



### Comments of Julia K. Jones

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On Feb 25<sup>th</sup>, 2000 I was terminated by Frontier Airlines for having a "substituted" drug test. A urine sample that is reported as substituted is interpreted as one in which the donor has cheated on his/her test. The test is treated as a refusal to test for disciplinary purposes. Prior to this day, I had been a flight attendant with this carrier since August 1997 with no history or record of performance or discipline problems. According to the Medical Review Officer contracted by Frontier Airlines, my lab results showed no flaws in the collection, transportation and analysis of the urine specimen. The lab results showed that my creatinine levels (4.9) and specific gravity levels (1.001) fell outside the acceptable range for characteristics associated with normal human urine. This acceptable range was established by the Department of Health and Human Services (HHS) and issued as guidance to interpreting and reporting laboratory results for all DOT drug tests and Federal agency workplace drug testing programs. According to the MRO, "the claim that "I didn't do it", no matter how sincere in its presentation, is completely irrelevant when pitted against the rock-solid scientific fact to the contrary. Moreover, the substitution guidelines were chosen to be certain that there could not be any false accusations of substitution. Any finding of credibility in a statement that "I didn't do it" is simply an example of ignorance."

Despite my protests of innocence and despite evidence from observed look alike DOT drug tests results which demonstrate that I typically produce urine with near substitution values, the appeal of my termination was denied in August of 2000. In standing the termination, the hearing board had consulted with and obtained information from DOT and HHS.

Claims that I am a cheater are built around one pivotal assumption: no normal human being can produce a urine specimen that falls below the established creatinine and specific gravity levels established by HHS. Therefore, any substitution result is irrefutable proof of donor guilt. This assumption served as the basis for my termination and for the denial of my termination appeal. It has also served as the basis for excluding from cancellation over 2,000 substituted DOT drug tests conducted and reported by certified laboratories failing to follow HHS guidance on validity testing, failing to run validity controls, failing to maintain quality assurance standards, and a host of other questionable lab practices. It continues to serve as the rationale behind refusals by any and all parties including the DOT, HHS, MRO and Frontier to cancel my February 2000 substituted test result despite continued requests and **new evidence** challenging this assumption.

The science behind substitution testing is principally derived from one primary source: a retrospective literature review. An independent analysis of this literature review by researchers and forensic toxicologists under contract with the pilots union found little evidence for claims of scientific support for the established levels. Following this critique, HHS and DOT conducted a water loading study. According to the HHS, this study validates that "no normal human being can produce a urine specimen that falls below the established HHS levels for creatinine and specific gravity. Unfortunately, one must consider if a study is "scientific" when its chief authors are invested in a particular outcome. While the study does demonstrate that no one urine sample tested below the substitution level, the authors fail to discuss the relevance of several issues including 1) that 25% of the samples were dilute – meaning nearing the substitution levels; 2) that the specimen with a borderline data point ( 5.1 creatinine and 1.001 specific gravity) was provided by a flight attendant who had previously produced a substituted result for which she was terminated ; 3) that split testing of the samples was not reported as originally planned in the study design ; 4) that the study was not repeated per usual scientific protocol ; 5) that the standard deviation of measurement for urine creatinine was not identified ; 6) that the study group was quite small ; and 7) that the amount of water characterized in the study as excessive would be described as moderate by most flight attendants' standard hydration practices.

As previously stated, new evidence has been presented to DOT and HHS that a normal individual is able to test below the substitution levels without cheating. A flight attendant, who was terminated for "substitution " on a random DOT drug test, produced another substitution result on a random DOT drug test. An interpretation of substitution in the second failed test does not follow the rules of deductive reasoning as this sample was taken under direct observation. A series of look alike DOT tests has substantiated that this flight attendant typically produces very dilute urine specimens-similar to those reported in the water load study. In short, the assumption that one has "substituted" his/her urine if levels for creatinine and specific gravity fall below the norm is erroneous. A donor may simply produce urine whose creatinine and specific gravity fall outside the normal bell curve. Another interpretation is that the definition of what is a normal for creatinine and specific gravity must be established to reflect the norm for each donor based on variable and conditions that can impact creatinine and specific gravity.

Recently, I successfully obtained a court order for the testing of bottle B (the split of my original substituted sample) Based on the then existing DOT regulations, an employee's request for test of Bottle B was not available. The results of bottle B were reported as negative for drugs. The creatinine and specific gravity were reported at 2.9 and 1.002. Paired creatinine and specific gravity did not fall below the HHS substitution levels. Therefore, the sample was not substituted. Additionally, comparison of the creatinine values for my urine sample demonstrates continued weaknesses associated with levels and assumptions underpinning substitution testing. Sample A was reported as 4.9 creatinine and 1.001 for specific gravity. Sample B was reported as 2.9 creatinine and 1.002 specific gravity. Given the significant deviation between the reported measurements for creatinine on the same urine specimen by two HHS certified lab, the conclusion that I cheated on my test because of the values assigned to creatinine and

specific gravity is not scientific nor is it even reasonable. What it does offer is yet another series of interpretations including urine creatinine is difficult to accurately measure using available technology, one lab has poor quality control procedures, using creatinine and specific gravity to determine if a person has substituted his/her results is and always will be problematic.

While I have been harmed by a process based on false assumptions and one that offered no due process, regulatory access to split testing and MRO review will not protect me 1) if the established levels are not accurate for all people 99.9% of the time, irrespective of influencing conditions and variables; 2) if a confirmatory test with a 99.9% reliability and predictability is not offered as a part of the test of bottle A; 3) if MRO's are lulled into believing that standards issued by the federal government are unapproachable; and if 4) there is not an open process for evaluating and adjusting validity testing procedures as new evidence comes to light. The scientific process requires that new information be considered each and every time that it becomes available. Today, there has been no evidence that HHS or DOT have factored my experience or those of others into a re-evaluation of the established thresholds for creatinine and specific gravity.

I believe in a drug free workplace. I also believe in the rights of individuals to be free from accusations based on false and falsified information. I have countless times requested a cancellation of my February 2000 lab result without any assistance or support from the DOT or HHS. To date, I am still counted as a "drug test cheater." From my experience it has become clear that the drug free workplace movement is a war on drugs where a few casualties on the front line, otherwise known as "employees", are acceptable and normal. Unfortunately, the generals aren't taking responsibility for offering aid or reparations to the wounded or reducing the number of tomorrow's casualties. It's easier just to buy more body bags and hope no one notices.

