# Michael A. Burson, MD PhD

Forensic Pathology Consultant

P.O. Box 419 Loveland, CO 80539

E-mail: specializedpathology@me.com

Monday-Friday 8 am to 5 pm (970) 820-4126 After-hours: (970) 820-4151 Fax: (970) 820-2509

#### AUTOPSY REPORT

Name of decedent: Shanann Watts Case#: AW18-155

Investigation#: WCCO 18-435

Date and time of death: August 16, 2018 at 0005 hrs (pronounced)

Date and time of autopsy: August 17, 2018 at 1030 hrs Age: 34 YEARS

Sex: Female

#### DIAGNOSES:

- I. HISTORY OF BEING REPORTED MISSING AND SUBSEQUENTLY BEING FOUND UNRESPONSIVE IN AN OBVIOUS STATE OF DEATH IN A SHALLOW GRAVE:
  - A. ASPHYXIATION DUE TO MANUAL STRANGULATION:
    - 1. BRUISING OF THE ANTERIOR STRAP MUSCLES OF THE NECK (RIGHT > LEFT)
  - B. MILD TO MODERATE DECOMPOSITION CONSISTING OF GENERALIZED DISCOLORATION, BLOATING AND SKIN SLIPPAGE
- II. HISTORY OF INTRAUTERINE PREGNANCY, SECOND TRIMESTER:
  - A. LARGELY DECOMPOSED FETUS AND PLACENTAL UNIT
    - 1. FOUND EXPELLED FROM THE GRAVID UTERUS

#### III. TOXICOLOGY:

- A. POSTMORTEM BASIC, SPLEEN BLOOD:
  - 1. ETHANOL-----128 mg/dL
  - 2. BLOOD ALCOHOL CONCENTRATION (BAC) --- 0.128 g/100 mL

#### TOXICOLOGY:

Reference Lab: NMS Labs

3701 Welsh Road

Willow Grove, PA 19090

#### OPINION:

Based on the history provided and the autopsy findings, the cause of death is asphyxiation due to manual strangulation by another individual. The manner of death is homicide.

11/chand a Burn, NAMA

Michael A. Burson, M.D., PhD Forensic Pathology Consultant Signed: September 26, 2018

MB/NW AD: 08/17/2018 AT: 08/19/2018 MD: 09/01/2018 MT: 09/01/2018

HISTORY: The decedent is a 34-year-old Caucasian female (DOB: 01/10/1984) who has a largely unknown medical history at the time of this autopsy. Reportedly, the decedent returned home from a business trip on the early morning hours of August 13, 2018. This was the last time she was seen alive. The decedent was subsequently reported missing on the afternoon of August 13, 2018. Following an extensive search and investigation by law enforcement, the decedent was found unresponsive in an obvious state of death in a shallow grave in rural Colorado. The decedent was pronounced dead at the gravesite at 0005 hours on August 16, 2018.

<u>WITNESSES</u>: Personnel present for the postmortem examination include Michael Burson, MD PhD, Pathologist and Joey Weiner, Autopsy Assistant. For a complete list of individuals present at the autopsy, please see the investigative report file held at the Weld County Coroner's Office.

District Attorney Disclaimer: At 1010 hours on August 17, 2018 the representative from the District Attorney's Office read a portion of an email which he received from the Public Defender's Office. In this email the Public Defender has requested that we swab the necks of the structures of the children despite being confined in a container of oil, water and associated sludge matter over the course of several days.

# IDENTIFICATION:

· By the Weld County Coroner, State of Colorado.

<u>CLOTHING</u>: The decedent is received in a sealed body bag (seal# 0420295) and clad in the following clothing items:

- · A purple t-shirt
- A pair of blue underwear
- A black bra
- · A white metal piercing in the left naris
- Paper bags are around each hand

#### IDENTIFYING MARKS AND SCARS:

· None visualized

EVIDENCE OF MEDICAL/SURGICAL INTERVENTION: Evidence of medical/surgical intervention consists of the following:

None

#### EVIDENCE OF INJURY

# EXTERNAL EVIDENCE OF INJURY:

 Possible patterned abrasions of the neck and left aspect of the face (see below)

# INTERNAL EVIDENCE OF INJURY:

- A 1 cm area of probable bruising on the anterior subcutaneous neck tissue
- Bruising of the superior aspect of the right sternocleidomastoid muscle
- Bruising of the soft tissue and fascial tissue of the surface of the right thyroid cartilage
- Bruising of the soft tissue associated with the right horn of the thyroid bone, which is intact

# GENERAL EXTERNAL EXAMINATION

The autopsy is commenced at 1030 hours, on August 17, 2018 on the body of Shanann Watts at the McKee Medical Center, Loveland, CO. This autopsy is performed at the request of the Weld County Coroner, State of Colorado. The body is that of a well-developed, well-nourished although decomposing Caucasian female whose appearance is generally consistent with the reported age of 34 years. The body measures approximately 67-inches long and weighs 144 pounds.

The body exhibits mild to moderate decomposition consisting of generalized discoloration, bloating and skin slippage.

At the time of autopsy, rigor mortis is released in the major muscle

groups. Livor mortis is not readily apparent due to postmortem artifact. There is however an area of blanching on the right aspect of the abdomen extending along the groin to the right thigh. This is likely consistent with an area of pressure, based on the body positioning at the time of discovery.

HEAD: Head hair is brown, normally distributed although sloughing from the scalp and measures approximately 30 cm long over the crown. EYES: The eyes are moderately opacified (postmortem artifact). The irides appear brown; the pupils are equal at 0.4 cm. The sclerae are dull although white. There are no discernible scleral or conjunctival petechiae. NOSE: The nose is midline although dried. It does not grate upon palpation. ORAL CAVITY: The oral cavity contains natural dentition in good repair. There are no discernible buccal mucosal petechiae. The lips exhibit mild drying artifact.

NECK: The neck structures are midline and without palpable adenopathy. There is a linear array of variably sized, purple-black, circular defects which extend from the inferior aspect of the chin, along the jawline, up the left aspect of the face, towards the left temporal area.

<u>CHEST</u>: The breasts and nipples are normal adult female without palpable masses.

<u>ABDOMEN</u>: The abdomen is moderately protuberant and tense. There is no detectable fluid wave.

GENITALIA: The external genitalia are largely normal adult female, however the internal genitalia are protruding through the vaginal vault. This likely represents prolapse of the uterus due to pregnancy and postmortem artifact. Adjacent to the probable uterus is a largely degraded portion of tissue which is unfortunately covered in sandy debris from the gravesite. Upon further examination of this tissue, it is revealed to be a largely decomposed fetus. Gender and age cannot be determined, however it has the following measurements: crown/rump length of approximately 10.5 cm and a foot length of approximately 0.7 - 0.8 cm. There is an approximate 17 cm umbilical cord extending to a disrupted placental disc. The membranes are ruptured and covered with

sandy debris. Portions of the placenta, umbilical cord and membranes will be retained and the fetus will be transferred to the jurisdiction of CBI for subsequent genetic analysis.

#### EXTREMITIES:

UPPER EXTREMITIES: The upper extremities are well-developed and symmetrical with all digits present. The fingernails are long and in good repair although markedly dirty with sand and debris from the gravesite. The fingernails are pulled and retained as evidence by law enforcement. LOWER EXTREMITIES: The lower extremities are well-developed and symmetrical with all digits present. The toenails are short and in good repair with the exception of abundant sandy debris from the gravesite.

BACK AND SACRUM: The back and sacrum are unremarkable.

# GENERAL INTERNAL EXAMINATION

The body is opened with a routine thoracoabdominal incision. The subcutaneous fat measures 2 cm in thickness at the level of the umbilicus.

BODY CAVITIES: There are no abnormal fluid accumulations or adhesions in any of the body cavities. The internal organs however do exhibit marked discoloration and vacuolization due to postmortem artifact. The internal organs are also markedly dry.

CARDIOVASCULAR SYSTEM: The heart weighs 210 grams. The epicardial surface is unremarkable. The coronary ostia are patent. The coronary arteries follow a right dominant distribution. Sectioning reveals no significant narrowing by atherosclerosis. There is no acute thrombosis. The endocardial surface and papillary muscles are unremarkable. The myocardium is red-brown, firm and without fibrosis. The valve leaflets are thin and pliant. AORTA: The aorta has a normal smooth yellow intimal surface. There is minimal atherosclerotic streaking noted. The major branches, including the celiac, superior and inferior mesenteric, and renal arteries are widely patent. The inferior vena cava is unremarkable.

RESPIRATORY SYSTEM: The right and left lungs weigh 280 and 320 grams, respectively, and show normal septation. The lung parenchyma is pale tan-brown and markedly atelectatic. There are no masses or gross areas of consolidation. The trachea and mainstem bronchi are unremarkable. There are no foreign bodies or masses. The pulmonary arteries are free of thromboemboli.

<u>SPLEEN</u>: The spleen is soft and weighs 120 grams. The capsule is intact, smooth and glistening. The parenchyma is firm, red-purple and smooth. There are no infarcts, nodules, scars or cysts present.

#### LIVER AND BILIARY SYSTEM:

LIVER: The liver weighs 900 grams. The capsule is intact. The parenchyma is firm and red-brown. No masses are detected. GALLBLADDER: A thin-walled gallbladder contains one well-formed gallstone.

## GASTROINTESTINAL TRACT:

ESOPHAGUS: The esophagus has a uniform diameter and intact mucosa. STOMACH: The stomach is empty. The mucosa is smooth, glistening and arranged in normal rugal folds. There are no gastric or duodenal ulcers. SMALL AND LARGE INTESTINES: The small and large intestines have

a uniform dimension and appear unremarkable. The vermiform appendix is not visualized.

<u>PANCREAS</u>: The pancreas is tan-orange with lobular architecture. There is no evidence of hemorrhage or saponification.

ADRENAL GLANDS: The adrenal glands have a golden cortex and gray-brown medulla.

#### GENITOURINARY SYSTEM:

KIDNEYS: The right and left kidneys weigh 120 and 100 grams, respectively. The capsules strip with ease. The external cortical surface is red-purple and smooth. The cortices are well delineated from the medullary pyramids. The pelves and ureters are nondilated. URINARY BLADDER: The urinary bladder is empty. The mucosal surface is tan-pink, moist and smooth. FEMALE INTERNAL GENITALIA: The fallopian tubes and ovaries are unremarkable. The uterus (480 grams), measuring 19 x 14 x 2 cm, is prolapsed through the vaginal vault. The uterus is opened to

reveal a predominantly empty space with membranous fragments remaining. There is also red-brown fluid and discoloration of the endometrial lining.

NECK: Traumatic injury has been previously described. The anterior musculature is smooth and dull. The epiglottis and hypopharynx are unremarkable. The hyoid bone and thyroid cartilage are intact. The laryngeal mucosa is unremarkable. There are no masses or aspirated material. The thyroid gland has symmetrical lobes and appears unremarkable.

<u>SPINE</u>: The spine has normal configuration. There is faintly visible hardware involving the anterior aspect of the cervical spine at the level of C6. There is no soft tissue hemorrhage or other abnormalities associated with this prior surgical site.

SKULL AND BRAIN: Reflection of the scalp reveals areas of congestion and discoloration which are likely associated with postmortem artifact. There is no evidence of discrete hemorrhage, contusions or lacerations. Reflection of the skull reveals no evidence of epidural or subdural hemorrhage. There is no subarachnoid hemorrhage. The brain is markedly soft and discolored (postmortem artifact) and weighs 1080 grams. The cerebrovascular system has normal configuration. The cranial nerves are symmetrically intact. Serial coronal sections through the brain reveal no areas of hemorrhage, contusion or mass lesion within the cortex, white matter, brainstem or cerebellum. The atlanto-occipital joint is intact. The cervical spinal column has normal mobility.

## SPECIMENS OBTAINED

<u>SPECIMENS</u>: Specimens retained at the time of autopsy include blood obtained from the spleen. Representative sections of major organs are also retained.

TOXICOLOGY: Blood obtained from the spleen is submitted to NMS Labs for analysis.

#### EVIDENCE:

- The fetus is transferred to the Colorado Bureau of Investigation for genetic analysis if warranted in the future.
- Swabs:
  - o The palmar surfaces of the hands
  - o Anterior and lateral neck surface
  - o Face
- X-rays: AP and lateral views of the head and neck
- · Bilateral fingernail clippings
- Deoxyribonucleic acid blood spot card (DNA)

<u>HISTOLOGY</u>: Sections of heart, lung, liver, kidney, brain, right sternocleidomastoid muscle, right sternothyroid muscle, soft tissue from the surface of the right thyroid cartilage and right lobe of the thyroid are submitted for histology.

# MICROSCOPIC EXAMINATION

\*\*ALL TISSUE SECTIONS EXAMINED SHOW MARKED POST MORTEM AUTOLYSIS

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## AUTOPSY REPORT

Name of decedent: Bella Watts Case#: AW18-156

Investigation#: WCCO 18-436

Date and time of death: August 16, 2018 at 1750 hrs Age: 4 YEARS

(Pronounced)

Date and time of autopsy: August 17, 2018 at 1330 hrs Sex: Female

#### DIAGNOSES:

- I. HISTORY OF BEING REPORTED MISSING AND SUBSEQUENTLY LOCATED IN AN OBVIOUS STATE OF DEATH WITHIN AN OIL TANK BATTERY:
  - A. ASPHYXIATION DUE TO SMOTHERING
  - B. BLUNT FORCE TRAUMA OF THE FRENULUM AND GINGIVAL MUCOSA OF THE MAXILLA
  - C. POSTMORTEM ARTIFACT (DECOMPOSITION)
  - D. OIL, WATER AND SLUDGE DEBRIS IN THE STOMACH
- II. HYDROCARBON EXPOSURE

#### III. TOXICOLOGY:

- A. POSTMORTEM BASIC, LIVER TISSUE-----NONE DETECTED
- B. HYDROCARBON AND OXYGENATED VOLATILES PANEL, CHEST CAVITY BLOOD:
  - 1. BENZENE-----PRESENT
  - 2. ETHYLBENZENE-----PRESENT
  - 3. TOLUENE-----3.7 mcg/mL
  - 4. XYLENES (O, M, P) ------PRESENT
  - 5. N-HEXANE-----PRESENT
  - METHYLPENTANES (2-,3-ISOMERS)----PRESENT
  - 7. N-BUTANOL------PRESENT

8. ETHANOL-----13 mg/dL 9. ACETALDEHYDE-----PRESENT

#### TOXICOLOGY:

Reference Lab: NMS Labs

3701 Welsh Road

Willow Grove, PA 19090

#### OPINION:

Based on the history provided and the autopsy findings, the cause of death is asphyxiation due to smothering. The toxicology results likely represent decomposition and an artifact of being submerged in an oil tank for several days. The manner of death is homicide.

11/chans a Burn, NAMA

Michael A. Burson, M.D., PhD Forensic Pathology Consultant Signed: September 27, 2018

MB/NW AD: 08/17/2018 AT: 08/19/2018 MD: 09/01/2018 MT: 09/01/2018

HISTORY: The decedent is a 4-year-old Caucasian female (DOB: 12/17/2013) who has an unknown medical history at the time of this autopsy. Reportedly, the decedent was reported missing with her sibling and mother on the afternoon of August 13, 2018. Unfortunately, the decedent was subsequently located in an obvious state of death within an oil tank battery container on rural property. The decedent was pronounced dead at the scene at 1750 hours on August 16, 2018.

<u>WITNESSES</u>: Personnel present for the postmortem examination include Michael Burson, MD PhD, Pathologist and Joey Weiner, Autopsy Assistant. For a complete list of individuals present at the autopsy, please see the investigative report file held at the Weld County Coroner's Office.

District Attorney Disclaimer: At 1010 hours on August 17, 2018 the representative from the District Attorney's Office read a portion of an email which he received from the Public Defender's Office. In this email the Public Defender has requested that we swab the necks of the children for residual trace DNA. According to him and his expert DNA witness, they anticipate trace DNA being preserved on the neck structures of the children despite being confined in a container of oil, water and associated sludge matter over the course of four days.

#### IDENTIFICATION:

By the Weld County Coroner, State of Colorado.

<u>CLOTHING</u>: The decedent is received in an unsealed body bag, wrapped in a bed sheet (from retrieval process) and clad in the following clothing items:

- An oil-soaked pink pajama-type top with images of hearts and butterflies
- A pair of oil-soaked underwear

#### IDENTIFYING MARKS AND SCARS:

None visualized

EVIDENCE OF MEDICAL/SURGICAL INTERVENTION: Evidence of medical/surgical intervention consists of the following:

None

# EVIDENCE OF INJURY

# EXTERNAL EVIDENCE OF INJURY:

- A 13 x 3 cm area of vertical excoriations on the left buttocks
- An at least 1.5 cm laceration of the frenulum and upper gumline with associated pink-purple contusions
- Superficial probable bite wounds of the mucosal surface of the tongue
- A 9 x up to 4 cm yellow-tan possible abrasion on the left torso
- A 3 x 1.5 cm faint yellow-tan discoloration on the superior aspect of the left shoulder

# INTERNAL EVIDENCE OF INJURY:

None

#### GENERAL EXTERNAL EXAMINATION

The autopsy is commenced at 1330 hours, on August 17, 2018 on the body of Bella Watts at the McKee Medical Center, Loveland, CO. This autopsy is performed at the request of the Weld County Coroner, State of Colorado. The body is that of a well-developed, well-nourished Caucasian female whose appearance is generally consistent with the reported age of 4 years. The body measures approximately 41-inches long and weighs 38 pounds.

At the time of autopsy, rigor mortis is released in the major muscle groups and the muscles of mastication. Livor mortis is not readily apparent due to postmortem artifact (decomposition).

There is postmortem artifact consisting of bloating, marbling of the abdominal surfaces and areas of skin slippage. Unfortunately, the body was found in an oil tanker containing oil and aqueous fluid. This resulted in abundant skin slippage upon washing.

<u>HEAD</u>: Head hair is blonde-brown, normally distributed and measures up to 15 cm long over the crown. EYES: The eyes are moderately opacified (postmortem artifact). The irides appear brown; the pupils are equal at

0.3 cm. The sclerae are dull, however there are no discernible scleral or conjunctival petechiae. NOSE: The nose is midline and does not grate upon palpation. ORAL CAVITY: The oral cavity contains natural dentition in good repair. The frenulum is markedly disrupted and there are adjacent pink-purple bruises of the buccal mucosa present. There are also teeth impressions and superficial bite marks on the mucosal surface of the tongue.

NECK: The neck structures are midline and without palpable adenopathy.

CHEST: The breasts and nipples are normal female.

<u>ABDOMEN</u>: The abdomen is mildly protuberant and slightly tense (postmortem artifact).

GENITALIA: The external genitalia are normal female.

# EXTREMITIES:

UPPER EXTREMITIES: The upper extremities are well-developed and symmetrical with all digits present. The fingernails are short, dirty and in fair repair without evidence of tearing. The fingernails are clipped and retained as evidence. LOWER EXTREMITIES: The lower extremities are well-developed and symmetrical with all digits present. The toenails are short, dirty and in fair repair.

BACK AND SACRUM: The back and sacrum are unremarkable.

## GENERAL INTERNAL EXAMINATION

The body is opened with a routine thoracoabdominal incision. The subcutaneous fat measures 1.2 cm in thickness at the level of the umbilicus.

BODY CAVITIES: There are no abnormal fluid accumulations or adhesions in any of the body cavities.

<u>CARDIOVASCULAR SYSTEM</u>: The heart weighs 80 grams. The epicardial surface is unremarkable. The coronary ostia are patent. The coronary arteries follow a right dominant distribution. Sectioning reveals no

significant narrowing by atherosclerosis. There is no acute thrombosis. The endocardial surface and papillary muscles are unremarkable. The myocardium is red-brown, firm and without fibrosis. The valve leaflets are thin and pliant. AORTA: The aorta has a normal smooth yellow intimal surface. There is minimal atherosclerotic streaking noted. The major branches, including the celiac, superior and inferior mesenteric, and renal arteries are widely patent. The inferior vena cava is unremarkable.

RESPIRATORY SYSTEM: The right and left lungs weigh 160 and 140 grams, respectively, and show normal septation. The lung parenchyma is mottled pink-tan to purple. There are no masses or gross areas of consolidation. The trachea and mainstem bronchi are unremarkable. There are no foreign bodies or masses. The pulmonary arteries are free of thromboemboli.

<u>SPLEEN</u>: The spleen is soft and weighs 60 grams. The capsule is intact, smooth and glistening. The parenchyma is firm, red-purple and smooth. There are no infarcts, nodules, scars or cysts present.

# LIVER AND BILIARY SYSTEM:

LIVER: The liver weighs 350 grams. The capsule is intact. The parenchyma is firm and red-brown. No masses are detected. GALLBLADDER: A thin-walled gallbladder is empty.

#### GASTROINTESTINAL TRACT:

ESOPHAGUS: The esophagus has a uniform diameter and intact mucosa. STOMACH: The stomach contains approximately 75 ml of viscous, green-black fluid which is suggestive of oil and particulate matter from the oil tank which she was in. The mucosa is smooth, glistening and arranged in normal rugal folds. There are no gastric or duodenal ulcers. SMALL AND LARGE INTESTINES: The small and large intestines have a uniform dimension and appear unremarkable. The vermiform appendix is present.

<u>PANCREAS</u>: The pancreas is tan-orange with lobular architecture. There is no evidence of hemorrhage or saponification.

ADRENAL GLANDS: The adrenal glands have a golden cortex and gray-brown

medulla.

## GENITOURINARY SYSTEM:

KIDNEYS: The right and left kidneys weigh 50 grams each. The capsules strip with ease. The external cortical surface is red-purple and smooth. The cortices are well delineated from the medullary pyramids. The pelves and ureters are nondilated. URINARY BLADDER: The urinary bladder is empty. The mucosal surface is tan-pink, moist and smooth. FEMALE INTERNAL GENITALIA: The cervix, uterus, fallopian tubes and ovaries are unremarkable.

<u>NECK</u>: The anterior musculature is smooth and glistening. The epiglottis and hypopharynx are unremarkable. The hyoid bone and thyroid cartilage are intact. The laryngeal mucosa is pink-purple, moist and smooth. There are no masses or aspirated material. The thyroid gland has symmetrical lobes and appears unremarkable.

SPINE: The spine has normal configuration.

SKULL AND BRAIN: Reflection of the scalp reveals patchy areas of likely Tardieu spots. These areas are incised to reveal superficial blood collections within the fascial planes. There do not appear to be any contusions present. The skull is intact and without fracture. The dura is intact and without epidural or subdural hemorrhage. There is no subarachnoid hemorrhage. The brain is moderately edematous with flattening of the gyri and narrowing of the sulci and weighs 1300 grams. The cerebrovascular system has normal configuration. The cranial nerves are symmetrically intact. Serial coronal sections through the brain reveal no areas of hemorrhage, contusion or mass lesion within the cortex, white matter, brainstem or cerebellum. The atlanto-occipital joint is intact. The cervical spinal column has normal mobility.

# SPECIMENS OBTAINED

SPECIMENS: Specimens retained at the time of autopsy include vitreous fluid and blood collected from the peripheral veins, heart and lungs.

TOXICOLOGY: Pooled blood as described above and liver are submitted to

NMS Labs for analysis.

<u>HISTOLOGY</u>: Sections of heart, lung, liver, kidney and brain are submitted for histology.

#### EVIDENCE:

- · Swabs of face prior to washing
- Swabs of anterior neck prior to washing
- · Swabs of face after washing
- Swabs of anterior neck after washing
- Swabs of bilateral hands (palmar surface)
- Oral swabs
- Vaginal swabs
- Bilateral fingernail clippings
- Deoxyribonucleic acid blood spot card (DNA)

# Radiographs (X-rays):

 Full body X-rays are taken and submitted to the Weld County Coroner's Office

# MICROSCOPIC EXAMINATION

HEART: Sections of the heart are without histopathologic abnormality.

LUNG: Sections of the lung are without histopathologic abnormality.

LIVER: Sections of the liver are without histopathologic abnormality.

KIDNEY: Sections of the kidney are without histopathologic abnormality.

BRAIN: Sections of the brain are without histopathologic abnormality.

# Michael A. Burson, MD PhD

Forensic Pathology Consultant

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#### AUTOPSY REPORT

Name of decedent: Celeste Watts Case#: AW18-157

Investigation#: WCCO 18-437

Date and time of death: August 16, 2018 at 1540 hrs Age: 3 YEARS

Date and time of autopsy: August 17, 2018 at 1730 hrs Sex: Female

# DIAGNOSES:

- I. HISTORY OF BEING REPORTED MISSING AND SUBSEQUENTLY LOCATED IN AN OBVIOUS STATE OF DEATH WITHIN AN OIL TANK BATTERY:
  - A. ASPHYXIATION DUE TO SMOTHERING
  - B. MILD POSTMORTEM ARTIFACT
- II. TOXICOLOGY:
  - A. POSTMORTEM BASIC, SPLEEN BLOOD----NONE DETECTED
  - B. HYDROCARBON AND OXYGENATED VOLATILES PANEL, SPLEEN BLOOD:
    - 1. N-BUTANOL-----4.4 mcg/mL
    - 2. ETHANOL-----31 mg/dL
    - 3. N-PROPANOL-----PRESENT
    - 4. ACETALDEHYDE-----PRESENT
  - C. ETHANOL, LIVER TISSUE-----SEE COMMENT
    - 1. COMMENT: THE CONCENTRATION OF THE ETHANOL INCREASED FROM 99 MG/100 G TO 174 MG/100 G OVER THE COURSE OF MULTIPLE ANALYSES. THE NATURE OF THE SPECIMEN AND/OR THE CONTAINER TYPE WHICH MAY NOT CONTAIN PRESERVATIVE, MAY EXPLAIN THE VARIABLE QUANTITATIVE RESULTS.

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## TOXICOLOGY:

Reference Lab: NMS Labs

3701 Welsh Road

Willow Grove, PA 19090

# OPINION:

Based on the history provided and the autopsy findings, the likely cause of death is asphyxiation due to smothering. The toxicology results likely represent decomposition and an artifact of being submerged in an oil tank for several days. The manner of death is homicide.

Whichers a Burn, ND MA

Michael A. Burson, M.D., PhD Forensic Pathology Consultant Signed: September 27, 2018

MB/NW AD: 08/17/2018 AT: 08/19/2018 MD: 09/01/2018 MT: 09/01/2018

HISTORY: The decedent is a 3-year-old Caucasian female (DOB: 07/17/2015) who has a medical history significant for peanut allergies. Reportedly, the decedent was reported missing, along with her sister and mother, on the afternoon of August 13, 2018. She was unfortunately subsequently found unresponsive in an obvious state of death contained within an oil tank battery on rural property. The decedent was pronounced dead at the oil field at 1540 hours on August 16, 2018.

<u>WITNESSES</u>: Personnel present for the postmortem examination include Michael Burson, MD PhD, Pathologist and Joey Weiner, Autopsy Assistant. For a complete list of individuals present at the autopsy, please see the investigative report file held at the Weld County Coroner's Office.

District Attorney Disclaimer: At 1010 hours on August 17, 2018 the representative from the District Attorney's Office read a portion of an email which he received from the Public Defender's Office. In this email the Public Defender has requested that we swab the necks of the children for residual trace DNA. According to him and his expert DNA witness, they anticipate trace DNA being preserved on the neck structures of the children despite being confined in a container of oil, water and associated sludge matter over the course of four days.

# IDENTIFICATION:

By the Weld County Coroner, State of Colorado.

<u>CLOTHING</u>: The decedent is received in an unsealed body bag and clad in the following clothing items (the clothing is all covered in oil and debris):

- A pink and black t-shirt
- A diaper
- · A pair of underwear

## IDENTIFYING MARKS AND SCARS:

None

EVIDENCE OF MEDICAL/SURGICAL INTERVENTION: Evidence of medical/surgical intervention consists of the following:

None

# EVIDENCE OF INJURY

# EXTERNAL EVIDENCE OF INJURY:

No significant trauma is noted

# INTERNAL EVIDENCE OF INJURY:

None

# GENERAL EXTERNAL EXAMINATION

The autopsy is commenced at 1730 hours, on August 17, 2018 on the body of Celeste Watts at the McKee Medical Center, Loveland, CO. This autopsy is performed at the request of the Weld County Coroner, State of Colorado. The body is that of a well-developed, well-nourished Caucasian female whose appearance is generally consistent with the reported age of 3 years. The body measures approximately 37 ½ inches long and weighs 37 pounds.

At the time of autopsy, rigor mortis is released in the major muscle groups and the muscles of mastication. Livor mortis is not readily apparent due to postmortem artifact.

The body exhibits mild postmortem artifact consisting of generalized bloating, areas of marbling, skin discoloration and skin slippage. During the washing procedure, the majority of the skin is sloughed from the surface.

<u>HEAD</u>: Head hair is red-brown, normally distributed and measures up to 15 cm long over the crown. EYES: The eyes are opacified (postmortem artifact). The irides appear brown; the pupils are equal at 0.3 cm. The sclerae are dull and there are no discernible scleral or conjunctival petechiae. NOSE: The nose is midline and does not grate upon palpation. ORAL CAVITY: The oral cavity contains natural dentition in good repair. There are no buccal mucosal petechiae.

NECK: The neck structures are midline and without palpable adenopathy.

CHEST: The breasts and nipples are normal female.

<u>ABDOMEN</u>: The abdomen is mildly protuberant and tense (postmortem artifact). There is no detectable fluid wave.

GENITALIA: The external genitalia are normal female.

# EXTREMITIES:

UPPER EXTREMITIES: The upper extremities are well-developed and symmetrical. The palmar surfaces of the hands were previously sloughed off during the body recovery process and are packaged separately. The palmar surfaces of the hands and digits and the accompanying fingernails are retained and transferred to the jurisdiction of the Colorado Bureau of Investigation. LOWER EXTREMITIES: The lower extremities are well-developed and symmetrical with all digits present. The toenails are short, slightly dirty and in good repair.

BACK AND SACRUM: The back and sacrum are unremarkable.

# GENERAL INTERNAL EXAMINATION

The body is opened with a routine thoracoabdominal incision. The subcutaneous fat measures 1 cm in thickness at the level of the umbilious.

<u>BODY CAVITIES</u>: There are no abnormal fluid accumulations or adhesions in any of the body cavities. The internal organs all exhibit marked discoloration and vacuolization due to postmortem artifact.

CARDIOVASCULAR SYSTEM: The heart weighs 80 grams. The epicardial surface is unremarkable. The coronary ostia are patent. The coronary arteries follow a right dominant distribution. Sectioning reveals no significant narrowing by atherosclerosis. There is no acute thrombosis. The endocardial surface and papillary muscles are unremarkable. The myocardium is red-brown, firm and without fibrosis. The valve leaflets are thin and pliant. AORTA: The aorta has a normal smooth yellow intimal surface. There is minimal atherosclerotic streaking noted. The major branches, including the celiac, superior and inferior mesenteric, and renal arteries are widely patent. The inferior vena cava is unremarkable.

RESPIRATORY SYSTEM: The right and left lungs weigh 180 and 160 grams, respectively, and show normal septation. The lung parenchyma is dark pink-tan to purple and markedly atelectatic. There are no masses or gross areas of consolidation. The trachea and mainstem bronchi are unremarkable. There are no foreign bodies or masses. The pulmonary arteries are free of thromboemboli.

<u>SPLEEN</u>: The spleen is soft and weighs 40 grams. The capsule is intact, smooth and glistening. The parenchyma is firm, red-purple and smooth. There are no infarcts, nodules, scars or cysts present.

# LIVER AND BILIARY SYSTEM:

LIVER: The liver weighs 320 grams. The capsule is intact. The parenchyma is firm and red-brown. No masses are detected. GALLBLADDER: A thin-walled gallbladder is empty.

# GASTROINTESTINAL TRACT:

ESOPHAGUS: The esophagus has a uniform diameter and intact mucosa. STOMACH: The stomach is empty. The mucosa is smooth, glistening and arranged in normal rugal folds. There are no gastric or duodenal

ulcers. SMALL AND LARGE INTESTINES: The small and large intestines have a uniform dimension and appear unremarkable. The vermiform appendix is present.

<u>PANCREAS</u>: The pancreas is tan-orange with lobular architecture. There is no evidence of hemorrhage or saponification.

ADRENAL GLANDS: The adrenal glands have a golden cortex and gray-brown medulla.

# GENITOURINARY SYSTEM:

KIDNEYS: The right and left kidneys weigh 50 and 40 grams, respectively. The capsules strip with ease. The external cortical surface is red-purple and smooth. The cortices are well delineated from the medullary pyramids. The pelves and ureters are nondilated. URINARY BLADDER: The urinary bladder is empty. The mucosal surface is tan-pink, moist and smooth. FEMALE INTERNAL GENITALIA: The cervix, uterus, fallopian tubes and ovaries are unremarkable.

<u>NECK</u>: The anterior musculature is smooth and glistening. The epiglottis and hypopharynx are unremarkable. The hyoid bone and thyroid cartilage are intact. The laryngeal mucosa is pink-purple, moist and smooth. There are no masses or aspirated material. The thyroid gland has symmetrical lobes and appears unremarkable.

SPINE: The spine has normal configuration.

SKULL AND BRAIN: Reflection of the scalp reveals no areas of laceration, contusion or hematoma. The skull is intact and without fracture. The dura is intact and without epidural or subdural hemorrhage. There is no subarachnoid hemorrhage. The brain markedly soft and edematous (postmortem artifact) and weighs 1280 grams. The cerebrovascular system has normal configuration. The cranial nerves are symmetrically intact. Serial coronal sections through the brain reveal no areas of hemorrhage, contusion or mass lesion within the cortex, white matter, brainstem or cerebellum. The atlanto-occipital joint is intact. The cervical spinal column has normal mobility.

# SPECIMENS OBTAINED

<u>SPECIMENS</u>: Specimens retained at the time of autopsy include pooled blood from the iliac veins and heart, blood obtained from the spleen and liver tissue.

TOXICOLOGY: Pooled blood, spleen blood and liver tissue are submitted to NMS Labs for analysis.

HISTOLOGY: Sections of heart, lung, liver, kidney and brain are submitted for histology.

# EVIDENCE:

- Swabs of face prior to washing
- Swabs of anterior neck prior to washing
- Swabs of face after washing
- Swabs of anterior neck after washing
- Swabs of bilateral hands (palmar surface)

- Oral swabs
- · Vaginal swabs
- Skin (palmar surfaces) and fingernails from the bilateral hands
- Deoxyribonucleic acid blood spot card (DNA)

# Radiographs (X-rays):

 Full body X-rays are taken and submitted to the Weld County Coroner's Office

# MICROSCOPIC EXAMINATION

HEART: Sections of the heart are without histopathologic abnormality.

LUNG: Sections of the lung are without histopathologic abnormality.

LIVER: Sections of the liver are without histopathologic abnormality.

KIDNEY: Sections of the kidney are without histopathologic abnormality.

BRAIN: Sections of the brain are without histopathologic abnormality.