

STATE FIRE MARSHAL'S OFFICE

Line of Duty Death Investigation



Investigation Number 02-524-08

Firefighter Travis Wiens

Wichita Falls West Volunteer Fire Department

Wichita County

August 12, 2002

Texas Department of Insurance
Austin, Texas

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Summary

A 28-year-old probationary volunteer firefighter died of head injuries sustained when he was thrown from the front platform of a large brush firefighting engine and run over by the front wheel of the truck.

On August 12, 2002 at 4:17 p.m., the Wichita West Volunteer Fire Department received a report of a grass fire in the 9200 block of Seymour Highway, Wichita Falls, Wichita County, Texas. Wichita West Engine 721 and Engine 720, which was driven by Daniel Gutierrez with probationary firefighter Travis L. Wiens as a passenger, responded to the fire with the units arriving at 4:29 p.m. and 4:34 p.m., respectively.

High winds had spread the grass fire from the Seymour Highway to Old State Road and the fire was threatening to cross the road. Heavy smoke was being blown across the road. Wiens boarded a bumper platform on the front of the 5-ton converted military cargo truck and began to apply water to the fire.

As the truck reached the end of the fireline, Engine 720 began making a U-turn across the roadway to make another pass at extinguishing the fire. The fire truck was almost stationary across the full width of the roadway.

A $\frac{3}{4}$ ton pickup truck was westbound through the cloud of smoke when the driver saw the fire truck blocking the roadway. The driver applied the brakes, but was unable to stop and skidded into the front tire of the fire truck.

The impact threw the fire truck driver, Gutierrez, who was not wearing a safety belt, across the interior of the truck to the passenger seat area. The impact also threw firefighter Wiens off the front platform. Wiens lost his firefighters helmet during the fall from the platform and landed on the ground in front of the left front wheel of the fire truck. The truck, which was still in low gear with no one behind the wheel, lurched forward and rolled over Wiens' head. He sustained massive crushing head injuries and was pronounced dead on the scene.

Wiens' body was transported to the Tarrant County Medical Examiner for autopsy. Cause of death was attributed to crushing injuries of the head from the fall from the truck and subsequently being run over by the truck.

Probationary Firefighter Travis L. Wiens, a fifteen-year veteran of the fire service, had served with Wichita West VFD for approximately two months. Firefighter Wiens is survived by his wife.

Introduction

Wichita West Volunteer Fire Department Chief Buddy Alexander notified the Texas State Fire Marshal's Office of the death of a firefighter on August 12, 2002. State Fire Marshal's Office (SFMO) investigator Clinton Williams was assigned as the lead investigator and SFMO Incident Coordinator. Williams traveled to Wichita County on August 13, 2002 to conduct an on-site investigation of the incident.

Upon arrival, Williams was advised that Travis L. Wiens, a Wichita West Volunteer Fire Department probationary firefighter, was killed as a result of a motor vehicle accident while fighting a wildfire. Wiens had been pronounced dead at the scene and his body was transported to the Tarrant County Medical Examiner for autopsy.

The SFMO commenced an LODD investigation under the authority of Texas Government Code Section 417.0075. The statute requires SFMO to investigate the circumstances surrounding the death of the firefighter, including the cause and origin of the fire, the condition of the structure, and the suppression operation, to determine the factors that may have contributed to the death of the firefighter. The State Fire Marshal is required to coordinate the investigative efforts of local government officials and may enlist established fire service organizations and private entities to assist in the investigation.

The investigation began when Williams traveled to Wichita Falls on August 13, 2002 and met with Lieutenant David Duke of the Wichita County Sheriff's Office.

The National Fallen Firefighter's Foundation and the National Institute for Occupational Safety and Health (NIOSH) Fire Fighter Fatality Investigation and Prevention Program were notified in accordance with SFMO policy.

Origin and Cause Investigation

Lieutenant David Duke of the Wichita County Sheriff's Office (WCSSO) stated that the WCSSO Arson Unit had investigated a grass fire that originated at 9062 Seymour Highway, Wichita Falls, Texas. Duke stated that the owner of the property, James Bruce Urban, had been cutting pipe at his property with a torch on August 12 at approximately 12:30 p.m. Sparks from the cutting operation ignited a small grass fire. Urban extinguished the fire with a pressurized water garden sprayer. When Urban was leaving his property at shortly before 1:30 p.m., Urban extinguished what he described as several remaining hot spots. Upon returning at approximately 1:45 p.m., Urban checked the area of the fire to ensure there was no remaining fire.

Urban left the property again at approximately 2:30 p.m., after again checking the area for hot spots. Urban received a cellular telephone call from his daughter at approximate 4:00 p.m. reporting a fire in the pasture next to his property. He instructed her to report

the fire by 911. She called back to confirm she had reported the fire and that the fire department had arrived.

On August 13, 2002 Williams and WCSO Deputy Robinson contacted Urban and after obtaining consent, traveled to the area of fire origin on Urban's property. They observed metal pipe in the area and a manure compost pile that was smoldering in several places. Deputy Robinson stated that the pile was larger on the day of the fire, but had been spread out to try and extinguish the fire. Grass had burned from the area of origin to the south shoulder of Old State Road.

The WCSO Arson Unit conducted a fire investigation of the grass fire. The WCSO Arson unit determined the fire cause to be accidental in nature. The fire was determined to have started in the area to the west of the manure pile where Urban was cutting pipe.

WCSO Lt. David Duke presented a report to the Wichita County District Attorney's Office for review in reference to the fire investigation. The District Attorney's Office declined to prosecute.

Building Structure and Systems

No buildings were involved in the fatality.

Investigation of the Death of the Firefighter

Information in this section was gathered from statements made by civilians, sheriff's deputies, and firefighters involved in the incident. The Texas Department of Public Safety investigated the motor vehicle accident and this report was the source of much of the material that follows.

On August 12, 2002 at 4:17 p.m., the Wichita West Volunteer Fire Department received a report of a grass fire in the 9200 block of Seymour Highway, Wichita Falls, Wichita County, TX. Wichita West Engine 721 and Engine 720, which was driven by Daniel Gutierrez with probationary firefighter Travis L. Wiens as a passenger, responded to the fire and both units arrived at 4:29 p.m. and 4:34 p.m. respectively.

Wichita West Lieutenant Jeffrey Hams stated that Wiens was a "yellow helmet" or probationary firefighter, which meant that he was not supposed to respond to fires. Hams stated that although a probationary fire fighter, the department had allowed Wiens, because of his prior fire fighting experience, to respond to fire incidents. Wiens had previously been a member of another fire department.

The National Weather Service reported that weather conditions at the time of the fire were clear skies with a temperature of 95° F. The humidity was 37% with 22-25 mph southeast winds.

Engine 721, driven by Lieutenant Jeffrey Hams with firefighter Matt Shugart, first proceeded to the origin of the pasture fire on Seymour Highway. After extinguishing the fire, Hams drove 721 to the where the fire had spread to Old State Road. Hams stated the smoke was so thick on Old State Road that he almost had to stop. Engine 721 then approached the west edge of the fire near the intersection of Crown Lane and Old State Road and Hams and Shugart began extinguishing fire in this area.

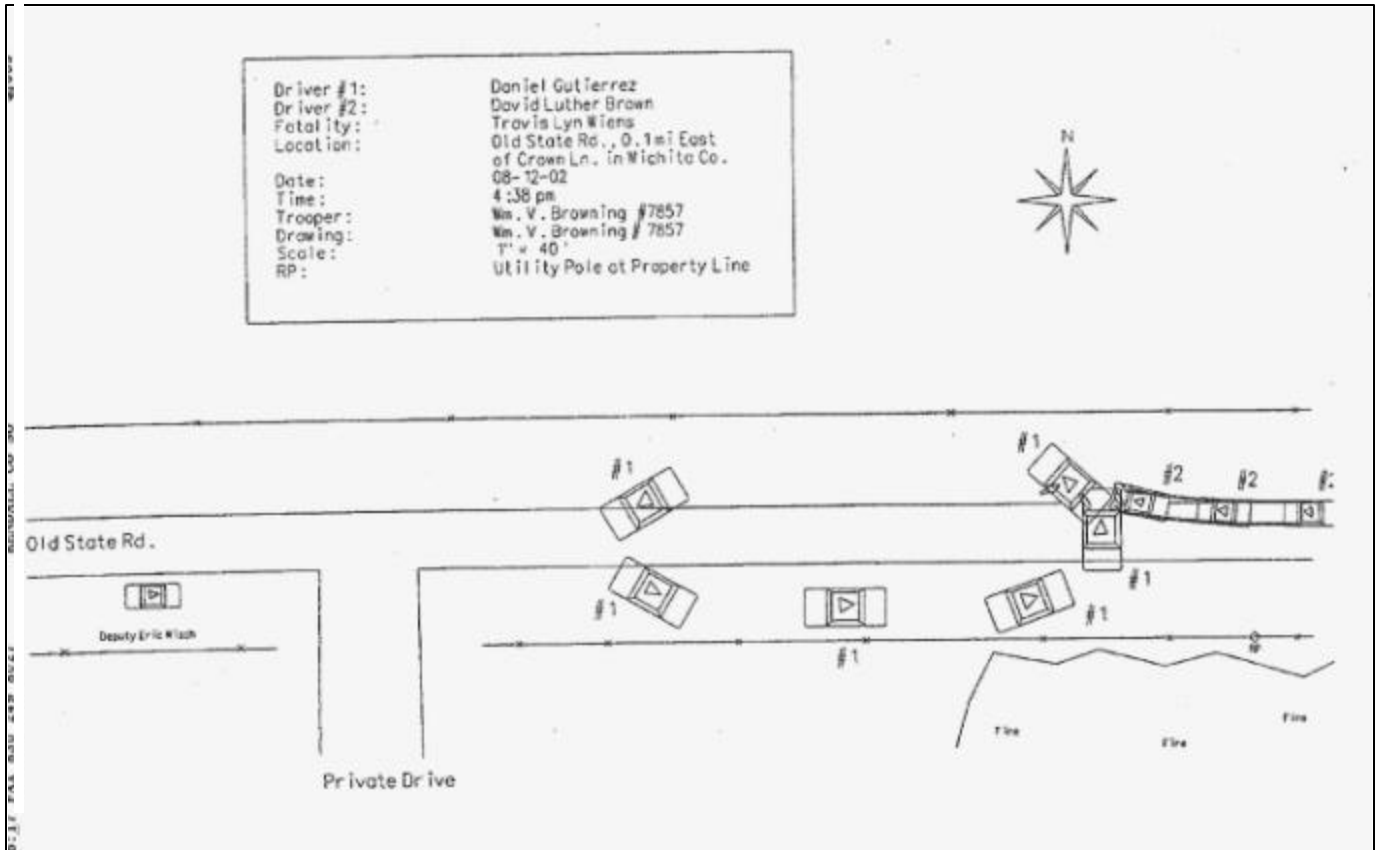
Engine 720, driven by Daniel Gutierrez with firefighter Travis L. Wiens proceeded west on Old State Road, through the same cloud of smoke, and past the west edge of the grass fire that was threatening to jump across Old State Road. The red emergency lights on the fire truck were flashing at this time.

Gutierrez made a U-turn with Engine 720, ending with the truck facing east-bound. Wiens moved to a bumper platform on the front of the 5-ton six-wheel-drive former military cargo truck. Wiens began to apply water to burning grass on the south side of Old State Road as Gutierrez drove the truck slowly to the east along the south shoulder/ditch area. Heavy smoke was being blown across the road.

As Engine 720 approached the east end of the fire, Gutierrez made a left turn across the roadway in preparation to making a U-turn to return to the west edge of the fireline to make another pass at extinguishing the fire. A thick cloud of smoke blew across the road just as the fire truck was turning. Gutierrez stated visibility was just a few feet. The 25.8-foot long fire truck was almost stationary across the paved 18-foot wide roadway as the driver "backed and filled" to complete the U-turn.

WCSO deputy Eric Wisch, who was stopped in his patrol car approximately 100 yards to the west, estimated the truck was across the roadway approximately 30 seconds. There was no traffic control at the east end of the fire.

The speed limit on Old State Road is 55 mph. A ¾ ton pickup truck driven by David L. Brown was westbound on Old State Road when it entered the cloud of smoke. Brown estimated visibility at 30 to 40 feet. Brown stated he had moved far to the right to give room for any eastbound vehicles that were over the center of the unmarked blacktop roadway. As Brown proceeded through the cloud of smoke at 30-40 mph (Brown's estimate) he encountered the fire truck blocking the roadway. The driver applied the brakes, but was unable to stop and skidded 56 feet into the fire truck. Brown's truck collided with the right front tire and wheel of the fire truck.



DPS Diagram-NOT TO SCALE

The impact threw Engine 720 driver Gutierrez across the interior of the truck towards the passenger seat. Gutierrez was not wearing the safety belt installed in the truck. The impact also threw firefighter Wiens over the top of protective screen and bar on the front platform. Wiens lost his firefighters helmet during the fall from the platform and landed on the ground in front of the left front wheel of the fire truck. There was no safety strap or harness on the front bumper platform.

The truck, which was still in low gear with no one behind the wheel, lurched forward and rolled over Wiens' head and then continued to lurch forward approximately 24 feet from the point of impact. Wiens sustained massive crushing head injuries.

As soon as the fire truck stopped moving, Gutierrez jumped from the driver's door, saw Wiens on the ground, and entered the truck cab to call for help on the radio. Deputy Wisch drove to the accident scene, observed Wiens was obviously deceased, and checked on Brown, who stated he was uninjured. Deputy Wisch called his dispatcher to notify them of an accidental death on the scene and requested an ambulance.

Engine 721 was directed to check on Engine 720 and upon arrival observed the accident scene. Shugart checked Wiens for a pulse and found none. Hams checked on 720's driver, Gutierrez, and found him slumped behind the steering wheel. Hams

also checked on Wiens and observed he was dead. Shugart checked Brown, the driver of the pickup involved in the accident. Hams notified his assistant chief that there had been a fatality and to make the proper notifications.

Hams helped Gutierrez out of the cab of Engine 720 and placed him in the cab of Engine 721 to get him away from the immediate accident scene. After helping walk Gutierrez to the ambulance when it arrived, Hams returned to Engine 721 to finish extinguishing the fire in the area.

Gutierrez was transported to a local hospital and treated for minor injuries and psychological shock. The driver of the pickup truck, Brown, was not injured.

Wiens was pronounced dead on the scene at 5:05 p.m. by Grady Smith, the Justice of the Peace death investigator in Wichita County and requested the autopsy which was performed under contract with the Tarrant County Medical Examiner.

Wichita West Engine 720

Engine 720 is a 1974 American General 5-ton 6-wheel-drive military cargo truck. The truck is titled to the Texas Forest Service (TFS) and had been assigned to the Wichita West Volunteer Fire Department as part of the TFS Federal Excess Personal Property program

Wichita West VFD built the cargo vehicle into a fire truck by adding a 900 gallon tank, a gasoline engine driven fire pump, and hose lines. A transverse platform was installed on the front bumper and equipped with piping to a short hose line for use in fighting wildfires. An additional hose reel and line is mounted above the pump in the rear of the cargo area.

The front bumper platform extended out approximately 36 inches. The bumper had an open frame that extended up to the cab and then down to the sides of the bumper. The lower front portion of the frame had mesh wire, which extended 39 inches from the top of the bumper to the cross member. The rest of the frame was completely open allowing uninhibited access from either side. There were no safety type harnesses or other safety devices for the front bumper platform.



Wichita West Engine 720

The truck has been painted red. Four-inch-wide white reflective tape and reflective 911 emblems had been applied to both sides of the cargo bed. Red and white alternating reflective tape has been applied across the rear of the truck. The only warning lights on the vehicle are a full width red light bar mounted on top of the cab. The truck is also equipped with an electronic siren with the speaker mounted on the front bumper platform. Two high-mount white lights were installed for extra night visibility. There are no low-mounted or side-mounted warning lights.

Wichita West VFD has an in-house driver training program. Daniel Gutierrez was checked out by Lieutenant Jeffrey Hams to drive and operate fire truck apparatus to and from fire scene locations. Gutierrez had been cleared and operating the apparatus for approximately 4 months. Hams stated that Gutierrez also had prior military experience in the operation of the type of vehicle that is used as a brush truck.

Chief Buddy Alexander, of the Wichita West VFD stated that the department has a standard operating policy for the driving and operation of their fire trucks. Alexander stated that they require the person to be checked out prior to them driving any fire truck apparatus and they require approximately 4 hours training. Alexander stated that wearing of seat belts is required if seat belts are present.

Chief Alexander stated that no safety belts or harnesses are provided on the front bumper of the brush trucks because the firefighters need to be able to exit the vehicle quickly or climb through the front windshield quickly, if the fire flares up on them.

Personal Protective Equipment Evaluation

Firefighter Wiens was wearing full personal protective equipment. Wiens was not wearing a self-contained breathing apparatus (SCBA). Smoke filter cartridges are carried on each Wichita West fire truck for attachment to SCBA facemasks, but were not used at this fire.

Wiens reportedly lost his firefighters helmet as he fell from the front platform to the ground. Witnesses reported Wiens moving in an attempt to avoid the wheels of the truck, so it is believed that any head injuries he sustained in his fall did not incapacitate him. It is unknown if the helmet would have provided any head protection from being run over by the heavy truck.

There were no safety straps or harnesses installed on the front firefighting platform of the 5-ton brush truck.

Cause of Death of the Victim

The cause of death was described by the Tarrant County Medical Examiner as “craniofacial crush injuries due to fall from a moving vehicle with secondary run-over.”

Recommendations

The Texas Forest Service Fire Protection Division and the SFMO Fireground Operations Task Force were asked to develop recommendations based on the events of this incident. The following recommendations are based upon nationally recognized consensus standards for the fire service.

Volunteer fire departments are not required by state statute to comply with these standards. All fire departments should be aware of the content of the standards and may develop programs based on them to increase the level of safety for fire department personnel.

Training

Travis Wiens was a probationary firefighter, but had some prior experience with other fire departments.

Volunteer Firefighters responding to emergency incidents should meet the minimum requirements for State Fireman's and Fire Marshal's Association introductory training requirements prior to responding to emergency incidents.

Fire Department Vehicles

The vehicle driver was not wearing the seatbelt provided in the fire truck. The vehicle was not equipped with a "lifeline" harness in the front platform. The deceased firefighter was working from a platform located in the front of the fire truck.

- Drivers and passengers should wear safety belts whenever a vehicle is in motion.

Signs stating "*Occupants must be seated and belted when the apparatus is in motion*" should be provided. These signs shall be visible from each seated position.

- New fire apparatus design should follow NFPA standards including protected seating of passengers, safety features, and audible and visible warning equipment.
- Conversion of vehicles to firefighting apparatus should be undertaken carefully with precautions taken against overloading, installing protective equipment such as seat belts for occupants, and maintaining stability against overturning and loss of control.

The Texas Forest Service recommends the Roscommon Equipment Center, a cooperative program between the National Association of State Foresters and the Michigan Department of Natural Resources, as an excellent resource for fire departments considering converting a military vehicle. The Roscommon Equipment Center publication *Guidelines for Designing Wildland Fire Engines* is a primer for those planning to fabricate a fire truck. It includes basic design needs, legal and safety requirements and a list of other resources. It is available electronically on the Internet at:

http://www.roscommonequipmentcenter.com/news_notes/nn3.pdf

- Personnel should not be allowed to ride on the front of wildfire firefighting apparatus at any time.

Accident prevention signs should be located on the vehicle at the rear step areas, and at front bumper extensions and cross walkways, if they exist. The signs should warn personnel that standing on these areas while the vehicle is in motion is prohibited.

- Firefighting should be limited to protected positions on the sides and rear of vehicles.

Firefighters in these positions should be protected by safety cages or belts that will prevent falls from vehicles. Rollover protection equipment should be considered for these types of vehicles.

Automatic nozzles may be installed on front bumpers to avoid placing firefighters at risk on an exposed position.

Fire Department Operations

The Wichita West VFD was conducting firefighting operations on a highway without adequate traffic control.

- Operators of fire apparatus should use special precaution while operating a fire apparatus in or around a hazard zone particularly when the hazard extends to roads or highways. Traffic laws must be followed as much as possible while operating a fire apparatus on the open road during the emergency incident regardless of the activity being done.
- Roads should be closed and traffic detoured where firefighters or equipment are exposed to traffic.
- Fire departments should meet and establish traffic control procedures with local law enforcement agencies