Knowing When to Say When: Federal Regulation of Alcohol Consumption by Air Pilots

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I. INTRODUCTION

On March 8, 1990, a drunk cockpit crew flew Northwest Flight 650 from Fargo, North Dakota to Minneapolis-St. Paul, Minnesota. Blaming the 1986 merger of Northwest Airlines and Republic Airlines on the creation of tension between Northwest pilots and former Republic crews, the crew decided to get together in a bar the night before a morning flight to talk things over. During the course of their conversation, the captain of the aircraft drank nineteen rum and cokes. The other officers consumed at least six pitchers of beer between the two of them.

Prior to takeoff the next morning, a Federal Aviation Administration (FAA or Administration) Flight Standards Inspector detained Flight 650’s crew for approximately one hour. He confronted the pilots about their drinking festivities on the prior evening after receiving an anony-

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2 Id.
4 Northwest Pilots’ Case, supra note 1, at 2.
When the inspector warned the crew that they would violate Federal Aviation Regulations (FAR's) if the allegations were true and if they chose to fly, the crew denied the drinking allegations. Northwest Airlines also received a tip at their reservations center before the flight departed from Fargo. Although both the FAA and Northwest had reason to know of the serious threat to public safety, the plane took off as scheduled.

Fortunately for the ninety-one passengers aboard, the aircraft landed safely. Upon arrival at the Minneapolis-St. Paul airport, another FAA flight inspector arrested the three crew members and arranged for blood-alcohol testing. The results of the tests were chilling. The captain's blood alcohol level exceeded 0.1% — the level at which most states deem it illegal to drive a car. The two officers co-piloting the flight had blood alcohol levels of more than the federal limit of 0.04%. Each of the three

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5 Jay C. Lowndes & Sid Goldstein, Following Arrest of Flight Crew on Alcohol Charges, Busey Tells Suspicious Inspectors to Notify Airlines, AIR SAFETY WK., Mar. 19, 1990, at 1. Flight Standards Inspector Verl Addison received the anonymous tip at approximately 1:30 a.m. Id.

6 Id. The applicable FAR prohibits consumption of alcohol within eight hours before a flight. 14 C.F.R. § 91.17(a)(1)(1991).

7 Lowndes & Goldstein, supra note 5, at 3. Northwest's management apparently did not receive the information until 6:40 a.m., after Flight 650 completed its forty minute flight to Minneapolis. Id.

8 Id. Douglas R. Solseth received a telephone call from Addison, the Fargo inspector. Solseth "performed a citizens arrest on all three crew members" when the plane landed in Minneapolis. Id.

9 Current federal law does not require the pilots to submit to alcohol testing. For a discussion of testing provisions see infra part IV and accompanying text. The Minneapolis Flight Inspector and the Minneapolis Airport Police received the crew's consent to test. 136 CONG. REC. S3,127-02 (daily ed. Mar. 22, 1990) (statement of Sen. Danforth).


11 Eric Weiner, Rules on Pilots' Drinking are Debated, N.Y. TIMES, Mar. 18, 1990, at 24 [hereinafter Weiner, Rules on Drinking]. Research indicates that at a blood alcohol level approaching .12%, the number of major procedural errors during flight triples. Flight 650's captain had a blood alcohol level of .13%, a fraction above this extremely dangerous level. For a discussion of alcohol's effects upon pilots in the air, see infra notes 40-52 and accompanying text.

12 Weiner, Rules on Drinking, supra note 11, at 24. The blood alcohol levels of the two other crew pilots were .06% and .04%. Id.
pled "not guilty" to federal felony charges that they flew an aircraft while intoxicated, even though one of the crew estimated he still had about three bottles of beer in him during the early morning flight. That pilot also maintained the alcohol neither impaired nor affected him. A Minneapolis jury did not agree. It convicted the entire crew for flying while intoxicated and sentenced the pilots to jail.

The Fargo incident directed the government's attention to the rules which regulate the relationship between drinking and flying. Vigorous administrative and congressional efforts to tighten restrictions on drinking by pilots now focus on the Fargo incident to emphasize the great potential for tragedy. Critics of the movement toward more stringent regulations maintain that a few members of Congress and the public have overreacted and that

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13 Fired Pilots Plead Not Guilty to Federal and State Charges, AIR SAFETY WK., Apr. 16, 1990, at 4 [hereinafter Fired Pilots].

14 Northwest Pilots' Case, supra note 1, at 3.

15 Id.


17 Airline And Rail Service Protection Act: Hearing on § 356 and § 362 Before the Senate Comm. on Commerce, Science & Transportation, 100th Cong., 1st Sess. 21 (1987) (statement of Elizabeth Dole, Secretary, Department of Transportation). Secretary Dole spoke generally about the potential for tragedy:

When we board an airline . . . we literally put our lives in the hands of others. The effective operation of any transportation system, therefore, ultimately depends on a foundation of mutual trust and confidence in the vigilance and responsibility of other people. The abuse of drugs and alcohol by transportation workers in safety sensitive functions is a life-threatening violation of that trust.

Id.

Roger Horn, president of Safe Travel America, questioned, "Why is it that airline passengers have less protection than cattle in a freight car?" Weiner, Rules on Drinking, supra note 11, at 24. He stated that the Fargo incident illustrates that the "traveling public needs the same kind of protection for alcohol use as it has for drug use." Id.
alcohol abuse does not run rampant through the aviation industry.

This comment will initially examine the prevalence of alcohol use by pilots and the effects of alcohol on the operation of an aircraft. It will then evaluate the effectiveness of the current regulations aimed at preventing pilots from flying while intoxicated as well as the success of the industry's rehabilitation program. Several proposed revisions of the regulations that seek to strike a balance between the traveling public's right to air safety and a pilot's privacy interests will be discussed. Finally, the comment will address congressional attempts to mandate random alcohol testing.

II. ALCOHOL AND PILOTS

Researchers began scrutinizing the relationship between alcohol and pilots during the mid-seventies, and their efforts continue into the nineties. Current studies typically concern the number of aviators who fall prey to alcoholism as well as the effects of alcohol on in-flight performance. The only consensus reached thus far is that mixing alcohol and the operation of an airplane produces a deadly combination.

A. PREVALENCE OF USE BY PILOTS

Although concrete statistical data indicating how many pilots abuse alcohol do not exist, members of the Department of Transportation (DOT), Congress, and the media insist the number is substantial. They base their estima-

19 The Advance Notice of Proposed Rulemaking on drugs and alcohol issued on December 4, 1986, by the FAA indicated the Administration had far too little data available regarding chemical dependence in the aviation community to conclude whether it threatened safety in the air. Dealing with Drugs and Alcohol in the Rail and Airline Industries: Hearing Before a Subcomm. of the House Comm. on Government Operations, 100th Cong., 1st Sess. 63 (1987) [hereinafter Dealing with Drugs] (statement of Richard B. Stone, Executive Chairman for Aeromedical Resources of the Air Line Pilots Association).
tions on an accumulation of information which includes: the number of accidents in which alcohol is determined causative, surveys in which pilots confess to alcoholism and alcohol abuse, data regarding pilots with driving-while-intoxicated (DWI) records, and the number of pilots who enter the industry’s voluntary rehabilitation programs.

1. Accident Data

Accident data primarily provide information relevant to establishing pilot drinking habits in general aviation. A large percentage of accidents in the non-commercial, non-military aviation community can be attributed, at least in part, to an over-consumption of alcoholic drinks before or during flight. Between 1965 and 1975, the National Transportation Safety Board (NTSB) listed “alcohol impairment of pilot judgment a deficiency” as either the main cause or a contributing factor in 485 general aviation accidents. Fatalities occurred in 430 of those accidents. The NTSB currently attributes six percent of all aviation accidents to drug or alcohol use, though others estimate that the number is closer to ten percent of all aviation accidents to drug or alcohol use.

20 Stronger FAA Requirements Needed to Identify and Reduce Alcohol Use Among Civilian Pilots, Comptroller General’s Report to the Cong. 1 (1978) [hereinafter FAA Requirements Needed]. General aviation includes “all civil-aviation operations other than those conducted for remuneration or hire.” The term does not encompass military or commercial aeronautics. Jack G. Modell & James M. Mountz, Drinking and Flying—The Problem of Alcohol Use by Pilots, 323 NEW ENG. J. MED. 455 (1990).

21 Modell & Mountz, supra note 20, at 455. The fatal accident rate is actually fairly low. Approximately 1.5 accidents per 100,000 hours of flight in fixed-wing aircraft resulted in fatalities. Id.

22 The NTSB is an independent federal agency charged with investigating accidents and determining their causes. FAA Requirements Needed, supra note 20, at 1.

23 Id. The NTSB uses a three level approach to determine if alcohol played a role in an accident based on a pilot’s blood alcohol concentration (BAC). If a pilot’s BAC is lower than 50 mg. percent, alcohol is ruled out as causative. The NTSB deems alcohol a “factor” if a level of 50 mg. to 120 mg. percent is present. Should the level exceed 120 mg. percent, alcohol “caused” the accident. Id.

24 Id.
percent.\textsuperscript{25} For each accident caused by abuse, a pilot drank too much or too close to take-off.

Far fewer accidents caused by alcohol plague the commercial airlines and military aviation. Researchers claim, however, that the amount of heavy alcohol use by airline and military pilots does not differ substantially from general aviators.\textsuperscript{26} Since 1983, the NTSB cited alcohol and drug use as factors in only sixteen commercial accidents. Those accidents each involved charter flights or commuter airlines.\textsuperscript{27} In fact, no fatal accident involving a major United States commercial carrier has ever been attributed to alcohol consumption by the pilot or crew.\textsuperscript{28} Nevertheless, many speculate that the statistical accident rate underestimates the level of drinking by commercial pilots.\textsuperscript{29}

Those doubting the disposition of accident data in the commercial aviation industry point to the number of professional pilots who have lost their licenses due to alcohol abuse.\textsuperscript{30} For example, since 1984 the FAA has revoked or suspended the licenses of sixty-one pilots for flying while

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\textsuperscript{25} For a discussion of the six percent estimate, see Eric Weiner, \textit{Drunken Flying Persists Despite Treatment Effort}, N.Y. \textsc{Times}, July 14, 1990, at 6 [hereinafter Weiner, \textit{Drunken Flying}]. For evidence of the ten percent estimate, see \textit{Dealing With Drugs}, supra note 19, at 2 (statement of Cardiss Collins, Chairman of House Subcomm. on Government Activities and Transportation).

\textsuperscript{26} Modell & Mountz, supra note 20, at 455.


\textsuperscript{28} Modell & Mountz, supra note 20, at 455. Captain Richard Stone clarified his position:

\textit{[T]here is no evidence that drug or alcohol use is a significant problem in the airline industry. Since the beginning of commercial aviation in the United States, a period of more than 50 years, in which hundreds of certified carriers have flown over 100 million flights, there has not been a single United States scheduled airline accident attributable to alcohol or drug abuse.}

\textit{Dealing with Drugs}, supra note 19, at 62.

\textsuperscript{29} Weiner, \textit{Rules on Drinking}, supra note 11, at 24. \textit{"[T]here is evidence that drinking among pilots is more widespread than the accident statistics indicate."} \textit{Id.}

\textsuperscript{30} See id. The Northwest alcohol incident is the first involving a major airline, according to JoAnn Sloan, an FAA spokeswoman. \textit{Id.}
intoxicated.\textsuperscript{31}

2. Pilot Surveys

A recent survey questioned 1039 FAA-licensed pilots about their consumption of alcohol.\textsuperscript{32} The respondents indicated that 21.8\% considered themselves moderate drinkers, and 15\% classified their drinking as heavy.\textsuperscript{33} When researchers then categorized the respondents as either private or professional pilots, the statistics remained essentially the same for both groups. Of the private pilots, 22.5\% were moderate drinkers and 14.8\% were heavy drinkers.\textsuperscript{34} Professional pilots responded that 20.5\% drank moderately, while 14.4\% drank heavily.\textsuperscript{35} If these statistics are true across the airline industry, commercial pilots may experience a higher incidence of alcoholism and alcohol abuse than that found in most other industries.\textsuperscript{36}

3. Rehabilitation Statistics

The number of pilots who seek treatment in voluntary airline rehabilitation programs suggests that concerns about pilots overindulging in alcohol should not be put aside merely for lack of definitive statistical evidence. The United States government funded the Human Interven-
tion and Motivation Study (HIMS), formulated by the Air Line Pilots Association (ALPA), in 1973.\textsuperscript{37} Approximately 1200 pilots have received treatment in that program.\textsuperscript{38} Dr. Joseph A. Pursch, a founder of the rehabilitation effort, expressed his legitimate fear that "[f]or every pilot I treat, there are five more who just sneak into early retirement."\textsuperscript{39} The number of pilots utilizing HIMS constantly reminds industry and government officials that the commercial airline community is not immune from the threat of intoxicated employees. Consequently, many officials maintain a desire to err on the side of caution by further restricting pilots' behavior before, during, and after flight.

4. Driving-While-Intoxicated Information

Recently, advocates of stricter controls pointed to the number of pilots who have driving-while-intoxicated offenses on their records as evidence of the growing problem of alcohol abuse. In 1987, the FAA cross-checked pilot records with the National Driver Registry.\textsuperscript{40} The Administration found that 10,300 active pilots had their driver's licenses suspended or revoked for drunk driving.\textsuperscript{41} Although the majority of those pilots flew small, non-commercial airplanes, more than 1000 were commercial airline pilots who flew passenger planes.\textsuperscript{42} If a DWI offense indicates that an individual suffers from an alcohol problem, then the DOT has a staggering new statistic with which to justify tightening the reigns on airline pilots.

\textsuperscript{37} Martinez, supra note 36, at ii. "The heart of the HIMS program is that once a pilot is identified, a trained team of union pilots, company officials, physicians and FAA officials work together to get the pilot off the line, into rehabilitation and eventually, back into the cockpit." \textit{Id}. Identification may be made by anyone who is in an appropriate position to detect a drinking pilot, and the pilot need not fear automatic discharge. \textit{Id}.

\textsuperscript{38} Weiner, Drunken Flying, supra note 25, at 6. FAA Chief Psychiatrist, Dr. Burton Pakull, estimated that in the program's 15 year history, around 1200 pilots have received treatment. \textit{Id}.

\textsuperscript{40} Weiner, Rules on Drinking, supra note 11, at 24.


\textsuperscript{42} Weiner, Rules on Drinking, supra note 11, at 24.
B. Alcohol's Effects on Pilots

Unlike the inconclusive nature of the statistics regarding the extent of alcohol abuse by pilots, pervasive, definitive evidence confirms the danger of mixing alcohol with the cockpit. Researchers continue to extensively evaluate the effects of alcohol on specific piloting tasks. Undoubtedly, performance can be impaired even at relatively low blood alcohol concentrations or when the pilot flies with a hang-over.

1. Dangers Involved in Flying While Intoxicated

Drinking hinders an individual's ability to operate a car safely, and piloting an airplane challenges an individual's motor coordination and mental responses to a much greater extent than does operating an automobile. Pilots find flying an aircraft more difficult than driving an automobile because of the "complex coordination requirements and multiplicity of tasks, such as maintaining course headings and level flight, monitoring power settings and fuel reserves, and communicating with air traffic control." Alcohol depresses the central nervous system, and people vary in their susceptibility to the accompanying effects. For the intolerant, a BAC as low as .025 percent hampers judgment and leads to the impairment of "recently learned, complex, and finely tuned skills." A moderate dose harms almost all aspects of information processing. Additionally, alcohol, even in minimal doses in the most tolerant drinker, negatively affects an

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43 For a discussion of the detrimental effects of minimal doses of alcohol, see infra notes 47-51 and accompanying text.
44 For a discussion of the hang-over effect, see infra notes 55-65 and accompanying text.
45 FAA REQUIREMENTS NEEDED, supra note 20, at 5.
46 Id.
47 Modell & Mountz, supra note 20, at 456.
48 Id. Persons lose the ability to utilize a large number of situational cues presented at once. They also lose the cognitive ability to interpret the meaning of incoming information. Id.
individual's vision. The net result is that the pilot's ability to perceive the airplane's actual attitude is decreased, as is the pilot's tracking ability. The pilot loses the skills necessary to maintain control of the aircraft, read instruments and navigational charts, and see and avoid other air traffic.

Ability diminishes as the amount of alcohol increases. At a BAC level of .12% the amount of major procedural errors triples. A complete loss of aircraft control becomes a significant threat. Furthermore, higher altitudes accentuate alcohol's affect on the complex skills necessary to operate the airplane. The physiological effects are twice as great at 10,000 feet above sea level and three times as great at 15,000 feet above sea level.

2. Danger of Flying While Hung-Over

Perhaps more surprising, alcohol impairs a pilot's ability to fly many hours after consumption even when the pilot's BAC is near or at zero. Studies revealed the existence of this "hang-over effect" over twelve years ago. Researchers and commercial airlines agree that the FAA-mandated eight hour interval between drinking and flying, the bottle

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50 See Modell & Mountz, supra note 20, at 456. See also Fed. Aviation Admin., U.S. Dep't of Transp., Report FAA-AM-79-7, Laboratory Performance During Acute Intoxication and Hangover 1, 22 (1979) (prepared by William E. Collins and W. Dean Chiles) [hereinafter Acute Intoxication and Hangover].
51 Modell & Mountz, supra note 20, at 456.
52 Id. "Blood alcohol concentrations of [0.05 to 0.12 percent] produce progressively larger and more consistent decrements in all . . . performance measures and in oculovestibular functions, again with pronounced detrimental effects during actual flight conditions involving acceleration and in some cases dim lighting." Id. at 457.
53 FAA Requirements Needed, supra note 20, at 16.
54 Id.
56 FAA Requirements Needed, supra note 20, at 15.
to throttle rule, does not adequately protect pilots and their passengers.\textsuperscript{57}

A report to the 1981 Aerospace Medical Association confirmed what the rest of the scientific community suspected. Researchers revealed that the federally required eight hour period can be insufficient to prevent threatening visual disorientation.\textsuperscript{58} The report indicated that alcohol can remain in the ear canals as many as twelve hours after consumption, thus leading to "rapid, jerky oscillations of the eyeballs and related sensations of angular movement during flight."\textsuperscript{59} Moreover, in 1986, researchers conducted a study which found severe impairment as many as fourteen hours after the pilots drank enough to become legally intoxicated.\textsuperscript{60} They concluded that a pilot may not possess the "ability to perform critical flying maneuvers" fourteen hours later, though they found little or no traces of alcohol in the pilots' bloodstream.\textsuperscript{61} Apparently, alcohol debilitates the "working" memory. The pilot can neither divide his attention between the several tasks he must perform nor perform non-routine tasks as effectively.\textsuperscript{62} Of course, the results decrease the pilot's ability to properly handle routine and emergency flight needs.

The study also tested pilots' subjective awareness of the effects that alcohol may have after many hours of drinking. Pilots generally did not acknowledge that any nega-

\textsuperscript{57} Id.

\textsuperscript{58} Between Bottle and Blue Yonder, \textit{Sci. News}, July 18, 1981, at 47. K.E. Money and other researchers from the Defense and Civil Institute of Environmental Medicine in Ontario studied the effects of rapid ingestion of alcohol and prolonged consumption. Subjects in both study groups experienced visual disorientation more than eight hours after drinking. In some instances, the disorientation continued even after 11 hours. Id.

\textsuperscript{59} Id.

\textsuperscript{60} Airborne and Hung Over, \textit{Sci. News}, Dec. 20-27, 1986, at 398. Jerome A. Yesavage and Von Otto Leirer of Stanford University's School of Medicine studied the lasting effects of alcohol consumption on ten Navy pilots. Id. Pilots performed poorly in the hang-over condition on tasks including control of the aircraft after loss of two of four engines during takeoff and landing. Id.

\textsuperscript{61} Id.

\textsuperscript{62} Id.
tive effects remained for more than a very short period of time.\textsuperscript{63} In fact, those surveyed believed it was safe to fly after only four hours had passed.\textsuperscript{64} Pilots typically underestimated the importance of the bottle to throttle rule. A United Airline pilot commented that although he refrains from drinking twenty-four hours before a flight due to alcohol's effects, "[t]here are pilots out there who will drink heavily right up to the limit."\textsuperscript{65}

III. EVALUATION OF CURRENT FEDERAL REGULATIONS

Members of the public and the government agree that since alcohol has a highly detrimental effect on cockpit performance, stringent government regulations must control the relationship between pilots and alcohol.\textsuperscript{66} Because great potential for tragedy exists, advocates of strict adherence to the rules discount the inconclusive statistical evidence of the number of pilots with drinking problems. The federal rules are primarily codified in the Federal Aviation Regulations and the Federal Aviation Act, though additional penalties appear in other United States Code provisions. State law and commercial airline policies also regulate the use of alcohol by pilots. Many of those regulations are more stringent than those of the federal government. The Appendix contains a listing of state flying-while-intoxicated statutes.

During the seventies and early eighties, the FAA initiated a policy intended to prevent abuse (practice deterrence) rather than to punish those who over-indulge.\textsuperscript{67} Recent rules promulgated by the FAA and Congress sug-

\textsuperscript{63} Bottle to Throttle, Sci. Am., Feb. 1987, at 86. Since no trace of alcohol existed in the pilots' bloodstreams, those pilots simply concluded that alcohol from the previous drinking episode lost all of its physiological influence. \textit{Id.}

\textsuperscript{64} \textit{Id.}

\textsuperscript{65} Weiner, \textit{Rules on Drinking}, supra note 11, at 24.


\textsuperscript{67} See generally \textit{FAA REQUIREMENTS NEEDED}, supra note 20, at 18.
gest a fundamental shift in the government’s attitude. Specifically, alcohol-related legislation controls the amount of time between drinking and flying, the permissible BAC at the time of flight, the prerequisites for medical certification, and the availability of non-flight related evidence of alcohol problems. Both civil and criminal penalties exist to punish the pilot who breaks the rules. These rules affect approximately 752,000 individuals who presently hold FAA-issued “medical certificates in conjunction with student, private, commercial, airline transport, glider-only, and lighter-than-air pilot certificates and ratings.”

A. FAR Section 91.17(a)

The FAA amended section 91.17 of the FAR’s in 1985 and 1986. This regulation applies to all civil pilots, including general and commercial aviators. Subsection (a)(1), the bottle to throttle rule, restricts the number of hours before flight that a pilot can drink to eight. The FAA proposed the rule in 1966, and it eventually became law in 1970 after a face-off between the FAA and aviation special interest groups who opposed the standard. Controversy surrounds the section in light of persuasive evi-

69 14 C.F.R. § 91.17 (1990). The regulation provides:
   (a) No person may act or attempt to act as a crewmember of a civil aircraft —
      (1) Within 8 hours after the consumption of any alcoholic beverage;
      (2) While under the influence of alcohol;
      (3) While using any drug that affects the person’s faculties in any way contrary to safety; or
      (4) While having .04 percent by weight or more alcohol in the blood.
   Id.
70 Id.
71 FAA REQUIREMENTS NEEDED, supra note 20, at 14-15. In January 1970, a major interest group changed its position to actively support the eight hour regulation because such a rule would enhance safety by educating pilots about alcohol abuse, deterring over-consumption, and by improving enforcement. Id. at 15.
dence of the hang-over effect. Critics maintain the rule is far too lenient. Most major airlines agree and therefore prohibit drinking twelve to twenty-four hours before flying. The section seems "implicitly to permit aircraft operation eight hours after a period of heavy to moderately heavy drinking."

Subsections (a)(2) and (a)(3) of the regulation are controversial because of their subjective nature. Section (a)(2) prohibits crewmembers from flying if they are under the influence of alcohol, and section (a)(3) prevents crewmembers from flying if they have used a drug that could impair their abilities to operate the aircraft safely. Since pilots report they are unaware of the effects of alcohol, compliance with the rule is probably minimal. To those pilots who fully appreciate the damage that alcohol inflicts upon the central nervous system and eyesight, these sections prohibit flying even with a BAC under 0.04% or within a period of eight hours after drinking. Only this interpretation achieves the FAA's goal of promoting safe drinking habits among pilots.

Finally, subsection (a)(4) forbids pilots from operating an aircraft while having a BAC of 0.04% or more. The rationale for the 0.04% rule rests on the fact that a pilot could comply with the eight hour rule yet still have a high level of alcohol in the blood. This rule is perhaps the most controversial provision of FAR section 91.17 as it reflects the recent efforts by the FAA to crack down on

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72 For a discussion of the hang-over effect, see supra part II. B.2. and accompanying text.
73 Weiner, Rules on Drinking, supra note 11, at 24.
74 Modell & Mountz, supra note 20, at 458.
75 See supra notes 63-65 and accompanying text.
76 Modell & Mountz, supra note 20, at 458.
77 Id.
78 The FAA began considering adoption of minimum BAC levels in 1965. FAA REQUIREMENTS NEEDED, supra note 20, at 14. It settled for the eight hour rule because powerful interest groups adamantly opposed the more stringent regulations. Id. at 14-15. The rule was again recommended in 1978; the DOT agreed that a blood alcohol standard was necessary and drafted a proposal. Id. at 18.
79 Ross & Ross, supra note 32, at 414.
alcohol use by pilots.\textsuperscript{80}

The Administration believes that the (a)(4) provision supplements the eight hour rule and ensures safer air travel. While violation of the eight hour rule is difficult to prove without either a confession or eyewitness testimony, a variety of tests readily identify a pilot who is flying with an illegal amount of alcohol in his system.\textsuperscript{81} Establishing the legal limit at higher than zero, however, indicates to pilots that flying with a BAC of 0.04\% is perfectly safe.\textsuperscript{82} Since the effects of even a minimal dose of alcohol hamper pilot performance, this message actually endangers travelers while attempting to protect them.\textsuperscript{83} An additional concern is that pilots will follow the BAC rule in lieu of a rule of abstinence.\textsuperscript{84}

I. \textit{Recommendations}

Researchers recommend several revisions of section 91.17.\textsuperscript{85} Dr. Jack G. Modell and Dr. James M. Mountz, both of the University of Michigan, suggest that the permissible BAC level found in subsection (a)(4) should be reduced.\textsuperscript{86} While they ideally would like to see a permissible BAC of zero, they recognize that such a change is unlikely.\textsuperscript{87} Modell and Mountz therefore recommend lowering the level to "no more than 0.01 percent alcohol per volume of blood."\textsuperscript{88} The 0.01\% proposition allows for minor errors in testing procedures and devices, while permitting only a trace of alcohol in the bloodstream.\textsuperscript{89}

Still, Dr. Susan M. Ross and Dr. Leonard E. Ross, both

\textsuperscript{80} Proponents of the BAC rule complain that most states' driving-while-intoxicated legislation is stricter than the federal aviation limit. Weiner, \textit{Rules on Drinking}, supra note 11, at 24.

\textsuperscript{81} Id.

\textsuperscript{82} Id.

\textsuperscript{83} See id.

\textsuperscript{84} Id.

\textsuperscript{85} Modell & Mountz, \textit{supra} note 20, at 458.

\textsuperscript{86} Id.

\textsuperscript{87} Id.

\textsuperscript{88} Id.

\textsuperscript{89} Id.
of the University of Wisconsin-Madison, argue for a zero blood-alcohol level.⁹⁰ Based on their results of pilot surveys, Ross and Ross concluded that pilots have relatively conservative attitudes about drinking, and they further contend that the aviation community would support a change to lower the minimum allowable BAC.⁹¹

Both research teams agree that the eight hour rule must be lengthened to at least twelve hours.⁹² Modell and Mountz also suggest expressly forbidding all pilots from flying within twenty-four hours after consumption of five or more "standard alcoholic drinks"⁹³ or if any after-effects of consumption, including a hang-over, persist.⁹⁴ Since many airlines already insist on a minimal wait exceeding eight hours, a federally mandated extension likely would not provoke controversy in the commercial airline industry.⁹⁵ Although many airlines voluntarily require their pilots to wait longer than eight hours after drinking before flying, only the federal limit controls general aviators. Thus, federally mandating the change would reach far beyond the aviation industry. Since statistics indicate that general aviation tends to experience a greater number of alcohol-related accidents, the extension to a twelve hour rule could potentially decrease that number.⁹⁶

Additionally, the regulation could begin with a preamble urging the importance of following the mandated

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⁹⁰ Ross and Ross, supra note 33, at 414.
⁹¹ Id.
⁹² Modell & Mountz, supra note 20, at 459; Ross & Ross, supra note 32, at 413. Modell and Mountz point out that "compliance may decrease as the required interval between drinking and flying is extended. Nevertheless, to prevent further misconceptions about the advisability of flying during a specific period after moderate or heavy drinking, we recommend this 'bottle-to-throttle' rule be increased . . . ." Modell & Mountz, supra note 20, at 459.
⁹³ Modell & Mountz, supra note 20, at 456. A standard drink contains approximately 15 grams of alcohol. Typically, 1.5 oz. of distilled liquor (80 proof), 12 oz. of beer, or 5 oz. of wine constitute a standard drink. Id.
⁹⁴ Id. at 459.
⁹⁵ See supra notes 72-75 and accompanying text.
⁹⁶ For a discussion of the number of accidents caused by alcohol in general aviation, see supra notes 20-25 and accompanying text.
rules by conveying the consequences of a violation in layman's terms. The message would then reach not only the professional pilot who must follow stringent company policies, but it would also reach the general aviator. According to Modell and Mountz, the preamble should expressly point out the following facts: a pilot's performance can be impaired enough to threaten air safety after drinking only one alcoholic beverage a couple of hours before take-off; impairment can last for as long as twenty-four hours after consuming five standard alcoholic drinks; for each alcoholic beverage consumed, two or more hours are required to metabolize it to the point where the alcohol will be undetectable; and a pilot's judgment becomes impaired as an effect of alcohol, thus decreasing the pilot's ability to adequately assess his own competence to fly an aircraft. Regularly testing pilots about specific alcohol regulations and the effects of alcohol could further deter irresponsible drinking behavior.

2. Problems with Proposed Revisions

The proposed revisions fail to solve significant problems with the regulations. Those drafting new rules must recognize the limited possibility of enforcement in the general aviation community. While commercial pilots experience constant review by their employers, thus deterring substance abuse, no such impetus exists in the general aviation context. Reliance on self-enforcement

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97 Modell & Mountz, supra note 20, at 459. Testing a pilot about the contents of such a preamble would increase the likelihood that a pilot would actually read it.
98 Id.
99 Id.
100 Id. For instance, the preamble proposed by Modell and Mountz would state that "the metabolism and elimination of 2100 ml (72 oz) of beer, 890 ml (30 oz) of wine, or 270 ml (9 oz) of distilled liquor may take at least 12 hours to reduce the [BAC] to below the maximal permissible level of 0.01 percent . . . for piloting an aircraft." Id.
101 Id.
102 Id. Modell and Mountz contend that pilots should be tested regarding the short-term and long-term effects of alcohol on flight performance in conjunction with all licensing examinations. Id.
provides only minimal assurance of compliance if the pilot suffers from alcoholism. Without additional external enforcement mechanisms, success in combatting alcohol abuse in the field of general aviation is unlikely. Currently, an air traffic controller does not possess the federal authority to detain or arrest a general aviator whom he believes to be intoxicated. While a controller may attempt to convince the pilot not to fly, in order to protect the public, the FAA must vest all controllers with the limited authority to prevent suspect flights until the arrival of a flight inspector.

Furthermore, the revisionists emphasize that pilots must better appreciate the consequences of flying under the influence. The suggestion that pilots undergo a more extensive examination on the subject warrants serious consideration. The FAA should recognize, however, that a pilot may simply memorize the information for the limited purpose of receiving his license. Once he obtains that license, the importance of the data may decrease. Consequently, additional educational programming should be mandated throughout the commercial industry and the general aviation community. Additional sessions could underscore the importance of the information, and at the very least, would refresh the pilot’s memory.

B. FAR Section 91.17(c),(e)

The FAA also requires a pilot to submit to alcohol testing performed by law enforcement officials when probable cause exists to believe that the pilot has violated section 91.17(a).103 The information acquired through

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103 14 C.F.R. § 91.17 (1991). The Administration requires:
(c) A crewmember shall do the following:
(1) On request of a law enforcement officer, submit to a test to indicate the percentage by weight of alcohol in the blood, when—
   (i) The law enforcement officer is authorized under State or local law to conduct the test or to have the test conducted; and
   (ii) The law enforcement officer is requesting submission to the test to investigate a suspected violation of State or local law governing the same or substantially similar conduct prohibited by paragraph (a)(1), (a)(2), or (a)(4) of this section . . . .
such a test may be used against the offender in a civil action for revocation or suspension of the pilot's license or in criminal proceedings.\textsuperscript{104} This regulation does not grant the federal government the authority to impose random alcohol testing\textsuperscript{105} before flight or following an accident.\textsuperscript{106} Pursuant to section (c), however, a pilot must submit to testing by local law enforcement officials if state or local law so requires.\textsuperscript{107} Forty-four states currently mandate that a pilot submit to an alcohol test. The catch-all clause in the federal regulation grants the FAA access to the results of any alcohol test that is performed within four hours of an accident.\textsuperscript{108}

(e) Any test information obtained by the Administrator . . . may be evaluated in determining a person's qualifications for any airman certificate or possible violations of this chapter and may be used as evidence in any legal proceeding under section 602, 609, or 901 of the Federal Aviation Act of 1958.

\textit{Id.}


\textsuperscript{105} For a discussion of the move for random alcohol testing, see infra notes 203-213 and accompanying text.

\textsuperscript{106} In December 1989, the FAA gained authority to conduct urinalysis screening for five drugs after any accident. The Administration cannot require alcohol testing under that rule. Delta ALPA Central Air Safety Comm., \textit{FAA Required Drug Testing}, THE SAFETY MIND, 3d Q. 1990, at 14. Additionally, the NTSB cannot require submission to an alcohol test; such a test, however, is available as part of an accident investigation on a purely voluntary basis. Delta ALPA Central Air Safety Comm., Voluntary NTSB v. FAA Required Drug Testing, THE SAFETY MIND, 3d Q. 1990, at 15 [hereinafter \textit{Voluntary Testing}].

\textsuperscript{107} 14 C.F.R. § 91.17(c) (1991).

\textsuperscript{108} 14 C.F.R. § 91.17(d) (1991). The Administrator has access to results of tests performed by local officials when there is a reasonable belief that the pilot was intoxicated. The section provides:

(d) Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)(1), (a)(2), or (a)(4) of this section, that person shall . . . furnish the Administrator, or authorize any clinic, hospital, doctor, or other person to release to the Administrator, the results of each test taken within 4 hours after acting or attempting to act as a crewmember that indicates the presence of any drugs in the body.

\textit{Id.}

The Anti-Drug Abuse Acts of 1986\textsuperscript{109} and 1988\textsuperscript{110} prohibit an individual from operating a common carrier under the influence of alcohol. Section 343 establishes that a blood alcohol level of .10\% or more creates a presumption that an individual is under the influence.\textsuperscript{111} Aviators and their lawyers complain that beyond section 343, there is "no satisfactory guidance for determining impairment."\textsuperscript{112} In addition, there is no case law on which to rely.\textsuperscript{113}

Constitutional problems exist with the presumptive nature of section 343. Unlike most state DWI laws, which make it illegal to drive a motor vehicle with a BAC higher than .10\%, section 343 shifts the burden of proof from the government and places it on the defendant.\textsuperscript{114} Because similar provisions have been ruled unconstitutional by the courts, a prosecutor may be left trying to prove impairment without reliance on the .10\% of the Fargo incident.\textsuperscript{115} Such was the case in the Northwest Airlines litigation that arose out of the Fargo incident.\textsuperscript{116}

Because of the question of constitutionality, the United States attorney who pursued the conviction of the Northwest flight crew\textsuperscript{117} ignored the presumptive .10\% BAC provision.\textsuperscript{118} She instead chose to argue that the

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\textsuperscript{111} Id. The section states that "an individual with a blood alcohol level of .10 percent or more shall be presumed to be under the influence of alcohol." \textit{Id.}


\textsuperscript{113} Id.

\textsuperscript{114} Id. Peter Wold, attorney for Captain Norman Prouse in the Northwest litigation which arose out of the Fargo incident, stated: "The mandatory presumptive inference [of the law] is on its face unconstitutional. It is quite different from language in state motor vehicle laws which state that it is against the law to drive with a blood alcohol level above a certain percentage." \textit{Id.} at 2.

\textsuperscript{115} Id. at 1-2.

\textsuperscript{116} Id.

\textsuperscript{117} See supra notes 1-16 and accompanying text for discussion of the Northwest incident.

\textsuperscript{118} See Jury Finding, supra note 112, at 2.
crewmembers were "under the influence of alcohol, thus impaired, at the time they flew." 119 While the jury believed her contention that the pilots' mental capacities and motor abilities were impaired, the United States attorney commented that the case was difficult to prove based on the law. 120 Litigation of the Northwest case underscores the inefficacy of current maximum allowable BAC levels found in the Code and the FARs. Both the prosecutor and a crewmember's defense attorney agreed that Congress must incorporate a much lower maximum limit into its laws. 121

D. MEDICAL CERTIFICATION STANDARDS

Prior to legally flying an aircraft, an individual must obtain a pilot's license. Before an individual can acquire that license, he must comply with a number of medical requirements and receive an actual medical certificate. Medical certification standards appear in the FARs. 122 Clinical diagnosis or a proven medical history of alcoholism 123 automatically disqualifies an individual from satisfying the medical certification standards. 124 The Administration reluctantly allows the Federal Air Surgeon to exempt an individual from the rule if he can establish evidence of recovery or abstinence for a period of at least two years. 125

119 Id.
120 Id.
121 Id.
123 "Alcoholism" means something more than over-consumption. It refers to a "pattern of use in which a person's intake of alcohol has been great enough to damage his physical health or personal or social functioning or where the individual has become dependent upon alcohol." J. Scott Hamilton, Medical Certification of Flight Crews: Standards and Procedures, 13 Transp. L.J. 103, 110 n.57 (1983) (citation omitted).
125 Id. The FAA amended its complete disqualification rule to bring the regulation in accord with the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970. 42 U.S.C. § 4561(c)(1)(1988). The Act prevents the denial of employment or professional or other licenses...
The established procedure incorporates a system of checks which ensures that pilots with medical problems do not slip by the examiner. For example, airline transport pilots face re-certification every six months. Consequently, an alcoholic pilot who manages to get through the system once must face the same hurdle repeatedly. While a pilot who fears that a legitimate, truthful response could jeopardize his career might be motivated to understate, omit, or even lie when answering the questions on the application form, stiff penalties should deter such individuals from falsifying information on their original and subsequent applications. Pursuant to the FAR’s, a fraudulent response leads to suspension or revocation of any certificates held by the individual. Moreover, under the criminal code, felony conviction is possible.

E. Availability of Driver Register Information

The National Driver Register (NDR or Register), maintained by the DOT, accumulates the names of individuals whose driver’s license or application for a driver’s license has been denied, suspended or revoked due to intoxication or other traffic offenses. As early as the mid-seventies, a General Accounting Office (GAO) report urged Congress to open the Register to the FAA to assist in its

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126 Hamilton, supra note 123, at 125.
127 Id.
129 18 U.S.C. § 1001 (1988). According to the Federal Criminal Code: Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document, knowing the same to contain any false, fictitious or fraudulent statement, shall be fined not more than $10,000 or imprisoned not more than 5 years, or both.
130 FAA Requirements Needed, supra note 20, at ii, 8.
certification and licensing functions. On August 1, 1990, the FAA published its version of the rule, which became effective November 29, 1990.

The rule permits the FAA to deny a medical certificate and suspend or revoke a pilot's license if the individual has had two or more alcohol-related convictions or state motor vehicle administrative actions within a three year period. Pilots involved in any drug or alcohol-related driving incident must report the action to the Civil Aviation Security Division of the FAA within sixty days of its occurrence. The Administration added an express con-

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131 Id. The GAO entitled the 1976 report "The Federal Aviation Administration Should Do More to Detect Civilian Pilots Having Medical Problems." Id.


(c) For the purposes of paragraphs (d) and (e) of this section, a motor vehicle action means-

(1) A conviction after November 29, 1990, for the violation of any Federal or state statute relating to the operation of a motor vehicle while intoxicated by alcohol or a drug, while impaired by alcohol or a drug, or while under the influence of alcohol or a drug;

(2) The cancellation, suspension, or revocation of a license to operate a motor vehicle by a state after November 29, 1990 for a cause related to the operation of a motor vehicle while intoxicated . . . .

(3) The denial after November 29, 1990, of an application for license to operate a motor vehicle by a state for a cause related to the operation of a motor vehicle while intoxicated . . . .

(d) A motor vehicle action occurring within 3 years of previous motor vehicle action is grounds for—

(1) Denial of an application for any certificate or rating issued under this part for a period of up to 1 year after the date of the last motor vehicle action; or

(2) Suspension or revocation of any certificate or rating issued under this part.

Id.

134 Id. The regulations also state:

(e) Each person holding a certificate issued under this part shall provide a written report of each motor vehicle action to [the] Civil Aviation Security Division . . . not later than 60 days after the motor vehicle action. . . .

(f) Failure to comply with paragraph (e) of this section is grounds for—

(1) Denial of an application for any certificate or rating issued under this part for a period of up to 1 year after the date of the motor vehicle action; or

(2) Suspension or revocation of any certificate or rating issued under this part.
sent clause to the medical certification requirements which authorizes the FAA's access to the personal information found in the NDR.\textsuperscript{135} A revised "Application for Airman Medical Certificate" accompanies the new regulations and clarifies the serious legal repercussions for intentionally providing incorrect information.\textsuperscript{136}

The rule is particularly noteworthy in that it enlarges the FAA's power by extending the Administration's authority beyond basic "flight operations' and any legitimate interest it has in insuring [a pilot's] physical fitness to operate an aircraft."\textsuperscript{137} Prior to NDR access, the FAA could deny a pilot an operating license because of prior DWI offenses in only one limited situation: when the pilot failed to disclose that fact on his medical certification form.\textsuperscript{138} That approach eventually failed on constitutional due process grounds in judicial proceedings.\textsuperscript{139} The "convictions" questions on the original certification form fell under the heading "medical history," and the courts consistently ruled a pilot could reasonably infer that such questions were immaterial with respect to ascertaining his medical fitness.\textsuperscript{140} Consequently, the previous method of regulation was deemed ineffective, motivating

\textsuperscript{135} 14 C.F.R. § 67.3 (1991). The new provision reads:
At the time of application for a certificate issued under this part, each person who applies for a medical certificate shall execute an express consent form authorizing the Administrator . . . to transmit information contained in the National Driver Register about the person to the Administrator. The Administrator shall make information received from the National Driver Register, if any, available on request to the person for review and written comment.

\textsuperscript{136} \textit{Id.}

\textsuperscript{137} Alan Armstrong, \textit{FAA Decrees Driving Records Germane}, LAWYER-PILOTS B. Ass'n J., Fall 1990, at 28.

\textsuperscript{138} \textit{Id.}

\textsuperscript{139} \textit{Id.}

\textsuperscript{140} \textit{Id.} at 28-29.
the current and unambiguous NDR rule.\textsuperscript{141}

Various rules require an airline pilot to disclose whether he has had any DWI's on his annual and semi-annual medical forms.\textsuperscript{142} FAA Administrator James B. Busey suggested that a "yes" answer would merely "lead to a medical decision one way or the other."\textsuperscript{143} Answering "no" — if later proved false by checking the Register — could lead to action against the pilot.\textsuperscript{144} While Busey's statement implied that the medical decision would be discretionary, members in the industry fear that, in reality, the standard is strict: two DWI offenses within three years disqualifies an individual from piloting an airplane.\textsuperscript{145}

The Administration began enforcing the new regulation in November 1990.\textsuperscript{146} A federal grand jury in Pittsburgh indicted several pilots for falsifying information on airman medical certificate applications.\textsuperscript{147} A cross check with information in the NDR brought to light the pilots' misreporting.\textsuperscript{148}

1. FAA Justification

Since the regulation is a new addition to the rules, assessment of its practical impact is not yet possible. Nevertheless, the FAA has placed its full weight behind the rule's ability to target individuals who endanger air

\textsuperscript{141} Id. The FAA learned that it needed federally authorized access after the loss of many cases prosecuted by the DOJ before Judge George C. Carr in Tampa, Florida. Thus, it "has set about to 'legislate' future victories after learning from the shortcomings of its previous regulations." \textit{Id.} at 29.

\textsuperscript{142} \textit{Convicted Drunken Drivers May Lose Their Aviation Medical Certificates, AIR SAFETY Wk.}, Apr. 2, 1990, at 3.

\textsuperscript{143} Id.

\textsuperscript{144} Id. The action could feasibly include criminal penalties pursuant to 18 U.S.C. §§ 1001, 3571 (1990). For an elaboration on possible penalties, see \textit{supra} note 124.

\textsuperscript{145} \textit{But cf. Five Pilots, supra} note 136, at 1 ("A conviction doesn't automatically bar a pilot from flying but it does open the matter to further inquiry about possible substance abuse.").

\textsuperscript{146} Id.

\textsuperscript{147} Id.

\textsuperscript{148} Id.
Administrator Busey applauded the latest regulation by claiming "[it] gives us the tool we need to deal with pilots who drink and drive. This kind of behavior indicates an attitude that we believe is not compatible with safe flying." The Administration maintains that access to the Register enhances safety by removing pilots who are unwilling or unable to comply with safety regulations.

Government officials maintain that applicants simply were not truthfully answering questions regarding alcohol-related actions. Use of information in the Register may also help airline companies avoid liability should an intoxicated pilot cause an accident. Senator J. James Exxon raised the issue in the context of railroad executives' ignorance of their employees' driving records:

I asked the railroad executives . . . as to whether or not they did any inquiry at all with regard to an engineer's public driving record. I asked them whether or not such information is public.

It was quite obvious . . . that none of these railroad executives fully comprehended what I was asking them. They didn't know that information was available to them.

I have checked and found that it is available to them if they want it. However, they may have to pay for it. It is obvious to me, whether it's a pilot or a railroad engineer, that if I were going to hire new employees, one of the first things I would want to do is determine what kind of record that individual has compiled. I would want to know whether that individual had ever been arrested under the DWI statutes of any state.

Evidently, that has not been done. I would suspect that sooner or later some sharp trial attorney, in bringing about some kind of claim, is going to ask on the witness stand of a top [airline] executive, "before you hired this man, did you even bother to check what his driver's record was"? [sic] If the answer comes back, "no, we didn't bother with it," I would think that trial attorney would make a pretty good case.


Lloyd B. Ericsson, DWI/DWI Pilots, LAWYER-PILOTS B. Ass'n J., Summer 1990, at 17. The press release which accompanies the new access provision maintained that "the new regulations necessary to ensure aviation safety by removing from navigable airspace pilots who demonstrate an unwillingness or inability to comply with state or local drunk driving law." Id.
hol-related offenses under prior regulations.\textsuperscript{152} They tested the accuracy of responses to DWI questions in the medical histories submitted by license applicants in one state by comparing the answers provided by the applicants to state motor vehicle records. Of these applicants, seventy-two had prior DWI convictions. Sixty-nine of the individuals failed to disclose their conviction(s) on the application.\textsuperscript{153} More strikingly, in 1987, 10,300 pilots committed DWI offenses. Of those convicted, over 7,000 neglected to reveal a conviction to the FAA, and more than 1,000 of those individuals flew commercial aircraft.\textsuperscript{154}

The linchpin in the government's position is that by identifying those pilots who have driven drunk, the FAA will be able to screen out the "bad" pilots who have drinking problems. By implication, the government contends that two DWI's indicates an individual is an alcoholic. Yet the FAA has not published data proving a correlation between individuals with a DWI offense and alcoholism, or a correlation between a DWI offense and accidents or safety violations by a pilot. In fact, the FAA responded that it made no effort to hide the lack of evidence for its position to the criticism launched by opponents of the system. Instead, it simply noted that some of those pilots killed in general aviation accidents had a relatively high BAC. The Administration idealistically concluded that even if the rule saved only a few lives, its promulgation was worthwhile.\textsuperscript{155}

\textsuperscript{152} FAA Requirements Needed, supra note 20, at 6; Masters, supra note 21, at xv.

\textsuperscript{153} FAA Requirements Needed, supra note 20, at 6. Some individuals who withheld information regarding their driving record had numerous offenses. For example, one pilot who claimed he had no traffic convictions actually had five in a two year period. By failing to disclose those convictions, the individual obtained a medical certificate, and later, a license. Id. at 6-7.

The FAA could have obtained this information via state driving conviction records, but the workload involved in contacting individual state motor vehicle departments was too ominous. Use of the Register will allegedly decrease the burden. Id. at 8.

\textsuperscript{154} Weiner, Rules on Drinking, supra note 11, at 24.

\textsuperscript{155} Cook, supra note 68, at 2. The FAA specifically responded that it did not:
2. Pilot Opposition

Members of the Air Line Pilots Association (ALPA), the Allied Pilots Association (APA), and the Aircraft Owners and Pilot Association (AOPA) lodge three primary complaints against FAA access to the NDR. While each group certainly supports the goal of an alcohol-free pilot and crew, they contend that the means chosen by the FAA to achieve that goal interfere excessively with the pilot's privacy expectations and rights. ALPA characterized the rule as "poorly conceived, unnecessarily invasive, and . . . a reversion back to the discredited punitive approach to substance abuse."

First, the unions complain that no correlation exists between drunk driving convictions and flying a plane while intoxicated. The FAA rationale which relies on a potential for saving lives does not satisfy opponents of the rule. Pilot groups and twenty-six commentators on the Notice of Proposed Rulemaking (NPRM) insist that no attempt to obscure the lack of evidence correlating alcohol- or drug-related motor vehicle accidents with substance abuse-related accidents or incidents while operating an aircraft . . . The FAA notes, however, that from 1978 to 1987, 6 percent of general aviation pilots killed in aviation accidents had a blood-alcohol level of .04 or more. During that same period, 11,213 people died in general aviation accidents. If the rule were to result in the saving of a few lives, the potential benefits would exceed its potential cost.

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Ind. The ALPA represents approximately 39,000 professional pilots employed by 47 different airlines. Dealing with Drugs, supra note 19, at 61.
158 The AOPA represents general aviation pilots. Id.
159 Armstrong, supra note 137, at 28. Alan Armstrong, Chairman of the NTSB Bar Association Committee on Legislative and Regulatory Activity, criticized the unions for being lackadaisical in their protests. He stated, "[r]ecognizing the aviation community’s reluctance to combat these abuses by the Agency, the rest of us must learn to live with the regulations contained in the [NDR] Rule.” Id.
161 Cook, supra note 68, at 1.
162 Id.
163 Id. at 2.
Knowing When To Say When

In 1992, the Knox County Board of Appeals determined that a nexus exists between the actions of pilots on the ground and their actions in the air. Members of the industry explain that there are pilots who do drink heavily to whom the rule against mixing alcohol and flight is "inviolable." In fact, even if the critics concede that DWI convictions on the ground prove that the pilot has an alcohol problem, the proposition fails to indicate a connection with his or her flight performance. The pilots' groups also emphasize that "[t]he new rule . . . misses . . . the pilot who falls off the curb while walking away from the tavern or who gets quietly drunk at home. That behavior, while equally showing the potential for an alcohol problem, is not illegal." Should no actual correlation exist, little reason appears to justify the expense of the new program and the obvious invasion of privacy.

Second, the pilots' associations believe the express consent provision extends beyond the scope of authority permitted by NDR legislation. One commentator on the NPRM called the FAA's express consent requirement "a deliberate and knowing act of administrative extortion," void of statutory authority. Most particularly, the aviation community believes that it is inappropriate for the FAA to refuse to issue a medical certificate simply because a person will not provide the requisite consent. The FAA concedes that access to the NDR via consent violates a pilot's privacy, but it maintains the invasion is neither large

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164 Id.
165 Ericsson, supra note 151, at 17.
166 Id.
167 Id. The Senate proposes to eliminate that problem through random drug testing. For a discussion of random drug testing, see infra notes 200-211.
168 Cook, supra note 68, at 2. The FAA disagreed:

[T]he statute granting the FAA authority to receive NDR information tied the use of the information specifically to the medical certification process. The statute provides that the information is to be used "to verify information required to be reported to the Administrator by an airman applying for an airman medical certificate and to evaluate whether the airman meets the minimum standards prescribed by the Administrator to be issued an airman medical certificate."

Id.
nor unjustified.\textsuperscript{169}

Third, the unions perceive the new rule as a dangerous step back to the days when commercial carriers simply discharged pilots with alcohol problems rather than offering them rehabilitation. The ALPA position insists the proper method to deal with aviation alcoholism is the HIMS program.\textsuperscript{170} The organization claims that the FAA's previous attitude regarding alcohol use by pilots encouraged individuals to disclose problems in order to receive treatment in industry-supported programs, often saving their careers and their lives. Now, however, the group fears that the FAA has "returned to the ignorance that brought us Prohibition."\textsuperscript{171} While the FAA at one time declared that an alcoholic suffers from a medical condition that can be treated, the Administration may have disregarded its work in the medical field by announcing that "the primary mission of the FAA is aviation safety and the identification of associated safety problems."\textsuperscript{172}

3. Rehabilitation Program Supplanted

FAA access to the National Driver Register may thwart industry efforts to rehabilitate pilots with alcohol problems.\textsuperscript{173} Ideally, the recent regulations could simply provide information to the FAA. The Administration could use its knowledge of possible alcoholism among original applicants and pilots to conduct further investigation of the relevant medical history. Simultaneously, the FAA could encourage entry into the HIMS program to the extent necessary.

Instead, the FAA's current position ignores the medical facet of alcoholism. Rather than providing the information gained from the Register to the medical personnel

\textsuperscript{169} Id.
\textsuperscript{170} Id. at 1-2. For a discussion of the HIMS program, see supra notes 37-39, 161-68 and accompanying text.
\textsuperscript{171} Masters, supra note 136, at xv.
\textsuperscript{172} Id.
\textsuperscript{173} Id.
KNOWING WHEN TO SAY WHEN

who make decisions regarding the pilot's fitness and authorize medical certification, the information now goes directly to the Civil Aviation Security Division (CASD).¹⁷⁴ The FAA "point[ed] out that medical examination . . . after a DWI/DUI would yield little information in the hands of aviation medical examiner physicians."¹⁷⁵ Thus, the CASD, a group of non-physicians, must review medical records of targeted pilots. FAA officials have failed to explain what they hope this review will accomplish or why a layman will make a better determination of a pilot's medical condition than a doctor.¹⁷⁶

The HIMS rehabilitation treatment programs enjoy a success rate of over ninety percent.¹⁷⁷ Every major airline provides and funds a program for its personnel.¹⁷⁸ A pilot who completes rehabilitation and passes a series of psychiatric tests loses no benefits or seniority and may return to work.¹⁷⁹ Close post-rehabilitation supervision of the pilot by doctors, another pilot, a counselor, and an airline executive motivates the individual to continue abstaining and alleviates the fear that safety will be jeopardized should a relapse occur. The supervision continues for two years.¹⁸⁰ The airline industry will have to battle to maintain a high level of self-disclosure by pilots in light of the FAA's new approach.

Perhaps the FAA's access to the NDR and the tougher penalties focus not on commercial pilots but on general aviators who do not have the built-in safety feature of an entire company checking their behavior. The HIMS rehabilitation effort is an industry phenomenon; it does not

¹⁷⁴ Id.
¹⁷⁵ Id. at xvi.
¹⁷⁶ Id.
¹⁷⁷ Drunken Flying, supra note 25, at 6.
¹⁷⁸ On average, rehabilitation costs an airline approximately $17,000 per person. Id. For many years, Northwest Airlines was a conspicuous exception since it refused to provide assistance to pilots with alcohol problems. The airline implemented its treatment effort in 1988. Prior to providing rehabilitation, those pilots displaying alcohol problems were simply grounded for two years. Id.
¹⁷⁹ Id.
¹⁸⁰ Id.
reach the weekend and evening pilot. Therefore, the FAA may simply have chosen to deal with the problem across-the-board, conceiving that every little bit helps. To that extent, the industry, from executives to pilots, should continue vigorously pursuing rehabilitation of pilots with drinking problems. Forthcoming data from the Register which reveal DWI offenses and possible alcohol abuse may indicate that many more pilots will need rehabilitation programs. At the same time, the FAA may prevent those general aviators from flying after accumulating five DWI convictions.

IV. PROPOSED FEDERAL REGULATION: MANDATORY ALCOHOL TESTING

At the present time, no federal rule or other piece of federal legislation requires alcohol testing of pilots without cause to believe there is impairment. An examination of current and potential regulations, as well as an assessment of their benefits and shortcomings, follows.

A. NTSB VOLUNTARY POST-ACCIDENT DRUG AND ALCOHOL TESTING

An NTSB policy initiated in July 1987 requests that any pilot involved in an aviation accident submit to a drug or alcohol test.\(^\text{181}\) Basically, the NTSB asks the pilot to provide a blood and urine sample on a purely voluntary basis.\(^\text{182}\) As the investigation progresses, the NTSB makes the determination as to whether to proceed with lab analysis of the sample or to dispose of it.\(^\text{183}\) Upon completion of the lab work, the Board releases the results to the public "in factual form."\(^\text{184}\) Because the NTSB has not assured the ALPA that it will use high quality lab standards and other safeguarding procedures, the pilots' union ad-

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\(^{182}\) *Id.*

\(^{183}\) *Id.*

\(^{184}\) *Id.*
vises pilots to refrain from providing any samples.\textsuperscript{185} If proper quality control procedures are not used in assaying samples, the results may be erroneous.

After a recent USAir incident in which an aircraft skidded off the runway into water, the pilot disappeared for more than fourteen hours before appearing for questioning by the FAA, NTSB or USAir officials. The pilot's disappearance illustrates the inefficacy of the NTSB rule.\textsuperscript{186} The policy simply provides no impetus for a pilot who may have been under the influence to come forward; it seems only to provide an avenue for a pilot who had not been under the influence to clear himself of any impression that he may have been intoxicated.

B. FAA Mandated Drug Testing

The FAA mandated drug testing in December 1989 for commercial airline pilots and other safety-sensitive transportation workers.\textsuperscript{187} The FAA regulation requires every commercial carrier and self-employed commercial pilot to file a plan providing for drug testing in six separate contexts: pre-employment, random, periodic, post-accident, reasonable cause, and return to duty.\textsuperscript{188} Ultimately, the responsibility rests with employers to properly implement the Administration's program. Unlike the NTSB's voluntary testing program, if a pilot receives a request to submit to an FAA-initiated drug test, he must comply.\textsuperscript{189} The FAA designed the rule to detect five specific drugs: marijuana, cocaine, PCP, opiates, and amphetamines.\textsuperscript{190}

\textsuperscript{185} \textit{Voluntary Testing, supra} note 106 at 15. The ALPA's concern appears justified. The NTSB does not comply with guidelines for testing issued by the Department of Health and Human Services. Consequently, the union feels that "[u]ntil these matters can be straightened out, it would be best to suggest declining the opportunity to provide a sample to the NTSB." \textit{Id.}


\textsuperscript{187} \textit{See FAA Required Drug Testing, supra} note 106, at 14.

\textsuperscript{188} \textit{See} Alan Armstrong, \textit{Drug Testing is on the Way}, \textsc{Lawyer-Pilots B. Ass'n J.}, Winter 1990, at 16.

\textsuperscript{189} \textit{Voluntary Testing, supra} note 106, at 15.

\textsuperscript{190} Armstrong, \textit{supra} note 188, at 17.
rule, however, does not currently target alcohol.\textsuperscript{191}

While serious challenges to the FAA's testing and laboratory procedures have not been lodged, the rule is not without many shortcomings.\textsuperscript{192} Initially, insofar as general aviation drug abuse is concerned, the rule does not apply. Interestingly, the FAA most often provides statistics of general aviation accidents to emphasize the need for more stringent alcohol control, and yet this particular rule essentially overlooks that segment of the aviation community.

Self-employed commercial pilots\textsuperscript{193} present another problem with the FAA's rule.\textsuperscript{194} Those individuals are supposed to hire their own doctors to supervise the testing. They are then supposed to surprise themselves with unannounced drug tests and counsel themselves in the event they discover they have a drug problem.\textsuperscript{195} The ineffectiveness of self-enforced testing is obvious. Both the mechanics of the testing procedure and enforcement provide real questions as to this plan's practical application in any arena outside of commercial carriers.

C. NPRM Issued on Alcohol

The FAA's drug testing rule is noteworthy because the Administration could amend the rule to include testing for alcohol. Alternatively, the FAA could design a specific alcohol testing regulation based upon the drug provisions. The FAA currently limits testing for alcohol in pilots to situations in which reasonable cause exists to believe the pilot was intoxicated.\textsuperscript{196} Indications suggest

\textsuperscript{191} Id.

\textsuperscript{192} Voluntary Testing, supra note 106, at 15. "The required FAA test is carried out at a company supervised collection facility, shipped, and analyzed by a certified lab." Id.

\textsuperscript{193} Id.

\textsuperscript{194} Id.

\textsuperscript{195} Id.

\textsuperscript{196} Modell & Mountz, supra note 20, at 459.
that this limitation will change in the near future. An NPRM, issued by the DOT in December 1989, proposes to include alcohol within the list of substances for which the aviation community must test. Sources in the Drug Abatement Branch of the Administration claim that alcohol testing is now "inevitable."

D. CONGRESSIONAL INITIATIVES

In the congressional arena, Senators John C. Danforth and Ernest F. Hollings lead the crusade for an alcohol testing program. For the past five years, both senators have pushed legislation mandating four forms of alcohol testing: random, post-accident, periodic, and pre-employment. The Senate passed such legislation nine times. The House of Representatives, however, has refused to put its stamp of approval on any legislation requiring alcohol testing. The legislation has again passed through the Senate and currently sits before the House Public Works Committee. In the aftermath of the Fargo incident, the bills have gained momentum in the House.

In response to criticism in the Senate, the House pro-

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197 See Armstrong, supra note 188, at 17.
198 Id.
199 Id.
200 Senator Hollings urged the Congress that "we cannot leave the fate of these important regulations to the whim of some DOT official. The only way to ensure the safety of the travelling public is to mandate legislatively . . . random drug and alcohol testing. . . ." 135 Cong. Rec. S15,403-01 (daily ed. Nov. 9, 1989) (statement of Sen. Hollings).
202 Id.
203 Id. Senator Danforth complained:

[T]he Senate went into conference with the House on three separate bills containing drug and alcohol testing provisions. We were unable to reach agreement on drug and alcohol testing because the two House committees with responsibility for rail, aviation, and motor safety once again refuse to deal with us on the subject.

Id.
204 Weiner, Rules on Drinking, supra note 11, at 24.
205 Id.
posed legislation that would commit federal funding to research programs designed to determine and detect the "safe" level of alcohol in aviators and the pervasiveness of alcoholism in the aviation industry. The House bill does not contain a testing provision. Two possible interpretations of the House's recent action exist. Initially, one might conclude that the House is making genuine progress with regard to the need for legislation dealing with alcohol use by pilots which could eventually result in adoption of testing requirements. On the other hand, the House may simply be forestalling public and Senate pressure by taking a mere symbolic action. While the House's efforts appear progressive, the real intention may be to tie up productive action in the red tape of inconclusive research. Ultimately, even assuming the House fosters positive intentions, the result of this legislation might still be frustrated with problems of data collection and analysis.

The proposed Senate bills would provide for testing for the use of alcohol by the operators of aircraft and for other purposes. Specifically, the Danforth-Hollings proposals require airline companies to conduct pre-employment testing of pilots and crewmen, periodic testing during their employment tenure, random testing, and post-accident testing. Pilots would be subjected to

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206 H.R. 4848, 101st Cong., 2d Sess. (1990). The proposed Aviation Medicine Program commits $10 million dollars in 1991 and $10 million dollars in 1992 for drug and alcohol testing research. Id. Representative Tom Lewis explained that the research program would develop a scientifically valid maximum allowable level of alcohol in a pilot's bloodstream that does not hinder flight performance. 136 Cong. Rec. E3,587-03 (daily ed. Oct. 26, 1990) (statement of Rep. Lewis). In addition, the research should attempt to establish the level of alcohol abuse pervading the industry. The bill requires the FAA to initiate this program and to present a report to Congress in 1992 on its progress. Id.


tests for use of alcohol at least once every six months; individuals abusing alcohol could have an application for a certificate denied, or the FAA could suspend or revoke a certificate. The proposed Act forbids an individual who has used alcohol in violation of the law from piloting an aircraft unless the individual completes the rehabilitation program prescribed by the bill. Airlines would be required to provide a rehabilitation program which, at the very least, identifies the person and the problem while offering treatment to the troubled pilot.

E. Justification for Testing

Proponents of mandatory and random testing for alcohol use, including the DOT and major airlines, justify their position on a number of preventive and punitive grounds. The legislation intends not only to catch wrong-doers before a tragedy occurs, but it also aims at deterring individuals from drinking before or during flight. A short list of the often-provided reasons for testing includes: catching abusers, prevention of abuse, increasing worker productivity, increasing profit, decreasing

209 Id. Section 613(a)(2) and (3) compels the FAA to:
(A) require that any individual referred to in paragraph (1) of this subsection shall be subject to testing for the use, without lawful authorization, of alcohol and controlled substances not less often than once every six months;
(B) require the disqualification, dismissal or revocation of any certificate relating to air transportation issued to such an individual . . . .

Id. 210 Id. Section 613(b)(2) would prevent an individual from flying an aircraft "unless such individual has completed a program of rehabilitation" as defined by a later section. Id.

211 Id. Pursuant to section 613(c)(2), each airline would be required to "establish and maintain a rehabilitation program which at a minimum provides for the identification and opportunity for treatment of [pilots] . . . in need of assistance in resolving problems with the use of alcohol or controlled substances." Id. Major airlines already offer successful treatment programs under the HIMS model. For a discussion of the HIMS program, see supra notes 105-108 and accompanying text.

absenteeism, decreasing bad decisions, protection of the abuser's health, and enhancing public perception of the industry.\textsuperscript{213}

Although proposed legislation provides for four types of testing, random testing sparks the most controversy. Those individuals advocating stringent random procedures maintain that such procedures promise the only practical method of preventing alcohol use from being a contributing factor in an aviation accident.\textsuperscript{214} To support the contention that random testing works, members of the Senate offer empirical evidence in comparable safety-sensitive industries.\textsuperscript{215} For instance, the Coast Guard began random testing in 1983. It reports a significant drop in the number of individuals testing positive for substance abuse.\textsuperscript{216} The Department of Defense also randomly tests its employees, and its positive test results decreased from 27\% in 1980 to 4.8\% in 1988.\textsuperscript{217}

\section*{F. Opposition to Testing}

It is difficult to find a group categorically opposed to all forms of alcohol testing. The major airlines and air pilot associations favor testing prior to employment, when probable cause exists, and when the pilot attends rehabilitation.\textsuperscript{218} Random testing, however, remains reprehensible to many members of the aviation community.

\textsuperscript{213} \textit{Dealing with Drugs, supra} note 19, at 86-87. Stone and Masters point out that the justifications listed in their report are particularly well-suited to the reasoning behind screening or random testing.

\textsuperscript{214} 135 \textit{Cong. Rec.} S15,403-01 (daily ed. Nov. 9, 1989) (statement of Sen. Hollings). Senator Hollings is "convinced that random testing is the only practical means or preventing ... alcohol use from being a factor in ... airline accidents." \textit{Id.}

\textsuperscript{215} \textit{Id.} (statement of Sen. Danforth).

\textsuperscript{216} \textit{Id.} In 1988, the Coast Guard recorded a drop from 10.3\% to 2.8\% of its employees testing positive.

\textsuperscript{217} \textit{Id.}

\textsuperscript{218} \textit{Airline and Rail Service Protection Act: Hearings on S.356 and S.362 Before the Senate Comm. on Commerce, Science, and Transportation, 100th Cong., 1st Sess. 76} (1987) (statement of Richard Stone, Executive Chairman, Aeromedical Research, Air Line Pilots Association). "[L]et me tell you that we are in agreement with the committee that there should be some form of testing in the industry." \textit{Id.}
The ALPA has established the most cogent opposition to random testing of its pilots.\textsuperscript{219} The organization provides five reasons for its position. First, the ALPA maintains that such testing is inefficient.\textsuperscript{220} The pilots contend that since random testing only looks at an individual one or two times annually, such testing is unnecessary because the industry’s HIMS alcohol program monitors individuals twenty-four hours a day, seven days a week.\textsuperscript{221} Second, the unreliability of the tests threatens innocent pilots whose careers may potentially be destroyed by a false positive.\textsuperscript{222} Third, employers might use random testing to terminate those employees whom they consider problematic.\textsuperscript{223} Fourth, financially strapped airlines may use random testing not as merely one element of a comprehensive prevention program but as the entire sum of it.\textsuperscript{224} Under that scenario, rehabilitation would become a program of the past.

Finally, ALPA insists that random testing violates the Fourth Amendment of the Constitution.\textsuperscript{225} Serious questions regarding the constitutionality of the FAA’s random drug testing program arose soon after its initiation. Random testing, however, survived claims that it violates the Fourth and Fourteenth Amendments. The Ninth Circuit upheld the FAA’s regulation after balancing workers’ personal rights and air safety in six consolidated cases.\textsuperscript{226} Specifically, the Ninth Circuit conceded the intrusiveness of such testing, particularly when the testing is performed randomly. Nevertheless, the court concluded that the intrusiveness was “insufficient to tip the scale against the [FAA’s] drug testing program.”\textsuperscript{227} The Ninth Circuit held

\begin{footnotes}
\item [219] Id. at 76-77.
\item [220] Id. at 76.
\item [221] Id.
\item [222] Id.
\item [223] Id.
\item [224] Id.
\item [225] Id.
\item [226] Random Testing for Airline Employees is Upheld by Federal Appeals Court, Air Safety Wk., July 16, 1990, at 3.
\item [227] Id.
\end{footnotes}
that the Administration's interest in the promotion of air safety outweighed the aviation workers' Fourth Amendment right to freedom from unreasonable searches and seizures.  

V. CONCLUSION

Although the rules promulgated by the FAA and Congress represent an attempt to prohibit pilots from flying while intoxicated, the aggregate of these rules potentially fail in many respects. They may fail to adequately identify alcohol abusers in commercial and general aviation, fail to authorize airport personnel to prevent an intoxicated pilot from flying, fail to provide a standard by which a court can convict an intoxicated pilot, and fail to motivate a pilot with an alcohol problem to come forward and enter a rehabilitation program.

Those specific shortcomings should be addressed by the FAA and Congress in a comprehensive piece of legislation. Such legislation should delineate the maximum allowable alcohol concentration prior to flight and should expand the time frame between consumption and take-off in general aviation to the number of hours already required by many commercial carriers. Furthermore, Congress and the pilots' associations must reach a compromise regarding alcohol testing, and the government should be sensitive to the problems of self-testing and self-enforcement in general aviation. Finally, air traffic controllers and flight inspectors should be federally authorized to detain an aircraft if its pilot appears intoxicated, otherwise the real danger of mixing alcohol and aviation will not be averted.

The FAA, Congress, airline pilots groups, and the public agree that an alcohol-free cockpit is vital to safe transportation. Rather than promulgating a series of additional, more invasive, and yet potentially ineffective rules, increasing the effectiveness of existing regulations.

\[228\] Id.
presents the best solution to curb the abuse of alcohol by pilots.
APPENDIX

STATES WITH FLYING-WHILE-INTOXICATED STATUTES

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