

TEXAS STATE FIRE MARSHAL'S OFFICE

Firefighter Fatality Investigation



Firefighter Fatality Investigation FY 11-01

Volunteer Firefighter Francis Arthur Ladue, Jr.

Santa Rosa Volunteer Fire Department, Inc.
January 9, 2011

Texas Department of Insurance
Austin, Texas

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- Santa Rosa Volunteer Fire Department
- City of Santa Rosa Police Department

Executive Summary

On January 9, 2011, Santa Rosa Volunteer Firefighter Francis Arthur Ladue, Jr., age 63, died as a result of a head injury from a slip and fall while performing re-supply operations on the scene of a wild land fire on November 8, 2010.

At 2:30 PM, on November 8, 2010, Firefighter Ladue was operating the Santa Rosa VFD Engine 9 during resupply operations of a brush truck at a grass/brush fire near South Rabb Road in Cameron County. Engine 9 features an open passenger cab with the pump controls located mid mount between the cab and tank. Firefighter Ladue slipped while stepping down from the pump controls to the passenger side and hit the back of his head. Firefighter Ladue indicated he was not injured and refused treatment at the scene. After the fire was secured he returned to the station. At approximately 6:30 PM he went home after refusing medical attention. Complaining of a headache to his wife, he went into a bedroom to rest. He was later found by his wife unconscious and unresponsive.

Emergency Medical Services transported him to Valley Baptist Medical Center in Harlingen, Texas, where exams revealed an intracranial hemorrhage.

Firefighter Ladue remained on life support until passing away on January 9, 2011.

Francis Arthur Ladue, Jr., served with the Santa Rosa VFD since 2008.

This report is to honor Lt. Francis Arthur Ladue, Jr., by taking the lessons learned from this tragic incident so others may not perish.



Introduction

On January 9, 2011, Santa Rosa Volunteer Fire Department Firefighter Francis Arthur Ladue, Jr., passed away as a result of injuries received while operating at the scene of a brush fire on November 8, 2010. An investigation was initiated in accordance with State of Texas statutes, upon receiving information of the firefighter fatality.

It should be noted that November 2010 was the beginning of the costliest drought and wildfire season in Texas history.

Texas Government Code, Section 417.0075, requires the SFMO to investigate the circumstances surrounding the death of a firefighter, including the cause and origin of the fire, the condition of the structure, and the suppression operation, when in connection with a firefighting incident, to determine factors that may have contributed to the death of the firefighter. No structures were involved in this incident.

Investigation

Origin and Cause

The origin and cause of the fire was a brush pile fire that extended to unplowed fields on the same property during windy conditions.

The Cameron County Fire Marshal and the Office of the County Judge issued a burn permit to the property owner on November 8, 2010. Burning Permits issued from this office are valid for two weeks from the date of issuance unless specifically restricted under additional notes. Notes included on this permit state “BURN 1 PILE AT A TIME, MUST HAVE WATER HOSE HANDY.”

Weather conditions on November 8, 2010, were clear to partly cloudy with temperatures ranging from 60° F at 8:00 AM to 80° F at 4:00 PM. Relative humidity levels dropped from 90% reported at 8:00 AM with calm winds to 38% at 3:00 PM with winds between 10-15 mph, gusting to 18 mph from the SSE.



View of the remains of the brush pile



Views of the scene from North Rabb Road





Santa Rosa VFD 1983 FMC Engine 9

Fire Scene Operations

On November 8, 2010, the Santa Rosa Volunteer Fire Department responded to a report of a grass fire south of the city at the corner of High Canal Road and Farm to Market 506. Firefighter Ladue responded to the grass fire as the driver/operator of Engine 9 (Unit 3209), a 1983 FMC with a 1500 GPM pump and 750 gallon water tank, to perform resupply operations of two brush trucks.

The Santa Rosa Fire Chief responded in his personal vehicle and while on the scene saw the smoke of a second brush fire to the Southwest. He responded in Unit 3208 to investigate, and seeing the second fire, called for units to respond to that location. Apparatus responding and on the scene included Brush/Tanker truck (Unit 3208), a Brush truck (Unit 3204), and Engine 9 (Unit 3209). Units 3204 and 3208 were conducting “Pump and Roll” operations in the brush east of North Rabb Road.

A Santa Rosa Police Officer was on scene to provide traffic control along with two inactive members of the fire department who were on scene to provide assistance.

Firefighter Ladue, driving Engine 9, positioned the apparatus on the southbound side of North Rabb Road headed south next to the bar ditch to allow room on the roadway for the brush trucks to refill next to the unit.

Brush Truck 3204 returned to the roadway for refill and was positioned along the driver's side of Engine 9. Firefighter Ladue was up on the mid-section of Engine 9 when the driver of Brush 3204 passed him the end of a hose to connect to the passenger side of Engine 9. The driver of Brush 3204 turned to get the hose to the tank of the Brush 3204 and did not know that Firefighter Ladue slipped and fell.



Positions of Engine 9 and Brush 3204

A Santa Rosa Police Officer was at the driver's side door of Engine 9. The officer saw Firefighter Ladue on top of the truck at the mid-mount pump panel and saw him reaching for the hose from the driver of Brush 3204. The Officer turned to look at the roadway for any approaching traffic and heard some noise coming from the top of Engine 9. He turned back toward the truck and did not see Firefighter Ladue but saw the hose playing out fast as if Firefighter Ladue grabbed the hose as he was falling. The Officer walked to the passenger side of the truck and saw Firefighter Ladue in the ditch with his back toward the truck, getting up and brushing off. The Officer asked if he was okay and Firefighter Ladue responded that he was and he continued connecting the hose to the passenger side panel.

Another witness, an ex-volunteer who arrived on scene to assist, was near the back of the truck when she saw Firefighter Ladue in the ditch. The witness states that Firefighter Ladue was standing in the ditch with his back toward the truck, brushing himself off as if he had fallen. The witness asked what happened and Firefighter Ladue responded that he slipped but was not hurt. The witness advised the Chief of the incident.



View of the position of the truck and passenger side at the ditch

A short time later the Chief talked to Firefighter Ladue about the fall and asked if he was hurt. Firefighter Ladue answered that he slipped but that he was okay.

Firefighting operations continued with Firefighter Ladue driving and operating Engine 9 until the brush fire was extinguished. At approximately 5:45 PM, upon returning to the station and after returning all the apparatus to service, the firefighters were in the station training room for a debriefing. Firefighter Ladue was asked again whether he was okay and again he gave no indication that he was injured, and refused treatment or examination by the Chief's wife, a registered nurse.

Emergency Medical Response

At approximately 6:30 PM, Firefighter Ladue left the station and returned home, where he ate a little, told his wife that he had a headache, and went to lie down. He did not tell his wife that he had slipped and fallen from the truck.

At 9:35 PM, Mrs. Ladue called 911 after finding her husband unconscious and unresponsive. Harlingen EMS responded, arriving at 10:00 PM.

Harlingen EMS transported Firefighter Ladue to the Valley Baptist Medical Center Emergency Room. Several tests and examinations were conducted that indicated Firefighter Ladue had a severe intracranial hemorrhage injury behind the right ear near the back of the head. Bruising was also noted on the backs of his legs, arms, and back.

Firefighter Ladue remained unresponsive in intensive care until passing away on January 9, 2011.

Medical Background

Interviews with Mrs. Ladue indicated that her husband had a history of medical issues. Firefighter Ladue had heart problems dating back to 1986 that were complicated by contracting Lyme disease. Firefighter Ladue retired in 2002 with a heart and stress-related disability after a career with an industrial chemical company in the New England area. Firefighter Ladue underwent heart by-pass surgery in 2005. He was prescribed and taking Coumadin (Warfarin), an anticoagulant medication. She indicated that Firefighter

Ladue would bruise easily and have serious bleeding from minor cuts or scrapes, a known side effect of the medication.

Firefighter Ladue was diagnosed with peripheral neuropathy, an illness that affects peripheral nerves that sense pain, touch, hot, and cold. It also affects movement and muscle strength, most often of the feet and lower legs. (From *WebMD, Healthwise, Incorporated*).

The death certificate listed Intracranial Hemorrhage as the first injury in the of chain events that directly caused the death. Complications listed in the chain of events included tracheostomy, pneumonia, and respiratory arrest.

No autopsy was performed.

RECOMMENDATIONS

Recommendations are based upon nationally recognized consensus standards and safety practices for the fire service. All fire department personnel should know and understand nationally recognized consensus standards, and all fire departments should create and maintain SOGs and SOPs to ensure effective, efficient, and safe firefighting operations.

- 1 Fire Departments should establish SOPs for minimum requirements of a fire service related occupational safety and health program in accordance with the ***National Fire Protection Association (NFPA) Standard 1500, Standard on Fire Department Occupational Safety and Health Program, 2007 Edition.***
- 2 Provide mandatory pre-placement and annual medical evaluations to all firefighters consistent with ***NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments, 2007 Edition,*** to determine their medical ability to perform duties without presenting a significant risk to the safety and health of themselves or others.
- 3 Perform an annual physical performance (physical ability) evaluation to ensure firefighters are physically capable of performing the essential job tasks of fire fighting. ***NFPA 1583, Standard on Health Related Fitness Programs for Firefighters, 2008 Edition.***
- 4 Ensure that firefighters are cleared for duty by a physician knowledgeable about the physical demands of firefighting, the personal protective equipment used by firefighters, and the various components of ***NFPA 1592, Standard on Comprehensive Occupational Medicine Program for Fire Departments.***
- 5 Fire Departments should establish SOPs and training that address safety on apparatus. Mounting and dismounting apparatus should be performed using established techniques, utilizing handrails and steps by maintaining at least one hand firmly grasping a handhold and at least one foot firmly placed on a flat surface. ***Essentials of Fire Fighting and Fire Department Operations, IFSTA, 5th Edition, Chapter Two, Firefighter Safety and Health;*** and ***Fundamentals of Firefighter Skills, IAFC, 2nd Edition, Chapter 10, Response and Size-Up.***

APPENDIX

Timeline

Those events with known times are identified. Events without known times are approximated in the sequence of the events based on firefighter statements regarding their actions and/or observations.

November 8, 2010

1:00 PM: A grass fire was reported at approximately 1:00 PM on November 8, 2010 at an empty lot on the corner of F. M. 506 and High Canal Road, Santa Rosas, Texas. Volunteer Firefighter Francis Ladue, Jr., responded as the driver/operator of the Engine 9 to resupply the Brush trucks.

2:30 PM: While on-scene and finishing extinguishing the FM 506 grass fire, smoke was seen to the southwest. Firefighter Ladue responded with the brush trucks to a grass fire off South Rabb Road approximately ½ mile south of the High Canal Road. (This was a Burn Permit fire.)

While on scene at South Rabb Road to resupply Brush 8, Firefighter Ladue positioned Engine 9 along the west side of the roadway next to the ditch facing to the south.

Two witnesses stated that they saw Firefighter Ladue in the ditch on the passenger side of the engine.

Firefighter Ladue stated he was not hurt, and he refused several attempts to be examined, nor did he indicate that he was injured.

5:45 PM: Firefighter Ladue returned to station.

6:30-7:00 PM: Firefighter Ladue returned home. He did not say anything to his wife about falling. He ate a little, said he had a headache and went in to his bedroom to rest awhile.

Several hours later, his wife found him unresponsive.

9:35 PM: Firefighter Ladue's wife called 911, requesting EMS.

10:00 PM: EMS arrived and transported Firefighter Ladue to Valley Baptist Medical Center, Harlingen, Texas.

Firefighter Ladue did not regain consciousness and remained unresponsive and hospitalized until he passed away on January 9, 2011.

Santa Rosa Volunteer Fire Department Statistics

The Santa Rosa Volunteer Fire Department was established in 1973. It provides service to the City of Santa Rosa and responds county wide according to mutual aid agreements and requests. The department serves a population of 2500 citizens within the one mile square area of the city limits and responds throughout a sixty square-mile area of Cameron County. Cameron County is located on the Gulf of Mexico at the southern tip of Texas bordering Mexico. The City of Santa Rosa is located at the border of Cameron County and its northern neighbor, Willacy County.

The Santa Rosa VFD is staffed by 12 Volunteers. Fire Chief Daniel Theys has been Chief and the Emergency Management Coordinator for 28 years.

Apparatus includes four pumpers, two brush trucks, and one utility truck.

Investigation Document Log

Doc #	Description	Source
1	Santa Rosa VFD Incident Report, 11/8/2010, 1:00 PM	Santa Rosa VFD
2	Santa Rosa VFD Incident Report, 11/8/2010, 2:30 PM	Santa Rosa VFD
3	Statement of Javier Florencia, Santa Rosa Firefighter	State Fire Marshal Office
4	Statement of Danny Theys, Santa Rosa Fire Chief	State Fire Marshal Office
5	Statement of Israel Garza, Santa Rosa Police Officer	State Fire Marshal Office
6	Certificate of Vital Records, Death Certificate	Family member
7	Burning Permit	Cameron County Judge Office
8	Employer's First Report of Injury	Santa Rosa VFD
9	Notification of First Temporary Income Benefit	Texas Municipal League
10	Notification of Death Benefit	Texas Municipal League
11	Weather Information for November 8, 2010	Weather Underground web site
12	Newspaper with Obituary, La Feria News, Vol. 88, #3	SFMO
13	Notes of interviews of witnesses	SFMO
14	Photograph CD	SFMO
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References

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2. NFPA [2007]. NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program*. Quincy, MA: National Fire Protection Association
3. NFPA [2008]. NFPA 1521: *Standard for Fire Department Safety Officer, 2008 Edition*. Quincy, MA: National Fire Protection Association
4. NFPA [2007]. NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments, 2007 Edition*. Quincy, MA: National Fire Protection Association
5. NFPA [2008]. NFPA 1583: *Standard on Health Related Fitness Programs for Firefighters, 2008 Edition*. Quincy, MA: National Fire Protection Association
6. U.S. Occupational Safety and Health Administration Respiratory Protection Standard, CFR 1910.134
7. IFSTA [2008]. *Essentials of Fire Fighting and Fire Department Operations*, 5th ed. Oklahoma State University. Stillwater, OK. Fire Protection Publications, International Fire Service Training Association
8. NFPA [2009]. *Fundamentals of Firefighter Skills*, 2nd Edition, Quincy, MA; International Association of Fire Chiefs