



OFFICE OF THE MEDICAL EXAMINER
701 W. Jefferson St.
Phoenix, AZ 85007

MEDICAL EXAMINER REPORT

DECEDENT: Scott Daniel Norris

CASE: 13-04441

DATE OF EXAMINATION: 07/02/2013

TIME: 0800 Hours

PERSONS PRESENT AT EXAMINATION:

Yavapai Sheriff's Office: Lt. T. Boelts

Arizona State Forestry Div.: State Forester J. Payne

PATHOLOGIC DIAGNOSES

- I. Fire Related Injuries.
 - a. Soot within Airways
 - b. Carboxyhemoglobin, 29% Saturation
 - c. Benzene, Toluene, Xylene Present in Lung and Brain

- II. Early Decomposition.

CAUSE OF DEATH: Fire Related Injuries
MANNER: Accident

10/8/13
Date Signed

Lesley E. Wallis, DO.
LESLEY E. WALLIS, DO
MEDICAL EXAMINER

REPORTED CIRCUMSTANCES OF DEATH

On July 1, 2013, Yavapai County officials requested assistance from the Maricopa County Office of the Medical Examiner with the medicolegal death investigations of 19 firefighters who died in the Yarnell Hill wildfire on June 30, 2013. Under the Maricopa County Manager's authority and direction, the Maricopa County Office of the Medical Examiner examined the firefighters' remains for the purpose of forensic identification and postmortem evaluation. The Maricopa County Office of the Medical Examiner also agreed to provide consultative services to investigating authorities and the Yavapai County Medical Examiner. The Yavapai County Medical Examiner agreed it will certify the firefighters' death certificates. The following Maricopa County Office of the Medical Examiner case numbers were designated for this incident: 13-04425, 13-04426, 13-04427, 13-04428, 13-04429, 13-04430, 13-04431, 13-04432, 13-04433, 13-04434, 13-04435, 13-04436, 13-04437, 13-04438, 13-04439, 13-04440, 13-04441, 13-04442, and 13-04443.

EXTERNAL EXAMINATION

The body is received in a zippered body bag sealed with tab number 042628.

CLOTHING AND PERSONAL EFFECTS

The decedent is received completely wrapped within a silver metal type fire shelter which encircles the head and strapped over the bilateral arms. It is noted that the labeling on the right hand of tent is located at the left knee. The decedent is also clad in a helmet. A pair of eyeglasses is melted to the collar of a yellow button down shirt. A pair of orange plastic earbuds are also melted to the left collar of the shirt. There are gloves overlying the bilateral hands and an outer protective pant is belted at the waist. Underlying the outer clothing which shows focal thermal defects, are an intact gray T-shirt, brand 50/50 American, and a pair of black intact boxer shorts, brand Champion size medium. Underlying the boots are two pairs of gray socks. Encircling the left wrist is a black Timex wrist watch, which appears to be still functioning. Within the left front pocket of the outer shirt is a package of Copenhagen chewing tobacco, a package of Juicy Fruit, and two pens. Within the right front pocket is an opened strawberry drink packet and a Pro-Air inhaler. Within the left pocket of the pants are multiple metallic tools. Located on the left belt area is a melted personal type radio and within the right pocket of the pants is a square object which has been completely melted to the overlying material. There is extensive charring noted to the back of the outer jacket; however, the underlying T-shirt remains intact.

EVIDENCE OF INJURY

There is thermal charring of the hair within the right parietal area, as well as along the neckline of the right occipital area. The left ear is notably shrunken and the tissues about the face are covered with soot and are extremely taut to partially mummified. The posterior aspect of the upper left arm also exhibits focal mummification of the tissues and the medial aspect of the right forearm, mainly posterior, has a dark red discoloration with focal area of skin slip, consistent with second to third degree burn. The posterior

SCOTT DANIEL NORRIS

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aspects of the bilateral calves have 24 to 25 x 18 cm rectangular areas of dark brown taut tissue consistent with mummification, located 10 inches superior to the left heel and 11-1/2 inches superior to the right heel. The remaining body surfaces have a slight green marble discoloration of the torso and face with focal areas of skin slippage overlying the bilateral hands, torso, and back. There is complete sparing of a rectangular portion of tissue overlying the inferior buttocks and extending into the upper posterior thighs.

Internal examination exhibits soot within the posterior pharynx and extending down into the bilateral bronchi. However, due to the decompositional changes the extent of soot within the bronchi cannot be accurately assessed.

GENERAL EXTERNAL EXAMINATION

The body is that of a 73-1/2 inch, 184 pound, adult Caucasian male appears approximately 20 to 30 years of age. The scalp is covered with light brown to strawberry-blond hair, with the above noted thermal artifact to the posterior aspects. The facial tissues are covered with soot and are extremely taut with a slight yellow discoloration, consistent with early mummification. The eyes have indeterminate coloration secondary to decomposition and thermal changes. The nasal bridge and septum are intact. The external auditory canals are grossly unremarkable; however, the left ear does exhibit shrinking secondary to thermal artifact. The oral mucosa has the above described soot, with no other acute lesions identified. The maxilla and the mandible have native dentition in good repair. The upper lip and mandible are clean shaven. The neck is symmetric with no grossly identifiable scars. The chest and neck exhibit green marbling of the skin, secondary to decompositional changes. There is no other acute deformity noted to the chest. The abdomen is distended secondary to decompositional gases and is also free of scars. The genitalia are those of an adult circumcised male with descended testes. The back is symmetric, with focal areas of skin slippage. The extremities are paired with the above noted deformities and are otherwise free of other abnormalities.

INTERNAL EXAMINATION

The body is opened by a standard Y-shaped thoracoabdominal incision. All viscera occupy their appropriate anatomic relationships. Subcutaneous adipose tissue ranges up to approximately 1.5 cm in thickness over the abdominal wall. Serous surfaces are smooth and glistening throughout.

CARDIOVASCULAR SYSTEM

The 350-gram heart occupies its usual mediastinal site. The external configuration is unremarkable. The epicardial surfaces are smooth and glistening. All major vessels arise in their appropriate anatomic relationships. The coronary arteries arise normally and are distributed in a right dominant distribution with no significant atherosclerotic narrowing of the major epicardial vessels. The myocardium is firm and red-brown

without areas of softening, hemorrhage or gross scarring. No abnormal communications exist between the cardiac chambers. The cardiac valves have thin, pliable leaflets. The valve circumferences are appropriate to the caliber of the cardiac chambers. The valve cusps and surfaces are free of fusion or vegetations.

The aorta is of normal caliber with all major arterial branches arising in their appropriate anatomic relationship. Elasticity is normal. The intimal surfaces have mild focal fatty streaks, without aneurysm formation or dissection. No systemic venous abnormalities or thrombi are present.

RESPIRATORY SYSTEM

The lungs weigh 825 grams left and 925 grams right. The bilateral pleural cavities contain 200 cc of serosanguineous decompositional type fluid bilaterally. The bilateral lung parenchyma is dark red-purple, markedly gelatinous consistent with decompositional changes and is otherwise free of scars. The bilateral bronchi and trachea contain the above noted black granular material, consistent with soot; however, they also contain a moderate amount of dark red-purple fluid which obscures the amount of soot deposition present. The bilateral pulmonary arteries are patent and have crimson red intima consistent with early decomposition.

DIGESTIVE/HEPATOBIILIARY SYSTEM

The oropharynx is grossly normal and unobstructed. The esophagus is of normal caliber, with a smooth, white mucosal lining. The gastroesophageal junction is well defined. The stomach has intact mucosal surfaces and the lumen contains 35 cc of brown partially digested food which cannot otherwise be grossly identified. No areas of ulceration, erosion, hemorrhage or scarring are present. The small and large intestines are unremarkable. The appendix is present and non-inflamed. The lobular tan pancreas is firm, without areas of fat necrosis, gross hemorrhage or space-occupying lesions. The pancreatic ducts are patent and of normal caliber.

The 1300-gram liver has a smooth intact capsule, covering red-brown parenchyma. No localizing masses, lesions or areas of hemorrhage are evident on external or cut surfaces. The intrahepatic and extrahepatic ducts are patent and of normal caliber. The gallbladder contains viscid bile. The gallbladder mucosa is grossly normal.

GENITOURINARY SYSTEM

The symmetric kidneys weigh 150 grams left and 150 grams right. They are similar. The capsules strip with ease from markedly congested cortical surfaces. The cortices are sharply delineated from the medullary pyramids. The calyces, pelves and ureters are unremarkable. The renal vessels are patent and of normal caliber.

The urinary bladder contains no urine. The mucosal surfaces are flat and pink-tan. The trigone is patent. The prostate and seminal vesicles are not remarkable.

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HEMATOPOIETIC SYSTEM

The 125-gram spleen occupies its usual anatomic site, and is covered with a gray wrinkled capsule. The underlying parenchyma is dark red-purple and soft. Regional lymph nodes have their usual distribution and appearance.

ENDOCRINE SYSTEM

The thyroid and adrenal glands are grossly not remarkable.

NECK

The cervical spine is structurally intact. The hyoid bone and thyroid cartilage are intact. There are no hemorrhages in the strap muscles or soft tissues of the neck. The upper airway is patent.

MUSCULOSKELETAL SYSTEM

The bony framework, supporting musculature and soft tissues are unremarkable. The axial and appendicular skeleton is normal.

NERVOUS SYSTEM

The reflected scalp is free of trauma. The temporalis muscles are unremarkable. The calvarium and dura mater are intact. The epidural and subdural spaces are free of blood. The 1450-gram brain has symmetric cerebral and cerebellar hemispheres covered by congested, clear, thin leptomeninges. The cerebral cortex is green to rose colored, uniform, and free of contusion foci or hemorrhage. The underlying white matter has a pink-red coloration and is otherwise uniform throughout. The caudate nuclei, thalami, and basal ganglia are tan, uniform, and symmetric. The cerebellum, pons, midbrain, and medulla oblongata are free of internal or external abnormalities. The substantia nigra is normally pigmented. The cranial nerves and mammillary bodies are paired and unremarkable. The vasculature at the base of the brain is free of atherosclerosis, aneurysm, or thrombi. The cervical spinal cord is firm, symmetric, and unremarkable. The atlanto-occipital articulation is intact.

TOXICOLOGY SPECIMENS

Samples of cardiac blood, bilateral decompositional pleural fluid, vitreous humor, bile, gastric contents, brain, spleen, liver, kidney, and psoas muscle are collected and submitted for toxicologic analysis.

EVIDENCE

All of the above noted clothing are collected, inventoried, and held as evidence.

FINAL SUMMARY

Based on the autopsy findings and investigative history as available to me, it is my opinion that Scott Daniel Norris, a 28-year-old Caucasian male, died as a result of Fire Related Injuries.

The manner of death is Accident.

LEW/svp
D7/11/13
T7/12/13
Lew 10/8/13

The Maricopa County Medical Examiner's Office is required by statute (A.R.S. § 11-594(A) (2) and (4)) to certify the cause and manner of death following completion of the death investigation of each case over which it assumes jurisdiction, and to promptly execute a death certificate, on a form provided by the state registrar of vital statistics, indicating the cause and manner of death. The form provided by the state registrar of vital statistics includes five manners of death: homicide, suicide, accident, natural, and undetermined. The determination of manner of death is a forensic determination by the pathologist predicated upon the totality of all then-known forensic evidence and other circumstances surrounding the cause of death; it is not a legal determination of criminal or civil responsibility of any person(s) for the death.

MARICOPA COUNTY OFFICE OF THE MEDICAL EXAMINER
REPORT OF TOXICOLOGICAL EXAMINATION

Case Number: 13-04441
Decedent: SCOTT DANIEL NORRIS
Date Submitted: 07/02/2013
Report Date: 07/26/2013

Specimens Collected: VITREOUS, KNOWN PULLED SCALP HAIR, SWAB OF NASAL CAVITY, RIGHT CHEST FLUID, CARDIAC BLOOD, SPLEEN, LIVER, PSOAS MUSCLE, LEFT LUNG, GASTRIC, LEFT KIDNEY, SUBCUTANEOUS ADIPOSE TISSUE, BLOT/FILTER PAPER, BRAIN, CRANIAL FLUID, BILE

Medical Examiner: LESLEY E. WALLIS, DO

RESULTS*:

Vitreous: None detected for ethanol, methanol, isopropanol and acetone


Cranial Fluid: Positive for
Ethyl alcohol 0.09 g%
Ibuprofen (<10 mg/L)
None detected for methanol, isopropanol, acetone, amphetamine, methamphetamine, phencyclidine, cocaine, benzoylecgonine, methadone, morphine, codeine, benzodiazepines, barbiturates, antihistamines, phenothiazines, tricyclic antidepressants, fentanyl, oxycodone, and acid neutral drugs

Cardiac Blood: Positive for Carboxyhemoglobin (29% saturation)

Brain and Lung: Positive by GC/MS for
Benzene
Toluene
Xylene

Bile: None detected for amphetamine, methamphetamine, phencyclidine, cocaine, methadone, codeine, antihistamines, phenothiazines, and tricyclic antidepressants

*If results are not listed for any specimen(s), that/those specimen(s) is/are deemed to be on "HOLD"



Norman A. Wade
Laboratory Director

Jurisdictional Agency: YAVAPAI SO
By: svp, Tox.1/2000, DAWN

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