



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Mike Monroney  
Aeronautical Center

P.O. Box 25082  
Oklahoma City, Oklahoma 73125

Monday, June 16, 2014

National Transportation Safety Board  
45065 Riverside Parkway  
Ashburn, VA 20147

**ACCIDENT #** 0074    **INDIVIDUAL#:** 001    **NAME:** KIRK, DANIEL T.    **MODE:** AVIATION  
**DATE OF ACCIDENT** 05/09/2014    **DATE RECEIVED** 05/15/2014    **PUTREFACTION:** Yes  
  **N #** 3016Z                    **NTSB #** ERA14FA231                    **CAMI REF #** 201400074001  
**LOCATION OF ACCIDENT** Ruther Glen, VA  
**SPECIMENS** Bile, Blood, Brain, Heart, Kidney, Liver, Lung, Muscle, Spleen, 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.

>> NOT PERFORMED

**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.

>> NO ETHANOL detected in Vitreous

**DRUGS:** Specimens are analyzed using immunoassay, chromatography, GC/MS, HPLC/MS, or GC/FTIR. 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), marijuana (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/>).

>> Fexofenadine detected in Liver  
>> Fexofenadine detected in Blood  
>> Valsartan detected in Liver  
>> Valsartan detected in Blood

Russell Lewis, Ph.D.  
TC, FAA, Forensic Toxicology  
Research Team CAMI