

**HUMAN PERFORMANCE GROUP CHAIRMAN'S  
FACTUAL REPORT**

**WILMER, TX**

**(8 Pages)**



**NATIONAL TRANSPORTATION SAFETY BOARD  
OFFICE OF HIGHWAY SAFETY  
WASHINGTON, D.C. 20594**

**HUMAN PERFORMANCE GROUP CHAIRMAN'S  
FACTUAL REPORT**

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**A. ACCIDENT**

Type: Motorcoach Fire  
Date and Time: September 23, 2005 about 6:07 a.m. CDT<sup>1</sup>  
Location: Northbound Interstate Highway 45, 0.2 mi south of Mars Rd., Near  
Wilmer, Dallas County, TX  
Vehicle: 1998 MCI 54-passenger Motorcoach  
Motor Carrier: Global Limo  
Fatalities: 23  
Injuries: 14

**NTSB #: HWY-05-MH-035**

**B. HUMAN PERFORMANCE GROUP**

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<sup>1</sup> The accident occurred in the Central Time zone, when Daylight Saving Time was in effect (CDT).

## C. ACCIDENT SUMMARY

On September 23, 2005 at about 6:07 a.m. CDT, a 1998 MCI 54-passenger motorcoach was traveling northbound on Interstate Highway 45 (I-45) with 44 passengers and the driver, evacuating in anticipation of Hurricane Rita. The passengers were from an assisted living facility in Bellaire, Texas, and most needed to be carried or assisted onto the motorcoach by firefighters. The trip began about 2:30 p.m. on September 22, 2005. The motorcoach had been traveling over 13 hours in heavy traffic when the right rear (#3 axle) tire went flat and needed to be changed near the FM1126 overpass in Rice, Texas. The tire left approximately 6,800 ft. of tire marks before the motorcoach came to a stop. A service mechanic was summoned to assist and he changed the tire. The motorcoach continued north on I-45 for about 26 miles.

At approximately 6:00 a.m., a motorist noticed the right rear (#3 axle) hub was glowing red/white hot. He was able to stop the motorcoach in the left traffic lane and told the driver (who did not speak English) of the danger. The motorcoach driver proceeded to pull the vehicle to the right shoulder, where he exited along with a nursing staff-passenger (the trip coordinator) and two other nurse-passengers and saw flames coming from the right rear wheel well. The passengers, with help from the nursing staff on-board and other motorists, began to disembark. At 6:07 a.m., the first call was made to 911. Fourteen intact oxygen cylinders were recovered from the motorcoach along with parts to possibly 4 others. One of those cylinders shows evidence of failure. Six nursing staff-passengers on the vehicle, a parent of one of the nursing staff, and 14 patient-passengers were able to exit the burning vehicle. Twenty-three patient-passengers, many of whom needed assistance in walking or needed to be carried off the vehicle were unable to escape.

## D. DETAILS OF THE INVESTIGATION

### 1. Toxicology

Toxicological specimens were not collected from the driver. 49 CFR §382.303 addresses post-accident testing for alcohol and controlled substances, and assigns responsibility to the motor carrier for ensuring that alcohol testing is conducted within two hours of an accident and that drug testing is conducted within 32 hours of the accident. Additionally, Title 49 of the Code of Federal Regulations defines an “accident” as:

“an occurrence involving a commercial motor vehicle operating on a highway in interstate or intrastate commerce which results in: (i) a fatality; (ii) bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident; or (iii) one or more motor vehicles incurring disabling damage as a result of the accident, requiring the motor vehicle(s) to be transported away from the scene by a tow truck or other motor vehicle.” [49 CFR §390.5]

The definition of “accident,” however, excludes any occurrence involving only boarding and alighting from a stationary motor vehicle or only the loading or unloading of cargo. 49 CFR §382.303 further provides that the results of testing for alcohol and controlled substances

conducted by Federal, State, or local officials having independent authority for the test may be used to meet these requirements.

The Texas Transportation Code, §724.012(b) provides that:

"[a] peace officer shall require the taking of a specimen of the person's breath or blood if:

- (1) the officer arrests the person for an offense under Chapter 49, Penal Code, involving the operation of a motor vehicle or a watercraft;
- (2) the person was the operator of a motor vehicle or a watercraft involved in an accident that the officer reasonably believes occurred *as a result of the offense*; [emphasis added]
- (3) at the time of the arrest the officer reasonably believes that a person has died or will die as a direct result of the accident; and
- (4) the person refuses the officer's request to submit to the taking of a specimen voluntarily."

Because the driver of the motorcoach was not arrested in connection with the fire,<sup>2</sup> and there was no apparent relationship between the vehicle fire and potential intoxication of the driver, and since the driver survived, no toxicological specimens were collected. Moreover, the Dallas County Sheriff's Officer who responded to the vehicle fire advised NTSB investigators that the driver displayed no apparent indications of intoxication, and therefore, the officers lacked reasonable suspicion of intoxication necessary to require the driver to submit to toxicological testing.

## **72-Hour History**

The driver's 72-hour sleep/wake/work history, constructed from preliminary interviews in the days following the fire, is depicted in Figure 1. The 72-hour history indicates a normal day-awake/night-asleep pattern, until the day (and driving period) immediately prior to the incident. During preliminary interviews, the driver told NTSB investigators he had 7 hours and 11 hours sleep, respectively, on the two nights preceding the incident. The driver slept 6.5 to 7 hours on the night before departure, and had a two-hour nap aboard the bus between the time he arrived in Bellaire, Texas and when firefighters began boarding passengers on the bus. At the time of the incident, the driver had been on duty for 24.5 hours, of which 20.5 had been driving. When he pulled the motorcoach over in Wilmer, Texas at the time of the fire, he had been on the road continuously for a 14.5-15 hour period, except for a period between about 3:30 and 4:30 a.m., while the motorcoach's tire was changed in Rice, Texas. The driver told NTSB investigators that he did not obtain any sleep during the time the motorcoach was awaiting the arrival of the tire service, nor did he attempt to sleep at that time.

The Federal Motor Carrier Safety Regulations addressing Hours of Service limitations on motorcoach drivers are found at 49 CFR §395.5.<sup>3</sup> The regulations provide that a motor carrier shall not permit or require a driver to drive more than 10 hours following 8 consecutive hours off

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<sup>2</sup> Although the driver was subsequently detained by Immigration and Customs Enforcement officials, the driver's legal status in the United States was neither known at the time of the fire nor relevant to the reasonable suspicion determination.

<sup>3</sup> The driver was exempt from the provisions of 49 CFR 395.5, as explained in the Motor Carrier Group Chairman's Factual Report.

duty, or for any period after having been on duty 15 hours following 8 consecutive hours off duty. However, an exception is contained at 49 CFR §395.1, which permits a driver who encounters adverse driving conditions<sup>4</sup> to drive not more than 2 additional hours in order to complete the run or to reach a place offering safety for the occupants of the commercial motor vehicle. The regulations<sup>5</sup> also provide that, “[i]n case of any emergency, a driver may complete his/her run without being in violation of the provisions of the regulations... if such run reasonably could have been completed absent the emergency.” A typical run from Bellaire, TX to Dallas can normally be completed in less than 4.5 hours; the fire occurred at a time when the motorcoach had been on the road for almost three times the normal trip duration. Although the driver told NTSB investigators that they anticipated *some* traffic and delays, the magnitude of the delays was wholly unexpected.

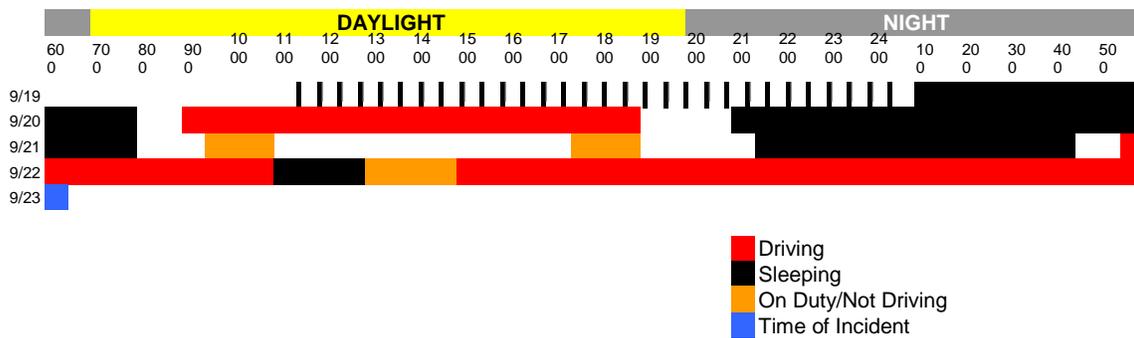


Figure 1. Graphical depiction of the driver’s 72-hour sleep/wake/work history.

### Driving History and Experience

The driver held a Class “B” commercial driver’s license (CDL), issued by the Country of Mexico, with a passenger endorsement. The license was issued on September 2, 1998 and was valid through September 2, 2006. He received his first commercial driver’s license in September 1988. The driver told investigators that he had begun his transportation career as a mechanic’s helper in Mexico, working for his family’s motorcoach service. He eventually began driving the buses on trips within Mexico, and between Mexico and the United States. He had been driving for his current employer in Pharr, Texas since February, 2005, although he had worked for the same company at some point in the past. Additional information about the driver’s history and experience, including violations, is contained in the Motor Carrier Group Chairman’s Report.

<sup>4</sup> *Adverse driving conditions* are defined as “snow, sleet, fog, other adverse weather conditions, a highway covered with snow or ice, or unusual road and traffic conditions, none of which were apparent on the basis of information known to the person dispatching the run at the time it was begun.” (49 CFR §395.2)

<sup>5</sup> 49 CFR 395.1(b)(2)

## **Medical Records**

The driver's medical certification, included on the back of his Mexican CDL (issued in 1998), indicated negative responses for corrective lenses, diabetes, and hypertension. However, the driver advised NTSB investigators that he was currently under treatment by a physician in Monterrey, Nuevo León, Mexico for Type II diabetes, and had been for approximately 1-1/2 years. He stated that he took oral antidiabetic medication, as prescribed. An opened blister pack of metformin tablets<sup>6</sup> was discovered with the driver's possessions in the wreckage.

As noted in the Motor Carrier Group Chairman's report, the driver was referred to a physician in the United States on March 7, 2005, for a physical examination to obtain an U.S. CDL. That physician declined to issue a medical certificate, pending receipt of diagnostic testing results (H<sub>g</sub>A<sub>1</sub>C) indicating that the driver's diabetes was under control. There is no evidence that the testing was subsequently completed.

## **Driver's Actions and Behavior**

The driver was interviewed on three separate occasions by NTSB investigators in an effort to determine the circumstances of the accident and his actions as the driver with responsibility for the safety of passengers. Transcripts and/or summaries of those interviews are attached.

The driver told investigators that, upon his arrival at the assisted living facility in Bellaire, he was very concerned as he observed firefighters loading the passengers on the motorcoach. He noted that an ambulance traveled along with the motorcoaches for a short distance, and this—along with the presence of the nursing staff on board the motorcoach—brought him some comfort; however, after a distance, the ambulance did not remain with the motorcoach. He told investigators he telephoned his wife shortly before departure and expressed his concerns about the frailty of the passengers to her; she advised him to be careful. He said he remained concerned about the passengers, particularly those on oxygen. He recounted the details of two stops requested by the nursing staff member who spoke some Spanish, in order to replace depleted oxygen cylinders with others that had been stored in the cargo bay. He explained that he pulled over at her request, which consisted primarily of hand gestures toward one of the oxygen cylinders and toward the roadside. He noted another stop, where the nurse disembarked and returned with beverages and snacks for the passengers.

When the right rear (axle #3) tire failed in the vicinity of Rice, TX, the driver recognized the need to pull over and did so; however, after inspecting the tire, he recognized it was not a safe place to await repairs, and so he returned to the bus and continued slowly, looking for a better place to stop. Unbeknownst to the driver, a nurse on the bus had called 911. She spoke with the driver in broken Spanish, attempting to ascertain their location, in order to aid the emergency dispatcher in sending assistance. When the service truck arrived, other than a gesture

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<sup>6</sup> Metformin is a biguanide oral antidiabetic medication. It is sold generically in Mexico as metformina.

to the newly-installed spare tire and the statement “100 psi,”<sup>7</sup> there was no communication between the mechanic and the driver, or between the driver and the TX-DOT employee who assisted the driver in returning the damaged tire to its stowed location.

Although a passenger reported subsequently hearing noises—which she characterized as sounding as if gravel was being kicked up—the driver told investigators he noticed nothing unusual, until the driver of a pickup truck signaled him and forced the motorcoach to a stop in the lane of traffic. Seeing flames in his side mirror, the driver recognized the seriousness of the situation and immediately proceeded to begin pulling the motorcoach over to the right side of the road, where he exited the vehicle and observed the source of the flames. The driver returned to the motorcoach and reported being unable to remove the fire extinguisher from its stowed position beneath a passenger seat.<sup>8</sup> He also told investigators that he attempted to open a roof hatch to help clear the smoke inside the passenger compartment, and tried to open emergency window exits, as well, without success.

When queried about the length of the trip, the driver told investigators that, while he’d heard a news report while still in Bellaire that traffic was heavy and to expect delays, the magnitude of the delays encountered was “unbelievable.” He explained that, at one point, he telephoned the driver of one of two other motorcoaches that was evacuating residents of the assisted living facility, and they both remarked that they had never before seen such traffic delays. When asked about fatigue, the driver staunchly denied feeling drowsy or on the verge of sleep. He stated that it was his duty to get the passengers to their destination, and that he would do so. In response to additional questioning about what he would do if he felt too tired to continue, the driver stated that he would pull over and rest, noting that he had done so on another trip in the past. But, when queried about the impact on passengers, particularly those using oxygen (of which there was a limited supply), he persistently maintained that it was his duty to get them to their destination, offering no other options for consideration.

### **English Language Proficiency**

The driver was unable to converse in English, so all interviews with the driver were conducted with the assistance of Spanish-English translators supplied by the Texas Department of Public Safety, or independently contracted for by the NTSB. During the course of the interviews, the driver listened intently to investigators’ questions (which were posed in English), and in a few instances, it appeared that the driver seemed to anticipate the investigators’ questions, as he occasionally began to respond even before the translator had finished repeating the question to the driver in Spanish.

NTSB investigators spoke with the senior nurse who had been on the motorcoach. She spoke English, and had limited fluency in Spanish. A 911 tape obtained from the Navarro

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<sup>7</sup> The driver told investigators that he “thumped” the tire and said “100 psi” to the mechanic, who responded, “It’s good.” Through a translator, the driver told investigators that he wanted to ensure that the mechanic had checked the tire pressure, and that he knew it was supposed to be 100 psi.

<sup>8</sup> Details concerning the fire extinguisher mounting are contained in the Survival Factors Group Chairman’s Report.

County Emergency Dispatch Center included several wireless phone conversations with the nurse. In one conversation, the nurse can be overheard attempting to converse with the driver in Spanish, in an effort to identify a milepost location, which then could be relayed to the emergency services dispatcher. The dialogue is an indicator of the level of effectiveness of spoken communication between the nurse (with her limited proficiency in Spanish) and the non-English-speaking driver. The mechanic who changed the tire near Rice, TX, told investigators that he did not speak with the driver, and it was his perception that the driver did not speak English.

### **Meteorological Information**

Information from the U.S. Naval Observatory Astronomical Applications Department, consisting of sun and moon data for Friday, September 23, 2005 was obtained for Wilmer, Dallas County, Texas (longitude W96.7, latitude N32.6). The data indicates as follows:

<b>SUN</b>	
Begin civil twilight	6:51 a.m.
Sunrise	7:16 a.m.
Sun transit	1:19 p.m.
Sunset	7:22 p.m.
End civil twilight	7:46 p.m.

<b>MOON</b>	
Moonrise	10:20 p.m. on preceding day
Moon transit	5:46 a.m.
Moonset	1:17 p.m.
Moonrise	11:05 p.m.
Moonset	2:16 p.m. on following day

Phase of the Moon on 23 September: waning gibbous with 65% of the Moon's visible disk illuminated.

Weather information for Wilmer, Texas at the time of the fire indicates a temperature of 72°F; dew point 57°F; Humidity 60%; Barometer 29.88; visibility  $\geq 10$  miles with scattered clouds; and winds calm.

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