



**MOTOR CARRIER GROUP
FACTUAL REPORT
HWY-08-MH-012
MEXICAN HAT, UTAH**

(11 pages)



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

**MOTOR CARRIER GROUP
CHAIRMAN'S FCTUAL REPORT**

A. ACCIDENT

Type: Motorcoach, overturn
Date and Time: January 6, 2008, 8:02 p.m. MST
Location: Southbound US Rt. 163 near MP29
Mexican Hat, San Juan County, Utah
Vehicle #1: 2007 MCI Model J4500 56-passenger Motorcoach
Motor Carrier: BUSCO, Inc., DBA Arrow Stage Lines
Fatalities: 9
Injuries: 43
NTSB #: HWY-08-MH-012

B. MOTOR CARRIER GROUP

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C. ACCIDENT SYNOPSIS

On January 6, 2008 about 3:30 p.m. MST a 2007 MCI 56-passenger motorcoach with 52 passengers on-board departed Telluride, CO enroute to Phoenix, AZ as part of a 17-motorcoach charter. The motorcoach was returning from a three-day weekend of skiing. The motorcoaches were diverted to an alternate route that included US Route 191 and 163 in Utah, due to a closure of Colorado State Route 145 because of snow. Colorado State Route 145 is the normal route used from Telluride to Phoenix.

At about 8:02 p.m. MST the motorcoach was traveling southbound descending a 6 percent grade leading to a curve to the left, 1,800 feet north of milepost 29, at a driver reported speed of 65 mph. After entering the curve, the motorcoach departed the roadway at a shallow angle striking the guardrail with the right rear wheel about 61 feet before the end of the guardrail.

The motorcoach began rotating in a counter clockwise direction as it descended an embankment. The motorcoach began to overturn and struck several rocks in a creek bed at the bottom of the embankment. The motorcoach came to rest on its wheels after overturning 360 degrees. During the rollover sequence the entire roof of the motorcoach separated from the body and 51 of the 53 occupants were ejected. As a result, nine passengers were fatally injured, 43 passengers and the driver received various degrees of injuries from minor to critical.

The weather was cloudy and the roadway was dry at the time of the accident.

D. DETAILS OF THE INVESTIGATION

The Motor Carrier investigator gathered information on the operations of Arrow Stage Lines to determine their compliance with the Federal Motor Carrier Safety Regulations. The Federal Motor Carrier Safety Administration's (FMCSA) MCMIS profile, pre-crash and post-crash FMCSA Compliance Reviews, and a Consolidated Safety Services Department of Defense audit report of the motor carrier was obtained. The busdriver's qualification file that included employment application, license information, driving history, logbook data, medical examiner's certificate, and other records were examined. The maintenance and inspection records were obtained on the MCI motorcoach.

E. MOTOR CARRIER INFORMATION

BUSCO, Incorporated
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BUSCO Incorporated dba Arrow Stage Lines¹ is an interstate, authorized for hire, carrier of passengers. The company has 48 state and Canadian authority. Arrow operated under United States Department of Transportation (USDOT) identification number 433377 and MC number 232723. Arrow is a family owned business that began operations in 1928. They started as a charter bus and mail carrier between Norfolk, Nebraska and Sioux City, Iowa. Arrow's business grew over the years and additional family members joined the business. Arrow expanded operations to include a Northern, Southern, and Western Regions. Cities included in the operation were Grand Island, Lincoln, Norfolk, and Omaha, Nebraska, Des Moines and Sioux City, Iowa. Other cities included Kansas City, Missouri, Denver, Colorado, Las Vegas, Nevada, and Phoenix and Tucson, Arizona. Arrow purchased a charter company in Phoenix called Corporate Transportation N Tours that is the terminal where the accident bus driver operated. The physical address is 2352 East University Drive, Phoenix, Arizona. Currently, Arrow's business consists of scheduled line runs between various cities and charter service. Also, Arrow provides military transportation to and from the bases in Iowa, Kansas, and Missouri.

The corporate structure of Arrow consists of a Chairman, Chief Executive Officer, President/Chief Operating Officer, Chief Financial Officer, Human Resource Director, Safety Director, Sales Director, and Maintenance Director.

¹ Hereafter referred to as Arrow

Arrow's corporate headquarters are located in Norfolk, Nebraska and their operations headquarters are located in Omaha, Nebraska.

Arrow's fleet consists of 179 motorcoaches with 47 to 59-passenger capacity, 11 minibuses, 3 transit style buses, 19 schoolbuses, 7 shuttle vans, 13 14-passenger vans. The average age of the motorcoach fleet is about 5 years. Arrow employs 337 company drivers. The single day driver is paid by the hour and the overnight charter driver is paid a flat daily rate plus meals and hotel expenses.

F. FEDERAL OVERSIGHT

The FMCSA conducted a post-crash "compliance review" of Arrow on February 2, 2008. The FMCSA's post-crash "compliance review" indicated that the 2007 annual miles traveled by Arrow as 10,333,556 miles. Additionally, the post-crash "compliance review" indicated that Arrow had 6 recordable accidents in the previous 12 months that resulted in a .58 accident rate². The FMCSA has determined that motor carriers with an accident rate of 1.50 or greater to be deficient in the accident area of the compliance review rating process. The FMCSA conducted a pre-crash "compliance review" of Arrow on January 19, 2006 that resulted in a "satisfactory" rating. In that review, Arrow was rated "conditional" in Factor 2 (Driver) and Factor 4 (Vehicle). Also, Arrow had an accident rate of .37 at that time.

The post-crash compliance review resulted in a "conditional" rating. The "conditional" rating was a result of Arrow being rated "conditional" in Factor 2- (Driver), Factor 4- (Vehicle), and "unsatisfactory" in Factor 3- (Operational) areas of the review. In the review it was noted that Arrow failed to conduct a post-crash alcohol and drug test on a driver, false records of duty status on other drivers, and using a commercial motor vehicle not periodically inspected. All of these violations are critical elements that affect the safety rating of a motor carrier. Additionally, Arrow received a "satisfactory" rating in Factor 1- (General) and Factor 6- (Accident). The FMCSA's MCMIS database indicated 3 other "compliance reviews" conducted in 1991, 1996, and 2000. All of these reviews resulted in a "satisfactory" rating.

The FMCSA uses the computer-generated MCMIS database and SafeStat program for information to track the performance of a motor carrier through roadside inspections. SafeStat is a program used to evaluate the safety posture of a motor carrier for compliance review through safety evaluation areas (SEA), accident involvement, driver roadside inspections, vehicle roadside inspections, and safety management (compliance reviews).

² Accident rate is determined by the number of annual miles traveled vs. the number of recordable accidents.

The FMCSA categorizes the motor carriers with MCMIS and Safestat to schedule terminal audits or compliance reviews. The categories are A-H with "A" being the highest score to warrant a compliance review. According to FMCSA only those motor carriers in categories A-C would receive a compliance review. The data from the SafeStat information is not an accurate and final evaluation until an actual compliance review is conducted and the information is evaluated. FMCSA has determined that a motor carrier that scores 75 or above in the safety evaluation area is deficient in that area and 2 or more areas rated 75 or above would be needed to warrant a compliance review. As of December 19, 2007 Arrow scored a 13.01 in the accident SEA, a 33.97 in the driver SEA, and a 6.43 in the vehicle SEA. According to FMCSA, since Arrow had no deficient SEA values they were placed in category H and they would not have been scheduled for a compliance review. Roadside inspection data for the 12 months prior to January 6, 2008 indicated that Arrow had 180 vehicle inspections with 7 vehicles placed out-of-service at a 4 percent rate. Also, the data indicated 80 driver inspections with 2 drivers placed out-of-service at a 3 percent rate. The national averages for the out-of-service rates are vehicle (23 percent) and driver (7 percent). After the post-crash compliance review Arrow was categorized as a "B" carrier. The updated SEA values are driver 93.13, vehicle 6.83, and safety management 89.53. They have not been scheduled for a follow-up review at this writing.

The FMCSA uses a computer-generated program called Inspection Selection System (ISS-D) that aids roadside inspector's decision to select vehicles for roadside inspection. The system was used to prioritize carriers for roadside inspection and the SafeStat system was designed to prioritize carriers for monitoring and compliance reviews. Both systems use similar data to define an "unsafe" carrier. The FMCSA has combined the rating systems of ISS and SafeStat to develop a uniform rating system called ISS-D. The ISS-D system replaced the old system and now prioritizes carriers with poor safety performance for roadside inspection of drivers and vehicles. The three levels of recommendations for roadside inspection in the ISS-2 system are pass, optional, or inspect³. Prior to the accident, Arrow was listed as "pass" in the system which means no inspection required. After the accident and as a result of the post-crash "compliance review" Arrow was rated as "inspect" during a roadside inspection. The ISS-D system is a guide and an inspector can inspect any vehicle or driver if he/she believes it is warranted.

Medical Certification:

The Federal Motor Carrier Safety Regulations established the medical certification of a commercial motor vehicle driver. The regulations require a CMV driver to be medically certified every 2 years provided he meets all of the standards

³ FMCSA defined "pass" as no inspection required/ISS-D score less than 50, "optional" as may be worth a look/ISS-d score greater than 49 and less than 75, and "inspect" as inspection warranted/ISS-D score greater than 74.

specified. The accident bus driver received his Medical Certification on February 21, 2007 with an expiration date of February 21, 2008. The accident bus driver had a history of hypertension and coronary artery disease with coronary artery bypass surgery and the Medical Examiner certified him for one year. Arrow Stage Lines has an operating policy that states a bus driver 65-years-of-age and older must be medically certified every year before they are allowed to drive. Since the policy required more than the Federal regulation, Arrow pays for this medical certification.

Additionally, the bus driver was diagnosed with sleep apnea in January 2007. He received his physical examination in February 2007 for his medical certification and he failed to report his sleep apnea condition to the examining Doctor. Although sleep apnea is not a disqualifying condition for medical certification, it is recognized by the Medical profession and the safety community as a contributor of fatigue if not treated properly.

SAFETEA-LU of 2005 required FMCSA to establish a Medical Review Board (MRB) to provide scientific advise on matters related to commercial motor vehicle driver health and safety. In 2006, the FMCSA organized the MRB consisting of 5 non-Federal Government employee members appointed by the Secretary of Transportation. The Board consists of medical doctors and doctors of osteopathy who have expertise in various medical specialties, an understanding of medical research methods, knowledge of transportation medical issues, and experience in the development of medical standards.

The MRB was established by FMCSA to improve highway safety by providing expert advise on medical standards, guidelines, and research on medical certification of commercial vehicle operators. Currently, the MRB has discussed several medical conditions pertaining to the certification of commercial vehicle operators. Also, it was noted that the MRB met on January 28, 2008 to discuss obstructive sleep apnea and driving. The MRB deliberated and voted on recommendations to the FMCSA. The recommendations included various levels of qualification of commercial vehicle drivers if diagnosed with obstructive sleep apnea from non-certification, limited certification (1st year), and annual certification after treatment established and successful evaluation of their condition.

Additional Oversight:

The Military Surface Deployment and Distribution Command (SDDC) of the United States Department of Defense contracted with a private company Consolidated Safety Services Incorporated (CSSI) to conduct facility, terminal, and vehicle inspections of motor carriers that are transporting military personnel. The CSSI audit is similar to the FMCSA compliance review but more comprehensive. The rating system used by CSSI is different than that of the FMCSA with a scale of 1 to 5 meaning a 1 is the highest rating and a 5 is the lowest rating. Arrow received an audit from CSSI on October 9, 2007 that resulted in a rating of 1.

Driver Training:

Arrow's new hire drivers are screened from a previous employment history entry on their application. The accident driver listed previous employment as a motorcoach driver and a truck driver. One of the two requests for previous employment responded to the inquiry. The response was that he was an excellent driver and good with the equipment and people. The General Manager at the Phoenix Office stated that since the accident driver had previous experience with motorcoaches and heavy trucks he limited his training to driving skills. He said that he spent about 7 hours with him driving on several roadways and a course he set-up with traffic cones. He said that the accident driver handled the motorcoach very well. Additional training included films and publications on nutrition, fatigue information, and driving in adverse weather.

Drug and Alcohol Testing:

Arrow's random drug and alcohol testing program is handled through various medical facilities located around their terminals. Arrow tested at a rate of 50 percent for drugs and 10 percent for alcohol as required by the Federal regulations⁴. The accident driver was tested for pre-employment drug and alcohol with negative results. He had not been scheduled for a random test since his employment began in 2007 with the company. Motor Carriers are required by Federal regulation to test for pre-employment, random, post-accident, reasonable suspicion, return-to-duty, and follow-up. A review of the United States Department of Transportation Drug and Alcohol Testing Data Collection Form indicated that Arrow had one positive result on pre-employment testing out of 173 tested. All of the other categories and alcohol testing results were negative. (See Human Performance Group Report for post-crash toxicological test results.)

Busdriver Hours-of-Service:

Although the hours-of service changed in 2003 for truck drivers, the hours-of-service for bus drivers remained the same. Arrow records indicated that the accident driver drove 7 local trips in the month of December. His last on-duty day was December 14th prior to the accident trip. None of the December trips were overnight. November records indicated 8 trips with one of those being overnight. A review of both November and December logbook entries did not reveal any violation in the hours-of-service regulations. During the post-crash compliance review, there were no hours-of-service violations revealed on the accident driver. It was noted however that he had not completed his logbook entry on the day of the accident. In the post-crash compliance review, the records of the 16 other drivers

⁴ FMCSR Title 49 Subpart 382.309- Random Testing.

on the charter were reviewed. It was revealed that all of the 16 drivers had hours-of-service violations during the return trip from Colorado. Fourteen of the drivers were over the 10-hour rule and the other two drivers had false reports of records of duty status for the return trip. Also, it was noted in the compliance review that ten of the sixteen drivers were over the 15-hour rule.

Additional Information:

The Federal regulations state that no driver shall operate a commercial motor vehicle, and no motor carrier shall not require or permit a driver to operate a commercial motor vehicle, while a driver's ability or alertness is so impaired, through fatigue, illness, or any other cause as to make it unsafe for him/her to begin or continue to operate the commercial motor vehicle.⁵ Also, in the interpretation section of FMCSR 392.3, it's stated that drivers are protected under the Surface Transportation Assistance Act of 1982 (49 U.S.C. 31105) in that no person shall discharge, discipline, or in any manner discriminate against an employee for refusing to operate a vehicle when such operation constitutes a violation of any Federal rule, regulation, standard, or order applicable to safety.

Arrow had an operating policy that stated " no employee shall refuse to perform work as assigned and directed by supervisory personnel or willfully neglect to do the work as instructed and assigned to them without valid and reasonable cause". Also, in the operating plan Arrow stresses safety by asking their drivers to think safety before they begin a trip and assure themselves that they are well rested and in a proper mind-set to make the trip. The bus driver did not report to Arrow any medical condition that would have affected his ability to operate the bus during this trip.

The Charter Trip:

The charter trip originated in Phoenix, Arizona on Thursday, January 3rd at 6:45 a.m. from a local shopping center. The loading of passengers was scheduled for 8:15 a.m. with departure shortly afterwards. The arrival in Telluride, Colorado was scheduled for 10:00 p.m. on January 3rd. A Mapquest run of the trip route to Telluride indicated 486 miles with a driving time of about 8 hours. The driver stated that he arrived in Telluride about 5:00 p.m. on January 3rd.

The morning of January 6th the busdriver received word that a portion of the return route was closed due to snow and the decision was made by a senior driver in charge to take an alternate route around the closure. The alternate route would have placed the bus driver over the maximum driving time allowed by Federal regulations. In an interview with Safety Board investigators, the bus driver stated

⁵ FMCSR Title 49 Part 392- Driving of Commercial Motor Vehicles Subpart A- General-392.3- III or Fatigued Operator.

that he took Rt.145 north out of Telluride to Rt. 141 toward Crown Point and then took Rt. 666 west to Rt. 190 or 191. The bus driver said that he thought he missed the turn in the last town before the accident but he knew the road he was on was taking him toward Phoenix. According to Mapquest, the alternate route that the accident driver took would have taken him about 9 hours and 40 minutes to drive (556 miles). The original schedule for the return trip was departure from Telluride at 4:00 p.m. with arrival in Phoenix about 12:00 a.m. The group departed 30 minutes early because of the road closure. (For detailed information see Human Performance Report)

Federal Motor Carrier Safety Regulation 392.6 states that “no motor carrier shall schedule a run nor require the operation of a motor vehicle between points in such period of time as would necessitate the vehicle being operated at speeds greater than those prescribed by the jurisdiction in or through which the vehicle is being operated.” The interpretation section of the regulation advises that trips over 500 miles with a posted 65 mile-per-hour speed limit completed in 10 hours are considered questionable and the motor carrier may be asked to document that such trips can be made. The posted speed limit in the area of the accident was 65 miles-per-hour.

Additional Information:

In an interview with a Safety Board investigator, an official with the Alpine Ski Club of Phoenix was asked why the ski group chose the motor carrier for transportation. He said that they had used the company previously and they had an excellent safety record.

G. AGED DRIVER

In a brief statistical summary dated May 2007, the National Highway Traffic Safety Administration (NHTSA) stated that drivers 65 and older have lower involvement rates in fatal crashes. The report continues to state that 65 and older drivers have lower involvement rates per 100,000 drivers when compared to adult drivers 21 to 64 years old. The population of people 21 to 64 has increased by 5.4 percent since 2001 and the population of people 65 and older has increased by 4.1 percent. The statistics indicated that the number of drivers 21 to 64 years old increased 5 percent and the number of drivers 65 and older increased 6.6 percent.⁶

The Governors Highway Safety Association’s (GHSA) statistical report stated that the percentage of Americans 65 and older has tripled from the year 1900 (4.1 percent) to 12.4 percent in 2004. The report continued by stating that the 65-74 age-group was 8 times larger than in 1900, the 75-84 age-group was 17 times

⁶ From the NHTSA website www.nhtsa.gov “Traffic Safety Facts-Crash Stats, May 2007.

larger, and the 85 and older age-group was 39.8 times larger. The statistics indicated that people are now outliving their ability to drive safely.⁷

Statistics from the Insurance Institute for Highway Safety (IIHS) indicated that motor vehicle accidents accounted for less than 1 percent of the fatalities among people 70 and older. Also, the IIHS stated that fewer older people are licensed to drive compared to the 20-69 age group and that the 70 and older group drive fewer miles. The IIHS statistics summarized that older drivers are keeping their licenses longer and they are driving more miles than before.⁸

The American Automobile Association (AAA) for Traffic Safety conducted a study in 2004 that revealed drivers over the age of 65 and older were more likely to receive fatal injuries in accidents than drivers 55 to 64 years old.⁹

The GHSA stated that the crash rate for older drivers resulted from impairments in 3 functions, vision, cognition, and motor function. These 3 functions decrease with age and contribute to an individual's ability to operate a motor vehicle. Of the 51 States, 29 have adopted some type of limitation on an individual's driver license renewal process either by limiting the number of years for renewal, required vision test, or a physical examination. Some of the States are requiring an individual to renew their license in person. There is no maximum age limit for CDL drivers in the various states, the only limitation is a minimum age limit of 21 years.

James G. LeBerte
Senior Motor Carrier Investigator

⁷ From the www.ghsa.org website "Issues-Older Driver article.

⁸ Same as previous footnote.

⁹ Same as previous footnote.