughout;
- Treat all evidence with the care and control necessary to ensure its integrity
- The avoidance of mistaken identification.

The investigation to identify the deceased must ensure that:

- The deceased are recovered in a dignified manner which ensures the integrity of identification and forensic evidence;
- The deceased are identified as speedily as possible using ethical means;
- Codes of practice, ethics and professional standards in Forensic Anthropology and Archaeology are adhered to;
- Misidentification is avoided;
- Families are kept informed throughout the process.

The procedures KIES will carry out to support identifications will be to the evidential standard used in criminal cases.

The examination of human remains for the purpose of examination is a sensitive task. It is of the utmost importance that it be understood that we respect the human remains we are handling at all times.

Identification and Repatriation Support Liaison specialists will be deployed to the families of the service members and will act as the main point of contact throughout the process. They will collect Ante Mortem information and samples for DNA analysis, gather information on the family's wishes regarding notification of identification, return of personal effects and keep the family informed of progress.

1. Documentation, Certification, Ante Mortem information and samples

Initial Preparation

All available documentation and governmental certification and permissions will be sought to enable the identification procedure to take place.

This includes authorities to conduct all steps from identification of the burial site through exhumation, repatriation, repatriation, examination, identification and release.

A local funeral home e.g. Rizal Funeral Home, 438 Cemetina Street, Pasay City, Philippines will be identified to assist with local services, facilities and logistics, and appropriate storage and handling for human remains.

Ante Mortem Investigation

The Ante Mortem Investigation process will be managed by an appointed Identification Management Center Coordinator.

An Ante Mortem file will be produced for each of the service members. The Ante Mortem file will be used in the identification process and enable later reviews of the process used.

Ante Mortem samples will be obtained from family members and appropriate authorities as required to assist in the comparison process. An auditable methodical investigation will take place to compile all necessary information and samples to allow scientific comparison with Human Remains and personal effects recovered from the burial site.

The investigation will be conducted in stages with the initial focus on collecting information from the military and known family members. An assessment will then take place, including after consideration of the post mortem remains recovered as to any additional steps to collect Ante-Mortem information necessary for the comparison purposes.

The first stage will be to obtain and assess all records, information and archive material held by, or accessible by the Military authorities or their agents regarding the service member. This is to include:

- service history file including full name, date of birth, family members, photographs;
- information as to how the service member met their death;
- medical records and any preserved medical samples or personal objects;

- biometric data – such as height, fingerprint records, dental radiographs, records, charting and notations, database dental profiles or entries, x-rays, samples taken for identification purposes and records relating to this;
- service data which may provide assistance if personal effects are found – such as service ID number;
- records describing any previous considerations regarding identification;
- death certificates;
- burial records.

The second stage will be to obtain all necessary and available Ante Mortem information from families and to identify all avenues to obtain ante mortem information. The focus at this stage will be to collect and record samples and information for DNA, dental, medical and personal effects.

Due to the likely decomposed and skeletalised condition of the historical remains the initial focus will be on DNA and dental (odontology) information as it is not likely that any friction ridge detail will be present. The necessity to attempt to obtain ridge detail information (e.g. reference samples, or personal objects such as books handled by the service member) will be addressed only following exhumation, when known post mortem comparators are known, e.g. whether there is any remaining post mortem ridge detail. Additional Ante Mortem investigation may be required following pathological examination and any associated personal effects found with the remains, for instance further medical research due to medical conditions noted, or researching the provenance of personal items.

The primary Ante Mortem samples that will be sought are:

- Forensic Odontology (by trained forensic odontologists)
- DNA (by accredited DNA experts)
- Friction Ridge samples (by trained fingerprint experts in the event that any Post Mortem fingerprints remain)

Secondary and assistance identification evidence will be sought.

Secondary Identification criteria, comprises:

Unique marks, scars, tattoos, medical deformity / condition, unique and identifiable jewellery, unique clothing and personal effects.

Assistance evidence comprises:

Jewellery, hair, clothing, photographs, medical deformity / condition, personal items or burial location of service member.

Collection of Ante Mortem DNA samples:

Whilst in some cases dental investigations will be sufficient; others in which young people are involved, the remains are severely decomposed, or there are many body parts, the use of DNA analysis and comparison may be the best method. Under such circumstances, DNA may be the only primary means of obtaining reliable identification.

Quality assurance measures will be established to maintain the high standards of AM data required for comparison purposes.

Ante Mortem sample types include the following:

- Medical blood/biopsy reference samples from the service member, database results
- DNA samples from immediate relatives
- Personal objects that have been used by the deceased

Type of AM Sample	Examples
Reference samples/tests	Hospital biopsies, Guthrie Tests, already prepared DNA profiles on DNA databases
Samples from relatives	Close blood relatives including parent, children, siblings
Personal objects from deceased	Toothbrush, razor, hairbrush, musical instruments, footwear/gloves

Samples will be obtained in sample collection kits/boxes and be labelled with a unique and traceable number or bar code. The unique number will be shown on every sample.

Sample intake forms and family information will be properly completed and immediately checked for obvious data errors.

Identification will be made using good quality AM DNA samples known to relate to the service member with a simple, standard software program supported by statistical data.

Identification based on samples taken from blood relatives will require the use of special kinship software.

DNA Samples from Relatives:

The preferred sample type used will be buccal (mouth) swabs (according to standard procedures) but blood on FTA card can also be tested. Only personnel who have been trained in sample collection will be authorized to take samples and consent forms will be used.

For the best data and maximum strength of matching, samples from immediate relatives in the following order will be taken:

- Monozygotic/identical twins
- Biological mother and biological father of the service member mother or father (unlikely to be available in these cases)
- Biological mother or biological father of the service member and if possible a sibling
- Biological children and spouse of the service member
- Siblings of the service member (as many as possible)
- Extended blood relatives

It is important to understand that in some circumstances, when there are multiple service members from the same family, DNA kinship tests have limitations e.g. if two siblings of the same gender are missing then samples from their parents will not be sufficient to distinguish between them and further evidence will be required, for example specific AM objects and/or non-DNA information such as age and other physical characteristics.

Medical Blood or Biopsy Samples

A good source of high quality DNA is if samples have been collected from the service member for bio-medical purposes and have been retained in hospitals, pathology units, blood transfusion departments and paternity testing laboratories.

Guthrie tests/neonatal blood samples may be preserved and permission will be sought from the relevant authorities to use these samples for the purposes of identification.

Each sample will be placed in a separate evidence bag or container that is immediately sealed and labelled according to the adopted number system. Official proof of the identity of the sample has to be recorded and verified by the physician or lead person responsible for the bio-bank or biomedical source.

The specialist collecting the sample will also verify a chain of custody in a report detailing where and when the sample was collected.

Viable samples may include the following:

- Extracted baby teeth or extracted third molars (wisdom teeth).
- Samples from national bio-banks, e.g. Blood and bone-marrow donor programs
- Other clinical blood or serum samples
- Reference samples from military services members
- Pathology preparations embedded in paraffin

DNA from Personal Objects Used by the Service member

It may be possible to obtain sufficient DNA from personal objects used by the service member to obtain an indirect DNA reference profile. There are particular quality considerations with this approach as the objects in question may not have been solely used by the service member and may contain DNA from a different source or sources. As there may be problems with multiple DNA sources with personal objects together with the fact that profiles may not be readily obtained from these items then it is advisable to take more than one personal object if possible. Further, it is important to establish by talking to the appropriate associates of the service member which items were solely used by the service member and in addition, where possible, such a test should be backed-up by kinship sample analyses from relatives.

As personal objects often only contain low quantities of DNA from the service member it is especially important to minimize the risk of contamination and maintain the integrity of the sample as follows:

- Each object will be placed in a separate evidence bag or a separate container.
- Every evidence bag will be sealed.
- Bags/containers will be labelled/marked appropriately in order to preserve the integrity, continuity and identity of their contents.

On collection of AM items by investigating personnel, they will prepare a complete list of objects for the purpose of documenting the receipt, transport and return of individual items.

Appropriate evidence control methods will be employed to ensure the safety of objects and adherence to chain-of-custody regulations.

Suitable objects that may contain a DNA source include the following:

- Toothbrushes
- Razor blades/razors
- Hairbrushes and combs
- Dentures
- Shoe laces/shoes
- Cigarette butts, e-cigarettes and pipes
- Cigarette lighter
- Motorcycle and other sports helmets, caps and hats
- Eyeglasses
- Jewellery
- Nail file
- Trimmers/scissors
- Wristwatches
- Musical instruments

Guidance that we will use on how to rank usefulness of surrogate personal and medical samples is given in the table below (modified from Prinz et al, 2007).

Quality of recovered DNA	Common samples	Might be available
Good sources of DNA	Toothbrush Razor	Neonatal heel prick (Guthrie tests) Pathology specimens Paternity samples Ref samples from military staff
Fair sources of DNA	Hair brush/comb Lipsticks or lip salves Deodorant stick Pillowcase Used drinking vessel Used underwear	Histology slides (eg cervical smears) Fingernail clippings Mouth guards
Poor sources of DNA	Jewellery or watch Outer clothing Towels Shoes Hair band or earmuff	Dentures

If a mixture of DNA is obtained then it is more reliable (and usually quicker) to move on to another AM sample rather than to interpret the mixture.

Collection of Ante-Mortem Odontology Samples

Quality assurance measures will be established to maintain the high standards of Ante Mortem data required for comparison purposes.

All gathered Ante Mortem data will be examined, collated and recorded for comparison purposes.

Commonly odontologists use dental records obtained from the dentist(s) who treated the service member. As these are very variable in the quality, type, availability and how up to date they are, they must be interpreted by a qualified forensic dentist (odontologist). All dental data will be requested e.g. radiographs (x-rays), casts, clinical photographs and laboratory work sheets. If no dental records can be obtained, odontologists can sometimes use family photographs of the service member smiling and showing their teeth. Even those who have not visited a dentist will usually have some such photographs. Items such as old disused dentures may be of assistance.

Ante Mortem sample types that will be sought include the following:

- Dental charts
- All correspondence
- X-Rays
- Models (casts)
- Specialist records (ortho)
- Photographs
- Any other documents

The sources for records include:

- Family & friends
- Work place
- Hospitals
- Dental clinics
- Dentists
- Doctors
- Specialists
- Health care workers
- Any other source

The collated Ante Mortem records will be recorded for comparison and oversight purposes. Additional records may be sought to aid the identification comparison.

The Department of Defense and JPAC have access to over 40,000 dental profiles from US Service Personnel. There are gaps, and the quality will vary due to improvement in standards and methods of recording dental information in recent years. It is expected that all relevant information relating to the service member will be passed to Kenyon for comparison by the Forensic Odontologist examining the remains.

Full auditable records will be kept and retained of Ante Mortem records, ensuring they are available for oversight and inspection.

Any personal items submitted for DNA sampling will be returned in due course.

2. Exhumation and Recovery:

As previously stated, the location of the graves to be exhumed is known. Despite the graves being marked, taking into account the history of the events leading to the burial of these individuals, there is the possibility of commingling. Therefore, a Forensic Anthropologist (FA) will be present at the exhumation of these graves for accurate record keeping, consultation and expert guidance in the event of unexpected occurrences.

The Forensic Anthropologist can (if required and depending on the condition of the casket) provide an opinion as to whether the remains are articulated, disarticulated, and the note position of the body. Photographs should be taken to augment any notes taken. If necessary, the Forensic Anthropologist can provide a diagrammatic inventory of all bones present at the scene, in order to assist in formulating further search strategies if necessary.

It should be possible to offer preliminary opinions on whether the remains represent an adult or juvenile, and if the appropriate elements are present, it may be possible to give an initial assessment of sex, ancestry and other information. The Forensic Anthropologist should advise on any photography of specific areas of the human remains and grave site before lifting and transportation of the remains in case there is any potential damage and fragmentation prior to the examination in the mortuary.

2.1 Details of Exhumation:

During the time period, the remains will be exhumed, with dignity and honor, at night by funeral service professionals and, the remains will be recovered by Kenyon International Emergency Services for proper handling, organization, and shipment.

Rizal Funeral Home, 438 Cementina Street, Pasay City, Philippines, is the suggested source to ensure the completion of the workload. The funeral home will supply:

- Twenty (20) grave digging professionals to ensure that the remains are treated with the utmost dignity and to ensure that the aesthetic value of the Manila American Cemetery and Memorial is not disturbed.
- Hearses for the dignified transport of the caskets from the cemetery to the funeral home.
- The funeral home will arrange with the cemetery to ensure that lowering devices are supplied for the lifting of the casket from the grave.
- The funeral home will arrange with Manila American Cemetery and Memorial, local law enforcement, and any other safety organizations to ensure the security of the remains from the cemetery to the point of departure.

- The funeral home will ensure that the proper equipment is supplied for removing the tops off of the caskets.
- The funeral home will ensure that the disposed casket are destroyed and rendered non-useable.
- The funeral home will provide sufficient space for the cleansing, displaying, and proper accounting of the exhumed remains.
- If needed, the funeral home will arrange with the cemetery for sump pumps in the event that the exhumed graves have significant water accumulation.
- The funeral home will arrange with the cemetery to ensure that tents are provided for each grave that is exhumed ensuring the privacy and dignity of the remains.
- The funeral home will arrange with the cemetery to ensure that the personnel assigned to dig the graves are of good character and do not have a financial interest in the operation.
- The funeral home will arrange with Manila American Cemetery and Memorial to ensure that a lighting system is in place during the entire operation. The lighting system should provide significant lighting to ensure the safety of the working personnel.
- The funeral home will ensure the privacy of the operation and will not provide information to any media outlet.

The funeral home and Manila American Cemetery and Memorial will ensure that safety personnel are on stand-by for all personnel

3. Unique Reference Number and Chain of Custody:

A unique reference number will be assigned to the recovered remains. If it is obvious at this point that multiple individuals are represented by the remains, the Forensic Anthropologist will assign unique reference numbers to the remains as appropriate, maintaining photographic and detailed records.

All samples and personal effects taken from the body at the scene or mortuary will be labelled with the same PM numbering system.

Chain of custody is maintained throughout the identification process, from exhumation and recovery through to final repatriation to the family.

All PM samples and paperwork relating to the PM case will bear the PM reference. Additional numbers or codes may be added after the PM number.

All samples and documentation relating to the service member will bear the AM reference nominated for each missing person by the AM Coordinator. Additional numbers or codes may be added after the AM number.

This numbering system is in addition to any standard numbering (where required) used within the nominated Forensic facility.

4. Transport to local funeral home for preparation:

If not recovered within a casket/coffin, the remains should be packaged appropriately (to prevent damage or loss) and transported to the local funeral home for preparation. They should be escorted by KIES employees. Any time the remains change hands, the responsibility should be signed over by completing the chain of custody forms.

5. Repatriation to USA:

The remains will be prepared for transport to the US at the local funeral home. All documentation must be completed and present and the appropriate measures in place in order for the human remains to be transported by US Flag Carrier to San Antonio, USA. This may mean that government officials should be present to witness the sealing of the casket.

Upon arrival in the US, the remains will be transported to an approved examination facility (such as Bexar County's Medical Examiner's Office: 7337 Louis Pasteur Dr, San Antonio, TX 78227, USA). As the chain of custody was initiated in the field, this will be incorporated into the internal accessioning process. The case will be photographed upon receipt.

6. Examination by Forensic Anthropologists:

Forensic Anthropologists work 'Blind'. Due to the nature of these cases in particular, it may be pertinent for a different forensic anthropologist to examine the remains in the mortuary in order to remove and bias from their examination (knowledge of the presumed identity of the individual may have been gained from the marked grave). In this case, all scene photographs (with the exception of those showing personal data from the grave marker of the individual such as name and age) should be made available to the examining forensic anthropologist in the mortuary.

6.1 Preparation of human remains for examination:

The preservation of the remains will dictate the processes that follow. At this stage the preservation is unknown. However, it is unlikely that soft tissue will remain. Previous burial methods are unclear and have a bearing on the preservation. If buried within a casket, which remains undamaged without soil or water penetration then the remains are likely osseous material. It may be necessary to wash the bones to remove excess dirt so the Forensic Anthropologist can observe the detail in areas used for age estimation.

Equipment: Osteometric board, calipers, reference material, recording material. All measuring equipment should be calibrated according to ISO17025.

6.2 Personal Effects

Any non-osseous or non-human material will be separated. Personal effects will be labelled and packaged with a unique reference number related to the case number of the remains. These will be inventoried, cleaned and photographed and will be included in the case file as supporting evidence of identity depending on their nature. Items such as identity cards, military dog tags and photographs may be found. Clothing (such as uniform) may be somewhat degraded, however, as much information as possible will be gathered from the case to both provide supporting evidence of identification and to return to the families.

6.3 Inventory

Upon receipt of the remains/body bag the Forensic Anthropologist will sort the contents accordingly. Non-human bone and other material will be separated, bagged and labelled accordingly. The Forensic Anthropologist will determine whether the contents represent a single or multiple individuals and will determine 'body parts' based on articulation of the bones and any missing elements. The remains will be laid out anatomically and inventoried. Separate, detailed guidelines are available for this process but for conciseness are not included here.

6.3 MNI

The sorting and inventory of the contents will enable the Forensic Anthropologist to determine the Minimum Number of Individuals (MNI) represented by the recovered assemblage.

6.4 Biological Profile

The Forensic Anthropologist will establish a biological profile for the remains as far as possible. The extent of this is determined by the quality and quantity of elements recovered. Areas of erosion cannot be assessed accurately.

A biological profile may include the following:

- Determination of Sex
- Estimation of Age
- Calculation of stature
- Estimation of Ancestry
- Documentation of disease and pathologies
- Documentation of trauma

7. Examination by Forensic Odontologists:

The Forensic Odontologist will compile a dental profile which can be compared to the dental records of missing individuals (in this case, a presumptive identification is already assumed). The dental remains will be photographed and inventoried and commingled teeth resolved as required. The dentition will be described in detail according to International scientific standards. Radiographs will be taken as necessary for Ante Mortem comparison. Comparison software can be utilized to provide a match.

8. DNA Samples:

The Forensic Anthropologist/Forensic Odontologist will determine, based on the elements present and their condition, the best sites for DNA samples to be taken. In short, sites with thick cortical bone yield the most successful samples (e.g. Femur shaft). There are separate guidelines available for reference on the DNA sampling of bone and teeth.

Health and Safety:

- Goggles, masks and gloves must be worn when cutting bone samples.
- Any direct contact with the specimen may result in DNA contamination that makes the identification process more troublesome.
- The autopsy saw is capable of causing serious injury. Extreme caution must be observed when operating this device.

All equipment must be properly cleaned prior to sampling. At a minimum, the blade surface of the autopsy saw must be rinsed with 10% commercial bleach or ethanol solution before each sample is taken.

Labelling:

Every sample designated for DNA testing must be assigned a Unique Reference Number (URN). The sample URN is neatly written in capital letters. A zero must have a diagonal slash through it (e.g. Ø) and the number seven must have a dash through it. This is to distinguish these characters from O's and 1's respectively.

Sampling Location:

The location on the bone and the selection of particular teeth for sampling is based on various factors and considerations. Each skeletal element has specific recommendations and is considered individually.

Desirable bone sample weight is 15.0-25.0g, minimal 3.0-4.0g. Larger samples may provide a better chance for DNA success with highly degraded remains. However, depending on circumstances and preservation, sub-gram samples of bone may provide DNA results and may be taken if there is no alternative.

A 'window' of bone should be removed where possible to preserve the integrity of the bone (except for the case of the mandibular body, clavicle, ulna, fibula and lower ribs). Avoid where possible cutting the bone in half. If necessary, measurements must be taken and recorded prior to cutting the bone. If the integrity of the bone is already lost due to taphonomy, the sample should be taken from the site with the most cortical bone. Refer to the guidelines on DNA Sampling of bone and teeth for optimal locations for bone sample cutting sites. A tag exhibiting the Unique Reference Number for that sample should be attached to the site from which the sample was removed.

Areas of bone to be avoided for DNA sampling include:

- Areas exhibiting discolouration should be avoided. This may indicate an increased concentration of certain metals in the soil or high humidity in the grave environment that may further contribute to degradation of DNA in the bone.
- Areas that exhibit individualizing characteristics which may be utilized for identification purposes.
- Areas that indicating trauma, such as along fracture edges, as these areas may contribute to future re-association efforts.

If unavoidable, ensure that a photographic or digital image of the skeletal element is taken, with scale and case number, before sampling.

Teeth

Intact and well preserved teeth with completely formed root apices are required where possible (this is a preferred, but not an absolute requirement for submission).

Select a tooth from the following order:

- a) First molar, left or right;
- b) Second molar, left or right;
- c) Third molar, left or right;
- d) First or second premolar, left or right;
- e) Canine, left or right;
- f) Incisors, left or right.

Record the tooth numbers submitted. Ensure that all tooth information is recorded before sampling. This may include assessment of calcification, eruption, or tooth transparency used in age at death estimations.

Where possible avoid sampling the following:

- Teeth with extensive carious destruction, and/or perimortem or postmortem fractures

- Teeth with dental restorations. These have an increased risk of crown fracture which may minimize the DNA yield, so should not be submitted for sampling. In addition, these may be essential for a radiographic comparison should Ante Mortem radiographs be available.
- Distinctive anterior teeth that contribute to a diastema or display a cultural modification, (if unavoidable, ensure a photographic or digital image of the dental arcade is taken, with scale and case number, before sampling).
- In a highly commingled situation, avoid sampling a loose tooth or teeth that have been replaced in the alveolar process. These are generally single-rooted teeth and should be considered least desirable in order of tooth sampling preference.
- When a maxilla and mandible, recovered together, demonstrate sound occlusion and inter-digitation, two teeth from *either* the maxilla *or* the mandible are submitted for sampling. A tooth from the maxilla and a tooth from the mandible should never be submitted together to ensure only one person is represented by the sample.

Chain of Custody

The sample code must be written on the vial/sample bag/container in indelible ink. The vial/sample bag/container should be signature sealed by signing, and dating, across the opening so that any attempt to open the vial/sample bag/container is obvious, thus ensuring the integrity of the contents. Where sticky tape is used, this needs to be initialled across the tape and onto the vial/sample bag, so that if there is any attempt to remove the sticky tape, this is clearly visible. Tamper evident bags may be used if available.

Chain of Custody information should be completed for each sample.

Chain of Custody Information

The following is the basic information that is required for each sample:

- Sample Code
- Description of Sample
- Time/Date Produced
- Location Produced
- Produced By
- Signature
- Name
- Signature and Date
- Item No. (if applicable)

Once the sample for DNA analysis has been sealed within the vial/sample bag/container and the chain of custody information completed for that sample, the chain of custody information is attached to each sample vial/sample bag/container. Evidence bags can be used if available. The samples can then be submitted to the DNA Testing Facility using the appropriate submission forms.

If the individual submitting the samples to the DNA Testing Facility is different than the individual that has cut or extracted the samples, this should be clearly documented on the chain of custody information.

The individual cutting the sample completes the information, inserts the sample into the vial/sample bag/container and signature seals the vial/sample bag. This sealed vial/sample bag/container is then handed over to the person who will be submitting it to the DNA Testing Facility. This person signs the table in the space provided (i.e. name, signature and date) (as confirmation of receipt) and then generates the appropriate submission form for the DNA Testing Facility. In this way, this submission form can contain the details of more than one sample that is being submitted for DNA analysis.

Transfer of DNA samples to DNA Testing Facility

The sample should be transferred to DNA Testing Facility in a sealed container. Containers that cannot be locked must be sealed in such a way so that all openings and potential openings (e.g. underside of container) are clearly sealed and signed across the seal, so that any attempt to tamper with the container is evident. Tamper evident bags may be used if available.

Incomplete chain of custody information on the table and/or incorrect signature seals will result in non-acceptance of the samples by the DNA Testing Facility.

9. Notification of Failed DNA Samples:

The DNA testing facility will notify the Identification Management Center Coordinator of any samples that did not yield a successful profile. These are referred to as 'failed samples'. The Identification Management Center Coordinator will in turn pass this information back to the scientists charged with examining the remains, who will re-sample in line with the sampling criteria and their expertise depending on the extent of the remains available and their condition. The samples will be re-submitted as above.

Successful samples will go on to the DNA Matching process at the laboratory/ DNA Testing Facility, where specialized software is utilized to calculate the match ratios and probabilities of the DNA sample being related to Ante Mortem or reference samples provided by the relatives of the individual.

The Forensic Anthropologist will re-examine the remains along with the DNA matching results to complete any reassociations and ensure consistency.

The post mortem examination report will be quality checked by additional experts in Forensic Anthropology and Odontology (as required) and passed to the Identification Management Center Coordinator for comparison with Ante Mortem records in the next stage of the identification process.

10. Identification Process:

The aim of the Identification Management Center will be to:

- Coordinate the forensic matching process to achieve integrity of identification and forensic evidence;
- Identify the deceased as speedily as possible using ethical means to the incident identification standard
- Avoid mistaken identification;
- Produce Identification files proposing identifications of missing persons, comparing AM and PM information;
- Maintain rigorous records of the identification process to meet the information and evidential requirements of the identification process, any later official enquiry or review, international authorities, and families.
- Keep families and Persons Authorized to Direct Disposition informed throughout the identification process

The identification standard to be adopted is that clear and convincing evidence is required before a comparison can be confirmed.

The international scientific primary identification criteria of:

- Fingerprints (Friction Ridge Analysis)
- Forensic Odontology
- DNA

will be used to establish identification to the identification standard required by the Identification Committee.

The identification standard may be attained using one or more of the primary identification criteria. This evidence may be supported by other secondary or assistance identification evidence. There must be no exclusionary factors and no unexplainable discrepancies.

All scientific comparisons e.g. by DNA or Odontology will be supported by a scientific comparison identification report.

An identification is reached by matching Ante Mortem and Post Mortem information to a scientific standard.

The Identification Management Center Coordinator will prepare identification reports using an Identification Report template. PM, AM and Comparison reports will be used.

The identification reports confirmed at the Identification Committee will be retained by the Identification Management Centre Coordinator.

11. Identification Committee

The role of the Identification Committee is to agree incident specific levels of proof required for scientific comparisons and to ensure that scientific methods employed are in accordance with internationally recognized scientific standards. Their role is to assess proposed identification reports using an Identification Report to verify decisions.

The Identification Committee will examine proposed identifications from the Identification Management Center Coordinator for each body or body part nominated during the DVI process.

The Identification Committee is informed of the scientific comparison results via, and presented by, the Identification Management Center Coordinator and specialists upon whose specialism the identification mainly relies.

There will be independence between those proposing the identification and those assessing the identification (the Identification Committee).

The Chair of the Identification Committee may be assisted by other experts, in the assessment of the comparisons dependent upon the comparison method being proposed at the ID Committee.

Where available, the family and national representatives of any case being brought before the ID Committee should be invited to:

- witness proceedings;
- advise on any repatriation requests; and
- obtain a copy of the Identification Report including scientific comparison reports, leading to the identifications.

The decisions by the Identification Committee will be recorded on a Certificate of Identification. The Committee may:

- require additional work to be carried out by the Identification Management Center Coordinator prior to the report being re-presented;
- advise on the necessary evidence in a particular case; or
- establish an Identification.

After establishing any identification the Committee will:

- cause steps to be taken to register the death by the appropriate authorities;
- consider whether the body could be released, at that or a later stage.

Following identification, the Identification Management Center Coordinator will:

- Ensure the family and Person Authorized to Direct Disposition is informed;

- Ensure that national representatives are informed;
- US Military authorities are informed;
- Cause the release or repatriation process to commence when authorised;
- Update Identification Management Center records;
- Retain the original Identification file for any later inspection or enquiry;
- Advise the family on post identification viewing.