

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
SAN ANTONIO DIVISION

JOHN A. PATTERSON, et al.,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	No. 5:17-CV-00467
	)	
DEFENSE POW/MIA ACCOUNTING	)	
AGENCY, et al.,	)	
	)	
Defendants.	)	

**DECLARATION OF JOHN E. BYRD**

I, Dr. John E. Byrd, pursuant to 28 U.S.C. § 1746, declare as follows:

1. I am currently Laboratory Director at the DPAA Laboratory and oversee laboratory operations in Hawaii, Nebraska, Ohio, and our scientific work in the field. I have been in this position since 2009. I am a board-certified forensic anthropologist.

2. The statements contained in this declaration are based on my personal knowledge and DPAA records and information made available to me in my official capacity.

3. I am responsible for the daily operation of the DPAA Laboratories and ensure that all testing activities and evidence management meet appropriate standards.

**DPAA Laboratory’s Mission and Organization**

4. The DPAA Laboratory is the largest and most diverse skeletal identification laboratory in the world and is staffed by more than 80 anthropologists, archaeologists and forensic odontologists along with support staff.

5. The DPAA Laboratory is accredited by the ANSI-ASQ National Accreditation



Board's (ANAB) International Standards Program in numerous aspects of forensic science testing, including, but not limited to, the identification of human remains, the segregation of comingled remains, certain bone procedures, and numerous aspects of odontology. We are also accredited for our field recovery activities. See Exhibit 1.

### **Identification Process**

6. After a disinterment is approved by the Assistant Secretary of Defense for Manpower and Reserve Affairs, DPAA personnel work with the entity responsible for the cemetery to schedule the disinterment. Because the American Battle Monuments Commission (ABMC) is responsible for Manila American Cemetery, DPAA personnel coordinate with ABMC for the timing and circumstances of a disinterment there.

7. DPAA personnel travel to the Philippines and conduct the disinterment, documenting each step of the process. Active duty military personnel escort the remains to the DPAA Laboratory in Hawaii, providing appropriate respect for the service members.

8. All remains and artifacts recovered from a site are signed over to an evidence coordinator and stored in a secure area upon arrival at the DPAA Laboratory.

9. Scientists use a variety of techniques to establish the identification of unaccounted-for individuals, including analysis of skeletal remains, dental remains, and sampling DNA. They also analyze material evidence, personal effects and life support equipment. The various testing activities generate formal reports. The agency medical examiner evaluates these overlapping lines of evidence in an effort to identify the remains.

10. Forensic anthropologists are responsible for the analysis of human remains and any material evidence, such as military uniforms, personal affects and identification tags. Human remains analysis is carried out in the "blind," meaning the anthropologist does not know

the suspected identity of the individual under analysis nor any specific information concerning lists of candidates. However, scientists are sometimes provided specific details that are required to select the appropriate scientific techniques (i.e., the approximate area of the loss incident or to aid in sorting commingled remains (e.g. field drawings). The blind analysis is completed in order to prevent bias (e.g. confirmation bias) from influencing the scientist's analysis.

11. All recovered skeletal remains are examined in order to produce a "biological profile." This profile includes sex, race, stature and age at death. Anthropologists may also analyze trauma caused at or near the time of death and pathological conditions of bone.

12. Dental remains are extremely important to the identification process. An individual's dental records are often the best way to identify remains as they have unique individual characteristics (e.g. specific dental treatments) and may contain surviving DNA. Even handwritten charts and treatment notes can be critical to the research and identification process.

13. DPAA Laboratory personnel select portions of the remains for sampling based on the totality of the circumstances and their experience with which types and portions of bones are more likely to yield usable DNA. Samples taken from bones and teeth are sent to the Armed Forces DNA Identification Laboratory (AFDIL), where the surviving DNA is extracted and analyzed to determine the individual's genetic profile. AFDIL conducts nuclear (nuDNA) and mitochondrial DNA (mtDNA) testing. The lead test is for the mtDNA sequence since the success rate is greater than 90% for most cases. This sequence is compared with sequences from family reference samples provided by living individuals who are related to the unidentified service member. Since these sequences are rare but not unique within the general population, they cannot stand alone as evidence for identification. AFDIL will often perform nuDNA testing as well and combine the results with the mtDNA sequence to obtain a more individualizing

result. In addition to the factors previously mentioned, each separate line of evidence must be examined at the DPAA Laboratory and correlated with all historical evidence.

14. Once sufficient evidence has been compiled to permit identification of the remains, DPAA Laboratory personnel prepare an identification package for review by the Director of the laboratory. This report undergoes a thorough peer review process that includes an external review by independent experts. Final identification decisions are made by the DPAA Medical Examiner, pursuant to statutory and delegated regulatory authority. *See* DoD Directive 5110.10 § 2(f).

#### **Challenges for Remains Coming From Manila American Cemetery**

15. The remains buried as Unknowns in the Manila American Cemetery, known to originate from the Cabanatuan POW Camp, present numerous special challenges for identification. The remains were originally buried by the Japanese captors in mass graves which serviced the camp sometimes for as little as 24 hours. When the grave was filled with remains of the recently deceased, it was closed and another grave created. These remains were later excavated by the U.S. Army and attempts were made to identify the men. There are some records as to which men were placed in which grave, but they are not wholly reliable. The remains were commingled by their placement in the grave, and then further commingled during the excavation and subsequent analysis of remains in the 1940's. Forensic science was very poorly develop in the years immediately following World War II. There are believed to be approximately 1000 men buried as Unknowns from Cabanatuan.

16. The remains from Cabanatuan that have been analyzed at the DPAA Laboratory have shown evidence of significant degradation. We believe this skeletal degradation primarily occurred during the years the remains were buried unprotected in the mass graves outside the

POW camp. The remains also likely received some damage during their excavation in the late 1940's.

17. The remains underwent chemical treatments in the U.S. Army mortuary in the Philippines in the 1940's. These chemicals have combined with the poor preservation to make DNA extraction at AFDIL very challenging. It appears that most samples from all of Cabanatuan will require the more advanced (and difficult) Next Generation Sequencing methods for mtDNA that is available only at AFDIL. The large number of individuals involved in the case means that we will be sequencing whole mitochondrial genome testing for Cabanatuan remains.

#### **Plaintiffs' Production Request**

18. I understand that Plaintiffs' Production Request No. 22 seeks the disinterment of 24 graves from Manila American Cemetery:

- Three individual graves: L-8-113, N-15-19, J-7-20;
- Nine graves associated with Cabanatuan Common Grave 407: A-8-60, A-14-15, B-5-138, B-15-168, D-1-26, D-14-159, H-11-107, N-2-185, N-8-151;
- Eight graves associated with Cabanatuan Common Grave 704: H-8-146, H-10-129, H-10-130, H-11-134, H-11-144, H-11-146, H-11-147, H-12-110;
- Four graves associated with Cabanatuan Common Grave 822: C-12-83, H-7-135, N-6-187, N-13-187.

19. I understand that Plaintiffs' Production Request No. 22 seeks "Any remains recovered from Cabanatuan Grave 717 that are being held in storage at an identification laboratory by the Government or that have not been returned to their respective next-of-kin."

20. The DPAA Laboratory is currently analyzing remains disinterred from thirteen graves that are associated with Cabanatuan Common Grave 717—ten graves designated as unknowns at Manila American Cemetery and three graves for remains that had been transferred

to the next of kin for burial due to identifications made in the late 1940s. DPAA is seeking the disinterment of a fourteenth grave associated with this common grave, but the process remains ongoing.

21. Since the disinterments began in 2014, the DPAA Laboratory has made seven identifications from among remains associated with Cabanatuan Common Grave 717, and has transferred the identified remains to the next of kin for disposition.

22. The DPAA Laboratory's analysis of the residual remains is ongoing and incredibly complex. DNA testing has identified at least 17 distinct human DNA sequences among the remains to date. Each set of remains is highly comingled, with DNA testing reporting an average of three distinct human DNA sequences per grave. One set of remains has yielded no usable DNA for testing. The DPAA Laboratory has numerous samples pending with AFDIL for various types of DNA testing. Results will continue to be reported to DPAA.

23. Requiring the DPAA Laboratory to immediately transfer the residual remains associated with Cabanatuan Common Grave 717 to a facility near San Antonio would significantly delay DPAA's identification effort for these remains. DNA testing results must be applied to the remains in light of the totality of the circumstances, including how other bones match or fit together with those that have been selected for testing. Transfer of the remains would hamper DPAA's ability to continue its comprehensive assessment of these remains. Moreover, due to comingling, final results for any of these service members are unlikely to be had until the fourteenth grave is disinterred and processed.

24. Similarly, DPAA would be hard pressed to conduct productive analysis on the 24 sets of remains for which Plaintiffs seek disinterment if those remains are immediately transferred to the San Antonio area because both the DPAA Laboratory and the relevant DPAA

personnel are located in Hawaii.


25. In performing the testing, Plaintiffs' consultant would select and remove samples, including whole teeth and portions of bone, then grind them into powder and attempt to extract usable DNA from the samples. These samples would no longer be available for further testing by DPAA or for transfer to family members with the remains upon identification.

26. The DPAA Laboratory and its predecessors have never permitted a private entity to select samples and conduct destructive testing on unknown remains in government custody and consider it a perversion of government's duty to service members and their families.

\* \* \* \* \*

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed this 18 day of May, 2018.



John E. Byrd, Ph.D. D-ABFA  
Laboratory Director



ANSI-ASQ National Accreditation Board

**SCOPE OF ACCREDITATION TO:  
ISO/IEC 17025:2005**

**ANAB 17025:2005 Forensic Science Testing Laboratories Accreditation Requirements:2017**

**Defense POW/MIA Accounting Agency Laboratory**

see locations listed below

**FORENSIC SCIENCE TESTING**

Valid to: March 31, 2022

Certificate Number: FT-0015

**Hawaii**

590 Moffet St., Building 4077  
Joint Base Pearl Harbor-Hickam, Hawaii 96853

<b>Discipline: Anthropology</b>			
<b>Component/Parameter or Characteristic Tested</b>	<b>Test Method</b>	<b>Items Tested</b>	<b>Key Equipment or Technology</b>
Archaeology	DPAA Laboratory Manual SOPs 2.0 & 2.1	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence <sup>1</sup> ,	Refer to Test Method
Identification	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Biological Profile	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Trauma Analysis	DPAA Laboratory Manual SOP 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Minimum Number of Individuals (MNI)	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Segregation of Human from Non-Human Material	DPAA Laboratory Manual SOP 3.3	Scattered Remains/Evidence, Buried	Refer to Test Method





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		Remains/Evidence, Burned Remains/Evidence <sup>2</sup>	
Segregation of Commingled Remains	DPAA Laboratory Manual SOP 3.3	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Osseous Radiographic Comparisons	DPAA Laboratory Manual SOP 3.9	Scattered Remains/Evidence, Buried Remains/Evidence,	Refer to Test Method
Osseous Histology	DPAA Laboratory Manual SOP 3.8	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method

<b>Discipline: Biology</b>			
<b>Component/Parameter or Characteristic Tested</b>	<b>Test Method</b>	<b>Items Tested</b>	<b>Key Equipment or Technology</b>
Collection	DPAA Laboratory Manual, SOP 3.7	Biological Evidence	Refer to Test Method

<b>Discipline: Crime Scene Investigation<sup>2</sup></b>			
<b>Component/Parameter or Characteristic Tested</b>	<b>Test Method</b>	<b>Items Tested</b>	<b>Key Equipment or Technology</b>
Physical Determination	DPAA Laboratory Manual, SOPs 3.3 & 3.6	Aircraft Wreckage, Life Support Equipment	Refer to Test Method
Physical Comparison	DPAA Laboratory Manual, SOPs 3.3 & 3.6	Aircraft Wreckage, Life Support Equipment	Refer to Test Method
Product (Make/Model) Determination	DPAA Laboratory Manual, SOPs 3.3 & 3.6	Aircraft Wreckage, Life Support Equipment	Refer to Test Method

<b>Discipline: Materials (Trace)</b>			
<b>Component/Parameter or Characteristic Tested</b>	<b>Test Method</b>	<b>Items Tested</b>	<b>Key Equipment or Technology</b>
Physical Determination	DPAA Laboratory Manual, SOPs 3.1, 3.3 & 3.6	Military Equipment, Personal Effects	Microscope, Calipers, Ring Sizer, Alternate Light Source, Tape Measure
Physical Comparison	DPAA Laboratory Manual, SOPs 3.1, 3.3 & 3.6	Military Equipment, Personal Effects	Microscope, Calipers, Ring Sizer, Alternate Light Source, Tape Measure
Product (Make/Model) Determination	DPAA Laboratory Manual, SOPs 3.1, 3.3 & 3.6	Military Equipment, Personal Effects	Microscope, SEM, Calipers, Ring Sizer, Alternate Light Source, Tape Measure



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Chemical Determination	DPAA Laboratory Manual, SOPs 3.1 & 3.6	Military Equipment, Personal Effects, Aircraft Wreckage, Life Support Equipment	SEM
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<b>Discipline: Odontology</b>			
<b>Component/Parameter or Characteristic Tested</b>	<b>Test Method</b>	<b>Items Tested</b>	<b>Key Equipment or Technology</b>
Physical Comparison	DPAA Laboratory Manual, SOPs 3.3 & 3.5	Ante-mortem dental records and human remains	Refer to Test Method
Product (Make/Model) Determination	DPAA Laboratory Manual, SOPs 3.3 & 3.5	Dental appliances and restorations	Refer to Test Method
Minimum Number of Individuals (MNI)	DPAA Laboratory Manual, SOPs 3.3 & 3.5	Ante-mortem dental records and human remains	Refer to Test Method
Segregation of Commingled Remains	DPAA Laboratory Manual, SOPs 3.3 & 3.5	Ante-mortem dental records and human remains	Refer to Test Method

**Nebraska**

106 Peacekeeper Dr., Ste 2N3, Building 301  
Offutt Air Force Base, NE 68113

<b>Discipline: Anthropology</b>			
<b>Component/Parameter or Characteristic Tested</b>	<b>Test Method</b>	<b>Items Tested</b>	<b>Key Equipment or Technology</b>
Archaeology	DPAA Laboratory Manual SOPs 2.0 & 2.1	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence <sup>1</sup> ,	Refer to Test Method
Identification	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Postmortem Interval	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Biological Profile	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried	Refer to Test Method



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		Remains/Evidence, Burned Remains/Evidence	
Trauma Analysis	DPAA Laboratory Manual SOP 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Minimum Number of Individuals (MNI)	DPAA Laboratory Manual SOPs 3.3 & 3.4	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Segregation of Human from Non-Human Material	DPAA Laboratory Manual SOP 3.3	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence <sup>2</sup>	Refer to Test Method
Segregation of Commingled Remains	DPAA Laboratory Manual SOP 3.3	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method
Osseous Histology	DPAA Laboratory Manual SOP 3.8	Scattered Remains/Evidence, Buried Remains/Evidence, Burned Remains/Evidence	Refer to Test Method

**Discipline: Biology**

Component/Parameter or Characteristic Tested	Test Method	Items Tested	Key Equipment or Technology
Collection	DPAA Laboratory Manual, SOP 3.7	Biological Evidence	Refer to Test Method

**Discipline: Materials (Trace)**

Component/Parameter or Characteristic Tested	Test Method	Items Tested	Key Equipment or Technology
Physical Determination	DPAA Laboratory Manual, SOPs 3.1, 3.3 & 3.6	Military Equipment, Personal Effects	Microscope, Calipers, Ring Sizer, Alternate Light Source, Tape Measure
Physical Comparison	DPAA Laboratory Manual, SOPs 3.1, 3.3 & 3.6	Military Equipment, Personal Effects	Microscope, Calipers, Ring Sizer, Alternate Light Source, Tape Measure




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Product (Make/Model) Determination	DPAA Laboratory Manual, SOPs 3.1, 3.3 & 3.6	Military Equipment, Personal Effects	Microscope, Calipers, Ring Sizer, Alternate Light Source, Tape Measure
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Note 1: Field Testing: performance of testing task(s) at a location other than that listed on this scope of accreditation. Often, but not always, the location is not under the control of the forensic service provider.

Note 2: The forensic service provider performs these testing services both at the stated location and in the field.



Pamela L. Sale  
Vice President, Forensics

