

<p><b>National Transportation Safety Board</b></p> <p><b>FACTUAL REPORT</b></p> <p><b>AVIATION</b></p>	<p>NTSB Accident/Incident Number</p> <table border="1" style="width: 100%; height: 40px; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> </table>										

**Supplement K Occupant Survival and Injury Information (continued)**

63  For multiple extreme traumatic injuries, check box, and go to next applicable supplement.

**Occupant Injury Coding Chart (Complete for survivors and non survivors as applicable.)**

	A Body Region	B Aspect	C Lesion	D System/Organ	E Severity	F Injury Source	G Source of Data
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							

<p><b>Body Region - A</b></p> <p>01 Head (Skull, scalp, ears)</p> <p>02 Face (Forehead, nose, eyes, mouth)</p> <p>03 Neck (Cervical spine C1-C7)</p> <p>04 Shoulder (Clavicle, scapula, hum.)</p> <p>05 Upper limb (Whole arm)</p> <p>06 Arm (Upper)</p> <p>07 Elbow</p> <p>08 Forearm</p> <p>09 Wrist</p> <p>10 Hand—fingers</p> <p>11 Chest (Anterior and posterior ribs)</p> <p>12 Abdomen (Diaphragm and below)</p> <p>13 Back (Thoracic spine T1-T12)</p> <p>14 Back (Lumbar L1-L5)</p> <p>15 Pelvis—hip</p> <p>16 Lower limb (Whole leg)</p> <p>17 Thigh (Femur)</p> <p>18 Knee</p> <p>19 Leg (Below knee)</p> <p>20 Ankle</p> <p>21 Foot—toes</p> <p>22 Whole body</p> <p>88 Injured, unknown region</p> <p>99 Other</p>	<p>66 Injured as listed unknown</p> <p>99 Other</p> <p><b>Lesion - C</b></p> <p>01 Laceration</p> <p>02 Contusion</p> <p>03 Abrasion</p> <p>04 Fracture</p> <p>05 Concussion</p> <p>06 Avulsion</p> <p>07 Rupture</p> <p>08 Sprain</p> <p>09 Dislocation</p> <p>10 Crush</p> <p>11 Amputation</p> <p>12 Burn</p> <p>13 Fracture and dislocation</p> <p>14 Severance (Transaction)</p> <p>15 Strain</p> <p>16 Detachment (Separation)</p> <p>17 Perforation (Puncture)</p> <p>88 Injured unknown lesion</p> <p>99 Other</p> <p><b>System/Organ - D</b></p> <p>01 Skeletal</p> <p>02 Vertebrae</p> <p>03 Joints</p> <p>04 Digestive</p>	<p>05 Liver</p> <p>06 Nervous System</p> <p>07 Brain</p> <p>08 Spinal cord</p> <p>09 Ears</p> <p>10 Arteries/veins</p> <p>11 Heart</p> <p>12 Spleen</p> <p>13 Urogenital</p> <p>14 Kidneys</p> <p>15 Respiratory</p> <p>16 Eye</p> <p>17 Pulmonary/lungs</p> <p>18 Airway</p> <p>19 Muscles</p> <p>20 Integumentary</p> <p>21 Thyroid (Thyroid or other endocrine gland)</p> <p>88 Injured, unknown system or organ</p> <p>99 Other</p> <p><b>Abbreviated Injury Scale - E</b></p> <p>00 Not injured</p> <p>01 Minor injury</p> <p>02 Moderate injury</p> <p>03 Serious injury (Not life-threatening)</p> <p>04 Severe injury (Life-threatening survival probable)</p> <p>05 Critical injury (Survival uncertain)</p> <p>06 Maximum (untreatable)</p> <p>07 Injured (Unknown severity)</p> <p>88 Unknown if injured</p>	<p><b>Source of Data - G</b></p> <p><b>Official</b></p> <p>01 Autopsy records with or without hospital/medical records</p> <p>02 Hospital/medical records</p> <p>03 Emergency room records</p> <p>04 Private or treating physicians</p> <p><b>Unofficial</b></p> <p>05 Lay coroner</p> <p>06 E.M.S. personnel</p> <p>07 Interviewee</p> <p>08 Police</p> <p>09 Other source</p>
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National Transportation Safety Board

## FACTUAL REPORT AVIATION

NTSB Accident/Incident Number

### Supplement K - Occupant Survival and Injury Information (continued)

#### Injury Source List - F

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>01 Windshield</li> <li>02 Windshield frame</li> <li>03 Window</li> <li>04 Window frame</li> <li>05 Instrument panel</li> <li>06 Side console</li> <li>07 Center console</li> <li>08 Control stick/cyclic stick</li> <li>09 Collective</li> <li>10 Control yoke column</li> <li>11 Throttle quadrant/levers</li> <li>12 Rudder pedals</li> <li>13 Ceiling</li> <li>14 Sidewall</li> <li>15 Floor</li> <li>16 Fuselage framing structure</li> <li>17 Table</li> <li>18 Seat</li> <li>19 Seatback tray</li> <li>20 Restraints—seatbelt/lie-down</li> <li>21 Restraints—shoulder harness</li> <li>22 Unsecured item(s) in cockpit</li> <li>23 Unsecured item(s) in cabin</li> <li>24 Other occupants</li> </ul> | <ul style="list-style-type: none"> <li>25 Ground/runway</li> <li>26 Unsecured seat(s)</li> <li>27 Outside object(s) entering aircraft</li> <li>28 Galley item(s)</li> <li>29 Food/beverage item(s)</li> <li>30 Other interior objects</li> <li>31 Other exterior objects</li> <li>32 Evacuation slide/slide raft</li> <li>33 Escape rope/tape</li> <li>34 Escape inertia device</li> <li>35 Ejected from aircraft</li> <li>36 Propeller/rotor blades</li> <li>37 Exterior aircraft surface</li> <li>38 Engine</li> <li>39 Wheel/brae</li> <li>40 Ground vehicle</li> <li>41 Toxic/noxious/volatile fumes</li> <li>42 Fire/radiant heat</li> <li>43 Flying glass</li> <li>44 Door/hatches</li> <li>45 Acceleration forces</li> <li>46 Exposure</li> <li>47 Glare Shield</li> <li>48 Eyeglasses</li> <li>88 Unknown</li> <li>99 Other</li> </ul> |
|--|--|

#### 74 Death Due To Fire/Smoke

- 1  Yes  
 2  No  
 A Other

#### 75 Death Due To Drowning

- 1  Yes  
 2  No  
 A Other

APPENDIX B

EXCERPTS FROM GENERAL OPERATING AND FLIGHT RULES  
ALCOHOL AND OTHER DRUGS, 14 CFR 91.11

§ 91.11 Liquor and drugs.

(a) No person may act as a crew-member of a civil aircraft—

(1) Within 8 hours after the consumption of any alcoholic beverage;

(2) While under the influence of alcohol; or

(3) While using any drug that affects his faculties in any way contrary to safety.

(b) Except in an emergency, no pilot of a civil aircraft may allow a person who is obviously under the influence of intoxicating liquors or drugs (except a medical patient under proper care) to be carried in that aircraft.

[Amdt. 1-1, 28 FR 6704, June 29, 1963, as amended by Amdt. 91-82, 35 FR 17037, Nov. 8, 1970]

## APPENDIX C

EXCERPTS FROM GENERAL OPERATING AND FLIGHT RULES  
RELATED TO ALCOHOL AND OTHER DRUGS, 14 CFR 91.17

## § 91.17 Alcohol or drugs.

(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.

(b) Except in an emergency, no pilot of a civil aircraft may allow a person who appears to be intoxicated or who demonstrates by manner or physical indications that the individual is under the influence of drugs (except a medical patient under proper care) to be carried in that aircraft.

(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.

(2) 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, upon request by the Administrator, 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 percentage by weight of alcohol in the blood.

(d) Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)(3) of this section, that person

shall, upon request by the Administrator, 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.

(e) Any test information obtained by the Administrator under paragraph (c) or (d) of this section 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.

APPENDIX D

IMPLIED CONSENT PROVISIONS IN FEDERAL AVIATION REGULATIONS RELATED TO  
ALCOHOL AND DRUG TESTING, 14 CFR PARTS 61 AND 63

**§ 61.14 Refusal to submit to a drug test.**

(a) This section applies to—

(1) An employee who performs a function listed in appendix I to part 121 of this chapter for a part 121 certificate holder or a part 135 certificate holder; and

(2) An employee who performs a function listed in appendix I to part 121 of this chapter for an operator as defined in § 135.1(c) of this chapter. An employee of a person conducting operations of foreign civil aircraft navigated within the United States pursuant to part 375 or emergency mail service operations pursuant to Section 405(h) of the Federal Aviation Act of 1958 is excluded from the requirements of this section.

(b) Refusal by the holder of a certificate issued under this part to take a test for a drug specified in appendix I to part 121 of this chapter, when requested by an employer as defined in that appendix or an operator as defined in § 135.1(c) of this chapter, under the circumstances specified in that appendix 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 that refusal; and

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

(Doc. No. 25144, Amdt. 61-81, 53 FR 47066, Nov. 21, 1988, as amended by Amdt. 61-83, 54 FR 15152, Apr. 14, 1989)

**§ 61.16 Refusal to submit to an alcohol test or to furnish test results.**

A refusal to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer in accordance with § 91.11(c) of this chapter, or a refusal to furnish or authorize the release of the test results requested by the Administrator in accordance with § 91.17 (c) or (d) of this chapter, is grounds for—

(a) 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 that refusal; or

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

(Doc. No. 21966, Amdt. 61-76, 51 FR 1229, Jan. 9, 1986, as amended by Amdt. 61-84, 54 FR 24230, Aug. 18, 1989)

**§ 63.12a Refusal to submit to an alcohol test or to furnish test results.**

A refusal to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer in accordance with § 91.11(c) of this chapter, or a refusal to furnish or authorize the release of the test results when requested by the Administrator in accordance with § 91.17 (c) or (d) of this chapter, is grounds for—

(a) 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 that refusal; or

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

(Docket No. 21956, Amdt. 63-24, 51 FR 1229, Jan. 9, 1986, as amended by Amdt. 63-27, 54 FR 24230, Aug. 18, 1989)

**§ 63.12b Refusal to submit to a drug test.**

(a) This section applies to—

(1) An employee who performs a function listed in appendix I to part 121 of this chapter for a part 121 certificate holder or a part 135 certificate holder; and

(2) An employee who performs a function listed in appendix I to part 121 of this chapter for an operator as defined in § 135.1(c) of this chapter. An employee of a person conducting operations of foreign civil aircraft navigated within the United States pursuant to part 375 or emergency mail service operations pursuant to section 405(h) of the Federal Aviation Act of 1958 is excluded from the requirements of this section.

(b) Refusal by the holder of a certificate issued under this part to take a test for a drug specified in appendix I to part 121 of this chapter, when requested by an employer as defined in that appendix or an operator as defined in § 135.1(c) of this chapter, under the circumstances specified in that appendix 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 that refusal; and

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

(Doc. No. 25143, Amdt. 63-25, 53 FR 47066, Nov. 21, 1988; 54 FR 15072, Apr. 14, 1989, as amended by Amdt. 63-26, 54 FR 15152, Apr. 14, 1989)

APPENDIX E

STATUS OF NTSB SAFETY RECOMMENDATIONS RELATED TO  
ALCOHOL AND OTHER DRUGS IN TRANSPORTATION

Safety Recommendation No.: A-84-45  
Date Issued: May 1, 1984  
Recipient: Federal Aviation Administration  
Status: Closed--Unacceptable Action  
Date Closed: September 16, 1985

Subject:

Issue a rule defining the blood alcohol concentration level that constitutes "under the influence" at the lowest possible level consistent with the capability of testing equipment to measure any ingested alcohol.

Brief Narrative of Status Assignment:

The FAA responded to this recommendation on October 9, 1984, and to a Safety Board followup letter dated February 19, 1985 on June 3, 1985. The FAA stated that a 0.04-percent BAC is adequate for identifying persons under the influence of alcohol, accommodates the problem of possible "false positive" BAC readings, and is based on research that shows the impairment threshold for pilot performance to be 0.04 percent. On September 16, 1985, after the FAA published its final rule, the Safety Board classified this recommendation as "Closed--Unacceptable Action." On December 10, 1987, the Safety Board sent another followup letter containing additional information on alcohol impairment in aviation; the FAA did not respond.

Safety Recommendation No.: A-84-46  
Date Issued: May 4, 1984  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Action  
Date Closed: September 16, 1985

Subject:

Issue a rule which establishes implied consent to toxicological testing as a condition of issuance of an airman certificate.

Brief Narrative of Status Assignment:

On October 9, 1984, the FAA responded by referring to a 1981 Notice of Proposed Rulemaking that proposed amending current regulations to require crewmembers to submit to a chemical test of breath for alcohol and to furnish results of alcohol and drug tests to the FAA. Commenters to the NPRM suggested that State and local law enforcement officers be given authority to request tests on behalf of the FAA because they are often the first officials on the scene of an accident. The FAA believed that it would be impractical for FAA inspectors to be equipped and trained to conduct the tests. The Safety Board responded on February 19, 1985, and FAA issued a supplemental NPRM on April 17, 1985, which the FAA included its June 3, 1985, letter to the Safety Board. The supplemental rule proposed that law enforcement organizations be authorized to conduct tests under an implied consent type of provision in the Federal Aviation Regulations. On May 5, 1986, the FAA further responded by providing the Safety Board with a copy of the final rule amending Parts 61, 63, and 91 to require crewmembers to submit to chemical tests for alcohol given by local law enforcement officers under certain conditions. The effective date of the amendment was April 9, 1986. On July 30, 1986, the Safety Board classified this recommendation as "Closed-Acceptable Action."

Safety Recommendation No.: A-84-47  
Date Issued: May 4, 1984  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Action  
Date Closed: February 19, 1985

Subject:

Develop comprehensive educational and classroom materials on the effects of alcohol on airman performance and distribute them to appropriate FAA personnel and to individual pilots through the accident prevention program and through fixed base operators, flying clubs, flight schools, and individual flight instructors.

Brief Narrative of Status Assignment:

On October 9, 1984, the FAA responded by citing and providing FAA publications and education materials that had been disseminated to the aviation public through the accident prevention program and by means of articles in FAA publications. The FAA agreed to develop new materials as information became available and to use the accident prevention program as a distribution medium. The FAA also agreed to emphasize the effects of alcohol on airman performance in meetings with the general flying public through the accident prevention program. Based on this information, the Safety Board classified the recommendation as "Closed-Acceptable Action" on February 19, 1985.

Safety Recommendation No.: A-84-48  
Date Issued: May 4, 1984  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Action  
Date Closed: August 9, 1988

Subject:

Provide to appropriate FAA personnel, particularly Aviation Medical Examiners [AMEs] and Flight Surgeons, and to others within the aviation community, materials to improve their ability to detect airmen with alcohol problems for use in determining fitness for medical certification and in making referrals for counseling.

Brief Narrative of Status Assignment:

On October 9, 1984, the FAA responded by stating that the recommended materials had been provided to AMEs and FAA physicians in the "Guide of Aviation Medical Examiners" and in AME seminars that new AMEs must attend within 12 months of designation and every 5 years thereafter. The Safety Board did not agree that the action satisfied the recommendation and exchanged letters with the FAA until the FAA developed a compendium on the detection of alcoholism. On May 17, 1988, the FAA stated that the compendium was published in the April edition of the Federal Air Surgeon's Bulletin that would be distributed to all aviation medical examiners. The compendium provides AMEs with information on the detection of alcoholism in a medical office diagnostic setting. As a result, the Safety Board classified this recommendation as "Closed--Acceptable Action."

Safety Recommendation No.: A-84-49  
Date Issued: May 4, 1984  
Recipient: Federal Aviation Administration  
Status: Closed--Unacceptable Action  
Date Closed: September 22, 1986

Subject:

Seek legislative authority to use the NDR [National Driver Register] to identify airmen whose driving licenses have been suspended or revoked for alcohol-related offenses.

Brief Narrative of Status Assignment:

The FAA responded to this safety recommendation on October 9, 1984, and on August 11, 1986. The FAA stated that its Office of Civil Aviation Security had authority to request information on individuals from State or local governments when there was an indication that an individual had a substance abuse problem. The FAA also stated that negative experiences had resulted from trying to sustain enforcement actions based on driving records as evidence. The last FAA response on this issue stressed that the Administrator believed that to allocate personnel to such investigations would weaken the medical certification program in general and would not produce the desired result of excluding from flying pilots who abuse alcohol. The Safety Board responded that the intent of the recommendation was not to use information from the NDR solely to deny an airman certificate but rather to use the information in conjunction with required medical examinations to determine if counseling or additional actions are necessary. On September 22, 1986, the Safety Board classified this recommendation as "Closed--Unacceptable Action."

Safety Recommendation No.: A-84-50  
Date Issued: May 4, 1984  
Recipient: Federal Aviation Administration  
Status: Closed--Reconsidered  
Date Closed: July 10, 1986

Subject:

Develop and implement a plan for improved surveillance and enforcement of the requirement for possession of a valid medical certificate for the exercise of airman privileges.

Brief Narrative of Status Assignment:

On October 9, 1984, the FAA provided copies of FAA orders that contain guidance to FAA inspectors on instructions, standards, and procedures for job performance in District Offices. The FAA agreed to issue further guidance to inspectors to increase the surveillance and enforcement actions that inspectors were already required to conduct. On June 3, 1985, the FAA responded that it was developing further guidance for field inspectors and would provide a copy of the guidance within 30 days. On October 29, 1985, the FAA responded that its review of field inspector guidance regarding medical certificate surveillance and enforcement was complete and adequate and that further emphasis would be redundant. On June 9, 1986, the FAA provided the Safety Board with FAA orders on general aviation operations and a general aviation safety audit stating that "FAA's normal surveillance activities do not indicate that a special compliance assessment is necessary at this time." On July 10, 1986, the Safety Board agreed and classified this recommendation as "Closed--Reconsidered."

Safety Recommendation No.: A-84-51  
Date Issued: May 4, 1984  
Recipient: Aircraft Owners and Pilots Administration,  
National Agricultural Aviation Association, and  
National Association of Flight Instructors  
Status: Closed--Acceptable Action  
Date Closed: August 27, 1987

Subject:

Disseminate to your members through articles in periodicals, seminars, workshops, and other avenues, information on the dangers of alcohol use in connection with flying.

Brief Narrative of Status Assignment:

The Aircraft Owners and Pilots Association responded in June 1984 with a commitment to include such information in periodicals and training courses. In July 1987, the National Association of Flight Instructors submitted a copy of the June/July 1987 edition of the NAFI Foundation newsletter that included an article about the Safety Board study. In June 1984, the National Agricultural Aviation Association referred action on the recommendation to its education committee, but took no further action until the Safety Board classified the recommendation as "Closed--Unacceptable Action." The Safety Board subsequently received an NAAA periodical containing information that satisfied the recommendation. As a result, the Safety Board classified this recommendation as "Closed--Acceptable Action."

Safety Recommendation No.: A-88-32  
Date Issued: March 24, 1988  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Alternate Action  
Date Closed: February 19, 1991

Subject:

Require commercial operators to screen pilot applicants to identify convicted abusers of alcohol and other drugs, using driver history records of the State in which the pilot is licensed to drive.

Brief Narrative of Status Assignment:

The Safety Board previously addressed the use of driver history records in conjunction with medical examinations and evaluations in Safety Recommendation A-84-49, issued to the FAA in May 1984 and classified in September 1986 as "Closed--Unacceptable Action" (see summary earlier in this appendix). In December 1987, legislation for airport and airway reauthorization, which included a provision for the FAA to have access to the National Driver Register, was signed into law. Safety Recommendations A-88-32 through -35 were intentionally worded so that commercial operators, rather than the FAA, would be required to screen and review the driving records of pilots and report the results to the FAA for use by the Federal Air Surgeon. In its August 16, 1989, response to the recommendations, the FAA stated that it would rely on the pilots to volunteer information about their alcohol-related offenses; further, the FAA did not specifically refer to the qualifications of the medical review officer handling evaluations of convicted substance abusers. On January 4, 1990, the Safety Board classified A-88-32 through -35 as "Open--Unacceptable Response." In early 1991, the FAA supplied the following documents: (a) final rule, 14 CFR Parts, 61 and 67; Pilots Convicted of Alcohol- or Drug-Related Motor Vehicle Offenses or Subject to State Motor Vehicle Administrative Procedures (dated August 1, 1990; effective November 29, 1990); and (b) a new application form for the Airman Medical Certificate (dated September 1990). Policy statements included in the preamble to the new drug/alcohol rule and the revised application form for the medical certificate met the intent of the safety recommendations. Based on the provisions for the FAA to provide screening for alcohol- and drug-related motor vehicle convictions rather than relying on the commercial operator, as outlined in the recommendations, the Safety Board closed the recommendations on February 19, 1991, classifying them as "Closed--Acceptable Alternate Action."

Safety Recommendation No : A-88-33  
Date Issued: March 24, 1988  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Alternate Action  
Date Closed: February 19, 1991

Subject:

Require commercial operators to review at specified intervals the driver history records of in-service pilots to identify convicted abusers of alcohol and other drugs, using the driver history records of the State in which the pilot is licensed to drive.

Brief Narrative of Status Assignment:

The Safety Board previously addressed the use of driver history records in conjunction with medical examinations and evaluations in Safety Recommendation A-84-49, issued to the FAA in May 1984 and classified in September 1986 as "Closed--Unacceptable Action" (see summary earlier in this appendix). In December 1987, legislation for airport and airway reauthorization, which included a provision for the FAA to have access to the National Driver Register, was signed into law. Safety Recommendations A-88-32 through -35 were intentionally worded so that commercial operators, rather than the FAA, would be required to screen and review the driving records of pilots and report the results to the FAA for use by the Federal Air Surgeon. In its August 16, 1989, response to the recommendations, the FAA stated that it would rely on the pilots to volunteer information about their alcohol-related offenses; further, the FAA did not specifically refer to the qualifications of the medical review officer handling evaluations of convicted substance abusers. On January 4, 1990, the Safety Board classified A-88-32 through -35 as "Open--Unacceptable Response." In early 1991, the FAA supplied the following documents: (a) final rule, 14 CFR Parts 61 and 67; Pilots Convicted of Alcohol- or Drug-Related Motor Vehicle Offenses or Subject to State Motor Vehicle Administrative Procedures (dated August 1, 1990; effective November 29, 1990); and (b) a new application form for the Airman Medical Certificate (dated September 1990). Policy statements included in the preamble to the new drug/alcohol rule and the revised application form for the medical certificate met the intent of the safety recommendations. Based on the provisions for the FAA to provide screening for alcohol- and drug-related motor vehicle convictions rather than relying on the commercial operator, as outlined in the recommendations, the Safety Board closed the recommendations on February 19, 1991, classifying them as "Closed--Acceptable Alternate Action."

Safety Recommendation No.: A-88-34  
Date Issued: March 24, 1988  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Alternate Action  
Date Closed: February 19, 1991

Subject:

Require commercial operators to report to the Federal Aviation Administration those pilots identified as convicted substance abusers for examination and evaluation by the Federal Air Surgeon.

Brief Narrative of Status Assignment:

The Safety Board previously addressed the use of driver history records in conjunction with medical examinations and evaluations in Safety Recommendation A-84-49, issued to the FAA in May 1984 and classified in September 1986 as "Closed--Unacceptable Action" (see summary earlier in this appendix). In December 1987, legislation for airport and airway reauthorization, which included a provision for the FAA to have access to the National Driver Register, was signed into law. Safety Recommendations A-88-32 through -35 were intentionally worded so that commercial operators, rather than the FAA, would be required to screen and review the driving records of pilots and report the results to the FAA for use by the Federal Air Surgeon. In its August 16, 1989, response to the recommendations, the FAA stated that it would rely on the pilots to volunteer information about their alcohol-related offenses; further, the FAA did not specifically refer to the qualifications of the medical review officer handling evaluations of convicted substance abusers. On January 4, 1990, the Safety Board classified A-88-32 through -35 as "Open--Unacceptable Response." In early 1991, the FAA supplied the following documents: (a) final rule, 14 CFR Parts 61 and 67; Pilots Convicted of Alcohol- or Drug-Related Motor Vehicle Offenses or Subject to State Motor Vehicle Administrative Procedures (dated August 1, 1990; effective November 29, 1990); and (b) a new application form for the Airman Medical Certificate (dated September 1990). Policy statements included in the preamble to the new drug/alcohol rule and the revised application form for the medical certificate met the intent of the safety recommendations. Based on the provisions for the FAA to provide screening for alcohol- and drug-related motor vehicle convictions rather than relying on the commercial operators, as outlined in the recommendations, the Safety Board closed the recommendations on February 19, 1991, classifying them as "Closed--Acceptable Alternate Action."

Safety Recommendation No.: A-88-35  
Date Issued: March 24, 1988  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Alternate Action  
Date Closed: February 19, 1991

Subject:

Require that all pilots identified as convicted substance abusers be medically examined and evaluated by a person qualified in the field of substance abuse detection and treatment to verify compliance with the medical certification requirements of 14 CFR Part 67.

Brief Narrative of Status Assignment:

The Safety Board previously addressed the use of driver history records in conjunction with medical examinations and evaluations in Safety Recommendation A-84-49, issued to the FAA in May 1984 and classified in September 1986 as "Closed--Unacceptable Action" (see summary earlier in this appendix). In December 1987, legislation for airport and airway reauthorization, which included a provision for the FAA to have access to the National Driver Register, was signed into law. Safety Recommendations A-88-32 through -35 were intentionally worded so that commercial operators, rather than the FAA, would be required to screen and review the driving records of pilots and report the results to the FAA for use by the Federal Air Surgeon. In its August 16, 1989, response to the recommendations, the FAA stated that it would rely on the pilots to volunteer information about their alcohol-related offenses; further, the FAA did not specifically refer to the qualifications of the medical review officer handling evaluations of convicted substance abusers. On January 4, 1990, the Safety Board classified A-88-32 through -35 as "Open--Unacceptable Response." In early 1991, the FAA supplied the following documents: (a) final rule, 14 CFR Parts 61 and 67; Pilots Convicted of Alcohol- or Drug-Related Motor Vehicle Offenses or Subject to State Motor Vehicle Administrative Procedures (dated August 1, 1990; effective November 29, 1990); and (b) a new application form for the Airman Medical Certificate (dated September 1990). Policy statements included in the preamble to the new drug/alcohol rule and the revised application form for the medical certificate met the intent of the safety recommendations. Based on the provisions for the FAA to provide screening for alcohol- and drug-related motor vehicle convictions rather than relying on the commercial operator, as outlined in the recommendations, the Safety Board closed the recommendations on February 19, 1991, classifying them as "Closed--Acceptable Alternate Action."

Safety Recommendation No.: A-89-5  
Date Issued: March 8, 1989  
Recipient: Federal Aviation Administration  
Status: Closed--Acceptable Action  
Date Closed: July 28, 1989

Subject:

Distribute and periodically update, as needed, the Department of Transportation study, "Data Available on the Impact of Drug Use on Transportation Safety," to all Aviation Medical Examiners. In addition, information on the detection of drug use should be disseminated to Aviation Medical Examiners.

Brief Narrative of Status Assignment:

On May 23, 1989, the FAA agreed to disseminate the DOT study to its Aviation Medical Examiners and stated that it currently disseminates information on medical issues, including drug dependency, to the Aviation Medical Examiners through the Federal Air Surgeon's Bulletin. Based on this information, the Safety Board classified this recommendation as "Closed--Acceptable Action."

Safety Recommendation No.: I-89-4  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Develop postaccident and postincident testing regulations that are separate from the pre-employment testing regulations that are separate from the pre-employment, random, and reasonable suspicion testing regulations in all modal agencies.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: I-89-5  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Adopt uniform regulations for all drug and alcohol testing, other than postaccident and postincident testing, in all transportation modes, including U.S. Department of Transportation employees who are in safety sensitive positions.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: I-89-6  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Adopt uniform regulations on postaccident and postincident testing of private sector employees for alcohol and drugs in all transportation modes. Use the Federal Railroad Administration's (FRA) current regulation as a model regulation for all transportation modes except for the permissible blood alcohol level of less than 0.04 percent. Using the FRA regulation as a model for other transportation modes refers only to the collection of blood and urine and the screening and confirmation of positives in the blood. As a minimum, the drugs identified in FRA screen should be used in other modes. Using the FRA regulation as a model for other transportation modes refers only to the collection of blood and urine and the screening and confirmation of positive in blood. As a minimum, the drugs identified in FRA screen should be used in the other modes. Reference to the FRA model does not refer to the administration or implementation of the regulation. The Safety Board recognizes that the implementation of the regulation may be different in the various transportation modes. The regulations for all modes should provide for the collection of blood and urine within 4 hours following qualifying incident or accident. When collection with 4 hours is not accomplished, blood and urine specimens should be collected as soon as possible and an explanation for such delay shall be submitted in writing to the administrator.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: I-89-7  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Adopt uniform regulations on postaccident and postincident testing of private sector employees for alcohol and drugs in all transportation modes. Use the Federal Railroad Administration's (FRA) current regulation as a model regulation for all transportation modes except for the permissible blood alcohol level of less than 0.04 percent. Using the FRA regulation as a model for other transportation modes refer to the collection of blood and urine and the screening and confirmation of positives in blood. As a minimum, the drugs identified in FRA screen should be used in the other modes. Reference to the FRA model does not refer to the administration or implementation of the regulation. The Safety Board recognizes that the implementation of the regulation may be different in the various transportation modes. The regulations for all modes should provide testing requirements that include alcohol and drugs beyond the five drugs or classes specified in the Department of Health and Human Services (DHHS) guidelines and that are not limited to the cutoff thresholds specified in the DHHS guidelines. Provisions should be made to test for illicit and licit drugs as information becomes available during accident investigation.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: I-89-8  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Adopt uniform regulations in postaccident and postincident testing of U.S. Department of Transportation employees in safety sensitive positions. The regulations should provide for the collection of blood and urine within 4 hours following a qualifying incident or accident. When collection within 4 hours is not accomplished, blood and urine should be collected as soon as possible and an explanation for such delay shall be submitted in writing to the administrator by the local official making the decision to test.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: 1-89-9  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Adopt uniform regulations in postaccident and postincident testing of U.S. Department of Transportation employees in safety sensitive positions. The regulations should provide testing requirements that include alcohol and drugs beyond the five drugs or classes specified in the Department of Health and Human Services (DHHS) guidelines and that are not limited to the cutoff thresholds specified in the DHHS guidelines. Provisions should be made to test for illicit and licit drugs as information becomes available during an accident investigation.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: I-89-10  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Closed--No Longer Applicable  
Date Closed: May 31, 1991

Subject:

Adopt uniform regulations in postaccident and postincident testing of U.S. Department of Transportation employees in safety sensitive positions. The regulations should provide that toxicological results from Federal employees be made available to investigators of the National Transportation Safety Board.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." Although the Safety Board had urged the DOT to take regulatory action on this issue, the intent of the recommendation was met by legislation (P.L. 102-143) enacted October 28, 1991. Subsequently, on May 31, 1991, the Safety Board classified this recommendation as "Closed--No Longer Applicable."

Safety Recommendation No.: I-89-11  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Adopt uniform regulations in postaccident and postincident testing of U.S. Department of Transportation employees in safety sensitive positions. The regulations should provide procedures by which Federal employees are sent to the nearest hospital or medical facility for obtaining incident or accident.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

Safety Recommendation No.: I-89-12  
Date Issued: December 5, 1989  
Recipient: U.S. Department of Transportation  
Status: Open--Unacceptable Response

Subject:

Issue rules specifying zero (no alcohol) as the blood alcohol concentration for private sector employees in safety sensitive positions in all transportation modes and for federal employees in safety sensitive positions.

Brief Narrative of Status Assignment:

On August 3, 1990, the Secretary of Transportation responded by stating that "the DOT program is not primarily intended as an accident investigation tool." On May 31, 1991, the Safety Board classified the recommendation as "Open--Unacceptable Response" because of inaction by the DOT. Legislation (P.L. 102-143) enacted October 28, 1991, requires much of what the Safety Board's recommendation sought to accomplish. It appears unlikely that a single rule will be issued to address all modes of transportation (rail, highway, transit, aviation, marine, and pipeline); rather, separate rules will likely be issued by each modal administration. The legislation, however, did not mandate rules for marine and pipeline modes. Pending review of the proposed rules to determine if they will satisfy the intent of the recommendation, the classification remains "Open--Unacceptable Response."

APPENDIX F

GENERAL AVIATION DATA TABLES

**Table 4.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by purpose of flight and accident group**

Purpose of flight	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Personal	112	91.8	1,764	74.0	24	75.0
Instructional	4	3.3	138	5.8	2	6.3
Work-related	6	4.9	482	20.2	6	18.8
Unknown <sup>d</sup>	1	NA	87	NA	1	NA
No data	12	NA	119	NA	2	NA
Total	135	100.0	2,590	100.0	35	100.1

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> Includes flights to position or to ferry aircraft; it is unknown if the flights were personal or work-related.

**Table 5.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by day of the week and accident group**

Day of the week	Alcohol-Involved		Substance-free <sup>b</sup>		Drug-Involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Monday	14	10.4	316	12.2	3	8.6
Tuesday	16	11.9	281	10.8	7	20.0
Wednesday	21	15.6	327	12.6	2	5.7
Thursday	19	14.1	299	11.5	7	20.0
Friday	18	11.9	381	14.7	1	2.9
Saturday	26	19.3	512	19.8	7	20.0
Sunday	23	17.0	473	18.3	8	22.9
No data	0	NA	1	NA	0	NA
Total	136	100.2	2,580	99.9	35	100.1

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 6.--Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by time of day and accident group**

Time of day	Alcohol-Involved		Substance-free <sup>b</sup>		Drug-Involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
12M-3:59 a.m.	26	19.3	138	5.3	4	11.4
4:00-7:59 a.m.	8	5.9	145	5.6	2	5.7
8:00-11:59 a.m.	10	7.4	554	21.4	2	5.7
12N-3:59 p.m.	17	12.6	765	29.5	11	31.4
4:00-7:59 p.m.	42	31.1	691	26.7	8	22.9
8:00-11:59 p.m.	32	23.7	296	11.4	8	22.9
Unknown	0	NA	1	NA	0	NA
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>99.9</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 7.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by light condition and accident group**

Light condition	Alcohol-Involved		Substance-free <sup>b</sup>		Drug-Involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Dawn	1	0.7	25	1.0	1	2.9
Daylight	65	48.2	1,887	73.9	20	58.8
Dusk	14	10.4	97	3.8	2	5.9
Night	55	40.7	546	21.4	11	32.4
No data	0	NA	35	NA	1	NA
Total	135	100.0	2,590	100.1	35	100.0

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NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 6.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by location of accident and accident group**

Location of accident	Alcohol-Involved		Substance-free <sup>b</sup>		Drug-Involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Off airport/airstrip	122	91.0	2,252	88.8	34	97.1
On airport/airstrip	12	9.0	264	11.2	1	2.9
Other <sup>d</sup>	1	NA	54	NA	0	NA
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> The accident reporting form includes the category "other," which is used when the designated categories do not apply. "Other" was not included to calculate the percentages.

**Table 9.--Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by number of engines on accident aircraft and by accident group**

Number of engines	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
One	126	95.3	2,123	83.5	27	77.1
Multiple	9	6.7	421	16.5	8	22.9
Other <sup>d</sup>	0	NA	46	NA	0	NA
Total	135	100.0	2,590	100.0	35	100.0

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> The accident reporting form includes the category "other," which is used when the designated categories do not apply. "Other" was not included to calculate the percentages.

**Table 10.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by type of flight plan and accident group**

Type of flight plan	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
None	131	97.0	1,971	76.5	30	65.7
Visual flight rules (VFR) <sup>d</sup>	1	0.7	206	8.0	0	0
Instrument flight rules	3	2.2	402	15.5	5	14.3
No data	0	NA	12	NA	0	NA
<b>Total</b>	<b>135</b>	<b>99.9</b>	<b>2,590</b>	<b>100.1</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> Includes VFR, VFR/IFR, company (VFR), and military (VFR).

**Table 11.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by basic weather conditions and accident group**

Weather condition	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Visual meteorological conditions	109	83.2	1,792	72.4	27	79.4
Instrument meteorological conditions	22	16.8	683	27.3	7	20.6
Other <sup>d</sup>	4	NA	115	NA	1	NA
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> The accident reporting form includes the category "other," which is used when the designated categories do not apply. "Other" was not included to calculate the percentages.

**Table 12.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1963 through 1988, by source of weather briefing and accident group**

Source of weather briefing	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
No record <sup>d</sup>	120	89.6	1,614	64.9	28	80
Flight Service Station <sup>e</sup>	11	8.2	823	33.1	7	20
Other <sup>f</sup>	3	2.2	49	2.0	0	0
No data	1	NA	104	NA	0	NA
Total	135	100.0	2,590	100.0	35	100.0

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> Accident reports indicated no record of a weather briefing source, which implies that no weather briefing was obtained.

<sup>e</sup> Facility of the Federal Aviation Administration.

<sup>f</sup> Includes National Weather Service, Pilot's Automatic Telephone Weather Answering Service (PATWAS), commercial, television/radio, and military.

**Table 13.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by precipitation condition, intensity of precipitation, and accident group**

Condition and intensity	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Precipitation condition:						
No precipitation	112	84.9	1,197	79.2	30	88.2
Rain/shower drizzle	18	13.6	407	16.1	4	11.8
Snow/snow shower	2	1.5	110	4.4	0	0
Freezing rain/freezing drizzle/hail	0	0	8	0.3	0	0
No data	3	NA	68	NA	1	NA
Total	135	100.0	2,590	100.0	35	100.0
(continued)						

**Table 13.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by precipitation condition, intensity of precipitation, and accident group (continued)**

Condition and intensity	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Intensity of precipitation:						
Light	11	64.7	308	65.5	4	100.0
Moderate	4	23.5	104	22.1	0	0
Heavy	2	11.8	58	12.3	0	0
No data	118	NA	2,120	NA	31	NA
Total	135	100.0	2,590	99.9	35	100.0

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NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 14.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by visibility condition and accident group**

Visibility condition	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Unrestricted	97	73.5	707	69.8	25	73.5
Restricted <sup>d</sup>	35	26.5	740	30.2	9	26.5
No data	3	NA	143	NA	1	NA
Total	135	100.0	2,590	100.0	35	100.0

NA = not applicable

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>d</sup> Includes haze, dust, smoke, fog, icy fog, ground fog, blowing spray, blowing dust, blowing snow, blowing sand, and other.

**Table 15.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1986, by gender of the pilot and accident group**

Gender of pilot	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Male	135	100.0	2,539	98.0	35	100.0
Female	0	0	51	2.0	0	0
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 16.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by age of the pilot and accident group**

Pilot age group	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Under 15 years	0	0	28	1.1	0	0
15-19	0	0	21	0.8	0	0
20-24	7	5.2	145	5.6	2	5.7
25-29	16	11.9	200	7.7	4	11.4
30-34	23	17.0	267	10.3	9	25.7
35-39	30	22.2	315	12.2	6	17.1
40-44	17	12.6	354	13.7	2	5.7
45-49	12	8.9	348	13.4	3	8.6
(continued)						

**Table 16.--Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by age of the pilot and accident group (continued)**

Pilot age group	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
50-54	11	8.1	320	12.4	3	8.6
55-59	14	10.4	242	9.3	1	2.9
60-64	3	2.2	199	7.7	4	11.4
65-69	2	1.5	98	3.8	0	0
70 and older	0	0	53	2.0	1	2.9
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

130

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 17.—Number and percent of fatally injured general aviation pilots-in-command in the alcohol-involved accident group, 1983 through 1988, by age of the pilot and blood alcohol concentration (BAC) level**

Pilot age (years)	<0.04% BAC		0.04-0.09% BAC		0.10-0.14% BAC		>0.15% BAC		All BAC levels	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent
20-24	0	0	2	28.6	3	42.9	2	28.6	7	100.1
25-29	0	0	4	25.0	4	25.0	8	50.0	16	100
30-34	1	4.5	4	18.2	7	31.8	10	45.5	22	100
35-39	1	3.6	6	21.4	7	25.0	14	50.0	28	100
40-44	1	6.3	2	12.5	6	37.5	7	43.8	16	100.1
45-49	0	0	4	33.3	1	8.3	7	58.3	12	99.9
50-54	0	0	2	18.2	2	18.2	7	63.6	11	100
55-59	1	7.1	2	14.3	6	42.9	5	35.7	14	100
60-64	0	0	2	66.7	1	33.3	0	0	3	100
65-69	0	0	0	0	0	0	2	100	2	100

<sup>a</sup> Percent in the age group. Percentages may not add to 100 because of rounding.

**Table 18.--Number and percent of general aviation accidents fatal to the pilot-in-command, 1993 through 1998, by type of airman certificate and accident group**

Type of airman certificate <sup>a</sup>	Alcohol-Involved		Substance-free <sup>c</sup>		Drug-Involved <sup>d</sup>	
	Number	Percent <sup>b</sup>	Number	Percent <sup>b</sup>	Number	Percent <sup>b</sup>
Student	18	13.3	111	4.3	9	25.7
Private	72	53.3	1,364	52.9	14	40.0
Commercial	32	23.7	846	32.8	6	17.1
Air transport	5	3.7	232	9.0	3	8.6
Other <sup>e</sup>	0	0	2	0	0	0
None	6	5.9	24	0.9	3	8.6
No data	0	NA	11	NA	0	NA
<b>Total</b>	<b>135</b>	<b>99.9</b>	<b>2,590</b>	<b>99.9</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Data indicate the highest level of certificate held. For pilots holding multiple certificates, the highest level was selected as follows: air transport over commercial over private.

<sup>b</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>c</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>d</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

<sup>e</sup> Includes military and foreign.

**Table 19.—Number and percent of fatally injured general aviation pilots-in-command in the alcohol-involved accident group, 1983 through 1988, by type of airman certificate and blood alcohol concentration (BAC) level**

Type of airman certificate	<0.04% BAC		0.04-0.09% BAC		0.10-0.14% BAC		>0.15% BAC		All BAC levels	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Student	1	5.6	4	22.2	2	11.1	11	61.1	18	100
Private	3	4.2	17	23.6	26	36.1	26	36.1	72	100
Commercial	0	0	7	22.6	8	25.8	16	51.6	31	100
Air transport	0	0	0	0	0	0	4	100	4	100
None	0	0	0	0	2	25.0	6	75.0	8	100

**Table 20.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by pilot instrument rating and accident group**

Instrument rating of pilot-in-command	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
None	106	78.5	1,340	52.5	24	68.6
Airplane	28	20.7	1,140	44.6	11	31.4
Helicopter	0	0	28	1.1	0	0
Airplane and helicopter	1	0.7	46	1.8	0	0
No data	0	NA	36	NA	0	NA
<b>Total</b>	<b>135</b>	<b>99.9</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

134

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 21.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by flight time in all aircraft and accident group**

Hours	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
0-100	18	15.4	169	7.2	9	27.3
101-250	19	16.2	318	13.5	1	3.0
251-500	32	27.4	346	14.7	8	24.2
501-1,000	7	6.0	354	15.0	2	6.1
More than 1,000	41	35.0	1,166	49.6	13	39.4
No data	18	NA	237	NA	2	NA
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

135

**Table 22.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by flight time in accident aircraft type and accident group**

Hours	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
0-100	40	58.0	765	48.2	10	76.9
101-250	8	11.6	320	20.1	1	7.7
251-500	16	23.2	206	13.0	2	15.4
501-1,000	1	1.4	132	8.3	0	0
More than 1,000	4	5.8	166	10.4	0	0
No data	66	NA	1,000	NA	22	NA
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

136

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 25.—Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by flight time in last 30 days and accident group**

Hours	Alcohol-involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
0-5	22	57.9	300	29.8	6	46.2
6-10	5	13.2	222	22.1	3	23.1
11-20	3	7.9	203	20.2	2	15.4
More than 20	8	21.1	281	27.9	2	15.4
No data	97	NA	1,584	NA	22	NA
<b>Total</b>	<b>135</b>	<b>100.1</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.1</b>

137

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 24.--Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1986, by status of biennial flight review and accident group**

Status of biennial flight review	Alcohol-Involved		Substance-free <sup>b</sup>		Drug-Involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Current	54	76.1	1,639	94.2	17	73.9
Not current	17	23.9	101	5.8	6	26.1
Not required (student)	13	NA	63	NA	2	NA
No data	51	NA	787	NA	10	NA
<b>Total</b>	<b>135</b>	<b>100.0</b>	<b>2,590</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 25.--Number and percent of general aviation accidents fatal to the pilot-in-command, 1983 through 1988, by status of pilot medical certificate and accident group**

Status of pilot medical certificate	Alcohol-Involved		Substance-free <sup>b</sup>		Drug-involved <sup>c</sup>	
	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>	Number	Percent <sup>a</sup>
Valid	56	42.7	1,088	43.2	12	37.5
Valid with waivers	44	33.6	1,237	49.1	14	43.8
Not valid this flight	3	2.3	20	0.8	1	3.1
Expired	19	14.5	139	5.5	4	12.5
No certificate	9	6.9	36	1.4	1	3.1
No data	4	NA	70	NA	3	NA
Total	135	100.0	2,590	100.0	35	100.0

139

NA = not applicable.

<sup>a</sup> Percent in the accident group. Percentages are based on the number of accidents for which data are known. Percentages may not add to 100 because of rounding.

<sup>b</sup> Substance-free means that the Safety Board did not cite alcohol or other drugs as a cause or factor in the accidents. Some of the substance-free accidents may have involved alcohol or other drugs, but there was no evidence of their use.

<sup>c</sup> Data on the drug-involved group are presented for information only; because they are from a limited sample, comparisons should not be made with data in the other accident groups.

**Table 26.—Number and percent of fatally injured general aviation pilots-in-command in the alcohol-involved accident group, 1983 through 1988, by status of pilot medical certificate and blood alcohol concentration (BAC) level**

Status of pilot medical certificate	0.04% BAC		0.04-0.09% BAC		0.10-0.14% BAC		>0.15% BAC		All BAC levels	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Valid	2	3.6	13	23.2	16	28.6	25	44.6	56	100
Valid with waivers	2	4.6	10	22.7	11	25.0	21	47.7	44	100
Not valid this flight	0	0	1	50.0	1	50.0	0	0	2	100
Expired	0	0	4	21.1	7	36.8	8	42.1	19	100
No certificate	0	0	0	0	1	11.1	8	88.9	9	100
No data	0	0	0	0	2	66.7	1	33.3	3	100

**APPENDIX G**

**DATES AND LOCATIONS OF ALCOHOL-INVOLVED  
GENERAL AVIATION ACCIDENTS, 1983 THROUGH 1988**

Table 27.--Alcohol-involved general aviation accidents that were fatal to the pilot-in-command, 1983 through 1988

Date of accident	Location of accident	NTSB accident number
01/06/83	La Belle, FL	MIA83FA057
01/13/83	Sunriver, OR	SEA83FA042
02/12/83	Astatula, FL	MIA83FA073
02/13/83	Winter Haven, FL	MIA83FA074
02/15/83	Moab, UT	DEN83FA062
03/06/83	Copperopolis, CA	LAX83FVG09
03/07/83	Mayflower, AR	FTW83FA144
03/20/83	Dos Palos, CA	LAX83FA150
03/30/83	Enid, OK	FTW83FA170
04/03/83	Waimanalo, Oahu, HI	LAX83FJA06
04/23/83	Lebanon, OR	SEA83FA089
05/13/83	Edmonds, WA	SEA83FA095
05/28/83	Glennallen, AK	ANC83LA085
06/01/83	Buckeye, AZ	LAX83FA260
06/13/83	LaGrange, TX	FTW83FA276
06/18/83	Santa Maria, CA	LAX83LUQ03
06/23/83	Millhaven, GA	ATL83FA238
08/06/83	Seminole, TX	FTW83FA361
08/06/83	Wiscasset, ME	NYC83FA204
08/10/83	Sevier, UT	DEN83FA203
08/12/83	Ville Platte, LA	FTW83FA373
08/14/83	Jackpot, NV	SEA83FYA02
08/17/83	El Paso, TX	FTW83FA384
08/20/83	Conchas, NM	FTW83FA387
08/30/83	Post, TX	FTW83FA407
08/31/83	Everett, WA	SEA83FA189
09/06/83	Homosassa Springs, FL	MIA83FA225
09/08/83	Newport Beach, CA	LAX83FA436
09/26/83	Leesville, LA	FTW83FA441
09/30/83	Ringgold, GA	ATL83FA386
10/08/83	Egegik River, AK	ANC84FA004
10/09/83	Sullivan, MO	MKC84FA005
10/29/83	Fairview, OK	FTW84FA035
11/24/83	Waynesville, NC	ATL84FA058
12/09/83	Port Richie, FL	MIA84FA042

Table 27.--Alcohol-involved general aviation accidents that were fatal to the pilot-in-command, 1983 through 1988 (continued)

Date of accident	Location of accident	NTSB accident number
01/04/84	Vashon, WA	SEA84FA032
01/10/84	Plaquemine, LA	FTW84LA416
04/17/84	Bowman, CA	LAX84FA259
05/21/84	Sleetmute, AK	ANC84FA074
05/28/84	Nome, AK	ANC84FA078
06/13/84	Lone Wolf, OK	FTW84FA272
06/21/84	Burley, WA	SEA84FA139
06/24/84	Canton, GA	ATL84MA208
06/26/84	Quinlan, TX	FTW84FA288
07/04/84	St. Croix, VI	MIA84FA199
07/05/84	Walbridge, OH	CHI84FA280
07/12/84	Columbus, IN	CHI84FA290
07/16/84	Elko, NV	SEA84FA175
08/01/84	Kotzebue, AK	ANC84FA132
08/12/84	Bonnors Ferry, ID	SEA84FA196
08/20/84	Lafitte, LA	FTW84FA354
08/25/84	Pownal, ME	NYC84FNC09
09/01/84	Murrieta, CA	LAX84FUG02
09/21/84	Highwood, MT	DEN84FA295
10/19/84	Douglas, GA	ATL85FA013
11/02/84	Beverly, MA	NYC85FA019
11/25/84	Wixom, MI	CHI85FA059
12/16/84	Petaluma, CA	LAX85FA074
12/18/84	Laredo, TX	FTW85FA079
02/25/85	Sunset Hills, MO	MKC85FA062
02/26/85	Newport Beach, CA	LAX85FA156
02/28/85	Cornville, AZ	DEN85FA088
04/05/85	White Cloud, MI	CHI85FA156
04/18/85	Santa Fe, NM	DEN85FA118
04/20/85	Goleta, CA	LAX85FA213
04/21/85	Fallbrook, CA	LAX85FA214
05/05/85	Verden, OK	FTW85FA209
05/10/85	Ocotillo Wells, CA	LAX85FA252
05/28/85	Loxahatchee, FL	MIA85FA180

Table 27.--Alcohol-involved general aviation accidents that were fatal to the pilot-in-command, 1983 through 1988 (continued)

Date of accident	Location of accident	NTSB accident number
06/03/85	Tioga, TX	FTW85FA245
06/06/85	Cartersville, GA	ATL85FA182
06/06/85	Daytona Beach, FL	MIA85FA187
06/20/85	Cleveland, GA	ATL85FA191
06/25/85	Reedsburg, WI	CHI85FA253
07/23/85	Goleta, CA	LAX85FA325
08/04/85	Glencoe, KY	ATL85FA237
08/09/85	Cedar Key, FL	MIA85FA227
08/19/85	Rose Township, MI	CHI85FA356
08/21/85	Gulkana, AK	ANC85LA159
08/29/85	Morton, TX	FTW85FQ603
10/24/85	Ozona, TX	FTW86FA019
11/13/85	Holly, CO	DEN86FA022
11/16/85	Mt. Carmel, IL	CHI86FA029
12/03/85	Concord, CA	LAX86FVD03
01/13/86	Deville, LA	FTW86FA034
02/04/86	Napa, CA	SEA86FA053
02/06/86	Fort Bragg, CA	LAX86FA107
02/08/86	McGrath, AK	ANC86LA026
02/28/86	Ontario, CA	LAX86FA130
03/02/86	Newport Beach, CA	LAX86FA131
04/07/86	Chesapeake, VA	BFO86FA021
04/21/86	Bermuda Dunes, CA	LAX86FA183
04/29/86	Winton, NC	ATL86FA120
05/03/86	Pembroke Pines, FL	MIA86FA146
05/29/86	E. Grand Forks, MN	CHI86FA146
06/04/86	Fullerton, CA	LAX86FA240
06/21/86	Marlton, NJ	ATL86FA178
06/21/86	Marysville, CA	LAX86FA260
06/28/86	Townsend, MT	DEN86FA181
07/26/86	Shiocton, WI	CHI86FA179
09/20/86	Overton, NV	SEA86FA248
10/22/86	Buffalo, WY	DEN87FA008
10/22/86	Pembroke, KY	ATL87FA010
10/23/86	West Chicago, IL	CHI87FA009
12/03/86	Baytown, TX	FTW87FA025

Table 27.--Alcohol-involved general aviation accidents that were fatal to the pilot-in-command, 1983 through 1988 (continued)

Date of accident	Location of accident	NTSB accident number
02/01/87	Central City, NE	MKC87FA044
03/15/87	Avenal, CA	LAX87FA146
04/17/87	Florida City, FL	MIA87FA135
04/27/87	Hollandale, MS	MIA87FA150
05/03/87	Georgiana, AL	ATL87FA132
05/20/87	North Las Vegas, NV	SEA87FA098
06/20/87	Marine City, MI	CHI87FA151
06/26/87	Jesup, GA	ATL87FA189
07/12/87	Firebaugh, CA	LAX87FA264
07/26/87	Circleville, OH	ATL87FA223
08/01/87	Sparta, NJ	NYC87FA215
08/25/87	Solon Springs, WI	MKC87FA161
08/16/87	Switz City, IN	DEN87FA218
08/23/87	Twin Falls, ID	SEA87LA174
09/04/87	Lima, OH	ATL87FA248
10/16/87	Indian Head, MD	BF088FA003
10/30/87	Aguadilla, PR	MIA88FA023
01/14/88	Cedartown, GA	ATL88FA078
04/20/88	Perry, FL	MIA88LA156
05/15/88	Winnsboro, LA	FTW88DRD03
05/25/88	Lake City, FL	MIA88FA179
06/15/88	Madeira Beach, FL	MIA88FA206
07/06/88	Middletown, IN	CHI88FA160
07/10/88	Garfield, GA	ATL88DKG09
07/11/88	Fryeburg, ME	NYC88LA144
08/21/88	Pittsboro, NC	ATL88FA233
09/03/88	El Paso, TX	FTW88FA160
09/14/88	Pulaski, WI	CHI88DEP12
11/17/88	Fremont, CA	LAX89FA042
11/24/88	Cortez, CO	DEN89FA036

## APPENDIX H

## CAUSES AND FACTORS ATTRIBUTED TO FLIGHTCREW

The Safety Board aviation accident investigation manual and data system assigns numeric codes and alphabetic descriptions to causes and factors. The cause and factors attributed to the flightcrew were collapsed into 12 categories for analysis. This appendix contains the numeric codes and the alphabetic descriptions of the causes and factors composing each of the 12 categories. All descriptions relate to the flightcrew; for example "fuel system" describes a flightcrew-attributed cause or factor related to the fuel system, not a problem with the aircraft fuel system. Codes 33130 Physical impairment (alcohol), 33140 Physical impairment (drugs), and 33230 Incapacitation (alcohol) are excluded because they define the accident groups.

<u>Code</u>	<u>Description</u>	<u>Code</u>	<u>Description</u>
<b>Aircraft Controls and Displays:</b>			
22000	Landing gear	22001	Gear retraction
22002	Gear extension	22003	Gear down and locked
22004	Brakes (normal)	22005	Brakes (emergency)
22100	Flight controls	22101	Elevator
22103	Elevator trim	22108	Stabilator trim
22110	Raising of flaps	22111	Lowering of flaps
22118	Speed brakes	22119	Removal of control/ gust lock(s)
22120	Trim setting	22200	Fuel system
22201	Fuel tank selector position	22202	Fuel boost pump selector position
22204	Fuel supply	22300	Powerplant controls
22301	Throttle/power control	22302	Propeller
22303	Mixture	22304	Carburetor heat
22307	Propeller feathering	22308	Adequate rotor rpm
22310	Wrong propeller	22600	Anti-ice/de-ice system
22900	Autopilot	23000	Emergency equipment
23100	Flight and navigation instruments	23101	Altimeter setting
23109	Heading indicator	23113	Attitude indicator
23200	Rotorcraft flight controls	23201	Cyclic
23202	Collective	23300	Miscellaneous equipment
23305	Seatbelt	23307	Landing lights

**Planning Decision:**

24000	Planning decision	24001	Preflight planning/preparation
24002	Aircraft preflight	24003	Aircraft service
24004	Ice/frost removal from aircraft	24005	Aircraft unattended/ engine(s) running
24006	Aircraft weight and balance	24007	Operation with known deficiencies in equipment
24008	Tie down	24009	Proper assistance
24010	In-flight planning/ decision	24011	Wind information
24012	Fuel consumption calculation	24013	NOTAMS
24014	Became lost/disoriented	24015	VFR flight into IMC
24016	VFR procedures	24017	Documentation
24018	Flight manuals	24019	Performance data
24020	Refueling	24021	Visual lookout
24022	Weather evaluation	24023	Flight into known adverse weather
24024	IFR procedure	24025	Flight to alternate destination
24026	Compensation for wind conditions	24027	Landed at wrong airport
24028	Wrong runway	24029	Unsuitable terrain
24030	Checklist	24031	Judgment
24032	Procedures/directives	24033	All available runway
24034	Planned approach		

**Maintenance Decision:**

24100	Maintenance	24101	Maintenance, service of aircraft
24102	Maintenance, inspection of aircraft	24103	Maintenance, compliance with AD
24104	Maintenance, annual inspection	24107	Maintenance, adjustment
24111	Maintenance, installation	24113	Maintenance, modification
24115	Maintenance, replacement	24118	Maintenance, recordkeeping
24120	Maintenance, design change		

**Weather Information:**

24400	Meteorological service	24401	Weather forecast
24402	Weather observation	24403	Hazardous weather advisory
24405	Preflight briefing service	24406	Inflight briefing service
24407	Inflight weather advisories		

**Communications:**

24602	Instructions, written/ verbal	24605	Flight advisories
24606	ARTCC service	24607	Control tower service
24608	Communications	24611	Radio communications
24612	Traffic advisory	24614	FSS service
24616	Radar assistance to VFR aircraft	24618	Visual separation
24620	Inflight weather avoidance assistance	24622	ATC clearance
24624	Crew/group coordination	24625	Crew/group briefing
24627	Supervision	24628	Unsafe/hazardous condition

**Aircraft Handling:**

24500	Airplane handling	24501	Aerobatics
24502	Abort	24504	Aborted landing
24505	Aborted takeoff	24506	Airspeed
24507	Airspeed (V <sub>lof</sub> )	24509	Airspeed (V <sub>mc</sub> )
24510	Airspeed (V <sub>ys</sub> )	24511	Airspeed (V <sub>s</sub> )
24512	Airspeed (V <sub>so</sub> )	24515	Airspeed (V <sub>a</sub> )
24516	Airspeed (V <sub>mo</sub> )	24518	Altitude
24519	Proper altitude	24520	Autorotation
24521	Buzzing	24522	Decision height
24523	Distance	24524	Descent
24525	Proper descent rate	24526	Clearance
24527	Climb	24528	Proper climb rate
24529	Minimum descent altitude	24530	Proper alignment
24531	Proper touchdown point	24532	Proper glidepath
24533	Lift-off	24534	Level off
24535	Flare	24536	Go-around
24537	Ground loop/swerve	24538	Design stress limits of aircraft
24539	Directional control	24540	Load jettison
24541	Low pass	24542	Remedial action
24543	Maneuver	24544	Missed approach
24545	Emergency procedure	24546	Precautionary landing
24547	Pull-up	24548	Rotation
24549	Starting procedure	24550	Spiral
24551	Stall	24552	Stall/spin
24553	Stall/mush	24556	Wheels up landing
24557	Power on landing	24558	Rotor rpm
24559	Run on landing	24561	Vertical takeoff
24562	Recovery from bounced landing	24563	Touch-and-go
24566	Aircraft control	24572	Airspeed (V <sub>ne</sub> )

**Spatial Disorientation:**

33400 Spatial disorientation

**Fatigue:**

33600	Fatigue	33610	Fatigue (chronic)
33620	Fatigue (lack of sleep)	33630	Fatigue (flight schedule)
33640	Fatigue (ground schedule)	33650	Fatigue (flight and ground schedule)

**Physical Condition:**

33100	Physical impairment	33111	Physical impairment (anoxia/hypoxia)
33112	Physical impairment (heart attack)	33113	Physical impairment (other cardiovascular)
33114	Physical impairment (carbon monoxide)	33117	Physical impairment (hypertension)
33120	Physical impairment (visual deficiency)	33121	Physical impairment (other organic problem)
33200	Incapacitation	33211	Incapacitation (anoxia/hypoxia)
33212	Incapacitation (heart attack)	33213	Incapacitation (other cardiovascular)
33214	Incapacitation (carbon monoxide)	33219	Incapacitation (stroke)
33221	Incapacitation (other organic problem)	33250	Incapacitation (loss of consciousness)
33300	Physical strength overload	33500	Visual/aural detection

**Psychological Condition:**

31000	Psychological condition	31110	Diverted attention
31120	Inattentive	31130	Motivation
31140	Complacency	31150	Underconfidence in personal ability
31160	Overconfidence in personal ability	31170	Overconfidence in aircraft's ability
31180	Anxiety/apprehension	31190	Panic
31200	Pressure	31201	Self-induced pressure
31203	Pressure induced by others	31210	Visual/aural perception
31220	Mental performance overload	31230	Expectancy
31240	Interpersonal relations	31250	Emotional reaction
31260	Ostentatious display	31270	Habit interference
31280	Other psychological condition	32000	Excessive workload (task overload)

**Training and Experience:**

34000	Qualification	34100	Improper training
34110	Improper initial training	34120	Improper recurrent training
34130	Improper transition upgrade training	34200	Inadequate training
34210	Inadequate initial training	34220	Inadequate recurrent training
34230	Inadequate transition/ upgrade training	34240	Inadequate training (emergency procedure(s))
34300	Experience	34310	Lack of familiarity with aircraft
34320	Lack of familiarity with geographic area	34330	Lack of total experience
34331	Total	34332	Lack of total experience in kind of aircraft
34333	Lack of total experience in type of aircraft	34334	Lack of total instrument time
34335	Lack of total experience in type operation	34340	Lack of recent experience
34341	Lack of recent total experience	34342	Lack of recent experience in kind of aircraft
34343	Lack of recent experience in type of aircraft	34344	Lack of recent instrument time
34345	Lack of recent experience in type operation		

**Other Factors:**

24200	Airport	24202	Airport snow removal
24302	Flight with inadequate enroute destination facilities	24702	Equipment, other
24705	Control interference	24706	Relinquishing of control
24707	Suicide	24708	Stolen aircraft/ unauthorized use
24715	Wake turbulence	25000	Undetermined
30000	Improper use of procedure	33700	Correcting lenses not worn
35100	Information insufficient	35310	Information unclear (phraseology)
40000	Improper use of equipment/ aircraft	60000	Improper decision
80000	Procedure/inadequate	82000	Aircraft/equipment inadequate
82121	Aircraft/equipment inadequate, visual restriction		

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**APPENDIX I**

**DRUGS DETECTED IN GENERAL AVIATION ACCIDENTS,  
1983 THROUGH 1988**

Table 28.--Drugs detected in toxicological tests taken after general aviation accidents fatal to the pilot-in-command, 1983 through 1988

Date of accident	Location of accident	Drugs detected <sup>a</sup>
02/15/83	Moab, UT	Alcohol, THC
08/14/83	Anchorage, AK	Cocaine
11/12/83	Mammoth Lakes, CA	Methamphetamine, amphetamine
01/22/84	Pequannock, NJ	Cocaine, benzoylecgonine, morphine, codeine
12/06/84	Charleston, SC	Methamphetamine
02/26/85	Newport Beach, CA	Alcohol, cocaine, benzoylecgonine
03/05/85	Foss, OK	Phedimétrazine
03/12/85	Toledo, OH	Barbiturates
08/04/85	Glencoe, KY	Alcohol, cocaine, diazepam
08/27/85	Carlisle, PA	Phenylpropanolamine
08/29/85	Morton, TX	Alcohol, THC
01/27/86	Milwaukee, NC	Cocaine
02/20/86	Andover, NJ	Cocaine
03/02/86	Newport Beach, CA	Alcohol, cocaine, benzoylecgonine
04/29/86	Winton, NC	Alcohol, cocaine, benzoylecgonine
07/06/86	Havasu Lake, CA	Cocaine, benzoylecgonine
07/27/86	Yucca Valley, CA	Codeine, morphine
11/22/86	Summersville, MO	Librium, tenormin (antihypertensive)
07/26/87	Circleville, OH	Alcohol, imipramine (antidepressant)
08/01/87	Sparta, NJ	Alcohol, butalbital
12/13/87	Geneva, AL	Butalbital
12/27/87	Sandwich, MA	Diazepam
01/09/88	Tehachapi, CA	Brompheniramine, phenylpropanolamine, THC
02/11/88	Sanford, FL	Dextromethorphan (decongestant)
02/20/88	Rosamond, CA	Methamphetamine, amphetamine, THC
03/17/88	Bishopville, SC	THC, THC-COOH
03/28/88	Valley Center, CA	THC, THC-COOH
04/19/88	Grace, ID	Diazepam
05/18/88	LeFlore, OK	Cocaine, THC-COOH

Table 28.--Drugs detected in toxicological tests taken after general aviation accidents fatal to the pilot-in-command, 1983 through 1988 (continued)

Date of accident	Location of accident	Drugs detected
06/09/88	Knoxville, TN	Imipramine, desipramine
08/10/88	Red Kay, TN	Diphenhydramine
08/13/88	Floweree, MS	Diazepam, THC-COOH
11/26/88	Port Lavaca, TX	Benzoylecgonine, THC
12/09/88	Alcoa, TN	Benzoylecgonine
12/22/88	Bloomville, OH	Benzoylecgonine

<sup>a</sup> Benzoylecgonine is a metabolite of cocaine. THC is the psychoactive of marijuana that further metabolizes in COOH. When both cocaine and benzoylecgonine are detected in a toxicological test, they are counted as a single drug. The same procedure is used for THC-COOH, imipramine-desipramine, and methamphetamine-amphetamine.

**APPENDIX J**

**EXCERPTS FROM FEDERAL AVIATION REGULATIONS RELATED TO  
AIR TAXI OPERATORS AND COMMERCIAL OPERATORS (14 CFR PART 135)  
AND SAFETY BOARD COMMENTS**

**Subpart A—General**

**§ 135.1 Applicability.**

(a) Except as provided in paragraph (b) of this section, this part prescribes rules governing—

(1) Air taxi operations conducted under the exemption authority of part 298 of this title;

(2) The transportation of mail by aircraft conducted under a postal service contract awarded under section 3402c of title 39, U.S.C.;

(3) The carriage in air commerce of persons or property for compensation or hire as a commercial operator (not an air carrier) in aircraft having a maximum seating capacity of less than 20 passengers or a maximum payload capacity of less than 6,000 pounds, or the carriage in air commerce of persons or property in common carriage operations solely between points entirely within any state of the United States in aircraft having a maximum seating capacity of 30 seats or less or a maximum payload capacity of 7,500 pounds or less; and

(4) Each person who applies for provisional approval of an Advanced Qualification Program curriculum, curriculum segment, or portion of a curriculum segment under SFAR No. 58 and each person employed or used by an air carrier or commercial operator under this part to perform training, qualification, or evaluation functions under an Advanced Qualification Program under SFAR No. 58; and

(5) Each person who is on board an aircraft being operated under this part.

(b) Except as provided in paragraph (c) of this section, this part does not apply to—

(1) Student instruction;

(2) Nonstop sightseeing flights that begin and end at the same airport, and are conducted within a 25 statute mile radius of that airport;

(3) Ferry or training flights;

(4) Aerial work operations, including—

(i) Crop dusting, seeding, spraying, and bird chasing;

(ii) Banner towing;

(iii) Aerial photography or survey;

(iv) Fire fighting;

(v) Helicopter operations in construction or repair work (but not including transportation to and from the site of operations); and

(vi) Powerline or pipeline patrol, or similar types of patrol approved by the Administrator;

(5) Sightseeing flights conducted in hot air balloons;

(6) Nonstop flights conducted within a 25 statute mile radius of the airport of takeoff carrying persons for the purpose of intentional parachute jumps;

(7) Helicopter flights conducted within a 25 statute mile radius of the airport of takeoff, if—

(i) Not more than two passengers are carried in the helicopter in addition to the required flight crew;

(ii) Each flight is made under VFR during the day;

(iii) The helicopter used is certificated in the standard category and complies with the 100-hour inspection requirements of part 91 of this chapter;

(iv) The operator notifies the FAA Flight Standards District Office responsible for the geographic area concerned at least 72 hours before each flight and furnishes any essential information that the office requests;

(v) The number of flights does not exceed a total of six in any calendar year;

(vi) Each flight has been approved by the Administrator; and

(vii) Cargo is not carried in or on the helicopter;

(8) Operations conducted under part 133 or 375 of this title;

(9) Emergency mail service conducted under section 405(h) of the Federal Aviation Act of 1958; or

(10) This part does not apply to operations conducted under the provisions of § 91.321.

(c) For the purpose of §§ 135.349, 135.251, and 135.353, operator means any person or entity conducting an operation listed in paragraph (b) of this section for compensation or hire except operation of foreign civil aircraft navigated within the United States pursuant to part 375 described in paragraph (b)(8) and emergency mail service operation pursuant to section 405(h) of the Federal Aviation Act of 1958 described in paragraph (b)(9). Each operator and each employee of an operator shall comply with the requirements of §§ 135.249, 135.251, and 135.353 of this part.

(d) Notwithstanding the provisions of paragraph (c) of this section, an operator who does not hold a part 121 certificate or a part 135 certificate is permitted to use a person, who is otherwise authorized to perform aircraft maintenance or preventive maintenance duties and who is not subject to the requirements of an FAA-approved anti-drug program, to perform—

(1) Aircraft maintenance or preventive maintenance on the operator's aircraft if the operator would be required

**§ 135.2**

to transport the aircraft more than 50 nautical miles further than the closest available repair point from the operator's principal place of operations to obtain these services; or

(2) Emergency repairs on the operator's aircraft if the aircraft cannot be safely operated to a location where an employee subject to the requirements of this appendix can perform the emergency repairs.

[Doc. No. 16097, 43 FR 46783, Oct. 10, 1978, as amended by Amdt. 135-5, 45 FR 43162, June 26, 1980; Amdt. 135-7, 45 FR 67248, Oct. 9, 1980; Amdt. 135-20, 51 FR 40709, Nov. 7, 1986; Amdt. 135-28, 53 FR 47560, Nov. 21, 1988; Amdt. 135-32, 54 FR 34382, Aug. 18, 1989; Amdt. 135-37, 55 FR 40278, Oct. 2, 1990]

**§ 135.249**

landing must be made to a full stop in a tailwheel airplane.

**§ 135.249 Use of prohibited drugs.**

(a) This section applies to persons who perform a function listed in appendix I to part 121 of this chapter for a certificate holder or an operator. For the purpose of this section, a person who performs such a function pursuant to a contract with the certificate holder or the operator is considered to be performing that function for the certificate holder or the operator.

(b) No certificate holder or operator may knowingly use any person to perform, nor may any person perform for a certificate holder or an operator, either directly or by contract, any function listed in appendix I to part 121 of this chapter while that person has a prohibited drug, as defined in that appendix, in his or her system.

(c) Except as provided in paragraph (d) of this section, no certificate holder or operator may knowingly use any person to perform, nor may any person perform for a certificate holder or an operator, either directly or by contract, any function listed in appendix I to part 121 of this chapter if that person has failed a test or refused to submit to a test required by that appendix given by any certificate holder or any operator.

(d) Paragraph (c) of this section does not apply to a person who has received a recommendation to be hired or to return to duty from a medical review officer in accordance with appendix I to part 121 of this chapter or who has received a special issuance medical certificate after evaluation by the Federal Air Surgeon for drug dependency in accordance with part 67 of this chapter.

(Doc. No. 25148, Amdt. No. 135-28, 53 FR 47061, Nov. 21, 1988)

**§ 135.251 Testing for prohibited drugs.**

(a) Each certificate holder or operator shall test each of its employees who performs a function listed in appendix I to part 121 of this chapter in accordance with that appendix.

(b) No certificate holder or operator may use any contractor to perform a function listed in appendix I to part 121 of this chapter unless that con-

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tractor tests each employee performing such a function for the certificate holder or operator in accordance with that appendix.

(Doc. No. 25148, Amdt. No. 135-28, 53 FR 47061, Nov. 21, 1988)

**§ 135.253 Prohibited drugs.**

(a) Each certificate holder or operator shall provide each employee performing a function listed in Appendix I to Part 121 of this chapter and his or her supervisor with the training specified in that appendix.

(b) No certificate holder or operator may use any contractor to perform a function specified in Appendix I to Part 121 of this chapter unless that contractor provides each of its employees performing that function for the certificate holder or the operator and his or her supervisor with the training specified in that appendix.

(Doc. No. 25148, Amdt. 135-28, 53 FR 47061, Nov. 21, 1988)

**National Transportation Safety Board**

Washington, D.C. 20594

April 1, 1991



Office of the Chairman

Federal Aviation Administration  
Office of the Chief Counsel  
Attn: Rules Docket, AGC-10  
Room 915G, Docket No. 25148  
800 Independence Avenue, S.W.  
Washington, D.C. 20591

Dear Sir:

The National Transportation Safety Board has reviewed your Notice of Proposed Rulemaking Number 91-6, Docket Number 25148, "Anti-Drug Program for Personnel Engaged in Specified Aviation Activities," which was published in 56 FR 6542 on February 15, 1991, and offers the following comments on the proposed amendments.

This notice proposes amendments to 14 CFR Parts 121 and 135 that would exempt 14 CFR 135.1(c) operations, except for sightseeing flight operators, from coverage under the anti-drug program requirements of 49 CFR Part 40. While these commercial operators are not providing transportation to passengers except in highly restricted circumstances, they often fly in the same air space as other Part 121 and 135 operators. If these operators use alcohol or other drugs, they may endanger the safety of Part 121 and 135 passenger operations. For this reason, they should be subject to drug testing. This higher burden of care promotes the goal of a drug-free transportation workplace.

The Safety Board is especially concerned that flight instructors are being considered for exemption from the regulations. Such an exemption seems inconsistent with their mission as trainers and role models for their students. The Safety Board believes that all commercial operators should be subject to mandatory testing, including post-accident and post-incident alcohol and other drug testing as contained in the Board's Safety Recommendations I-89-4, -6, and -7 issued on December 5, 1989 (enclosed). The Safety Board requests that the proposed exemptions be reconsidered, and requests that rulemaking action be initiated on Safety Recommendations I-89-4, -6, and -7.

The Safety Board appreciates the opportunity to comment on this proposed rulemaking.

Sincerely,

A handwritten signature in cursive script, appearing to read "James L. Kolstad".

James L. Kolstad  
Chairman

Enclosure

## APPENDIX K

FEDERAL AVIATION REGULATIONS RELATED TO OFFENSES  
INVOLVING ALCOHOL OR DRUGS, 14 CFR 61.15**§ 61.15 Offenses involving alcohol or drugs.**

(a) A conviction for the violation of any Federal or state statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marihuana, or depressant or stimulant drugs or substances 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 final conviction; or

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

(b) The commission of an act prohibited by § 91.17(a) or § 91.19(a) of this chapter is grounds for—

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

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

(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 by alcohol or a drug, while impaired by alcohol or a drug, or while under the influence of alcohol or a drug; or

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

(d) Except in the case of a motor vehicle action that results from the same incident or arises out of the same factual circumstances, a motor vehicle action occurring within 3 years of a 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.

(e) Each person holding a certificate issued under this part shall provide a written report of each motor vehicle action to the FAA, Civil Aviation Security Division (AAC-700), P.O. Box 25810, Oklahoma City, OK 73126, not later than 60 days after the motor vehicle action. The report must include—

(1) The person's name, address, date of birth, and airman certificate number;

(2) The type of violation that resulted in the conviction or the administrative action;

(3) The date of the conviction or administrative action;

(4) The state that holds the record of conviction or administrative action; and

(5) A statement of whether the motor vehicle action resulted from the same incident or arose out of the same factual circumstances related to a previously-reported 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.

[Doc. No. 21966, Amdt. 61-74, 50 FR 15379, Apr. 17, 1985, as amended by Amdt. 61-84, 54 FR 34330, Aug. 18, 1989; Amdt. 61-87, 55 FR 31309, Aug. 1, 1990; Amdt. 61-87, 55 FR 41415, Oct. 11, 1990]

**END  
FILMED**

DATE:

**2-19-93**

**NTIS**