

**Statement of The Honorable Christopher Hart,
Acting Chairman National Transportation Safety Board
Before the Subcommittee on Government Operations,
Committee on Oversight and Government Reform
United States House of Representatives
Hearing on Planes, Trains and Automobiles: Operating While Stoned
Washington, DC
July 31, 2014**

APPENDIX

**OTHER TOXICOLOGY ISSUES IN ACCIDENTS INVESTIGATED BY THE
NATIONAL TRANSPORTATION SAFETY BOARD**

Highway

Safety Study on Commercial Motor Vehicle Accidents Involving Drugs and Alcohol

In 1990, the NTSB published a safety study that focused on the role of fatigue, drugs, alcohol, and medical factors in fatal-to-the driver heavy truck crashes.¹ One hundred and eighty-two accidents involving 186 trucks were included in the study. From the toxicological tests, the NTSB found that 33 percent of the fatally injured drivers tested positive for alcohol and other drugs of abuse. The most prevalent drugs found in drivers who had tested positive were marihuana and alcohol (13 percent each), followed by cocaine (9 percent), methamphetamine/amphetamines (7 percent), other stimulants (5 percent), and codeine and phencyclidine (PCP) (less than 1 percent each). Stimulants (for example cocaine and amphetamines) were the most frequently identified drug class among fatally injured drivers. As a result of the study, the NTSB made several safety recommendations pertaining to drug screening and testing procedures to all levels of government, trucking associations, and the trucking industry.

Motorcoach Run-off-the-Road Accident

On May 9, 1999, about 9:00 a.m., a 1997 Motor Coach Industries 55-passenger motorcoach was traveling eastbound on Interstate 610 in New Orleans, Louisiana. The bus, carrying 43 passengers, was en route to a casino. The bus departed the right side of the highway, crossed the shoulder, and went onto the grassy side slope alongside the shoulder. The bus continued on the side slope, struck the terminal end of a guardrail, traveled through a chain-link fence, vaulted over a paved golf cart path, collided with the far side of a dirt embankment, and then bounced and slid forward upright to its final resting position. Twenty-two passengers were killed, the bus driver and 15 passengers received serious injuries, and 6 passengers received minor injuries.

¹ National Transportation Safety Board, *Fatigue, Alcohol, Other Drugs, and Medical Factors in Fatal-to-the Driver Heavy Truck Crashes*, Safety Study, NTSB/SS-90/01 (Washington, DC: NTSB, 1990), 2 Vols.

The ensuing investigation established that the motorcoach driver possessed a current commercial driver's license and medical certificate, but suffered from several life-threatening medical conditions of the kidneys and heart. The NTSB determined that small amounts of tetrahydrocannabinol (THC, the active substance in marijuana) and larger amounts of tetrahydrocannabinol carboxylic acid were detected in the driver's blood collected more than an hour after the accident. The agency also determined that the probable cause of this accident was the driver's incapacitation due to his severe medical conditions and the failure of the medical certification process to detect and remove the driver from service. Other factors that may have had a role in the accident were the driver's fatigue and his use of marijuana and a sedating antihistamine.²

15-Passenger Child Care Van Run-off-the Road Incident

On April 4, 2002, a 15-passenger van, driven by a 27-year-old driver and transporting six children to school, was southbound in the left lane of Interstate 240 in Memphis, Tennessee. The van was owned and operated by a private child care center. A witness driving behind the van stated that the vehicle was traveling about 65 mph when it drifted from the left lane, across two other lanes, and off the right side of the roadway. The van then overrode the guardrail and continued to travel along the dirt and grass embankment until the front of the van collided with the back of the guardrail and a light pole. The rear of the van rotated counterclockwise and the front and right side of the van struck the bridge abutment at an overpass before coming to rest. The driver was ejected through the windshield and sustained fatal injuries. Four of the children sustained fatal injuries and two were seriously injured.

The NTSB determined the driver consumed marijuana on the morning of the accident and was under the influence of the drug at the time of the crash and had drug testing been conducted, the driver's drug use would likely have been detected and he may have been prohibited from transporting children. As a result of the investigation, the NTSB made numerous safety recommendations, including two to child care transportation oversight agencies in the 50 States and the District of Columbia to implement an oversight program for child care transportation that includes preemployment, random, postaccident, and "for cause" drug testing for all transportation providers and the prohibition of anyone who tests positive for drugs from transporting children.³

Medical Oversight of Noncommercial Drivers

As the result of its investigation of six noncommercial vehicle accidents from 2001-2003 in which a driver's medical condition played a role, and a March 2003 public hearing at which the factors that contribute to medically related accidents were discussed, the NTSB prepared a

² National Transportation Safety Board, *Motorcoach Run-off-the-Road Accident, New Orleans, Louisiana, May 9, 1998*, Highway Accident Report, NTSB/HAR-01/01 (Washington, DC: NTSB, 2001).

³ National Transportation Safety Board, *15-Passenger Child Care Van Run-off-the Road Accident, Memphis, Tennessee, April 4, 2002*, Highway Accident Report, NTSB/HAR-04/02 (Washington, DC: NTSB, 2004).

special investigative report to examine these issues.⁴ The special investigative report pointed out that certain medical conditions can negatively affect driving activities, thereby increasing the safety risk of drivers who suffer from them. The extent of the overall impact of medically impaired drivers is not known because data are not available on the number of licensed drivers with particular medical conditions or (except for data on alcohol-related accidents) on the number of accidents where a driver's medical condition was a contributory factor. However, in order to offer some perspective on the medical oversight issues that State licensing agencies face the report identified the number of Americans with one or more of the following medical conditions:

- Epilepsy: 2.5 million (180,000 new diagnosed cases each year).³
- Diabetes: 18.2 million (1 million new cases diagnosed each year in those over 20 years of age).
- Sleep Disorders: 50 to 70 million.
- Cardiovascular Disease: 23.5million(41.7 million additionalhave hypertension).
- Alzheimer's Disease: 4.5 million (10 percent of those over 65 years and nearly 50 percent of those over 85 years suffer from the disease).

As a result of its accident investigations and discussions stemming from the public hearing, the NTSB identified the following safety issues:

- Need for more data on the extent to which medical conditions contribute to the cause of accident.
- Need for improved awareness and training for healthcare professionals, law enforcement, and the public regarding State medical oversight laws and practices.
- Existence of barriers to the reporting of medically impaired drivers.
- Lack of uniform medical assessment and oversight standards throughout the states.
- Deficiencies in alternative transportation options for those who should not drive.

In the special investigative report, the NTSB made numerous safety recommendations to US Department of Transportation, the National Highway Traffic Safety Administration, the National Committee on Uniform Traffic Laws and Ordinances, the American Association of Motor Vehicle Administrators, the Commission on Accreditation for Law Enforcement Agencies, the Liaison Committee on Medical Education, the American Osteopathic Association, the Association of American medical Colleges, and the Federation of State Medical Boards.

⁴ National Transportation Safety Board, *Medical Oversight of Noncommercial Drivers*, Highway Special Investigative Report, NTSB/SIR-04/01 (Washington, DC: NTSB, 2004).

Aviation

Asiana Flight 214 and Postaccident Toxicological Testing

As part of its accident investigation, the NTSB reviewed post-accident flight crew testing following the Asiana Flight 214 crash at San Francisco International Airport on July 6, 2013. Current FAA regulatory requirements for drug and alcohol testing programs apply to U.S. operators but not foreign air carriers. Therefore, the Asiana flight crew was not subject to postaccident testing in the U.S. The NTSB's counterpart agency in Korea, the Republic of Korea Aviation and Railway Accident Investigation Board, collected scalp hair samples from the two pilots nearly a month after the crash and submitted them to the Korea National Forensic Service for toxicological tests. No evidence of drug use was found. However, the case highlighted the complexities of postaccident toxicology testing involving foreign air carriers and international flight crew.

During the 38th session of the ICAO Assembly held last year, the United States presented a paper, authored by the FAA, proposing that ICAO develop an international standard on postaccident drug and alcohol testing of flight crewmembers. ICAO agreed to review existing standards, recommended practices, and guidance material to determine the need for a specific international standard to address postaccident drug and alcohol testing of flight crewmembers.

We will be happy to inform the Subcommittee of further ICAO developments as it considers developing and implementing postaccident drug and alcohol testing for flight crewmembers.

Marine

Investigation of Marine Allision Involving a Recreational Boat

On April 12, 2009, a 22.5-foot recreational boat carrying 14 persons collided with a 25.9-foot push boat (a type of towboat) moored near Ponte Vedra Beach in St. Johns County, Florida. An hour earlier, the recreational boat had departed a marina/restaurant in Jacksonville Beach, on route to St. Augustine, after refueling at the marina's fuel dock and after personal effects and beverages (including liquor, beer, and drink mixers) were loaded on board. After reaching St. Augustine, the boat passengers began the return trip to Jacksonville Beach. At this point, the regular boat operator showed signs of alcohol impairment and several group members objected to his operating the boat. The operator agreed to allow one of the passengers to take his place. As the boat proceeded north in the Intercoastal Waterway, two witnesses saw it run aground on a shoal. Approximately 45 minutes later, the boat struck the push boat, which was moored to a barge. Five persons on the boat died at the accident scene. The remaining nine persons were injured, seven seriously.

Although Florida law permits consumption of alcoholic beverages on recreational vessels by anyone at least 21 years old, it is a violation of Florida law to operate a vessel while impaired

by alcohol or drugs. Vessel operators are presumed to be impaired and under the influence of alcohol if their blood alcohol content (BAC) or breath alcohol content (BrAC) is 0.08 or above. For persons under 21 years of age, it is a violation of Florida law to have a BrAC of 0.02 or higher and to operate or be in physical control of a vessel. Postaccident drug and alcohol tests results revealed that 11 of the boat's occupants, including the regular operator, had a BAC above 0.08 (the regular operator's BAC was 0.204). The BAC of the designated operator, who died in the accident, was 0.035. Three occupants tested positive for marijuana, including the regular operator, and four others tested positive for cocaine. Other drugs such as benzodiazepine were also detected. A small amount of marijuana was found in the boat after the accident.

The NTSB determined that the probable cause of the collision of the recreational boat with the push boat was the inattention of the boat operators, most likely the result of alcohol impairment on the part of the regular operator and inexperience on the part of the designated operator. No specific safety recommendations or conclusions were listed in the marine accident brief.⁵

Rail

Rear-end Collision of Passenger Train and Freight Train

On January 4, 1987, a northbound Conrail train departed the rail yard at Baltimore, Maryland on track 1. Almost simultaneously, a northbound Amtrak train departed Pennsylvania Station in Baltimore on track 2. After the Conrail train entered track 2 without authorization, the signal indication on track 2 changed from *clear* to *stop*. The engineer for the Amtrak train saw the stop signal and placed his train into emergency braking but could not stop before colliding with the Conrail train. At the time of the collision, the speed of the Amtrak train was estimated at 108 miles per hour. Among the Amtrak passengers, there were 16 fatalities (including the Amtrak engineer), 10 serious injuries, 15 moderate injuries, and 149 minor injuries.

On January 6, 1987, Amtrak's general manager informed the NTSB that the dispatcher and the surviving Amtrak train crewmembers had not been required to submit to toxicological testing. Toxicology testing of the specimens obtained from the Conrail engineer and brakeman indicated the presence of marijuana metabolites in sufficiently high levels to show that they were heavy or frequent users of marijuana and may have used marijuana within 24 hours before the time they provided specimens.⁶

The NTSB determined that the probable cause of this accident was the failure, as a result of impairment from marijuana, of the engineer of the Conrail train to stop his train in compliance with the wayside signal and the failure of the Federal Railroad Administration (FRA) and Amtrak to require, and Conrail to use, automatic safety backup devices on all trains on the Northeast Corridor.⁷ As a result of its investigation, the NTSB issued 17 safety

⁵ National Transportation Safety Board, Marine Accident Brief, NTSB/MAB-10/01 (Washington, DC: NTSB, February 24, 2010).

⁶ The engineer was charged with manslaughter by locomotive under Maryland law and sentenced to five years in state prison and one year of probation.

⁷ National Transportation Safety Board, *Rear-end Collision of Amtrak Passenger Train 94, The Colonial*,

recommendations, including recommendations to Amtrak and Conrail regarding improved methods of identifying employees who abuse alcohol and/or drugs and to the FRA to expand and intensify oversight of Amtrak's operating practices and compliance with Federal safety regulations (including the requirements for post-accident toxicological testing).

and Consolidated Rail Corporation Freight Train ENS-121, on the Northeast Corridor Highway Accident Report, NTSB/HAR-04/02 (Washington, DC: NTSB, 2004).