DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0164
Name: Baldassare, Daniel Isidoro
Grade: E-4; USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13-14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 27 JUL 2017

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by postmortem and antemortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple injuries due to aircraft mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

CLOTHING AND PERSONAL EFFECTS

The body is clad in a flight suit, T-shirt, underwear, boots, and socks. The name "D. I. Baldassare" is visible on the flight suit. Accompanying the remains are a necklace, ear protection, knife, gloves, and part of a watch. All items are photographed for documentation.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

Postmortem radiology is performed (computed tomography and x-rays) and the results are incorporated below.

EVIDENCE OF INJURY

MULTIPLE INJURIES:

(b) (6)

(b) (6) [redacted]

INTERNAL EXAMINATION[1]

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

[1] Injuries described in the "Evidence of Injury" are not repeated in the "Internal Examination" section.

(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin without the preparation of slides.

ADDITIONAL REMARKS

1. Documentary photographs are taken by an OAFME Photographer.
2. Special Agents with NCIS are in attendance for the autopsy. A complete list of those in attendance at the time of autopsy is retained in the case file.
3. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
4. Personal effects are released to personal effects personnel.
5. No evidence is collected during the autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple injuries:

A. (b) (6) [redacted]

B. [redacted]

C. [redacted]

D. [redacted]

E. [redacted]

F. [redacted]

G. [redacted]

H. [redacted]

I. [redacted]

II. Toxicology (Toxicology Accession Number: 172674):

A. ETHANOL: No ethanol is detected in the vitreous fluid

B. DRUGS: No screened drugs of abuse/medications are detected in the liver

C. CARBON MONOXIDE: Carboxyhemoglobin saturation of 2% in the lung fluid

D. CYANIDE: No cyanide detected in the spleen fluid

OPINION

This Marine, Daniel Isidoro Baldassare, died from multiple injuries due to an aircraft mishap. There are severe injuries of the axial and appendicular skeleton, and numerous internal organs. The toxicology screen is negative for ethanol, drugs, and cyanide. The carboxyhemoglobin saturation is 2% in the lung fluid. The manner of death is accident.

(b) (6) [redacted]

Major, USAF, MC

(b) (6) [redacted]

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0165
Name: Cox, Robert H.
Grade: E-6; U.S.M.C.
Date of Birth: (b) (6)
Date of Death: 10 JUL 17
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13 & 14 JUL 17
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 15 AUG 17

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and cornplete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple Injuries due to Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in a black short-sleeved t-shirt, black shorts, a black belt, gray underwear, black shoes, and black socks. A wallet (contents photographed for documentation) was found within the right front pocket of the shorts.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

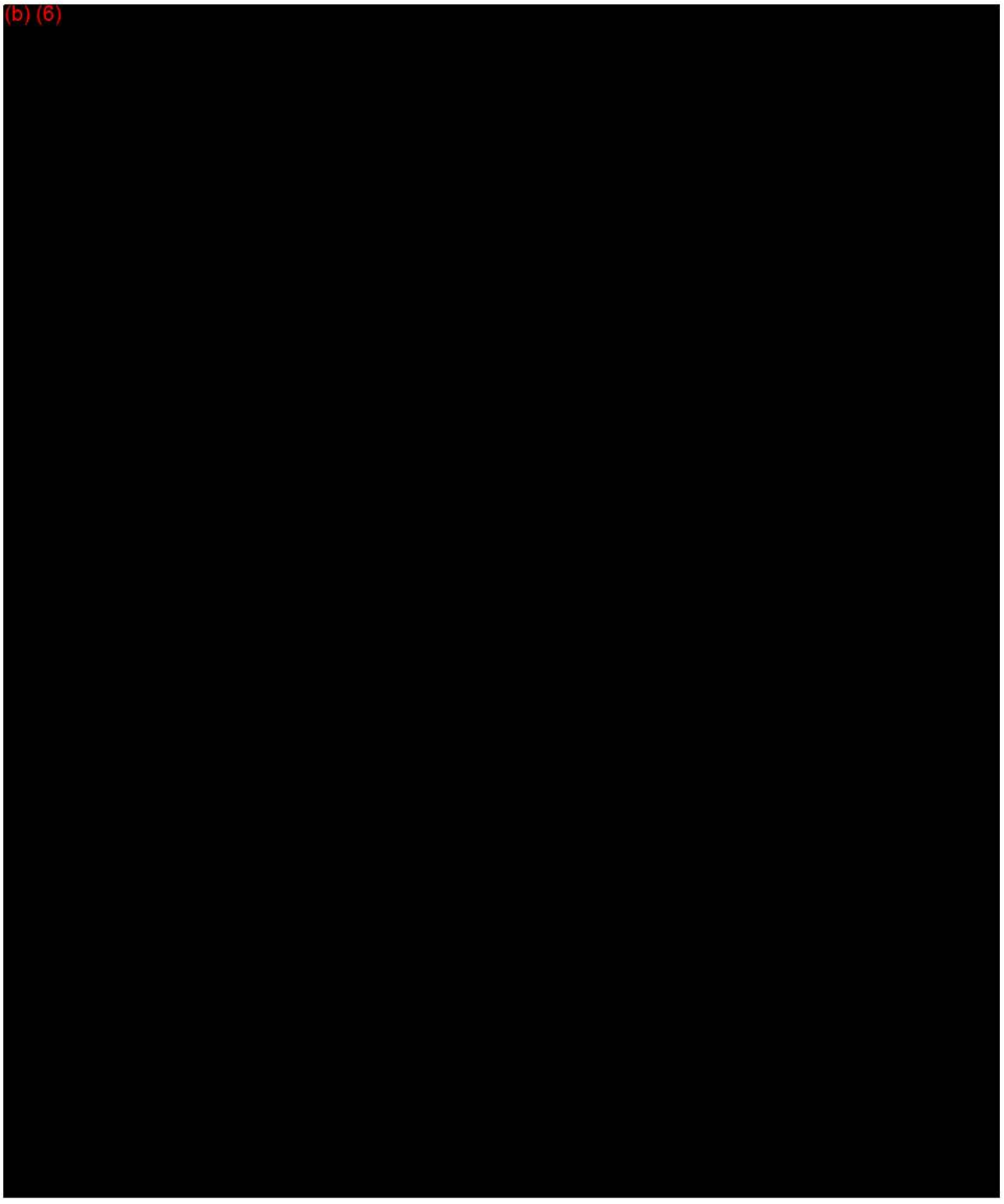
A complete set of post-mortem radiographs is obtained and the results are incorporated into the section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6)

[redacted]

(b) (6)



INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin without the preparation of slides.

ADDITIONAL REMARKS

1. Assisting with the autopsy is an AFMES staff member. Documentary photographs are taken by an OAFME photographer. Representatives from NCIS attended the autopsy. A complete list of all individuals in attendance is on file.
2. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
3. Personal effects are released to personal effects personnel.
4. Recovered evidence: none.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries:

A. (b) (6)
B.
C.
D.
E.
F.
G.
H.
I.
J.
K.

L.
M.
N.
O.
P.
Q.
R.
S.
T.
U.
V.
W.
X.
Y.
Z.

II. Toxicology:

A. CARBON MONOXIDE: Carboxyhemoglobin saturation in the cavity blood (5%)
B. CYANIDE: No cyanide detected in the cavity blood
C. VOLATILES: Ethanol detected in the cavity blood (0.031 g%) and urine (0.043g%)
D. DRUGS: No screened drugs of abuse/medications detected in the urine

OPINION

This Marine, Robert H. Cox, died of multiple injuries due to an aircraft mishap. There were severe injuries to the head and torso. The toxicology screen reflects a carboxyhemoglobin saturation of 5% in the cavity blood and an ethanol level in the cavity blood consistent with that produced by decomposition (as opposed to alcohol consumption prior to death). The manner of death is accident.

(b) (6)

MAJ, MC, USA

(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0160
Name: Elliott, Sean Endecott
Grade: O-3; USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13-14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 10 AUG 2017

Circumstances of Death: By report, this Marine was one of the two pilots of a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by postmortem and antemortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple injuries due to aircraft mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6) [redacted]

CLOTHING AND PERSONAL EFFECTS

The body is partially clad in (b) (6) [redacted] underwear, T-shirt, right sock, and right boot. Accompanying the remains are a flashlight, knife, flight cap, cellular phone, black watch (broken band), and wallet with contents (to include identification cards, $4 USD, foreign currency, and miscellaneous cards and papers). Clothing items associated with reassociated remains (SP913-2017) are described below. Items are photographed for documentation.

MEDICAL INTERVENTION

There is no evidence of medical intervention.

RADIOGRAPHS

Postmortem radiology is performed (computed tomography and x-rays) and the results are incorporated below.

EVIDENCE OF INJURY

MULTIPLE INJURIES:

(b) (6) [redacted]

(b) (6) [redacted]

INTERNAL EXAMINATION[1]

(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin without the preparation of slides.

REASSOCIATED REMAINS

(b) (6) [redacted]

ADDITIONAL REMARKS

1. Documentary photographs are taken by an OAFME Photographer.
2. Special Agents with NCIS are present during the autopsy. A complete list of those in attendance at the time of autopsy is retained in the case file.
3. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
4. Personal effects and miscellaneous objects / aircraft parts are released to personal effects personnel.
5. There is no evidence collected during the autopsy.

[1] Injuries described in the "Evidence of Injury" are not repeated in the "Internal Examination" section.

FINAL AUTOPSY DIAGNOSES

I. Multiple injuries:

A. (b) (6)

B.

C.

D.

II. Reassociated remains: (b) (6)
(b) (6)

III. Toxicology (Toxicology Accession Number: 172671):

A. VOLATILES: Ethanol is detected in the kidney (0.064 g%) and muscle (0.075 g%)
B. DRUGS: No screened drugs of abuse/medications are detected in the kidney
C. CARBON MONOXIDE: Carboxyhemoglobin saturation of 3.4% in the kidney

OPINION

This Marine, Sean Endecott Elliott, died from multiple injuries due to an aircraft mishap. (b) (6)
(b) (6) The toxicology screen demonstrates ethanol in the kidney and muscle, consistent with postmortem production from bacterial putrefaction. The carboxyhemoglobin saturation is 3.4% in the kidney. The manner of death is accident.

(b) (6)

Major, USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0156
Name: Goyette, Caine Michael
Grade: O-4; U.S.M.C.
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13 & 14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 14 AUG 2017

Circumstances of Death: By report, this Marine was one of the two pilots of a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint, dental, and DNA comparisons.

CAUSE OF DEATH: Multiple Injuries due to Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in fragments of a flight suit, fragments of a tan t-shirt, and blue underwear. All of the clothing is torn with varying degrees of burning. Two pens and an ear plug are noted in the left arm pocket of the flight suit. A patch with the decedent's name (partially charred) is on the flight suit. On the left ring finger is a metal ring. A charred glove and portion of a seat belt accompany the remains.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiologic imaging, including whole-body radiographs and Computed Tomography, is obtained and the injuries identified are incorporated into the section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6)

[redacted]

(b) (6) [redacted]

INTERNAL EXAMINATION

(b) (6) [redacted]

RE-ASSOCIATED REMAINS

- (b) (6) [redacted]

TOXICOLOGY (Accession#: 172668)

- Carbon Monoxide: The carboxyhemoglobin in the spleen fluid is 4%
- (b) (6) [redacted]
- Ethanol detected in the liver (0.037g%) and kidney (0.084g%)
- No screened drugs of abuse/medications detected in the liver

ADDITIONAL REMARKS

1. Assisting with the autopsy and taking photographs are OAFME personnel. A representative from NCIS attended the autopsy. A complete list of all individuals in attendance is on file.
2. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
3. Personal effects are released to personal effects personnel.

FINAL AUTOPSY DIAGNOSES

I. Multiple injuries:

A. (b) (6)

B.
C.
D.
E.
F.
G.
H.

I.

J.
K.
L.

M.
N.

O.
P.

Q.
R.

OPINION

This Marine Aviator, Caine Michael Goyette, died of multiple injuries sustained in an aircraft mishap. There are multiple lethal blunt force injuries of the head, neck, and torso. (b) (6)
The carbon monoxide saturation in the spleen fluid is 4%. The ethanol detected in the liver and kidney is consistent with post-mortem bacterial production (decomposition). The manner of death is accident.

(b) (6)

Lt Col, USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0169
Name: Hopkins, Mark Alan
Grade: E-7; U.S.M.C.
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13 & 14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 15 AUG 2017

Circumstances of Death: By report, this Marine was the navigator of a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint comparisons.

CAUSE OF DEATH: Multiple Injuries due to an Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6) [redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in fragments of a flight suit and underwear. In the right front pocket of the flight suit are a burned and damaged cell phone and two burned U.S. Passports. In the left pant pocket of the flight is a flashlight, burned notepad, and wallet with contents (photographed for documentation). Accompanying the remains is an additional flashlight, multi-tool, damaged communication gear, and miscellaneous wires and fasteners.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiologic imaging, including whole-body radiographs and Computed Tomography, is obtained and the injuries identified are incorporated into the section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6) [redacted]

INTERNAL EXAMINATION

(b) (6) [redacted]

(b) (6) [redacted]

TOXICOLOGY (Accession#: 172669)

- Carbon monoxide: The carboxyhemoglobin concentration in the liver is 3.1%
- Ethanol detected in the kidney (0.051g%) but not the liver
- No screened drugs of abuse/medications detected in the liver.

ADDITIONAL REMARKS

1. Assisting with the autopsy and taking photographs are OAFME personnel. A representative from NCIS attended the autopsy. A complete list of all individuals in attendance is on file.
2. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
3. Personal effects are released to personal effects personnel.

FINAL AUTOPSY DIAGNOSES

I. **Multiple injuries:**
A. (b) (6)
B.

OPINION

This Marine, Mark Alan Hopkins, died of multiple injuries sustained in an aircraft mishap. There are multiple lethal blunt force injuries of the body. (b) (6) (b) (6) The carbon monoxide saturation in the liver is 3.1%. The ethanol detected in the liver is consistent with post-mortem bacterial production (decomposition). The manner of death is accident.

(b) (6)

Lt Col, USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0168
Name: Jenson, Chad Elliot
Grade: E-5, U.S. Marine Corps
Date of Birth: (b) (6)
Date of Death: 10 July 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13-14 July 2017
Place of Autopsy: OAFME, Dover Air Force Base
Date Report Signed: 10 August 2017

Circumstances of Death: By report, this Marine was abroad a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 July 2017 and complete autopsy examination was completed on 14 July 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple Injuries due to aircraft mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

(b) (6)

CLOTHING AND PERSONAL EFFECTS

The body is clad in a long sleeved tan shirt, a tan pants with a black belt, black underwear, two black socks, two brown boots. All of the clothing is soiled and torn. Two metal keys are identified in the pockets of the pants. Received with the remains are a blue ball point pen, a pair of black sunglasses (broken), a black wallet with miscellaneous cards and papers to include a CAC (Common Access Card), a driver's license and three (3) credit cards. A black digital watch is on the left wrist and is photographed in situ and released to personal effects personnel at intake.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

MULTIPLE INJURIES:

(b) (6)

[redacted]

INTERNAL EXAMINATION

BODY CAVITIES:

(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:

(b) (6) [redacted]

RESPIRATORY SYSTEM:

(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:

(b) (6) [redacted]

HEPATOBILIARY SYSTEM:

(b) (6) [redacted]

GENITOURINARY SYSTEM:

(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. A 92M mortuary affairs assistant assisted with the autopsy.
2. Documentary photographs are taken by an OAFME staff photographer.
3. NCIS case agents attended the autopsy.
4. A complete list of autopsy attendees is maintained with the case file.
5. Personal effects are released with the body.
6. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
7. The dissected organs are forwarded with body.
8. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries:

A. (b) (6) [redacted]
B.
C.
D.
E.
F.
G.
H.
I.
J.
K.
L.
M.
N.
O.
P.
Q.
R.
S.
T.
U.
V.

II. **Postmortem Changes**

A. (b) (6) [redacted]
B.
C.
D.

III. **Toxicology:**

A. CARBON MONOXIDE: The carboxyhemoglobin saturation in the liver fluid was 16%
B. CYANIDE: There was no cyanide detected in the thoracic cavity blood

C. VOLATILES:
   1. 0.047 g% Ethanol detected in the thoracic cavity blood
   2. 0.054 g% Ethanol in the liver
D. DRUGS: No screened drugs of abuse/medications detected in the thoracic cavity blood

OPINION

This Marine, Chad Elliott Jenson, died from multiple injuries due to an aircraft mishap. (b) (6) (b) (6) The toxicology screen reveals 16% carboxyhemoglobin in the thoracic cavity blood. The ethanol detected in the thoracic cavity blood and liver is indicative of postmortem putrefaction. The manner of death is accident.

(b) (6)

Lt Col, USAF, MC,
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0159
Name: Johnson, Brendan Colin
Grade: E-7; USMC
Date of Birth: (b) (6)
Date of Death: 10 July 2017
Place of Death: Itta Bena, Mississippi
Date/Time of Autopsy: 13-14 July 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 11 SEP 2017

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint comparisons.

CAUSE OF DEATH: **Multiple Injuries due to Aircraft Mishap**

MANNER OF DEATH: **Accident**

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in charred remnants of a green flight suit consisting primarily of the right sleeve, a right sock, a portion of right boot and a portion of a right green glove. There is a metallic multiuse folding tool in a flight suit pocket along with a fragment of a metallic pin.

MEDICAL INTERVENTION

There is no evidence of any medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs and computed tomography are obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6)

[redacted]

(b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. A mortuary assistant assisted with the autopsy.
2. Documentary photographs are taken by a staff photographer.
3. NCIS case agents attended the autopsy.
4. A complete list of autopsy attendees is maintained with the case file.
5. Personal effects are released with the body.
6. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
7. The dissected organs are forwarded with body.
8. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries:

A. (b) (6)

B.

C.

D.

E.

F.

G.

H.

I.

J.

K.

II. Toxicology:

A. VOLATILES: Ethanol is detected in the kidney (0.051 g%)
B. DRUGS: No screened drugs of abuse/medications are detected in the kidney
C. CARBON MONOXIDE: Carboxyhemoglobin saturation of 1.8% in the liver
D. CYANIDE: No specimen suitable for testing

OPINION

This 45 year old male Marine, died of multiple injuries with (b) (6) (b) (6) that occurred when he was aboard a C-130T that was involved in a single aircraft mishap. The toxicology screen is negative, but for ethanol detected in the kidney that is consistent with postmortem production from bacterial putrefaction. The carboxyhemoglobin saturation in the liver is 1.8%. There is no evidence of any significant natural disease. The manner of death is accident.

(b) (6)

LtCol, USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0157
Name: Kevianne, Julian Marquis
Grade: E-5 (Sgt); USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, Mississippi
Date/Time of Autopsy: 13 and 14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, Dover, DE
Date Report Signed: 05 SEP 2017

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by comparisons of post-mortem fingerprint and dental examinations with ante-mortem fingerprint and dental records.

CAUSE OF DEATH: Multiple Injuries Due To Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6) [redacted]

CLOTHING AND PERSONAL EFFECTS

(b) (6) [redacted]

In the pockets of the flight suit: Left thigh- cellphone (charred); right thigh- USMC enlisted cover; right leg- ear plug, keychain flashlight, ear bud, shredded paper (gum packet) and fragments of a small knife. A wire is admixed in the remains.

In the blue human remains pouch are two (2) pairs of gloves, a gray metallic flashlight, a black metallic flashlight and a blue knife handle.

MEDICAL INTERVENTION

There is no evidence of medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

Injuries of the Head:

(b) (6) [redacted]

(b) (6) [redacted]

Injuries of the Torso:

(b) (6) [redacted]

Injuries of the Extremities:

(b) (6) [redacted]

Thermal Injuries:

(b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
See "Evidence of Injury" section.

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
See "Evidence of Injury" section.

(b) (6) [redacted]

RESPIRATORY SYSTEM:
See "Evidence of Injury" section.

(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
See "Evidence of Injury" section.

(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
See "Evidence of Injury" section.

(b) (6) [redacted]

GENITOURINARY SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

ENDOCRINE SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. An AFMES 92M assisted with the autopsy and photographs.
2. NCIS case agents attended the autopsy.
3. A complete list of autopsy attendees is maintained with the case file.
4. Personal effects are released with the body.
5. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
6. The dissected organs are forwarded with body.
7. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries due to aircraft mishap, including
A. (b) (6)
B.
C.
D.
E.
F.
G.
H.
I.
J.
K.

II. (b) (6)

III.

IV. No natural diseases identified within the limits of the examination

V. Toxicology:
A. VOLATILES: Ethanol is detected in the urine (0.044g%) and none found in the liver.
B. DRUGS: (b) (6) No other screened drugs of abuse/medications are detected in the urine.
C. Carbon Monoxide: 1.8 mcg/g (as reported by NMS Labs)
D. Cyanide: No suitable specimen for testing

OPINION

This 31 year old USMC E-5, Julian Marquis Kevianne, died of multiple injuries sustained in an aircraft mishap. The injuries are consistent with blunt force injuries resulting from a fall from significant height. The injuries were immediately fatal. (b) (6) (b) (6) (b) (6) (b) (6)

Diphenhydramine (Benadryl) is also present in the urine but did not contribute to the death. Based on the investigative information available at completion of this report, the manner of death is accident.

(b) (6)

COL MC USA
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0170
Name: Kundrat, William Joseph
Grade: E6/SSGT/USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date of Autopsy: 13 & 14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 22 AUG 2017

Circumstances of Death: By report, this Marine, William Joseph Kundrat, was a board A C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

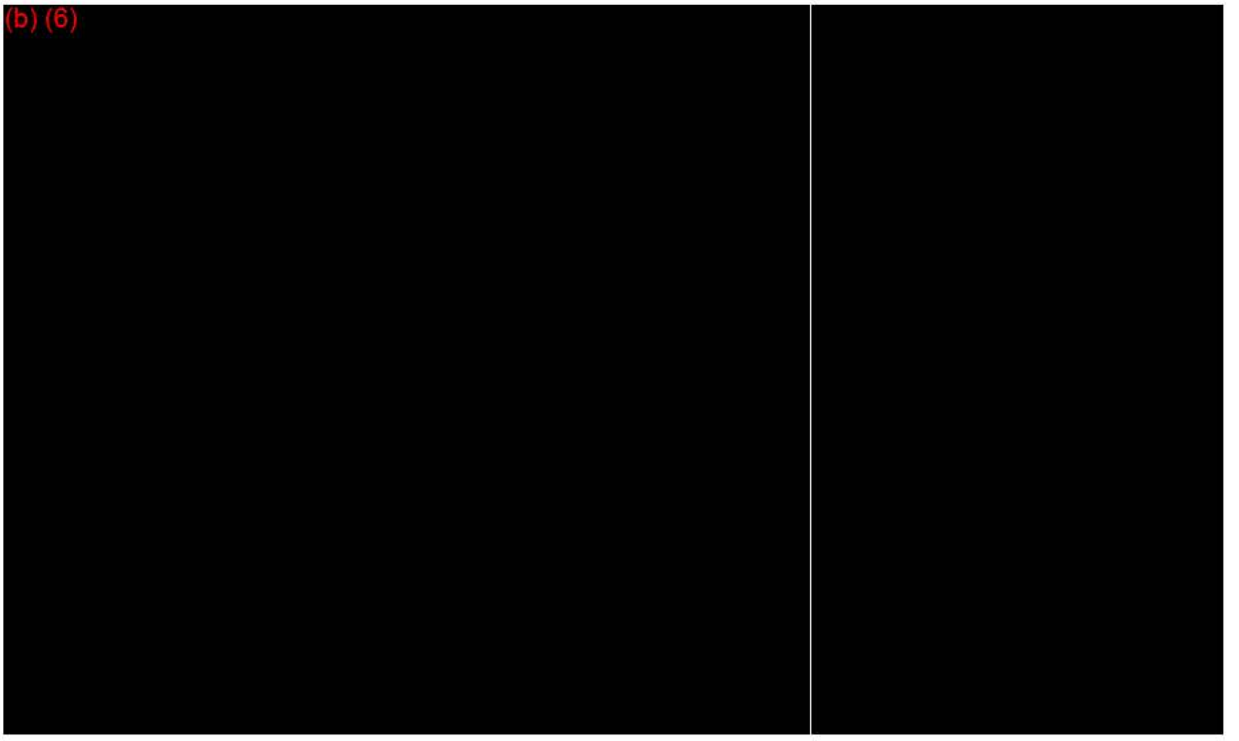
Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons. A sample is obtained for DNA analysis should an ante-mortem exemplar become available.

CAUSE OF DEATH: Multiple Injuries Due To Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION



CLOTHING AND PERSONAL EFFECTS

The body is clad in the following articles of clothing:

- Tan trousers
- Plaid, button down collared shirt
- Black T-shirt
- Black and white socks with red trim
- Black leather belt with red white and blue buccal depicting the image of a bison
- Blue boxer briefs with yellow and black waist band
- A multi-purpose knife is contained in the front right trousers pocket
- A black metal band encircles the proximal phalanx of the third digit of the left hand

MEDICAL INTERVENTION

There is no medical intervention in place at the time of autopsy.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6)

- (b) (6)
- [redacted]

(b) (6)

- (b) (6)
- [redacted]

(b) (6)

- (b) (6)
- [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. Documentary photographs are taken by an OAFME staff photographer.
2. NCIS case agents attended the autopsy.
3. A complete list of autopsy attendees is maintained with the case file.
4. Personal effects are released with the body.
5. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
6. The dissected organs are forwarded with body.
7. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. **Multiple Injuries Due To Aircraft Mishap:**

A. (b) (6) [redacted]
B.
C.
D.
E.
F.

II. **Toxicology:**

A. VOLATILES: The liver and kidneys were examined for the presence of volatiles, neither specimen was suitable for testing
B. DRUGS: No screened drugs of abuse/medications detected in the liver
C. CARBON MONOXIDE: The carboxyhemoglobin saturation in the spleen is 8 %
D. CYANIDE: No cyanide is detected in the pleural fluid

OPINION

This Marine, William Joseph Kundrat, died as a result of multiple injuries due to aircraft mishap. The toxicology screen is negative for cyanide, and screened drugs of abuse/medications. The carboxyhemoglobin saturation in the cavity blood is 8%. After review of autopsy findings and circumstances, the manner of death is best classified as accident.

(b) (6) [redacted]

CDR MC USN
(b) (6) [redacted]

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0155
Name: Leach, Talon R.
Grade: E-5; U.S.M.C.
Date of Birth: (b) (6)
Date of Death: 10 JUL 17
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13 & 14 JUL 17
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 15 AUG 17

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple Injuries due to Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in a sleeveless black t-shirt, tan shorts, a black belt, and black shorts. All of the clothing is torn. There is a necklace around the neck consisting of what appears to be a copper-jacketed bullet strung onto a black cord.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into the section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6)

[redacted]

(b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin without the preparation of slides.

ADDITIONAL REMARKS

1. Assisting with the autopsy is an AFMES staff member. Documentary photographs are taken by an OAFME photographer. Representatives from NCIS attended the autopsy. A complete list of all individuals in attendance is on file.
2. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
3. Personal effects are released to personal effects personnel.
4. Recovered evidence: none.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries:

A. (b) (6)
B.
C.
D.
E.
F.
G.
H.
I.
J.
K.
L.

M.
N.

O.
P.
Q.
R.
S.
T.
U.
V.

W.
X.
Y.
Z.

II. Toxicology:

A. CARBON MONOXIDE: Carboxyhemoglobin saturation in the liver fluid (6%)
B. CYANIDE: No cyanide detected in the lung fluid
C. VOLATILES: Ethanol detected in the liver (0.037 g%) and kidney (0.094 g%)
D. DRUGS: No screened drugs of abuse/medications detected in the liver

OPINION

This Marine, Talon R. Leach, died of multiple injuries due to an aircraft mishap. (b) (6) (b) (6) The toxicology screen reflects a carboxyhemoglobin saturation of 6% in the liver fluid and (b) (6) (b) (6) The manner of death is accident.

(b) (6)

MAJ, MC, USA
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0161
Name: Lennon, Owen James
Grade: E5/SGT/USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date of Autopsy: 13 & 14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 22 AUG 2017

Circumstances of Death: By report, this Marine, Owen James Lennon, was a board A C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons. A sample is obtained for DNA analysis should an ante-mortem exemplar become available.

CAUSE OF DEATH: Multiple Injuries Due To Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

CLOTHING AND PERSONAL EFFECTS

The body is clad in the following articles of clothing:

- Green flight suit with leather patch above left pocket with patient's name and additional patches located above the right chest pocket and on both lateral shoulders that have been photographed for documentation.
- 10 high top combat boots
- Tan socks
- Green T-shirt
- Red boxer briefs with blue waist band
- Cell phone and wallet (contents are inventoried, photographed and placed with personal effects)

MEDICAL INTERVENTION

There is no medical intervention in place at the time of autopsy.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

(b) (6)

- (b) (6)

[redacted]

(b) (6)

(b) (6)

(b) (6)

- (b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. Documentary photographs are taken by an OAFME staff photographer.
2. NCIS case agents attended the autopsy.
3. A complete list of autopsy attendees is maintained with the case file.
4. Personal effects are released with the body.
5. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
6. The dissected organs are forwarded with body.
7. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries Due To Aircraft Mishap:

A. (b) (6) [redacted]

II. Toxicology:

A. VOLATILES: No ethanol detected in the cavity blood and liver
B. DRUGS: No screened drugs of abuse/medications detected in the cavity blood
C. CARBON MONOXIDE: The carboxyhemoglobin saturation in the cavity blood is 7%
D. CYANIDE: No cyanide is detected in the cavity blood

OPINION

This Marine, Owen James Lennon, died as a result of multiple injuries due to aircraft mishap. The toxicology screen is negative for ethanol, cyanide, and screened drugs of abuse/medications. The carboxyhemoglobin saturation in the cavity blood is 7%. After review of autopsy findings and circumstances, the manner of death is best classified as accident.

(b) (6) [redacted]
CDR MC USN
(b) (6) [redacted]

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0163
Name: Lohrey, Ryan Michael
Grade: E-5, U.S. Navy
Date of Birth: (b) (6)
Date of Death: 10 July 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13-14 July 2017
Place of Autopsy: OAFME, Dover Air Force Base
Date Report Signed: 31 August 2017

Circumstances of Death: By report, this Sailor was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 July 2017 and complete autopsy examination was completed on 14 July 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple Injuries due to aircraft mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

(b) (6)

(b) (6)

CLOTHING AND PERSONAL EFFECTS

The body is clad in long sleeved black sweatshirt, a tan and blue plaid button down shirt, a pair of black pants, a pair of brown slip-on shoes, two black and grey socks, and black pair of Navy shorts. All of the clothing is soiled and torn. A black Garmin watch is on the left wrist. This watch is photographed in situ, removed and photographed off the remains and turned over to personal effects personnel at intake. Accompanying the remains are a CAC (Common access card) and black and silver car fob/remote.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into the section "Evidence of Injury".

EVIDENCE OF INJURY

MULTIPLE INJURIES:

(b) (6)

(b) (6)

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
See "Evidence of Injury".
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. A 92M mortuary affairs assistant assisted with the autopsy.
2. Documentary photographs are taken by an OAFME staff photographer.
3. NCIS case agents attended the autopsy.
4. A complete list of autopsy attendees is maintained with the case file.
5. Personal effects are released with the body.
6. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
7. The dissected organs are forwarded with the body.
8. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries:

A. (b) (6) [redacted]
B. [redacted]
C. [redacted]
D. [redacted]
E. [redacted]
F. [redacted]
G. [redacted]
H. [redacted]
I. [redacted]
J. [redacted]
K. [redacted]
L. [redacted]
M. [redacted]
N. [redacted]
O. [redacted]
P. [redacted]
Q. [redacted]
R. [redacted]
S. [redacted]
T. [redacted]
   1. (b) (6) [redacted]
   2. [redacted]
   3. [redacted]
   4. [redacted]
U. (b) (6) [redacted]
V. [redacted]
W. [redacted]
X. [redacted]
Y. [redacted]

II. Postmortem Changes

A. (b) (6) [redacted]
B. [redacted]
C. [redacted]
D. [redacted]

III. Toxicology:

A. CARBON MONOXIDE: None detected in the liver
B. CYANIDE: Not performed, no suitable sample for testing available
C. VOLATILES: No ethanol detected in the liver
D. DRUGS: No screened drugs of abuse/medications detected in the liver

OPINION

This Sailor, Ryan Michael Lohrey died from multiple injuries due to an aircraft mishap. There are severe injuries of the axial and appendicular skeleton, major blood vessels and numerous internal organs. The toxicology screen was negative. No carbon monoxide was detected in the liver. The manner of death is accident.

(b) (6)

Lt Col, USAF, MC,
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0158
Name: Murray, Joseph James
Grade: E-5, U.S. Marine Corps
Date of Birth: (b) (6)
Date of Death: 10 July 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13-14 July 2017
Place of Autopsy: OAFME, Dover Air Force Base
Date Report Signed: 8 August 2017

Circumstances of Death: By report, this Maine was abroad a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 July 2017 and complete autopsy examination was completed on 14 July 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple Injuries due to aircraft mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

CLOTHING AND PERSONAL EFFECTS

The body is clad in a grey t-shirt with graphic writing on the back, a pair of tan pants with a brown belt, one black shoe on the right foot, two black socks, and black pair of underwear. A black watch is identified under the body. All of the clothing is soiled and torn. A grey-black silicone ring is on the left ring finger. This ring is photographed in situ, removed and photographed off the remains and turned over to personal effects personnel at intake. A black plastic clip holds nine (9) miscellaneous cards, to include a driver's license and Department of Defense (DoD) Common Access Card (CAC) accompanies the remains. All items are photographed for documentation.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

MULTIPLE INJURIES:

(b) (6)

[redacted]

(b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. A 92M mortuary affairs assistant assisted with the autopsy.
2. Documentary photographs are taken by an OAFME staff photographer.
3. NCIS case agents attended the autopsy.
4. A complete list of autopsy attendees is maintained with the case file.
5. Personal effects are released with the body.
6. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
7. The dissected organs are forwarded with body.
8. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Injuries

A. (b) (6)
B.
C.
D.
E.
F.
G.
H.
I.
J.
K.
L.
M.
N.
O.
P.
Q.
R.
S.
T.
U.
V.

II. **Postmortem Changes**

A. (b) (6)
B.

III. **Toxicology:**

A. CARBON MONOXIDE: The carboxyhemoglobin saturation in the liver fluid was 5%
B. CYANIDE: There was no cyanide detected in the liver fluid
C. VOLATILES: No ethanol detected in the urine and vitreous fluid
D. DRUGS: Ibuprofen is detected in the urine

OPINION

This Marine, Joseph James Murray died from multiple injuries due to an aircraft mishap. There are severe injuries, of the axial and appendicular skeleton, major blood vessels and numerous internal organs. The toxicology screen reveals 5% carboxyhemoglobin in the liver fluid and ibuprofen in the urine. The manner of death is accident.

(b) (6)

Lt Col, USAF, MC,
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0166
Name: Schaaff, Collin John-Michael
Grade: E-4 (Cpl); USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, Mississippi
Date/Time of Autopsy: 13-14 JUL 2017 @ 1230hrs
Place of Autopsy: OAFME, Dover AFB, Dover, DE
Date Report Signed: 17 AUG 2017

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by comparisons of post-mortem fingerprint and dental examinations with ante-mortem fingerprint and dental records. Positive Identification was made on 13 JUL 2017 during AFMES Operations to account for aircraft passengers.

CAUSE OF DEATH: Multiple Injuries due to Aircraft Mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in a green t-shirt (torn), boxer shorts, dark colored socks, and tan boots.

MEDICAL INTERVENTION

There is no evidence of medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs is obtained and the results are incorporated into section "Evidence of Injury".

EVIDENCE OF INJURY

Injuries of the Head:

(b) (6)

[redacted]

(b) (6)

[redacted]

Injuries of the Torso:

(b) (6)

[redacted]

Injuries of the Extremities:

(b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:

See "Evidence of Injury" section.

(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:

See "Evidence of Injury" section.

(b) (6) [redacted]

RESPIRATORY SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

HEPATOBILIARY SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

GENITOURINARY SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

ENDOCRINE SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:

See "Evidence of Injury" section.

(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. An AFMES 92M assisted with the autopsy and photographs.
2. NCIS agents attended the autopsy.
3. A complete list of autopsy attendees is maintained with the case file.

4. Personal effects are released with the body.
5. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
6. The dissected organs are forwarded with body.
7. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple injuries
A. (b) (6)
B.
C.
D.
E.
F.

G.
H.
I.
J.
K.
L.
M.
N.
O.

II. (b) (6)

III. Toxicology:

CARBON MONOXIDE: The carboxyhemoglobin saturation in the CAVITY BLOOD was 4% as determined by headspace gas chromatography flame ionization detection with a limit of quantitation of 1 %. Carboxyhemoglobin saturations of 0-3% are expected for non-smokers and 3-10% for smokers.

CYANIDE: There was no cyanide detected in the CAVITY BLOOD. The limit of detection for cyanide screen by microdiffusion is 0.5 mg/L.

ETHANOL: The CAVITY BLOOD and URINE were examined for the presence of ethanol at a cutoff of 0.020 g%. No ethanol was detected.

DRUGS: The URINE was screened for amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, opioids, phencyclidine, sympathomimetic amines, acid, neutral and alkaline extractable drugs by immunoassay or gas

chromatography/full scan-mass spectrometry. The following drugs were detected: None were found.

OPINION

This 22 year old Marine E-4, Collin John-Michael Schaaff, died of multiple injuries sustained in an aircraft mishap. The injuries are consistent with blunt force injuries resulting from a fall from significant height. The injuries were immediately fatal. Toxicology screening is negative for ethanol, drugs of abuse and cyanide. The carbon monoxide level is 4%. Based on the investigative information available at completion of this report, the manner of death is accident.

(b) (6) [redacted]

COL USA MC

(b) (6) [redacted]

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY EXAMINATION

Autopsy Number: ME17-0162
Name: Schmieman, Dietrich Aaron-Allen
Grade: E-5; USMC
Date of Birth: (b) (6)
Date of Death: 10 July 2017
Place of Death: Itta Bena, Mississippi
Date of Autopsy: 13-14 July 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 18 AUG 2017

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by ante-mortem and post-mortem fingerprint and dental comparisons.

CAUSE OF DEATH: **Multiple Injuries due to Aircraft Mishap**

MANNER OF DEATH: **Accident**

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in a pair of tan pants with a brown belt and silver colored metallic buckle, a pair of green shorts, a pair of white socks and a pair of brown short boots. There is a moderate amount of plant matter embedded within the clothing, and the shorts and pants are torn and focally shredded, predominantly on the right side.

MEDICAL INTERVENTION

There is no evidence of any medical intervention.

RADIOGRAPHS

A complete set of post-mortem radiographs and computed tomography are obtained and the results are incorporated into section "Evidence of Injury."

EVIDENCE OF INJURY

(b) (6)

[redacted]

(b) (6)	
(b) (6)	
(b) (6)	
(b) (6)	
(b) (6)	

(b) (6) [redacted]

INTERNAL EXAMINATION

BODY CAVITIES:
(b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:
(b) (6) [redacted]

RESPIRATORY SYSTEM:
(b) (6) [redacted]

CARDIOVASCULAR SYSTEM:
(b) (6) [redacted]

HEPATOBILIARY SYSTEM:
(b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
(b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
(b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
(b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin, without preparation of histology slides.

ADDITIONAL REMARKS

1. A mortuary assistant assisted with the autopsy.
2. Documentary photographs are taken by a staff photographer.
3. NCIS case agents attended the autopsy.
4. A complete list of autopsy attendees is maintained with the case file.
5. Personal effects are released with the body.
6. Selected portions of organs and body fluids are retained for toxicology and/or DNA identification.
7. The dissected organs are forwarded with body.
8. No evidence is recovered at autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple Blunt Force Injuries:

A. (b) (6) [redacted]

B. (b) (6) [redacted]

C. (b) (6) [redacted]

II. Toxicology:

A. VOLATILES: Ethanol detected in the blood (0.069 g %) and liver (0.012 g %)
B. DRUGS: No screened drugs of abuse/medications detected in the liver
C. CARBON MONOXIDE: Carboxyhemoglobin saturation of 3% in the blood
D. CYANIDE: No cyanide detected in the blood

OPINION

This 26 year old male Marine, Dietrich Schmieman died of multiple injuries including extensive blunt force injuries of the head, torso and extremities that occurred when he was aboard a C-130T that was involved in a single aircraft mishap. The toxicology screen is negative for screened drugs and medications. The carboxyhemoglobin saturation is 3% in the blood, and the ethanol in the blood and liver is consistent with post mortem production. There is no evidence of any significant natural disease. The manner of death is accident.

(b) (6)

LtCol, USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
OFFICE OF THE ARMED FORCES MEDICAL EXAMINER
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

AUTOPSY REPORT

Autopsy Number: ME17-0167
Name: Snowden, Joshua Michael
Grade: E-6; USMC
Date of Birth: (b) (6)
Date of Death: 10 JUL 2017
Place of Death: Itta Bena, MS
Date/Time of Autopsy: 13-14 JUL 2017
Place of Autopsy: OAFME, Dover AFB, DE
Date Report Signed: 30 JUL 2017

Circumstances of Death: By report, this Marine was aboard a C-130T that was involved in a single aircraft mishap. Scientific identification was accomplished on 13 JUL 2017 and complete autopsy examination was completed on 14 JUL 2017.

Authorization for Autopsy: Armed Forces Medical Examiner, IAW 10 USC 1471.

Identification: Positive identification by postmortem and antemortem fingerprint and dental comparisons.

CAUSE OF DEATH: Multiple injuries due to aircraft mishap

MANNER OF DEATH: Accident

EXTERNAL EXAMINATION

(b) (6)

[redacted]

CLOTHING AND PERSONAL EFFECTS

The body is clad in a flight suit, T-shirt, underwear, boots, and socks. The name "J.M. Snowden" is visible on the flight suit. Accompanying the remains are a metallic cross pendant, metallic jewelry with engravings, metallic chain, metallic ring, watch (separated from band), flag, flash light, batteries, calculator, and other miscellaneous items. All items are photographed for documentation.

MEDICAL INTERVENTION

There is no evidence of acute medical intervention.

RADIOGRAPHS

Postmortem radiology is performed (computed tomography and x-rays) and the results are incorporated below.

EVIDENCE OF INJURY

MULTIPLE INJURIES:

(b) (6)

[redacted]

(b) (6) [redacted]

INTERNAL EXAMINATION[1]

BODY CAVITIES:

See "Evidence of Injury." (b) (6) [redacted]

HEAD (CENTRAL NERVOUS SYSTEM) and NECK:

See "Evidence of Injury." (b) (6) [redacted]

RESPIRATORY SYSTEM:

See "Evidence of Injury." (b) (6) [redacted]

CARDIOVASCULAR SYSTEM:

See "Evidence of Injury." (b) (6) [redacted]

[1] Injuries described in the "Evidence of Injury" are not repeated in the "Internal Examination" section.

HEPATOBILIARY SYSTEM:
See "Evidence of Injury." (b) (6) [redacted]

GENITOURINARY SYSTEM:
(b) (6) [redacted]

GASTROINTESTINAL SYSTEM:
See "Evidence of Injury." (b) (6) [redacted]

LYMPHORETICULAR SYSTEM:
See "Evidence of Injury." (b) (6) [redacted]

ENDOCRINE SYSTEM:
(b) (6) [redacted]

MUSCULOSKELETAL SYSTEM:
See "Evidence of Injury." (b) (6) [redacted]

MICROSCOPIC EXAMINATION

Selected portions of organs are retained in formalin without the preparation of slides.

ADDITIONAL REMARKS

1. Documentary photographs are taken by an OAFME Photographer.
2. Special Agents with NCIS are in attendance for the autopsy. A complete list of those in attendance at the time of autopsy is retained in the case file.
3. Selected portions of organs and fluids are retained for toxicology and/or DNA identification.
4. Personal effects are released to personal effects personnel.
5. No evidence is collected during the autopsy.

FINAL AUTOPSY DIAGNOSES

I. Multiple injuries:

A. (b) (6) [redacted]

II. Toxicology (Toxicology Accession Number: 172666):

A. VOLATILES: Ethanol is detected in the liver (0.026 g%) and kidney (0.062 g%)
B. DRUGS: No screened drugs of abuse/medications are detected in the liver
C. CARBON MONOXIDE: Carboxyhemoglobin saturation of 4% in the spleen fluid
D. CYANIDE: No cyanide detected in the spleen fluid

OPINION

This Marine, Joshua Michael Snowden, died from multiple injuries due to an aircraft mishap. There are severe injuries of the axial and appendicular skeleton, and numerous internal organs. The toxicology screen reveals the presence of ethanol in the liver and kidney, consistent with postmortem production from putrefaction. The carboxyhemoglobin saturation in the spleen fluid is 4%. The manner of death is accident.

(b) (6) [redacted]

(b) (6) [redacted]
Major, USAF, MC
(b) (6) [redacted]

DEFENSE
HEALTH AGENCY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
HEALTH AFFAIRS
ARMED FORCES MEDICAL EXAMINER SYSTEM
115 PURPLE HEART DRIVE
DOVER AFB, DE 19902-5051

08 NOV 2017

MEMORANDUM FOR Lt Col (b) (6) USMC

SUBJECT Carbon Monoxide Results

1. Toxicological analyses were performed on all of the Service Members that died in the 10 JUL 2017 aircraft mishap in Leflore County, Mississippi. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

2. The carboxyhemoglobin levels ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. Although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire.

3. If further information is necessary, please do not hesitate to contact me at (b) (6) or (b) (6).

(b) (6)
LtCol, USAF, MC
(b) (6)

DEFENSE HEALTH AGENCY
115 PURPLE HEART DRIVE
DOVER AIR FORCE BASE, DELAWARE 19902

Armed Forces Medical Examiner System

10 FEB 2018

MEMORANDUM FOR Lt Col (b) (6) USMC
JAGMAN IO YANKEE 72
4TH MAW

SUBJECT Forensic Pathology Investigation Results for YANKEE 72

1. In accordance with Title 10 U.S. Code Subsection 1471, a forensic pathology investigation was conducted on all sixteen Service Members that died in the 10 JUL 2017 aircraft mishap (YANKEE 72) in Leflore County, Mississippi by the Armed Forces Medical Examiner System. Autopsy reports were written for each of the deceased Service Members. The cause of death of each of these Service Members was certified as Multiple Injuries due to Aircraft Mishap and the manner of death certified as Accident. The majority of injuries sustained by each individual can be classified as blunt force injuries. A blunt force injury occurs when a blunt object strikes the body or when the body impacts a blunt object or surface, including the ground. Each individual Service Member sustained lethal blunt force injuries. The thermal injuries sustained by some of the individuals are consistent with occurring during the post-mishap fire and these injuries are post-mortem in nature.

2. Toxicological analyses were performed on all of the deceased Service Members. Included in these analyses was testing for carbon monoxide. Carbon monoxide is a colorless and odorless gas that is produced from the partial oxidation of carbon-containing compounds. In the environment, it is usually produced through combustion. Although produced by the human body in small amounts, elevated levels of carbon monoxide from the environment can have a deleterious effect on the body. Once inhaled, carbon monoxide preferentially binds to hemoglobin, the molecule that transports oxygen from the lungs to the body's tissues and returns carbon dioxide from the body's tissues back to the lungs. In addition, carbon monoxide shifts the oxygen saturation curve causing oxygen to be more tightly bound to hemoglobin making it more difficult for oxygen to be released to the tissues. The amount of carbon monoxide is usually measured as the carboxyhemoglobin saturation. A carboxyhemoglobin saturation of 0 – 3% is generally considered normal for non-smokers. Due to carbon monoxide being produced by smoking, a carboxyhemoglobin of less than 10% is generally considered normal for smokers. There are usually no symptoms when carboxyhemoglobin levels are less than 10%. For levels between 10 – 20%, symptoms may include headache, dizziness, fatigue and nausea. Levels over 50% are usually considered fatal. In normal air, the half-life (time it takes to reduce the peak level by 50%) of carbon monoxide is 5 – 6 hours. The treatment for carbon monoxide exposure is movement to fresh air and/or breathing 100% oxygen depending on the symptoms and levels.

3. The carboxyhemoglobin levels in the deceased Service Members ranged from 0% to 16% with fifteen of the sixteen results being less than 10%. As stated above, although there was a significant post-mishap fire, all of the individuals sustained non-survivable injuries during the mishap sequence. Thus, any elevation in carboxyhemoglobin levels occurred prior to the post-mishap fire. Based on available information, including no known source of carbon monoxide after take-off, it is most probable that the elevated carboxyhemoglobin level observed was due to the loading of motorized equipment into the aircraft prior to take-off.

4. If further information is necessary, please do not hesitate to contact the POC for the MFR at (b) (6) or (b) (6) .

(b) (6) MD, PhD
Col(s), USAF, MC
(b) (6)