## THESE RECORDS MAY BE RELEASABLE UNDER THE FOIA REQUEST 15 DAYS AFTER SIGNATURE DATE UNLESS WE HEAR OTHERWISE FROM FAA NTSB COUNSEL



Mike Monroney Aeronautical Center P.O. Box 25082 Oklahoma City, Oklahoma 73125

Thursday, July 25, 2019

National Transportation Safety Board 45065 Riverside Parkway Ashburn, VA 20147

ACCIDENT # 0113 INDIVIDUAL#: 001 NAME: MODE: AVIATION

DATE OF ACCIDENT 05/29/2019 DATE RECEIVED 06/05/2019 PUTREFACTION: Yes

**N#** 201DG **NTSB** # ERA19FA184 **CAMI REF** # 201900113001

LOCATION OF ACCIDENT Cape May, NJ

SPECIMENS Bile, Blood (Cavity), Brain, Gastric, Heart, Kidney, Liver, Lung, Muscle, Spleen, Urine, Vitreous

## FINAL FORENSIC TOXICOLOGY FATAL ACCIDENT REPORT

CARBON MONOXIDE: The carboxyhemoglobin (COHb) saturation is determined by spectrophotometry with a 10% cut off and confirmed by chromatography.

NO CARBOXYHEMOGLOBIN detected in Blood (Cavity)

CYANIDE: The presence of cyanide is screened by Conway Diffusion, when the COHb level is equal to or greater than 10% or upon special request. Cyanides are quantitated by spectrophotometry and confirmed by chromatography. The reporting cutoff for cyanide is 0.25 ug/mL. Normal blood cyanide concentrations are less than 0.15 ug/mL, while lethal concentrations are greater than 3 ug/mL.

NOT PERFORMED

VOLATILES: The volatile concentrations are determined by headspace gas chromatography at a cut off of 10 mg/dL. Where possible, positive ethanol values are confirmed by Radiative Energy Attenuation.

- 81 (mg/dL, mg/hg) Ethanol detected in Blood (Cavity)
- 53 (mg/dL, mg/hg) Ethanol detected in Urine
- NO ETHANOL detected in Vitreous

DRUGS: Specimens are analyzed using immunoassay, chromatography, mass spectrometry, or spectrophotometry. Concentrations (ug/mL) at or above those in () can be determined for, but not limited to, the following drugs: amphetamines (0.010), opiates (0.010), marihuana (0.001), cocaine (0.020), phencyclidine (0.002), benzodiazepines (0.030), barbiturates (0.060), antidepressants (0.100), and antihistamines (0.020). Drugs and/or their metabolites, that are not impairing or abused, may be reported from the initial tests. See the CAMI Drug Information Web Site for additional information (http://jag.cami.jccbi.gov/toxicology/).

NO DRUGS listed above detected in Urine

c=US, o=U.S. Government, ou=AMC, ou=AMC, cn=RUSSELL J LEWIS 2019.07.29 15:45:21 -05'00'

Russell Lewis, Ph.D., F-ABFT Supervisor, Forensic Sciences Bioaeronautical Sci. Research Lab CAMI, FAA

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## **CLINICAL REPORT**

CLINICAL: Vitreous and Urine are tested for the presence of glucose with reagent strips and by enzymatic spectrophotometric analysis. Postmortem vitreous glucose levels above 125 mg/dL are considered abnormal and postmortem urine levels above 100 mg/dL are considered abnormal. Hemoglobin A1C is analyzed using a latex immunoagglutination inhibition methodology. Hemoglobin A1C blood levels above 6% are considered abnormal. Urine specimens are defined as "dilute" if the creatinine concentration is < 20 mg/dL and the specific gravity is < 1.003. Concentrations of serotonin metabolites 5-hydroxytryptophol (5-HTOL) and 5-hydroxyindole-3-acetic acid (5-HIAA) are measured by LC/MS. A 5-HTOL/5-HIAA ratio value < 15 pmol/nmol is not consistent with ethanol ingestion, while a ratio value > 15 pmol/nmol is indicative of ethanol ingestion.

- 265 (mg/dL) Glucose detected in Urine
- 5.3 (%) Hemoglobin A1C detected in Blood (Cavity)



Russell Lewis, Ph.D., F-ABFT Supervisor, Forensic Sciences Bioaeronautical Sci. Research Lab CAMI, FAA c=US, o=U.S. Government, ou=AMC, ou=AMC, cn=RUSSELL J LEWIS 2019.07.29 15:44:42 -05'00'