TEXAS
STATE FIRE MARSHAL'S OFFICE

Firefighter Fatality Investigation

Investigation Number FY 11-02

Firefighter Elias Jaquez

Cactus Volunteer Fire Department
April 09, 2011

Texas Department of Insurance
Austin, Texas

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ACKNOWLEDGEMENTS

The Texas State Fire Marshal wishes to thank the following entities for their cooperation and assistance in the investigation of this incident and the preparation of this report:

Cactus Volunteer Fire Department

Dumas Fire Department

Moore County Sheriff's Department

Lubbock County Medical Examiner's Office

Texas Forest Service

National Institute for Occupational Safety and Health

And the many emergency responders to this incident

Executive Summary

On April 9, 2011, Cactus Volunteer Fire Department Firefighter Elias Jaquez was critically injured and two other firefighters from the Dumas Fire Department received injuries during firefighting operations at a wild land fire located in Moore County. At 1:57 PM, Moore County Dispatch Center received a report of a grass fire located off CIG Road, south of the city limits of Dumas, Texas. The Dumas Fire Department responded and upon arrival requested mutual aid. At approximately 2:05 PM, the Cactus Volunteer Fire Department was paged for mutual aid and responded from Cactus, Texas.

The fire involved buffalo grass, native to the Texas Panhandle. The fire moved from near CIG road east of US 287 toward the east and northeast, jumping several county roads. The fire burned approximately 35,000 acres of grassland.

Firefighter Jaquez responded to the fire scene from the Cactus Volunteer Fire Department in Brush 51, assigned to staff the pump and nozzle. Brush 51 and Dumas Fire Department Brush 58 attacked the east flank from the unburned side of the fire, approximately nine miles east of US 287 on County Road U. Brush 58 became stuck in the deep sand. Brush 51 stopped alongside Brush 58 and the two Dumas firefighters got inside. As Brush 51 started to leave, it also became stuck in the sand. As the fire moved toward them, the four firefighters abandoned the truck and began running. They became separated while trying to outrun the fast moving fire. After the fire burned over the area, Firefighter Jaquez was found severely burned. Jaquez was transported to an ambulance waiting on US 287 where he was transported to Dumas Memorial Hospital and then to the University Medical Center Harnar Burn Center in Lubbock, Texas.

On April 20, 2011 Firefighter Jaquez, age 49, died as a result of complications of the injuries received on April 9, 2011.

This report is to honor Firefighter Elias Jaquez by taking the lessons learned from this tragic incident so others may not perish.

Firefighter Elias Jaquez, 49 years old, had been a member of the Cactus Fire Department for less than two years.

Introduction

On Wednesday, April 20, 2011, the Texas State Fire Marshal's Office was notified that Firefighter Elias Jaquez died as a result of injuries he sustained while performing firefighting operations on the scene of a wild land fire in Moore County on April 9, 2011.

The State Fire Marshal's Office (SFMO) commenced the firefighter fatality investigation under the authority of Texas Government Code Section 417.0075. This statute requires the SFMO to investigate the origin and cause of the fire, the condition of the structure, the suppression operation, and any factors that may have contributed to the firefighter fatality. The statute requires the State Fire Marshal to coordinate the investigative efforts and may enlist established fire service organizations and private entities to assist in the investigation.

Texas State Fire Marshal Paul Maldonado assigned Deputy State Fire Marshal Glen Harris to investigate the firefighter fatality.

The investigation began on April 21, 2011, with the initial assessment and survey to determine the needed resources to conduct the investigation. The Moore County Sheriff's Office was instrumental in the collection of information and providing assistance throughout the investigation.

The National Institute for Occupational Safety and Health (NIOSH) Fire Fighter Fatality Investigation and Prevention Program responded to conduct an independent investigation.

Wild Land Fire Conditions

There were no structures involved in the origin of the fire. Forecast conditions and Actual Observed conditions are reported by the Texas Forest Service.

The State of Texas' wildfire season began in mid-November 2010 and by April 9, 2011, millions of dollars in property and thousands of acres were destroyed. Thick grasses and vegetation that grew as a result of the rains during 2010 dried up during the drought, leaving substantial fuels for the fast moving fires. The 2011 fire season was to become the most devastating and costly fire season period in Texas history and in April there was no end to the drought in sight. The extremely dry fuels resulted in extreme fire conditions, fire behavior, and flame lengths.

The fire involved open rangeland of buffalo grass, yucca, cactus and mesquite trees native to the Texas Panhandle. The terrain includes rolling hills covered with a layer of sandy soils. The high winds are known to cause sand drifts capable of covering roadways within minutes. The fire moved from east of US 287 in an area known as Crawford Flats located in Potter County and progressed into Moore County, crossing CIG Road toward the northeast, jumping several county roads including County Road U. The fire, known as the Crawford fire, eventually burned more than 35,000 acres of rangeland.

Weather conditions in the Moore County area on April 9, 2011, were hot, dry, and windy with gusts to 40 mph and the relative humidity dropping into the single digits.

Fire Behavior forecast by the Texas Fire Service for April 9, 2011:

FIRE BEHAVIOR FORECAST

FORECAST NUMBER: #41
FIRE NAME: West Texas IA 2011
DATE ISSUED: 04/08/2011
UNIT: Texas Forest Service - Abilene

TYPE OF FIRE: Wildland
OPERATIONAL PERIOD: 04/09/2011 0800-2000
TIME ISSUED: 1800
SIGNED: /s/ Brad Smith
Typed/printed:

INPUTS

WEATHER SUMMARY:

Red Flag Warnings likely for the West and Northwest branches today.

A distinct, significant dry line will set up and slowly move eastward during the day. Afternoon conditions include:

West of Dry Line: High temperatures mid-90's except north of I-40 in the 80's. Minimum RH less than 10% except north of I-40 they will run 10-15%. Wind will be SW at 25-30mph with gusts to 40.

East of Dry Line: High temperatures in the mid 90's. Minimum RH 25-30%. Wind will be South 20-25mph with gusts to 30.

OUTPUTS

FIRE BEHAVIOR

GENERAL:

Rate of spread (ROS) and surface fire intensity as measured by flame length (Fl) will be higher west of the dry line. Cured grass fuels and a mixture of grass and shrub fuels (shrubs include juniper and oak) dominate the landscape. Average fine fuel loading is represented by SFBPS Grass model Gr2 and Grass/Shrub model Gs2. Above average fuel loading represented by Gr3 and Gs3. Cured grass fuels drive the ROS in both the Gr and Gs models. The Juniper and Oak shrub in the Gs model increase the fire intensity and difficulty of control. Crown fire potential is high in Juniper and Oak due to low live fuel (foliar) moisture. It takes little surface fire intensity to transition surface fire into crowns.

SPECIFIC:

Dry line will move eastward to a line roughly from Wichita Falls to Del Rio.

West of Dry Line:

Fine dead fuel moisture (FDFM) will average 3% and Probability of Ignition (POI) will average 90%.
ROS in Gr2 and Gs2 will range from 1.5 to 2.5 mph. Fl will range from 8 to 15 ft.
ROS in Gr3 and Gs3 will range from 2.5 to 3.5 mph. Fl will range from 15 to 20 ft.

East of Dry Line:

FDFM will average 6% and POI will average 60%.
ROS in Gr2 and Gs2 will range from 1 to 1.5 mph. Fl will range from 6 to 12 ft.
ROS in Gr3 and Gs3 will range from 1.5 to 2 mph. Fl will range from 10 to 18 ft.
The attached Hauling Chart uses FDFM 3% and wind speed of 25 to 30mph for west of dryline. FDFM 6% and wind speed 20-25mph east of the dry line.

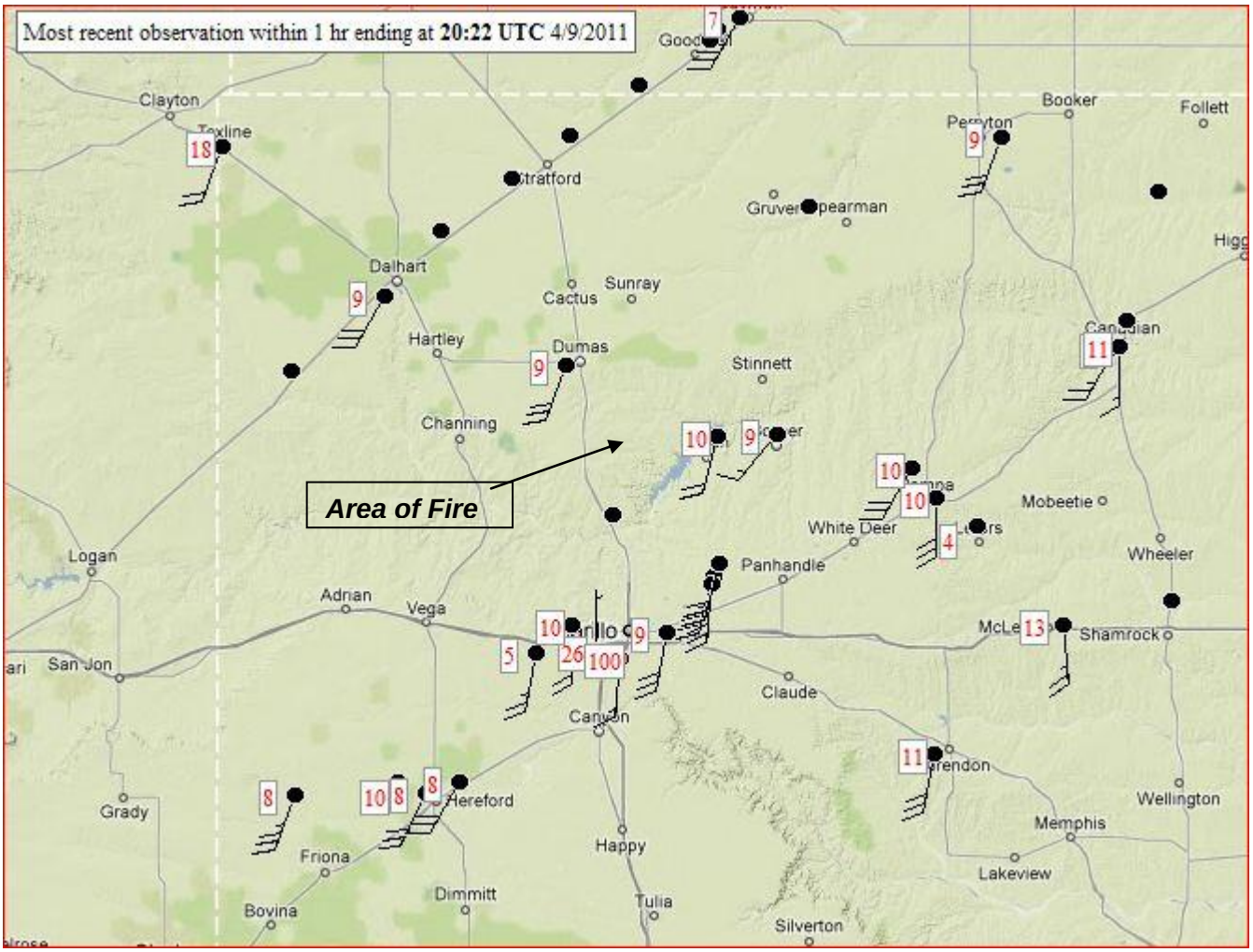
AIR OPERATIONS:

Wind speeds west of the dry line may reach 30mph with gusts to 40.

SAFETY

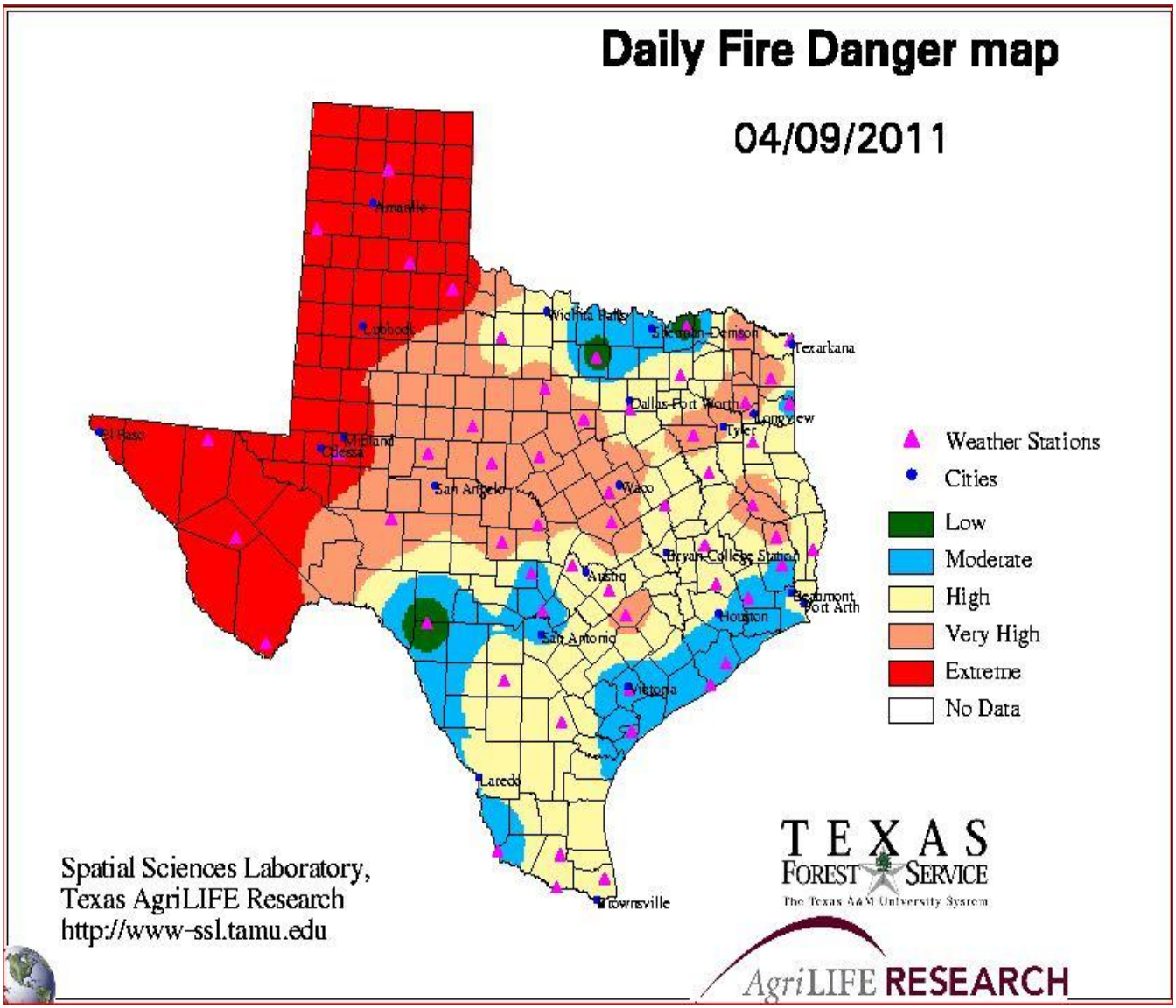
Wind direction will regularly shift 15 to 40 degrees. This is sometimes referred to as a quartering wind. A quartering wind on a flank can quickly increase ROS and fire intensity which will adversely affect direct line construction on the flank.

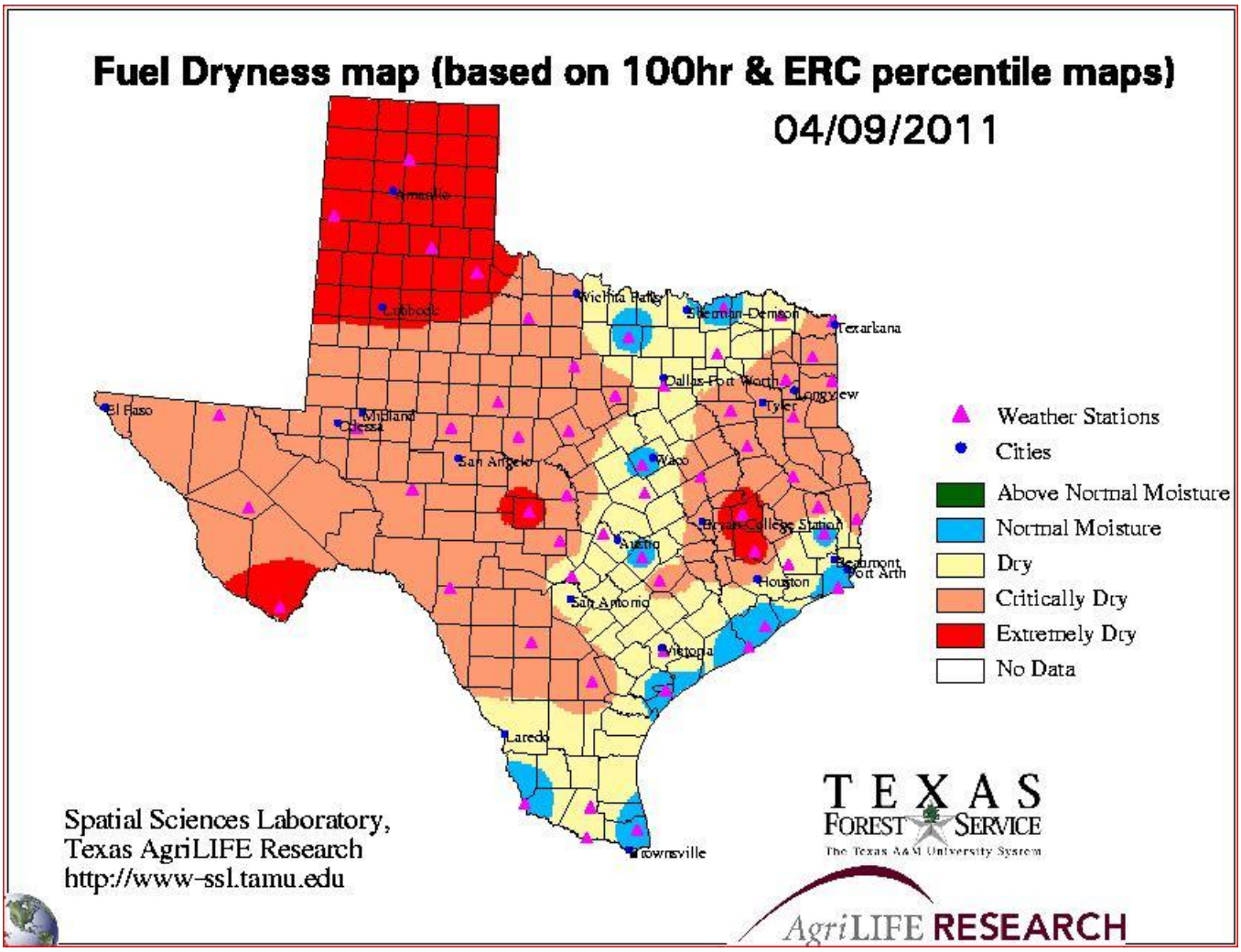
Relative humidity levels and wind directions on April 9, 2011:

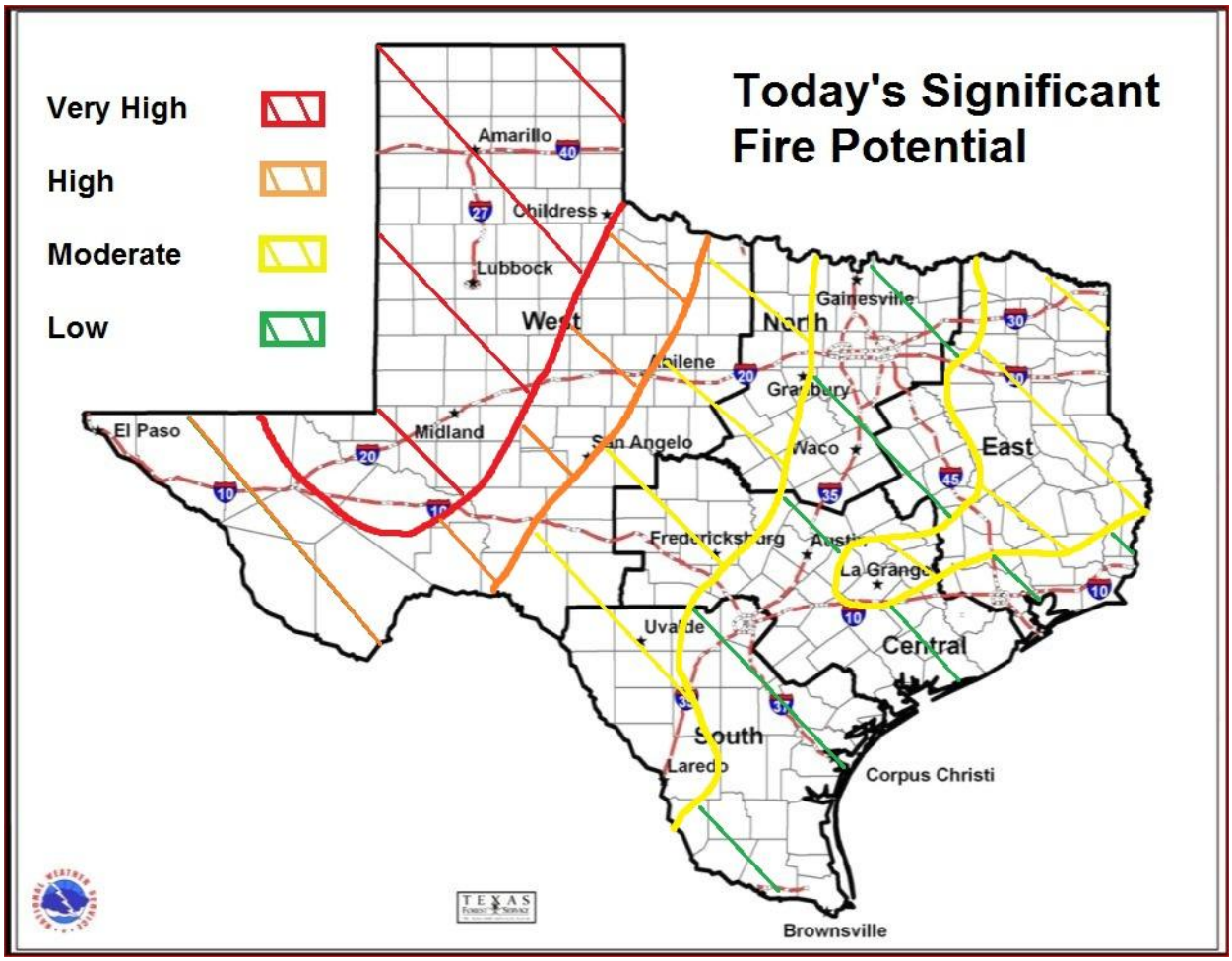


Weather data for April 9, 2011, on the Moore and Potter County line from 11:55 CDT (12:00 noon) to 2100 CDT (9:15 PM):

Time (CDT)	Temp F	Dew Point	RH	Speed	Wind Gust	Direction
21:15	75.2	21.2	13	17		SSW
20:55	78.8	21.2	12	20	26	SSW
20:35	78.8	21.2	12	23	32	SSW
20:15	80.6	21.2	11	29	43	SSW
19:55	80.6	21.2	11	35	43	SSW
19:35	82.4	21.2	10	33	46	SW
19:15	82.4	21.2	10	36	44	SW
18:55	84.2	21.2	10	39	46	SW
18:35	86.0	21.2	9	38	45	SW
18:15	86.0	21.2	9	33	44	SSW
17:55	87.8	21.2	9	40	48	SW
17:35	87.8	21.2	9	36	41	SSW
17:15	87.8	19.4	8	40	46	SSW
16:55	87.8	19.4	8	35	48	SSW
16:35	87.8	21.2	9	36	47	SSW
16:15	87.8	19.4	8	36	49	SSW
15:55	87.8	19.4	8	36	44	SSW
15:35	89.6	23.0	9	26	44	S
15:15	87.8	21.2	9	29	46	SSW
14:55	87.8	23.0	9	29	39	SSW
14:35	86.0	23.0	10	24	45	SSW
14:15	87.8	23.0	9	31	43	SSW
13:55	86.0	23.0	10	28	38	S
13:35	86.0	23.0	10	31	40	SSW
13:15	86.0	24.8	11	32	38	SSW
12:55	82.4	24.8	12	24	32	SSW
12:35	82.4	24.8	12	25	37	SW
12:15	82.4	23.0	11	25	35	SW
11:55	80.6	23.0	12	32	37	SW


Daily Fire Danger map
04/09/2011
Amarillo
Lubbock
Wichita Falls
Sherman-Denison
Texarkana
Dallas-Fort Worth
Longview
Tyler
El Paso
Midland
Odessa
San Angelo
Waco
Bryan-College Station
Austin
Beaumont
Port Arth
Houston
San Antonio
Victoria
Laredo
Brownsville
Weather Stations
Cities
Low
Moderate
High
Very High
Extreme
No Data
Spatial Sciences Laboratory,
Texas AgriLIFE Research
http://www-ssl.tamu.edu
TEXAS
FOREST SERVICE
The Texas A&M University System
AgriLIFE RESEARCH


Fuel Dryness map (based on 100hr & ERC percentile maps)
04/09/2011
Amarillo
Lubbock
Wichita Falls
Sherman-Denison
Texarkana
Dallas-Fort Worth
Longview
Tyler
El Paso
Midland
Odessa
San Angelo
Waco
Bryan-College Station
Austin
Beaumont
Port Arth
Houston
San Antonio
Victoria
Laredo
Brownsville
Weather Stations
Cities
Above Normal Moisture
Normal Moisture
Dry
Critically Dry
Extremely Dry
No Data
Spatial Sciences Laboratory,
Texas AgriLIFE Research
http://www-ssl.tamu.edu
TEXAS
FOREST SERVICE
The Texas A&M University System
AgriLIFE RESEARCH



Texas Forest Service April 9, 2011, forecast

Origin and Cause Investigation

On April 9, 2011, an oil field employee saw sparks from a power line, followed by flames on the ground below. The employee called 911 at 1:57 PM.

The fire traveled from this area in a northeasterly direction and eventually involved approximately 35,000 acres of the open rangeland.

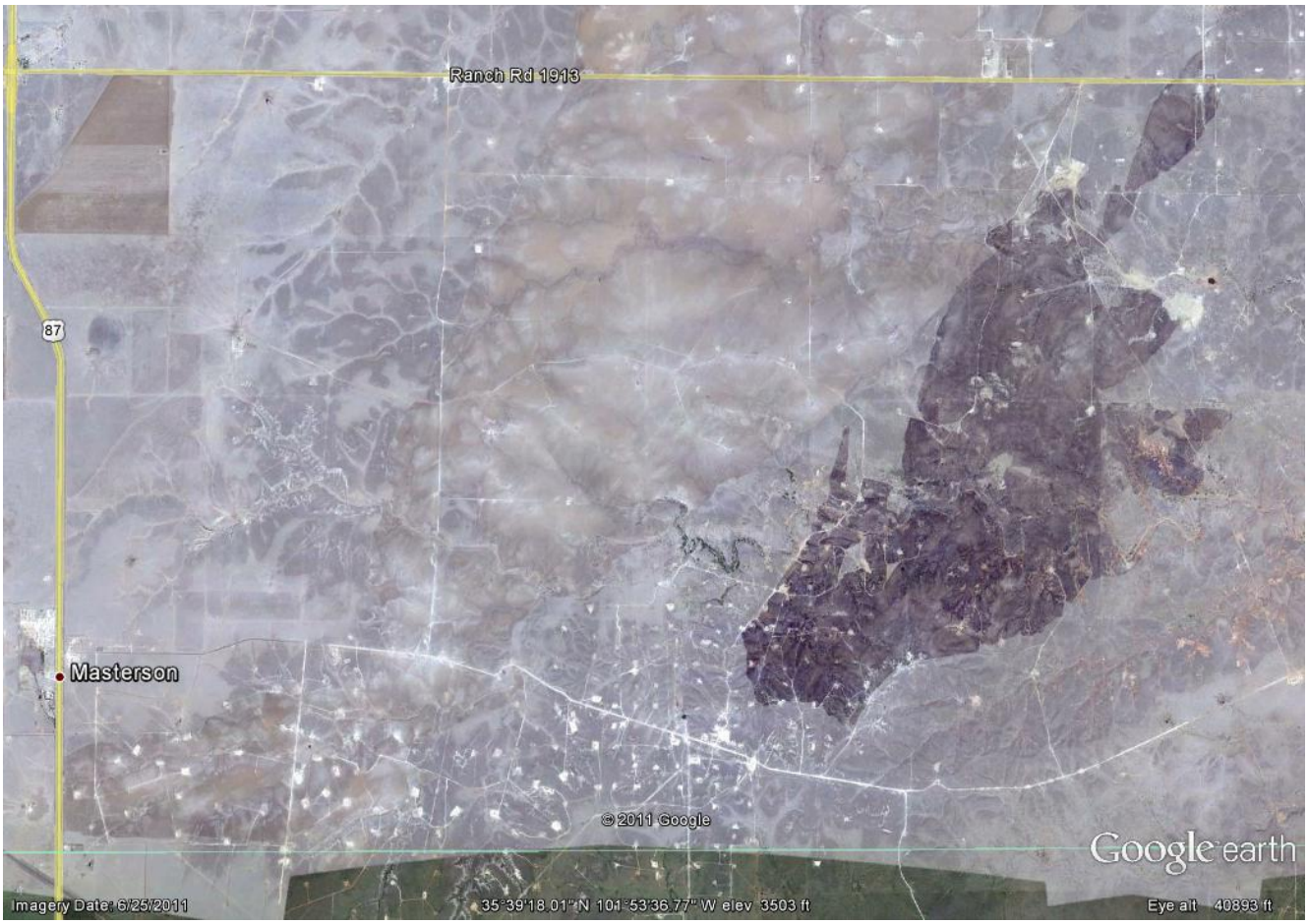


Photo showing approximate fire area, courtesy of GoogleEarth ©

Fire Ground Operations and Tactics

Note: The following sequence of events was developed from times of events based on dispatch log and firefighter witness statements. Those events with known times are identified. Events without known times are approximated in the sequence of events based on firefighter statements regarding their actions and observations.

On April 9, 2011, at approximately **2:05 PM**, Dumas firefighters were dispatched to a grass fire near Masterson, Texas. While en route, Moore County Road and Bridge was dispatched and the Moore County Emergency Operations Center (EOC) was activated.

2:16 PM: a Lieutenant of the Dumas FD arrived in the command truck and became the Incident Commander.

;**2:20 PM:** two Dumas FD units responded and engaged fire at an old oil field road known as CIG Road. Potter County Fire Department arrived shortly after and also engaged the fire on CIG Road, assisting the two Dumas Fire units.

2:35 PM: Cactus FD Brush 51 arrived at the staging area and left to get fuel.

3:09 PM: Dumas FD Brush 58, Dumas FD Booster 2 and the Cactus brush truck were together on CIG Road east of US 287.

3:15 PM: the fire was reported to be nearly contained when it breached CIG road and traveled quickly to the northeast with the high winds. The fire became wind driven and traveled quickly over the surfaces of the extremely dry vegetation. The responders were moving to try to keep pace with and get ahead of the fire when the IC requested an “ALL CALL” alerting all available area fire departments to respond. Eventually, nine fire departments, the Texas Forest Service, several other local agencies responded.

3:55 PM: Cactus FD Brush 51 arrived at the staging area and was directed to County Road U to work with Dumas units.

4:30 PM: Brush units from Cactus and Dumas worked the eastern border of the fire by driving off road and moving northward.

4:41 PM: Dumas FD Brush 58 and Cactus Brush 51 were together on County Road U and proceeded to the east side of the fire line in the unburned area. As the units were racing to keep up with the head

of the fire after it crossed CIG Road, the east flank and heel of the fire extended into the unburned vegetation behind them.

4:50 PM: Dumas FD Brush 58, with a driver and one firefighter, became stuck in deep sand 100 yards east of the fire line. The Cactus brush truck, with a driver and one firefighter, stopped next to Brush 58 and picked up the two Dumas firefighters. The Cactus brush truck then became stuck in the deep sand when attempting to drive off. Fire approached them and began to overrun the area.

5:00 PM: All four firefighters abandoned the Cactus brush truck and began running southeast toward County Road U to the east of the fire line. Visibility was near zero due to smoke and blowing sand, and the firefighters became separated.

Only one Dumas firefighter had a portable radio and called for assistance. Due to the remote location, the firefighter's radio traffic was mostly unreadable.

A Rapid Intervention Crew was formed to search for the missing firefighters including the IC.

5:15 PM During a search of the area, radio contact led Command to the two Dumas firefighters.

5:20 PM The driver of the Cactus brush truck was located but Firefighter Jaquez remained unaccounted for. The firefighters continued to search for Firefighter Jaquez and returned to where trucks were abandoned. One of the tires on the Cactus truck was burning when they arrived but otherwise remained undamaged. The firefighters did not take the time to extinguish the tire fire and continued the search for Firefighter Jaquez.

5:36 PM Firefighter Jaquez was found lying on a meter road approximately 1½ miles southeast of the brush truck. He was found lying face down with severe burns to his feet, chest, arms, hands, and head but was alert and coherent. Firefighter Jaquez was able to get into the Command truck and he was transported to a waiting ambulance. While he was transported to the waiting ambulance, Firefighter Jaquez was speaking but was in extreme pain.

5:50 PM Firefighter Jaquez was transferred to an ambulance and transported to the Moore County Dumas Memorial Hospital. After Firefighter Jaquez was stabilized, he was flown to the University Medical Center Harnar Burn Center in Lubbock, Texas. Firefighter Jaquez passed away on April 20, 2011.

Personal Protective Equipment

Firefighter Jaquez was not wearing his full ensemble of Personal Protective Equipment (PPE). The equipment he was wearing included structural firefighting equipment, including turn out pants, boots and helmet, when he abandoned the truck. When he was found on the road he was not wearing boots. They were later recovered at the scene. He was not wearing gloves or a bunker coat.

Firefighter Jaquez sustained serious burns where he was not protected by PPE. Firefighter Jaquez's legs sustained only minimal injury, as the turnout pants protected his legs. His helmet was partially melted around the brim and allowed heat injuries to his head. His hands were seriously burned with second and third degree injuries. His chest, arms, and face also received second- and third-degree burns. His feet were injured with second- and third-degree burns.

The PPE performed as expected, protecting the areas where PPE was properly donned.

It should be noted that the Cactus Volunteer Fire Department does not have wildland firefighting PPE.

Findings and Recommendations

Recommendations are based upon nationally recognized consensus standards and safety practices for the fire service. Although there are no state requirements for volunteer departments, fire department personnel should know and understand nationally recognized consensus standards. Fire departments should create and maintain SOGs and SOPs to ensure effective, efficient, and safe firefighting operations.

There were several factors that, when combined, may have contributed to the death of Firefighter Jaquez. It is important that we honor him by learning from the incident.

Finding #1 – Fire suppression strategy used

Members of the first arriving units committed to an aggressive attack, a high risk with a low benefit result strategy. Limited availability of personnel and resources, combined with the extreme weather conditions, dictated a low-risk strategy in which defensive wildland firefighting may have been the best option.

Recommendation*:* No firefighter lives should be put in jeopardy where there is no possibility of saving property and lives, or no lives are endangered. Wild land firefighting training should include recognizing when offensive-versus-defensive fire suppression tactics and strategies should be utilized. Since each fire is different, tactics and strategies to be employed are dictated by available resources, weather conditions, terrain, and the fuels in the local environment. Those strategies may include the use of plowed fire lines, existing roadways, and back burns away from the head of the fire.

Reference: NFPA 1561: *Standard on Emergency Services Incident Management System*, Chapter 4, Section 4-1.2

The following risk management principles shall be utilized by the incident commander.

> *(a) Activities that present a significant risk to the safety of personnel shall be limited to situations where there is a potential to save endangered lives.*
> *(b) Activities that are routinely employed to protect property shall be recognized as inherent risks to the safety of personnel, and actions shall be taken to reduce or avoid these risks.*
> *(c) No risk to the safety of personnel shall be acceptable where there is no possibility to save lives or property.*

Reference: Texas Commission on Fire Protection Standards Manual, Chapter 435, Section 435.15, Part b, Paragraphs 1 and 2

(b) The Standard operating procedure shall:

> *(1) specify an adequate number of personnel to safely conduct emergency scene operations;*
> *(2) limit operations to those that can be safely performed by personnel at the scene;*

***Reference**:* NFPA 1143, Annex Section 5.4.2

***A.5.4.2** The safety and welfare of personnel are the first and foremost considerations in all incident operations and decisions. The following references provide basic knowledge of fire suppression safety standards and procedures:*

(1) Fire behavior: NWCG S-190, Introduction to Fire Behavior
(2) Ten standard fire orders: NFES 0065, Fireline Handbook.
(3) Eighteen "watch out" situations: NWCG-NFES 0065, Fireline Handbook
(4) Four major common denominators of fire behavior on fatal and near-fatal fires, as outlined in NWCG-NFES 2225, Common Denominators of Fire Behavior on Tragedy and Near-Miss Forest Fires, (5) Downhill indirect line construction guidelines: NWCGNFES 0065, Fireline Handbook
(6) LCES (lookouts, communications, escape routes, and safety zones): LCES Course, S-134, Lookouts, Communications, Escape Routes and Safety Zones (LCES).
(7) The ten Wildland/Urban Interface Fire "Watch Out Situations": NWCG-NFES 0065, Fireline Handbook.
http://www.nwcg.gov/pms/pubs/pubs.htm

Finding #2 – Fire units were attacking from the unburned area

Units in the field were attacking the fire aggressively from the unburned area of the fire flank.

Recommendation: Always attack a wildland fire from the burned area. If this is done and a sudden change in conditions or wind occurs, the unit can retreat further into the black where fuel has previously been consumed.

Reference: Texas Forest Service "Attack from the Black" training DVD

"The black is the best safety zone"
Available at *http://txforestservice.tamu.edu/main/popup.aspx?id=9514*

Reference: National Wildfire Coordinating Group, *Fireline Handbook*, NWCG Handbook 3, March, 2004; *Chapter 2 - Initial Attack.*

Page 92- "Keep one foot in the black when possible"

Finding #3 – Inadequate exit strategy

An exit strategy to escape the area as conditions changed was not in place. The fire extended into unburned areas behind the responders and then overran the area.

Recommendation: Egress routes and safety zones should be well identified and communicated to everyone on the scene before fire operations begin. Staging areas should be set up as to not interfere with ingress or egress to afford safety to the firefighters using the areas. These should be established by well understood standard operating procedures. Utilize *Fireline Handbook* LCES (lookouts, communications, escape routes, and safety zones) LCES Course, S-134, *Lookouts, Communications, Escape Routes and Safety Zones (LCES)*.

Reference: NFPA 1143: *Standard for Wildland Fire Management*, 2009 Edition; Annex Section 5.4.2

The safety and welfare of personnel are the first and foremost considerations in all incident operations and decisions.
(7) The ten Wildland/Urban Interface Fire "Watch Out Situations": NWCG-NFES0065, Fireline Handbook.
a. Poor access and narrow congested one way roads

Reference: Texas Commission on Fire Protection Standards Manual, Chapter 435, Section 435.15, Part a

(a) The fire department shall develop, maintain and use standard operating procedure for fire protection personnel operating at emergency incidents.

Reference: National Wildfire Coordinating Group, *Fireline Handbook*, NWCG Handbook 3, March, 2004, *Chapter 1- Firefighter Safety*

Finding #4 – Proper Personal Protective Equipment (PPE)

Firefighters were not wearing the full ensemble of approved personal protective equipment.

Recommendation:

All firefighters on the scene of a fire and actively engaged in firefighting operations should be in approved full PPE suitable for the type of fire incident. Fire shelters should be considered as part of the wild land firefighting PPE.

Reference: NFPA [2007]. NFPA 1500: *Standard on Fire Department Occupational Safety and Health Program;*

Chapter ***7.1.2*** *Protective clothing and protective equipment shall be used whenever the member is exposed or potentially exposed to the hazards for which it is provided.*

National Wildfire Coordinating Group, *Fireline Handbook*, NWCG Handbook 3, March, 2004; *Chapter 1- Firefighter Safety*

Page 21 - All PPE must meet or exceed NFPA 1977, Standard on Protective Clothing and Equipment for Firefighters (current edition).

Page 21 - Determine and comply with host agency requirements regarding fire shelters on fireline suppression assignments or follow your own agency's requirements if they are more restrictive. The fire shelter is a tool of last resort, not to be used tactically.

Finding #5 – Use of the vehicle as a refuge

When faced with possible entrapment by an approaching fire, the firefighters chose to leave their vehicles. Portable fire shelters were unavailable.

Recommendation: Firefighters should be trained in the use of their vehicle as a shelter when faced with possible entrapment. Although use of the vehicle should only be considered as a last resort, the vehicle as a shelter may be an option.

Reference: National Wildfire Coordinating Group, *Fireline Handbook*, NWCG Handbook 3, March, 2004; *Chapter 1- Firefighter Safety, Page 45-47 Vehicle Refuge*

" ... If you find yourself in a fire entrapment situation where a shelter deployment is not possible, using a vehicle for refuge may be an option."

APPENDIX

TIMELINE OF EVENTS

04/09/2011

2:05 PM Dumas firefighters are dispatched to a grass fire near Masterson. Unit 5, Booster 2 and Brush 58 respond to the fire. While en route, Moore County Road and Bridge is dispatched and the Moore County Emergency Operations Center (EOC) is activated.

2:16 Unit 5 arrives on scene and establishes "Crawford Command."

2:20 Booster 2 and Brush 58 arrive on scene.

2:28 Tanker 54 arrives on scene and stages near Highway 287 and CIG Road and is assigned as staging area manager.

2:35 Cactus brush truck, with three firefighters (including the victim), arrives on scene at the staging area. One firefighter from Cactus brush truck is assigned to assist the staging area manager with filling brush trucks with water.

2:55 Two firefighters in Cactus Brush (including the victim) leave the scene to fill their vehicle with fuel.

3:09 Dumas Fire Department Brush 58, Dumas Fire Department Booster 2 and Cactus brush truck were together on CIG Road east of US 287.

3:35 Cactus Brush (including the victim) arrives on scene again.

3:35 Brush 58 and Cactus Brush are relocated to County Road U east of US 287.

4:41 Dumas Fire Department Brush 58 and Cactus Brush are together on County Road U and proceed to east side of the fire line in the unburned area. As the units are racing to keep up with the head of the fire after it crosses CIG Road, the west flank and heel of the fire extends into the unburned vegetation behind them.

5:00 Dumas Fire Department Brush 58, with driver and one firefighter, becomes stuck in deep sand 100 yards east of the fire line. The Cactus brush truck, with a driver and one firefighter, that is following Brush 58, stops and picks up the two Dumas firefighters. The Cactus brush truck then becomes stuck in the deep sand when attempting to drive off. Fire approaches them from the west and begins to overrun the area.

All four firefighters abandon the Cactus brush truck and run on foot to the east of the fire line. Visibility is near zero due to smoke and blowing sand, and the firefighters become separated.

Only one Dumas firefighter has a portable radio and calls for assistance. Due to the remote location, the firefighter's radio traffic is mostly unreadable.

5:14 During a search of the area, Command finds the two Dumas firefighters and the driver of the Cactus brush truck on foot, but Firefighter Jaquez remains unaccounted for. The firefighters continue to search for Firefighter Jaquez and return to where the trucks were abandoned. One of the tires on the Cactus truck is burning but otherwise remains undamaged. The firefighters do not take the time to extinguish the tire fire and continue the search for Jaquez.

5:36 Firefighter Jaquez is found lying on a meter road with severe burns to his feet, chest, arms, hands, and head.

5:36 Firefighter Jaquez is able to get into the Command truck and is transported to a waiting ambulance. He is then transported to the Moore County Dumas Memorial Hospital. After Firefighter Jaquez is stabilized, he is flown to the University Medical Center Harnar Burn Center in Lubbock, Texas.

5:50 Firefighter Jaquez is transported by ambulance to Dumas Memorial Hospital.

5:50 Dumas Fire Chief assumes Crawford Command.

April 10, 2011

12:31AM Crawford Fire declared under control.

12:30 Crawford fire declared out.

Investigation Document Log

Doc #	Description	Source
1	Moore County Dispatch Logs	Moore County
2	Moore County Fire Department Radio Traffic	Moore County
3	Moore County Sheriff's Department Radio Traffic	Moore County
4	Kent Robinson, Discovered/Reported Fire/Called 911	Moore County
5	Dumas Fire Department Incident Report	Dumas FD
6	Weather Conditions Report	TFS
7	Dumas FD Lt. Galen Davis Statement	Dumas FD
8	Dumas FD FF Matt Smith Statement	Dumas FD
9	Dumas FD FF Kelly Davis Statement	Dumas FD
10	Dumas FD FF Luis Trujillo Statement	Dumas FD
11	Autopsy Report, Masahiko Kobayashi, M.D., PhD.	Lubbock Co. ME Office
12	Photo Disk	

References

1. NFPA [2008]. NFPA 921: *Guide for Fire and Explosion Investigations*, 2008 Edition. Quincy MA: National Fire Protection Association

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