



Inspection Narrative

Inspection Nr.		317242683	
Opt. Case Number		0618	
Establishment Name	Arizona State Forestry Division		
Legal Entity		Type of Business	Forestry/Wildland Fire

Additional Citation Mailing Addresses

Organized Employee Groups

Authorized Employee Representatives

Employer Representatives Contacted			
Name	Title	Function	Walk Around?
Scott Hunt	State Forester	I O C M	N
David Geyer	Fire Management Officer	I O C M	N
Elizabeth Nehring	Administrative Secretary	M	N
Jerry Payne	Deputy State Forester	M	N
Jim Downey	Phoenix Dist Forester	M	N
Brian Lauber	Planning Section Chief	M	N
Paul Musser	Agency Representative	M	N
Roy Hall	Incident Commander	M	N
Russell J Shumate	Asst Fire Mngt Officer	M	N
Byron Kimball	Fire Behavior Analyst	M	N
Glenn Joki	Incident Commander	M	N
Paul A Katz	Asst Attorney General	C	N
Brad Zettler	Air Support	M	N
Jake Guadiana	Crew Coordinator-Lewis	M	N
Justin Smith	Crew Coordinator-Perryv	M	N
Will Brewer	Asst Fire Mngt Officer	M	N
Norval Tyler	AZ Dispatch Center Lead	M	N
Bill Astor	Safety Officer	M	N
Brock Heathcotte	Asst. Attorney General	C	N

Other Persons Contacted

Entry	07/01/13	13:30	First Closing Conference	12/03/13	09:30
Opening Conference	07/01/13	13:30	Second Closing Conference		
Walkaround	07/01/13	14:00	Exit	12/03/13	11:20
			Case Closed		

Penalty Reduction Factors					
Size	0	Good Faith	0	History	10

Followup Inspection?		Reason	
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Coverage Information/Additional Comments

Inspection Number 317242683

COVERAGE INFORMATION:

(Provide a summary of the inspection, the establishment and nature of work)

On July 1, 2013, at approximately 1330 hours ADOSH Director Warren, ADOSH Supervisor Krotenberg, and ADOSH Compliance Officer Hanna visited the Yarnell Hill Incident Command Post, met with Safety Officer Gillispie, and Arizona State Forestry Division District Forester Jim Downey. Due to ongoing fire suppression operations inspection of the accident scene and operations was postponed. The Yavapai County Sheriff's Office maintained control of the incident scene which was inspected by ADOSH Supervisor Krotenberg on July 3, 2013.

On July 15, 2013, a formal opening conference was conducted with the Arizona State Forestry Division.

FINDINGS

(Mark the applicable boxes with an "X" and explain findings)

☐ Complaint Items:

☐ Referral:
Received from:

☒ Accident Investigation Summary & Findings

Notification & Synopsis:

On June 30, 2013 at 2130 Arizona State Forestry Division (ASFD) Deputy State Forester Jerry Payne telephoned the ADOSH Hotline and left a message regarding the workplace death of 19 firefighters from Granite Mountain Interagency Hotshot Crew (Granite Mountain IHC or GMIHC) who had been killed working the Yarnell Hill Fire when their position was overrun by flames (entrapment and burnover). Shortly thereafter, ADOSH Supervisor Marshall Krotenberg was notified by Hotline operators and telephoned Mr. Payne to obtain more information about what happened.

On the evening of Friday, June 28, 2013, lightning ignited a small fire on a peak in the Weaver Mountains located west of the Arizona towns of Yarnell, Glen Ilah, and Peeples Valley. Initial attack efforts initiated by ASFD on Saturday, June 29, 2013, were unable to suppress the eight acre fire in steep, rocky, chaparral fuels. By the evening of June 29, 2013, the fire had escaped initial attack and had grown to over 100 acres. That evening ASFD began ordering a Type 2 Incident Management Team (overhead), crews, and resources to begin an extended attack the following day. Due to extreme fire behavior and afternoon thunderstorm winds, firefighting efforts to control the fire on Sunday, June 30, 2013 were futile. On that day the fire burned over 8,000 acres of wildland, over 114 structures, and resulted in multiple instances of firefighters being unnecessarily and unreasonably exposed to the deadly hazards of wildland firefighting, the most catastrophic being the entrapment, burn-over, and deaths of 19 member of the Granite Mountain IHC.

Investigation Details:

OPENING CONFERENCE:

On July 15, 2013 an opening conference was conducted with ASFD. In attendance were Scott Hunt (State Forester), David Geyer (Fire Management Officer), Marshall Krotenberg (ADOSH Safety Compliance Supervisor and Lead Investigator), Bruce Hanna (ADOSH Compliance Officer) and Brett Steurer (ADOSH Compliance Officer). The opening conference was cordial.

ASFD JURISDICTION, PERSONNEL AND OPERATIONAL STRUCTURE:

The Yarnell Hill Fire burned predominately on Arizona State trust land and private land. As a result, the fire was managed by ASFD. The ASFD has the following powers and duties under A.R.S. Section 37-623:

"The State Forester shall have authority to prevent and suppress any wildfires on state and private lands located outside incorporated municipalities and lands covered by cooperative fire agreements or on any lands in this state or other states, Mexico or Canada."

"The State Forester may enter into cooperative agreements with other state and federal agencies, departments and political subdivisions and any person for: prevention and suppression of wildfires; and, assistance with fire and nonfire national and state emergencies and multiagency logistical support in this state and other states."

ASFD wildfire management and personnel and operational structure:

State Forester Scott Hunt;

Deputy State Forester Jerry Payne;

Fire Management Officer (FMO) David Geyer;

Three District Forester positions;

Two Assistant Fire Management Officers (AFMO) working for each District Forester;

There are twelve Crew Coordinators, one for each Department of Corrections Inmate Type 2 Hand Crew. The Crew Coordinators are supervised by the AFMO's.

ASFD manages the Arizona Dispatch Center located in Phoenix, Arizona.

ASFD employs 131 full time and seasonal employees. Depending upon need, the State Forester may request personnel and resources (equipment, aviation, services) from approximately 250 cooperating agencies located throughout Arizona and New Mexico.

ASFD deployed 21 state employees to the Yarnell Hill Fire. Another 66 cooperators sent resources and personnel to the fire. Approximately 20 private contractors also responded as did several Arizona Department of Corrections (AZDOC) Inmate Type 2 wildland firefighting hand crews (Arizona State Prison Complex - Lewis, Yuma, Florence and Globe). At the time of the incident, ASFD managed approximately 325 firefighters and various resources.

DOCUMENTS REVIEWED:

A large number of documents related to the fire were requested from State Forester Scott Hunt. In addition, reference documents were downloaded from internet sites maintained by the National Wildfire Coordinating Group (NWCG), NWCG Lessons Learned Center, National Interagency Fire Center (NIFC), and the Southwest Wildfire Coordinating Center (SWCC).

Documents provided by ASFD included: The Incident Response Pocket Guide, PMS 461, NFES 1077, January 2010; Wildland Fire Incident Management Field Guide, PMS 210, April 2013; Standards for Interagency Hotshot Crew Operations February 4, 2011; Interagency Standards for Fire and Fire Aviation Operations, NFES 2724, January 2013; Fireline Handbook, PMS 410-1, NFES 0065, March 2004; the Standard Operational Guidelines (SOG's) provided by ASFD along with A.R.S. Section 37-623 Suppression of wildfires; powers and duties of State Forester; entry on private lands are the standards used to suppress wildfires and provide for firefighter safety.

A second meeting was held on Tuesday July 30, 2013 at ADOSH with FMO David Geyer and Special Projects Coordinator Brian Lauber who served as Planning Section Chief Type 2 on the Yarnell Hill Fire. Lauber provided a compressed or redacted list of employers/resources (ASFD employees, Hotshot crews, Inmate hand crews, Municipal fire crews, Bureau

of Land Management, Forest Service) working on the fire as of the morning of June 30, 2013 through the entrapment of the Granite Mountain IHC.

PERSONNEL INTERVIEWS:

ASFD:

Interviews were conducted with ASFD management on August 14-16, 2013, August 21, 2013, August 23, 2013, October 15, 2013, October 18, 2013, and October 22, 2013. All management personnel were represented by State of Arizona Assistant Attorney General Paul A. Katz. The following personnel were interviewed and are listed in the order of the interview. All interviews were digitally recorded and the interviews were transcribed.

Jim Downey, District Forester, Central region including Phoenix;

Glenn Joki, Incident Management Type 2 Team, Incident Commander;

Brian Lauber, Planning Section Chief Type 2, Special Projects;

Russ Shumate, Incident Commander Type 3 and Type 4, Assistant Fire Management Officer;

Brad Zettler, Air Support;

Byron Kimball, Fire Behavior Analyst;

Paul Musser, Incident Commander Type 3, Operations Section Chief, Agency Representative;

Roy Hall, Incident Commander Type 2, Incident Management Team;

Scott Hunt, State Forester;

David Geyer, Fire Management Officer;

Justin Smith, Division Supervisor, Crew Coordinator-ASPC Perryville;

Will Brewer, Logistics and Communications, ASFD Engine Boss (Engine 151), Assistant Fire Management Officer, Central Phoenix Region,

Norval Tyler, Arizona Dispatch Center Lead;

Bill Astor, Safety Officer, Incident Management Team and Facilities Safety Officer.

The following individuals under the direction of the ASFD on the Yarnell Hill Fire were also interviewed either in person or over the telephone:

Todd Abel, Operations Section Chief, Captain for the Central Yavapai Fire District;

Gary Cordes, Structure Group 1 Supervisor (Yarnell), Battalion Chief/Training Officer for the Central Yavapai Fire District;

Patrick McCray, Captain for the Peoples Valley Fire Department;

Jake Moder, Structure Group 1 resource assigned to Yarnell, Captain for the Peoples Valley Fire Department;

Ron Smith, Structure Group 1 resource assigned to Yarnell, Captain for the Peoples Valley Fire Department;

Jim Koile, Fire Chief for the Yarnell Fire District;

Brad Haggard, Water Tender, Structure Group 1 resource, Captain for the Yarnell Fire District;

Sean Portillo, Water Tender, Structure Group 1 resource, Captain for the Yarnell Fire District;
Tyson Esquibel, Task Force Leader Trainee assigned to Structure Group 1 (Yarnell), Firefighter for the Peoria Fire Department;

Arizona Department of Corrections - AZDOC:

Sergeant Joe Barreras, assigned to Division Alpha, ASPC-Lewis Inmate hand crew;

Correctional Officer II Leo Vasquez, assigned to Division Alpha, ASPC-Lewis inmate hand crew;

Jake Guadiana, Crew Coordinator, assigned to Division Alpha, Arizona State Forestry Division, ASPC-Lewis inmate hand crew;

Sergeant Chad Blackwell, Structure Group 2 resource (Double Bar A Ranch, Model Creek Subdivision, Peeples Valley), ASPC-Yuma inmate hand crew;

Sergeant Parker, assigned to Incident Command Post initially, ASPC-Florence inmate hand crew;

Sergeant Paulson, Structure Group 2 resource (Double Bar A Ranch, Model Creek Subdivision, Peeples Valley), ASPC-Globe inmate hand crew.

City of Prescott Fire Department, Granite Mountain IHC:

Fire Chief Dan Fraijo, City of Prescott;

Darrell Willis, Structure Group 2 Supervisor assigned to Double Bar A Ranch, Model Creek Subdivision and Peeples Valley, Wildland Division Chief, City of Prescott;

Tony Sciacca, Safety Officer, Battalion Chief, City of Prescott;

Brendan McDonough, Division Alpha Lookout, Granite Mountain IHC, City of Prescott;

Tom Cooley, Temporary Captain, Granite Mountain IHC, Firefighter, City of Prescott.

United States Department of the Interior, Bureau of Land Management (BLM):

Rance Marquez, Division Zulu Supervisor, State Fuels Lead, Arizona State Office, Bureau of Land Management;

Dan Philbin, Division Supervisor from the Central West Zone assigned to Division Zulu and Structure Group 1, Assistant Fire Management Officer, Phoenix Office, Bureau of Land Management;

Paul Lenmark, Bravo 3, Air Tactical Group Support, Bureau of Land Management, Boise, Idaho;

Rusty Warbis, Bravo 3, Air Tactical Group Support, Bureau of Land Management, Boise, Idaho.

Arizona Department of Public Safety:

Ranger 58 Helicopter crew members Clifford Brunsting, DPS Helicopter Pilot; and Eric Tarr, DPS Medic/Officer.

Others:

Local Hikers Sonny Gilligan and Joy Collura from Congress, Arizona.

It should be noted that the United States Department of Agriculture - Forest Service (USDA-FS) denied ADOSH's requests to interview USDA-FS employees (Blue Ridge IHC and an Air Attack crew) who were working the Yarnell Hill Fire under cooperative agreement with ASFD. USDA-FS did provide redacted copies of written documents produced by members of the Blue Ridge Interagency Hotshot Crew describing their activities on June 30, 2013. The redactions included not only the names of Blue Ridge IHC personnel, but all names, as well as information USDA-FS stated was of a sensitive nature. As a result, the documents were useless in ADOSH's investigation.

In addition, ATGS Rory Collins failed to return multiple telephone messages requesting a return call and, accordingly, was not interviewed.

INVESTIGATION CHRONOLOGY:

July 1, 2013 - ADOSH Director Warren, ADOSH Compliance Supervisor Krotenberg, and ADOSH CSHO Hanna visit the Yarnell Hill Fire incident command post, make contact with incident staff, and offered assistance. Incident staff did not request any assistance.

July 2, 2013 - ASFD notified ADOSH that it would be permitted to participate as a member of the Serious Accident Investigation Team assembled on the behalf of ASFD. ADOSH Krotenberg contacts ASFD Deputy State Forester Jerry Payne to confirm meeting location and time.

July 2, 2013 - Krotenberg meets with ASFD Deputy State Forester Payne at the Phoenix Dispatch Center, is briefed on the incident, and Payne requested Krotenberg return the following morning to meet up with the Serious Accident Investigation Team (SAIT) as most members were in transit.

July 3, 2013 - ADOSH Krotenberg meets with SAIT at 0700 hours. Krotenberg and SAIT travel to Yarnell Hill Fire to inspect the fatality scene.

July 4, 2013 - ADOSH Krotenberg attends 0700 SAIT morning briefing. Shortly thereafter, Krotenberg was advised by ASFD Hunt and SAIT managers Karels and Dudley that the SAIT Team will be moving forward with its investigation without ADOSH participation.

July 10, 2013 - ADOSH opens an inspection with City of Prescott Fire Department. ADOSH requests documents from the City of Prescott.

July 10, 2013 - ADOSH Steurer and Hanna meet with Yavapai County Sheriff's Office (YCSO) Detective John McDormett to discuss obtaining investigative report, videos, 3-D imaging and photos of the deployment scene.

July 12, 2013 - ADOSH retains Wildland Fire Associates (WFA).

July 15, 2013 - ADOSH opens inspection with ASFD and requests documents.

July 16, 2013 - ADOSH/WFA investigation team meet in Phoenix followed by site visit.

July 18, 2013 - ADOSH opens inspection with Yarnell Fire District and visits Peebles Valley Fire Station. The Peebles Valley Fire Station is unmanned. ADOSH travels to Prescott and obtains previously requested documents from the City of Prescott. ADOSH visits Yavapai County Evidence Storage and inspects remaining evidence (19 body bags with personal items, radios, shelters, etc.). ADOSH receives three discs that contain photographs of the deployment scene.

July 23, 2013 - ADOSH Krotenberg begins calling next of kin and provides notification that ADOSH is investigating the deaths of the 19 firefighters.

July 24, 2013 - First set of documents requested from ASFD available for pick-up by ADOSH.

July 24, 2013 - ADOSH makes second request for additional documents to ASFD Hunt.

July 24, 2013 - ADOSH Hanna interviews Yarnell Fire Department Captain Brad Haggard and Captain Sam Portillo over the telephone.

July 25, 2013 - ADOSH Krotenberg completes calls to next of kin.

July 29, 2013 - ADOSH e-mails Arizona Department of Corrections (AZDOC) requesting information regarding staff that worked the Yarnell Hill Fire.

July 29, 2013 - ADOSH e-mails Blue Ridge Hotshot Superintendent Brian Frisby and Assistant Superintendent/Captain Rogers Trueheart Brown requesting information regarding staff that worked the Yarnell Hill Fire.

July 29, 2013 - ADOSH Hanna contacts Peebles Valley Fire Captain Patrick McCray and interviews Captain Jake Moder over the telephone.

July 30, 2013 - ADOSH Krotenberg, Hanna and Steurer meet with ASFD employees David Geyer and Brian Lauber at ADOSH.

July 30, 2013 - ADOSH Hanna contacts the Central Yavapai Fire District (CYFD) to schedule interviews with Todd Abel and Gary Cordes.

July 30, 2013 - ADOSH meets with FMO David Geyer and Special Projects Coordinator Brian Lauber who served as Planning Section Chief Type 2 on the Yarnell Hill Fire. Lauber states that he is in the process of obtaining additional documentation requested by ADOSH Team Lead Investigator Marshall Krotenberg. Lauber also states that he will provide a compressed or redacted list of employers/resources (ASFD employees, Hotshot crews, Inmate hand crews, Municipal fire crews, Bureau of Land Management, Forest Service) working on the fire as of the morning of June 30, 2013 through the entrapment of the Granite Mountain IHC.

July 31, 2013 - YCSO e-mails ADOSH that requested records were available for pick-up.

August 2, 2013 - ADOSH requests unit logs from ASFD for BLM employees working Yarnell Hill Fire.

August 5, 2013 - ADOSH Director Warren sends condolence letters to next of kin.

August 6, 2013 - ADOSH sends second e-mail request to Arizona Department of Corrections (AZDOC) requesting information regarding staff that worked the Yarnell Hill Fire.

August 6, 2013 - ADOSH Krotenberg e-mails BLM FMO Castillo requesting interview with BLM employee Marquez.

August 7, 2013 - ADOSH sends third e-mail request to (AZDOC) requesting information regarding staff that worked the Yarnell Hill Fire.

August 7, 2013 - AZDOC Smith e-mails ADOSH providing the names and contact information for AZDOC staff that worked the Yarnell Hill Fire.

August 9, 2013 - AZDOC Smith e-mails ADOSH authorizing ADOSH investigators to interview AZDOC staff.

August 11, 2013 - ADOSH receives e-mail from hikers Sonny Gilligan and Joy Collura that were at the fire on June 30, 2013.

August 12, 2013 - ADOSH Krotenberg sends e-mail response to hikers.

August 14-16, 2013 - ADOSH interviews ASFD staff.

August 19, 2013 - ADOSH conducts interviews with City of Prescott employees Dan Fraijo and Darrell Willis. The City of Prescott Attorney Jon Paladini is present for the interviews.

August 19, 2013 - ADOSH consultant Hicks is notified by USDA-FS Regional Acting Deputy Director Graham to provide ADOSH contact information to coordinate interviews with USDA-FS Aviation staff working Yarnell Fire.

August 19, 2013 - ADOSH receives photos from a Yarnell resident.

August 19, 2013 - ADOSH consultant Hicks is notified by USDA-FS French that a Touhy request would be required for authorization for interview USDA-FS personnel.

August 20, 2013 - ADOSH Krotenberg e-mails BLM Castillo requesting status of interview with Marquez.

August 20, 2013 - Krotenberg e-mails USDA-FS Graham requesting interviews with Aviation staff. Graham responds that the request was forwarded to USDA-FS Office of General Counsel (USDA-OGC).

August 20, 2013 - ADOSH conducts interviews with City of Prescott employees Tony Sciacca and Brendan McDonough. Brendan McDonough has his personal attorney Emily Dolan present for his interview.

August 21, 2013 - ADOSH e-mails request to USDA-FS for audio/video associated with retardant study conducted at Yarnell Hill Fire on June 30, 2013.

August 22, 2013 - USDA-OGC Hattenbach e-mails ADOSH providing information to complete Touhy request for documents and interviews of USDA-FS employees.

August 22, 2013 - ADOSH interviews CYFD Captain Todd Abel.

August 26, 2013 - ADOSH Krotenberg e-mails T. Zachary Barnett in the federal OSHA Phoenix office requesting assistance in obtaining authorization to interview DOI-BLM and USDA-FS employees as well as copies of their unit logs.

August 27, 2013 - US Department of Interior (DOI), Office of the Field Solicitor responds to ADOSH's

August 28, 2013 - ADOSH Hanna interviews Peoria Firefighter Tyson Esquibel who was assigned to the Yarnell Hill Fire as a Task Force Leader Trainee for Structure Protection Group 1.

August 29, 2013 - USDA-FS responds by letter to ADOSH that requested aerial audio/video recordings will be sent shortly.

August 29, 2013 - ADOSH Krotenberg e-mails USDA-FS Hattenbach requesting update on request to interview FS personnel.

August 29, 2013 - ADOSH Krotenberg e-mails DOI-BLM Castillo requesting update on progress towards interviews with BLM employees.

August 30, 2013 - USDA-FS Hattenbach e-mails ADOSH Krotenberg with update regarding interviews of USDA-FS personnel. He advises that no interviews likely to occur until end of season. ADOSH must submit requests in writing.

August 30, 2013 - United States Department of Interior (DOI), Office of the Solicitor, responds by letter to ADOSH 8-20-13 request for documents and interviews with DOI-BLM employees. DOI states ADOSH must submit a Touhy request for review by DOI.

September 3, 2013 - ADOSH receives USDA-FS video of retardant study that occurred on Yarnell Hill Fire. Audio had been redacted.

September 3, 2013 - ADOSH Krotenberg receives e-mail from federal OSHA Phoenix Office Barnett indicating that Federal OSHA efforts to assist ADOSH in obtaining access to Federal employees was not going well.

September 4, 2013 - ADOSH Krotenberg e-mails Maughan Ranches requesting access to their property for follow-up visit to fire scene. Don Glasgow provides ADOSH Krotenberg approval during telephone conference.

September 4, 2013 - ADOSH Hanna makes second request for additional documents to City of Prescott.

September 4, 2013 - ADOSH e-mails five ex-Granite Mountain Hotshots requesting interviews.

September 5, 2013 - ADOSH receives YCSO letter requesting guidance regarding disposition of evidence in their possession.

September 5, 2013 - ADOSH Hanna interviews ASPC Lewis (Guadiana, Barreras and Vasquez), ASPC Yuma (Blackwell), ASPC Globe (Paulson) and ASPC Florence (Parker) over the telephone.

September 6, 2013 - ADOSH submits Touhy Request to DOI Viscusi for interviews and unit logs for DOI-BLM employees that worked the Yarnell Hill Fire.

September 6, 2013 - ADOSH e-mails request to City of Prescott requesting ex-Granite Mountain Hotshot/current City of Prescott employee clarification.

September 11, 2013 - ADOSH e-mails National Oceanic and Atmospheric Administration (NOAA) Ocala requesting specific weather data.

September 11, 2013 - ADOSH interviews CYFD Battalion Chief/Training Officer Gary Cordes.

September 13, 2013 - USDA-FS responds by letter to ADOSH 9-5-13 request to obtain activity log for Blue Ridge IHC. USDA-FS is re-routing ADOSH request to USDA FOIA service center for review.

September 13, 2013 - DOI Viscusi responds by letter to ADOSH granting access to interview Lenmark and Warbis.

September 16, 2013 - ADOSH sends Touhy Request to USDA-FS Hattenbach regarding interviews with Forest Service employees that worked the Yarnell Hill Fire.

September 16, 2013 - DOI, Office of the Field Solicitor grants request to interview Marquez and Philbin and for Marquez's notes subject to specified conditions.

September 17, 2013 - City of Prescott provides partial submittal of documents pursuant to ADOSH second request for documents.

September 18, 2013 - ADOSH Steurer and Hanna meet with Hikers Collura and Gilligan at Yarnell and hike the route taken by the Granite Mountain IHC on June 30, 2013.

September 19, 2013 - ADOSH requests YCSO incident report.

September 20, 2013 - ADOSH receives response from NOAA McCown regarding records request. Records are available. Cost would be about \$6,000.00.

September 23, 2013 - ADOSH interviews DOI-BLM employees Rance Marquez and Dan Philbin.

September 23, 2013 - YCSO provides requested reports.

September 24, 2013 - ADOSH interviews DOI-BLM employees Lenmark and Warbis.

September 24, 2013 - ADOSH interviews Aerial Supervision Module One (Bravo 3) BLM employees Paul Lenmark and Rusty Warbis via telephone.

September 26, 2013 - ADOSH Krotenberg e-mails ASFD Geyer a third request for additional information and to schedule follow-up interviews.

September 27, 2013 - ADOSH submits request to DOI-BLM Viscusi for photographs from Lenmark/Warbis.

September 29, 2013 - SAIT report published online.

October 1, 2013 - Federal government employee's furloughed. Contacts for USDA-FS are unavailable.

October 2, 2013 - ADOSH Krotenberg e-mails ASFD Geyer requesting time sheets for Shumate and SAIT documentation.

October 3, 2013 - Arizona Assistant Attorney General (AZAG) Katz notified ADOSH that SAIT investigation documents are available for ADOSH.

October 3, 2013 - ADOSH Hanna e-mails City of Prescott requesting follow-up interviews with Willis, McDonough, Sciacca, and first interview with Tom Cooley.

October 3, 2013 - City of Prescott e-mails ADOSH Hanna confirming interviews with Willis and Cooley. Interview with McDonough pending and Sciacca is out of the country until October 22, 2013.

October 4, 2013 - ADOSH receives copy of SAIT documents on portable hard drive from AZAG Katz.

October 7, 2013 - ADOSH receives partial package of documents requested from ASFD.

October 8, 2013 - City of Prescott confirms interview with McDonough.

October 10, 2013 - ADOSH conducts interviews with City of Prescott employees Tom Cooley, Darrell Willis and Brendan McDonough. The City of Prescott Attorney Jon Paladini is present for Cooley and Willis's interviews.

October 15, 2013 - ADOSH conducts a third interview with ASFD District Forester Jim Downey, second interview with Incident Commander Roy Hall, and first interview with Crew Coordinator Justin Smith.

October 18, 2013 - ADOSH conducts interview with ASFD Incident Management Team Safety Officer Bill Astor, Arizona Dispatch Center Lead Norval Tyler and second interview with Incident Commander Russ Shumate.

October 22, 2013 - ADOSH conducts interview with ASFD Assistant Fire Management Officer and Engine Boss Will Brewer. ADOSH conducts a follow-up interview with Crew Coordinator Justin Smith over the telephone concurrent with the Brewer interview.

October 23, 2013 - ADOSH telephone call with USDA-FS Hattenbach regarding interviews with Forest Service employees that worked the Yarnell Hill Fire. USDA-FS is still contemplating ADOSH interviews of FS employees.

October 29, 2013 - ADOSH Krotenberg interviews Sergeant Chad Blackwell from the Arizona Department of Corrections - Yuma Complex

October 30, 2013 - ADOSH receives response from the United States Department of Agriculture, Office of the General Counsel denying ADOSH's request to interview United States Forest Service employees (Blue Ridge IHC and ASM-2 Bravo 33 Thomas French and John Burfiend).

November 7, 2013 - ADOSH receives a CD from the United States Department of Agriculture containing 40 pages of responsive records regarding the Yarnell Hill Fire with respect to the "Activity Log" for the Blue Ridge IHC for June 30, 2013.

November 11, 2013 - ADOSH Krotenberg requests time cards and firefighter qualifications for ASFD fire management staff.

WILDLAND FIRE ACRONYMS:

A/G - Air to Ground

ADC - Arizona Dispatch Center

AFMO - Assistant Fire Management Officer

ASM - Aerial Supervision Module (is a two person crew functioning as the Lead and ATGS from the same aircraft)

ATGS - Air Tactical Group Supervisor (Air Attack)

BLM - Bureau of Land Management

BRIHC - Blue Ridge Interagency Hotshot Crew

C&G - Command and General Staff

DIVS - Division Supervisor (The Field Operations Section Chief designated two divisions on June 30, 2013; Division Alpha and Division Zulu)

DOC - Department of Corrections

FBAN - Fire Behavior Analyst

FMO - Fire Management Officer

GMIHC - Granite Mountain Interagency Hotshot Crew

HEQB - Heavy Equipment Boss (supervises and directs the dozer operator)

IA - Initial Attack

IAP - Incident Action Plan

IC - Incident Commander

ICP - Incident Command Post

ICS - Incident Command System

ICT1- Incident Commander Type 1

ICT2 - Incident Commander Type 2

ICT3 - Incident Commander Type 3

ICT4 - Incident Commander Type 4

IMT - Incident Management Team

IMT2 - Incident Management Team Type 2

LAT - Large Air Tanker

LCES - Lookouts, Communications, Escape Routes and Safety Zones

NWCG - National Wildfire Coordinating Group

OPS - Operations Section Chief (Field and Planning)

PSC - Planning Section Chief

SAIT - Serious Accident Investigation Team

SEAT - Single Engine Air Tanker

Slop over - a fire edge that crosses a control line or natural barrier intended to control the fire.

SOF - Safety Officer

SPGS1 - Structure Protection Group 1 Supervisor (Yarnell and Glen Ilah)

SPGS2 - Structure Protection Group 2 Supervisor (Double Bar A Ranch, Model Creek, and Peebles Valley)

TAC 1 - Tactical Channel 1

TAC 3 - Tactical Channel 3

Two-track road - a road with two visible ruts created by a vehicle such as a Jeep, tractor, ATV (All-Terrain Vehicle) or UTV

UTV - Utility Task Vehicle

WFDSS - Wildland Fire Decision Support System

WFSA - Wildland Fire Situational Analysis

VLAT - DC-10 Very Large Air Tanker

10 & 18 - The Ten Standard Firefighting Orders and the Eighteen (18) Situations That Shout Watch Out

YARNELL HILL FIRE MANAGEMENT POSITIONS:

Scott Hunt - State Forester

David Geyer - Fire Management Officer

Jim Downey - District Forester/Unit Manager/Line Officer

Russ Shumate - Assistant Fire Management Officer and Type 4 Incident Commander (ICT4)

Dean Fernandez - BLM Representative

Roy Hall - Type 2 Incident Commander (ICT2)

Glenn Joki - Type 2 Incident Commander (ICT2)

Todd Abel - Operations Section Chief I (OSC-Field)

Paul Musser - Operations Section Chief II (OSC -Planning)

Eric Marsh - Division Alpha Supervisor

Rance Marquez - Division Zulu Supervisor

Gary Cordes - Structure Protection Group 1 Supervisor

Darrell Willis - Structure Protection Group 2 Supervisor

Byron Kimball - Fire Behavior Analyst

GMIHC - Granite Mountain Interagency Hotshot Crew

Jesse Steed - Granite Mountain IHC Captain

Brendan McDonough - Granite Mountain IHC Lookout

BRIHC - Blue Ridge Interagency Hotshot Crew

Brian Frisby - Blue Ridge IHC Superintendent

Rogers Trueheart Brown - Blue Ridge IHC Assistant Superintendent/Captain

GENERAL SUMMARY OF INVESTIGATION (ADDITIONAL DETAILS CONTAINED WITHIN CITATION NARRATIVES):

On **June 28, 2013** at approximately **1700**, lightning started a wildland fire in the Weaver Mountains, Arizona, near the town of Yarnell, the fire was formerly named the Yarnell Hill Fire. The initial report was made to the Arizona Dispatch Center (ADC) at approximately **1740** by the volunteer fire department in Congress, Arizona.

Russ Shumate, an ASFD Assistant Fire Management Officer (AFMO) who is a qualified Incident Commander Type 4 and Type 3 (ICT4 and ICT3), traveled to Yarnell to be closer to the location of multiple new wildland fire starts that resulted from the lightning activity.

Land jurisdiction in the Yarnell area includes private, Arizona State Lands Department (for which Arizona State Forestry has fire suppression responsibilities) and U.S. Bureau of Land Management (BLM). Shumate met with Bruce Olson, the BLM Fuels Specialist to coordinate actions on fires on either jurisdiction.

The initial fire size-up was made by Bob Travis, the Air Tactical Group Supervisor (Air Attack) for the Doce Fire, who stated that the Yarnell Hill Fire was in a boulder field with no vehicle access. Due to the fire's perceived inaccessibility, Shumate, who had by this time (approximately **1940**) become the initial attack Incident Commander (ICT4), decided to take no action on the fire that evening due to safety concerns and a perceived low spread potential with low immediate risk for structures or people. Instead, Shumate planned for suppression activities for the following day and ordered two Arizona Department of Corrections (DOC) crews, a Type 6 engine and a Type 3 helicopter for June 29.

Shumate developed a full suppression strategy based upon the policy of the Arizona State Forestry Division. The tactic for the next day was to use a helicopter to transport people to and from the fire. This suppression strategy was concerned with mitigating risks of the predicted monsoonal lightning and rains, but did not initially appear to plan for potential extreme fire behavior. A spot weather forecast was received at **2207**.

June 29, 2013

On **June 29** Shumate returned to the fire early in the morning and began assigning resources to the Yarnell Hill Fire, which was the only lightning-caused fire still active from the storm on June 28. Sometime after **0700** and prior to **1100**, Dean Fernandez, a BLM representative, took a morning flight to update the situation of the fire and estimated the fire to be approximately eight acres. From this assessment, Shumate and Fernandez developed an initial attack plan to put six firefighters from the DOC Lewis Crew and one helitack crew member on the fire using the helicopter for transportation. Shumate also planned to remove the firefighters from the fire by **1530** due to perceived lightning risk from afternoon storms.

At **0651** Shumate requested that the Single Engine Air Tanker base at Wickenburg airport be opened so that two Single Engine Air Tankers (SEAT) could be used. The plan was to use fire retardant on the north and south sides of the fire, but leave the west and east flanks open. There was a two-track road on the east side of the fire.

At **1011** Shumate requested a helicopter to shuttle crews.

The SEATs arrived mid-morning and dropped fire retardant on the flanks, each SEAT making two retardant drops. Dan Eckstein, the ATGS planned to have the SEATS drop retardant to hold the fire perimeter.

At **1100** a BLM helicopter transported seven firefighters to the top of the ridge. One helitack crew member and six DOC Lewis Crew firefighters hiked in the rest of the way to construct handline, cold trail and hot spot.

At approximately **1225**, Shumate reported that the fire size was about two acres. Air Attack reported that the retardant had secured the south and west flanks. Air Attack also stated that a ridge flanked the fire to the north and that a two-track road secured the eastern flank. The Air Attack and SEATs returned to their base in Prescott, Arizona.

At **1442**, Shumate released the Air Attack and the SEATs due to the fire holding on all four sides and no other fire starts from the previous day showing smoke. The original plan by Shumate was to fly crews down off the fire by **1530**.

At **1500**, a weather alert for thunderstorms was issued by the National Weather Service. However, the storms far to the north dissipated prior to reaching the Yarnell Hill Fire.

At **1540**, Shumate released the BLM brush engine and a local Peebles Valley fire engine due to the lack of multiple fires.

During the afternoon, the temperature in Phoenix reached a high of 116 degrees.

At **1600**, weather conditions were hot and dry. Winds from the west-southwest increased which led to elevated fire activity.

At **1610**, Shumate requested two SEATs and Air Attack to return to the Yarnell Hill Fire. Arizona Dispatch Center (ADC) sent one SEAT but held the second aircraft so that it could be available for the Dean Peak fire.

About **1630**, afternoon winds increased and the Yarnell Hill Fire jumped the two-track road on the east side of the fire. Shumate told the ADC that containment was problematic, and at **1655** ordered a Type 1 Heavy Helitanker and later a Large Air Tanker (LAT).

At **1730**, a total of 13 firefighters were assigned to contain the eastern fire edge that crossed over the two-track road (slop over).

The Yarnell Hill Fire was estimated at six acres by ASFD Crew Coordinator Justin Smith who was assigned by Shumate as the Division Supervisor for the crew on the hill. At some point near this time Shumate learned that the Lewis Crew was out of chainsaw gas which seriously hindered their ability to be effective in chaparral.

At **1742**, additional air resources declined dispatch due to high winds and severe weather between their home base and the fire location. Shumate continued to use SEATs to drop retardant on the Yarnell Hill Fire.

At **1743**, dispatch offered a Very Large Air Tanker (VLAT) from Albuquerque in place of the heavy air tanker that could not respond due to weather. Based on discussion with Air Attack and Fernandez, Shumate declined the VLAT offer.

Between **1730** and **1924**, the fire behavior and complexity continued to escalate. ASFD began dispatching a Type 2 Incident Management Team. In addition, two structure group specialists were requested (one for north of the fire - Model Creek and Peebles Valley, and one for south of the fire - Yarnell and Glen Ilah). ASFD also requested three Interagency Hotshot Crews (IHCs). Three IHCs were assigned the Yarnell Hill Fire: Blue Ridge IHC, GMIHC (a local crew, ordered filled internally), and Arroyo Grande IHC (who ultimately missed this assignment).

At **1924**, the fire burned into chaparral to the north and northeast. Temperatures were above 100 F and relative humidity was at 12%. Sustained winds of 10 miles per hour were reported with gusts up to 20 miles per hour out of the south and southwest. Estimated flame lengths were reported between 10 to 20 feet and rate of spread was estimated at five to ten chains per hour. (one chain = 66 feet)

By **1938**, the Yarnell Hill Fire was an estimated 100 acres. The fire was approximately one mile from structures in Peebles Valley and 2.5 miles from the town of Yarnell.

At **2200**, the dispatch logs note that ASFD ordered additional resources including 14 engines, six water tenders, two Type 2 handcrews, two bulldozers, and numerous aircraft.

At approximately **2330** hours, Darrell Willis arrived at the Yarnell Hill Fire incident command post and met with Shumate. Shumate instructed Willis to scout the north side of the fire and determine risks to structures. Through the night and into the morning Willis scouted the area. At or about **0100** while scouting the Double Bar A Ranch, Willis notes in his unit log that the seven structures present there are all high risk, low probability of success.

At approximately **2340** hours, Structure Protection Group 1 Supervisor Gary Cordes arrived at the Yarnell Fire Station. He met with Shumate and was assigned by Shumate to implement a plan for the structure protection of Yarnell and Glen Ilah.

June 30, 2013

At **0100** hours, Cordes met with Shumate and BLM Representative Dean Fernandez. The fire was estimated to be between 120 and 300 acres by fire personnel on the hill. Cordes drove the area to size-up conditions and hiked to the fire. Cordes determines that structures were non-defensible. Cordes ordered resources for the next operational period.

At approximately **0100** hours, Willis noted that the fire was approximately 100 acres in size and actively burning on the east slope of the Weaver Mountains. He estimated flame lengths to be in excess of 20 feet.

At **0300**, Shumate, Cordes and Willis ordered additional resources based on the structure protection needs identified during scouting. Shumate assigned Willis the role of Structure Protection Group 2 Supervisor and given responsibility for protection of structures at the north side of the fire (i.e., Double Bar A Ranch, Model Creek, and Peeples Valley).

At **0330**, Willis and Shumate discussed the fire situation, very active fire behavior and probable outcomes for the strategy.

At approximately **0600** hours, additional crews and equipment began arriving at the fire scene. Structure Protection Group 2 resources ordered by Shumate and supervised by Willis included a total of thirty-one firefighters and two engines to protect structures at the Double Bar A Ranch. Personnel included BLM Engine 58 (crew of 6), Tonto National Forest Engine 3665 (crew of 3), Arizona Department of Corrections - Yuma (crew of 20), Willis, and Cory Moser, a Task Force Leader trainee (TFLD(t)). Planned activities included building a perimeter fire line, brush removal, and wetting down the structures.

Structure Protection Group 1 included four type 6 engines, 2 tenders, and one Taskforce Leader Trainee (TFLD(t) Tyson Esquibel. Approximately 12 to 20 firefighters were assigned to Esquibel in Glen Ilah. Based on the initial size-up by Structure Protection Group 1 Supervisor Cordes, Cordes determined that insufficient resources were available to perform structure protection.

At **0700** hours, Incident Commander Russ Shumate met with Operations Section Chief I Todd Abel, Operations Section Chief II Paul Musser, and Structure Protection Group 1 Supervisor Gary Cordes. During that meeting, Abel and Cordes decided that Division A would create an anchor point at the south heel of the fire and tie into a dozer line (Division Z) that would extend across the valley floor north of Yarnell and Glen Ilah. Shumate, Abel, Musser and Cordes believed if there were favorable winds they could burn-out from the dozer line to protect Yarnell and Glen Ilah from fire advancing from the north.

At **0700**, a briefing occurred between Shumate and incoming Incident Commander Type 2 (ICT2 - Roy Hall), Musser and Abel, Cordes, fire behavior analyst (FBAN - Byron Kimball), and deputies from the Yarnell County Sheriff's Office. The GMIHC Superintendent (Eric Marsh) was reportedly present and listened in on much of the discussion. Hall informed everyone that his first priority was to have an air operations plan developed so that air resources could operate safely over the fire. Hall's second priority was to hold a briefing with all assigned resource representatives prior to transfer of incident command.

Following the meeting Abel assigned Marsh as the Division Alpha Supervisor (DIVS A) transferring leadership of the GMIHC crew to the Granite Mountain IHC Captain (Jesse Steed). The GMIHC were assigned to Marsh with the task of establishing the anchor point at the heel of the fire, using direct and indirect attack.

At approximately **0800**, the GMIHC arrived at the ICP. Cordes escorted them through Yarnell and they stopped along Sesame Street. Cordes told them of the "bomb-proof" safety zone (the Boulder Springs Ranch), and Cordes reminded Marsh that the crew also had the previously burned black area as a safety zone. In addition, during their internal crew briefing, all GMIHC crew members were told the escape routes would be into the black and/or back to the crew carriers.

At **0854**, a VLAT was ordered by Shumate (SWCC had mentioned that competition for resources existed).

The Incident Command Post (ICP) was designated at the Model Creek School in Peeples Valley.

At **0930**, a briefing of assigned crews was held by Hall and Shumate at the ICP. Immediately after the briefing, Musser assigned several resources to Structure Protection Group 2 to protect structures. Sometime after the briefing, Musser directed Cordes to assess structures in the Yarnell area. Cordes confirmed that most but not all of the structures were indefensible with available resources.

The BRIHC was assigned by Abel to drive to the fire area and to meet up with Cordes on their way to the fire.

By **0930** hours, the dozer had created a line approximately three quarters of the way to the east side of Division A.

At approximately **0930**, Marsh was briefed over the radio by a helitack crew member (who had been on the fire overnight). Weather and fire behavior observations were relayed to Marsh along with an estimate of 500 acres for the fire size. Marsh was at the top of the ridge near a helispot.

Structure Protection Group 1 crews met at the Ranch Restaurant and were tasked with scouting Yarnell and Glen Ilah.

At **1000** hours GMIHC completed their hike to the south side of the fire along the eastern ridge of the Weaver Mountains. Their task was to establish an anchor point and connect to a dozer line in the valley below (about 1000 feet of steep elevation change). Fire behavior at the heel slowed as the fire, pushed by winds from the south, progresses northward towards Peeples Valley.

At **1022**, formal transfer of command (from Shumate to Hall) was announced via radio. The Incident Management Type 2 Short Team now in control of the fire did not have a Planning Section Chief and a Safety Officer (SOF), which are required under the ASFD Standard Operating Guidelines. Two SOF's had been ordered by Shumate through Deputy Incident Commander Glenn Joki at **2120** on **June 29, 2013** through the ADC but had not been filled.

Around **1030**, the BRIHC parked their crew carriers next to the GMIHC carriers. The BRIHC Superintendent (Brian Frisby) and Captain (Rogers Trueheart Brown) unloaded their utility task vehicle (UTV) and continued along Sesame Street. They encounter Cordes who requested a Heavy Equipment Boss (HEQB) to manage a dozer and clear out the two-track road on both sides as far as possible to provide access and to prepare for possible backfire. BRIHC assigned one of their squad leaders (Cory Ball), who is a qualified HEQB, to help.

Frisby and Brown scouted the fire edge while Ball took the dozer as far as an old abandoned grader to push a clear area around the old grader. Ball then headed in the direction of the saddle near GMIHC's anchor point and planned to then turn around and clear out the two-track road (an old fuel break) between Sesame Street and Shrine Road. During these operations, the remaining crew members of the BRIHC stayed with the crew carriers.

At **1030** hours, crews at the Double Bar A Ranch were still working on building the perimeter line. Fire activity had increased substantially. The fire head was reportedly half a mile wide with 40 to 50 foot high flames. Willis estimated that the fire front would reach the Double Bar A Ranch in approximately 60 to 90 minutes. Willis reported receiving a telephone call from the Southwest Wildfire Coordinating Center (SWCC) requesting photographs of the fire. Willis took several photos and sent them to Dana Carter at SWCC. Copies of the photos are included in this case file.

At **1045**, the Yarnell County Sheriff's Office issued evacuation notices to the residents of Model Creek and the Double Bar A Ranch.

At **1100**, the fire front was moving to the northeast along the eastern slope of the Weaver Mountains and headed directly towards Double Bar A Ranch. Cumulus clouds built up to the north and Musser contacted Marsh via radio to ascertain if Marsh could see the cloud formations. Marsh indicated that he could see the clouds and would keep an eye on the weather.

By this time, Frisby and Brown reached the old grader and were able to ascertain that the GMIHC were working on the east side of the ridge, slowly burning off of the two-track road. Over the radio, Frisby and Brown noted that the GMIHC was trying to get the fireline connected with the two-track road so the fire could not burn back up the ridge.

At or around **1100** based on the escalating fire danger, Hall informed the State Fire Management Officer (David Geyer) that the Yarnell Hill Fire needed a full Type 2 IMT.

At approximately **1100**, Structure Protection Group 2 Supervisor Willis called for the evacuation of the caretaker at the Double Bar A Ranch. Structure protection crews continued working at the Ranch.

Between **1130** and **1145**, the GMIHC conducted burnout operations, and Marsh and ATGS (Rory Collins) discussed tactical options. Collins directed two SEAT drops at **1136** and **1145** directly onto the burnout. Marsh indicated to air attack via radio that the drops were **not** what he wanted. As a result of the drops, GMIHC shifted tactics from building indirect line going direct along the fire edge. During this same period, a short squad of the GMIHC moved to the west side of the ridge and tied into the cold black and into steep rocky terrain.

At approximately **1150** hours, Frisby (BRIHC Superintendent) drove a utility vehicle up to the ridge and met with Marsh (Division A Supervisor). Operations Section Chief Todd Abel initially assigned the BRIHC to Division A; however, adjacent Division Z Supervisor Rance Marquez had yet to arrive to the fire, and a clear plan had not been developed. According to Frisby, tactics for Division Z were unclear and his crew was staged on Shrine Road waiting for instructions.

Frisby reported to Marsh that he attended a poor morning briefing and that radio communication problems were experienced by the dozer operator, the Operations Section Chief Todd Abel, and aviation resources. Marsh and Frisby decided that Division A would create an anchor by burning-out a section of brush located between the heel of the fire and the existing two-track road that led down into the valley. BRIHC would manage Division Z and work with the dozer to connect to the anchor point developed by Division A.

At approximately **1200** hours, Aerial Supervision Module B-3 arrived at the fire (Paul Lenmark and Rusty Warbis). While flying a test run in preparation for a very large air tanker (VLAT) retardant drop, B-3 noticed that the fire was burning in a horseshoe shape and that one end of the horseshoe appeared to be getting close to the Double Bar A Ranch entrance/exit road. B-3 radioed the ground crew and warned a firefighter associated with Engine 58 that their escape route may be compromised by the approaching fire.

At **1230**, radio communication frequency changed to TAC3 due to increased communication at the north side of the fire.

Between **1230** hours and **1300** hours, two VLAT retardant drops were made in a line in front of the approaching fire south of Double Bar A Ranch. Willis observed that the fire only slightly slowed by the retardant, quickly recovered, and continued to burn through the retardant line.

At approximately **1240** hours, Frisby transports GMIHC Lookout Brendan McDonough to the bottom of the valley. Before leaving, Frisby tells McDonough to contact them (Frisby and Brown) directly if he needs them for anything and they will return on the UTV for pickup. McDonough hiked to a small hill about 100 yards north of the two-track road. From that position he could observe the Granite Mountain crew working on the mountain side and their burn-out operation.

At approximately **1300** hours, Marquez arrived at the dozer line and spoke with Frisby in person and Marsh via Frisby's radio. Marquez was having trouble with his radio and could not contact Marsh with his own radio. There was confusion as to who had responsibility for Division Z and where the break between Division A and Division Z would be located. Air Attack overheard this conversation and radioed command instructions for Frisby, Marsh, and Marquez. However, Marsh disagreed and radioed back the original plan developed by him and Frisby. Marquez decided to leave and drove to the incident command post. He never returned to Division Z.

At approximately **1300** hours, the Yuma DOC crew working at Double Bar A Ranch packed-up and left while the remaining personnel lit backfires. The 11 remaining personnel monitored the burnout until it became clear that the escape route was about to be compromised.

At **1327**, the ASFD District Forester (Jim Downey) and Hall developed a complexity analysis. Based upon the analysis, Hall recommended ordering a full Type 2 IMT. However, Downey and Geyer changed the recommendation to a Type 1 IMT and placed the order through ADC at **1413** hours.

At **1402**, the FBAN (Kimball) received a weather update from the National Weather Service (NWS). Kimball was informed that thunderstorms were predicted to occur east of the fire and might produce wind gusts up to 30 to 45 miles per hour with winds out of the northeast. This information was relayed to Musser and Abel via tactical frequency 1 (TAC1).

Yavapai County Sheriff began pre-evacuation reverse 911 calls to residents of the Town of Yarnell.

At **1420**, the responding resources of Structure Protection Group 2 located north of the fire retreated due to the fire flanking the Double Bar A Ranch.

At approximately **1445** hours, Task Force Leader Trainee Tyson Esquibel met with Structure Protection Group 1 Supervisor Gary Cordes. Cordes instructed Esquibel to take several resources to the east end of Division Z's dozer line and construct a saw-line up a small hill located north of Yarnell. The saw-line would tie into the dozer line. Once completed, the plan was to burn-off the line later that evening or night to stop fire from moving south toward Yarnell and Glen Ilah.

At approximately **1445** hours, the Yavapai County Sheriff began evacuating the Town of Yarnell.

At **1447**, the second Aerial Supervision Module (ASM2 - Bravo 33) arrived to relieve ASM1 (Bravo 3). After a 10 minute briefing, Bravo 33 dealt with an arriving VLAT and supported structure protection north of the fire. However, conditions changed, turning priorities towards the Town of Yarnell.

At **1500**, the outflow boundary originating from thunderstorms to the northeast of the fire area begin to blow the fire eastward towards the incident command post and Highway 89A.

At approximately **1500**, the dozer was ordered to the north side of the fire where the ICP was being threatened by fire.

At approximately **1515** hours, Esquibel and his crew drove to the Shrine Road, parked their vehicles, and hiked about one quarter mile to the dozer line where they began building a saw line up a small hill directly north of Yarnell. BRIHC was working on Division Z's dozer line approximately one-quarter mile west of Esquibel's crew. Esquibel's crew consisted of Peeples Valley FD Engine 54 (2 crew members), Peeples Valley FD Water Tender 54 (2 crew members), and Sun City West Engine 103 (4 crew members). Sun City West Engine 131 (2 crew members) was serving as a lookout.

At **1526**, Kimball was informed of an update from the NWS. North to northeast winds of up to 40 and 50 miles per hour were now expected from the thunderstorm outflows which would push the fire south by southwest. This information was relayed to Musser and Abel via TAC1.

At **1530**, winds changed course by 90 degrees to the south-southwest. There was approximately three miles of an active fire head.

At approximately **1530** hours, Cordes placed an evacuation order for Yarnell and Glen Ilah.

At approximately **1540** hours, Cordes observed the fire one mile north of Yarnell and then a spot fire about one half mile south of the main fire. Cordes reported to his supervisor Operations Section Chief I Todd Abel that he could not transmit on the air to ground radio frequency. Abel relayed Cordes' message to aviation for them to drop retardant and water at will.

At approximately **1545** hours, Division A Supervisor Marsh had a radio conversation with Operations Section Chief I Abel regarding the weather and the position of Granite Mountain IHC. Marsh was located near the top of the Weaver Mountains and had a clear view of the thunderstorm, the fire, and the valley below. Marsh and Abel had been watching the storm for some time and discussed their concerns regarding the storm's effects. Marsh reportedly stated that Granite Mountain was safe and in the black (i.e., previously burned wildland). Marsh mentioned that the winds were "squirrelly" at his position and that the retardant and dozer lines north of Yarnell were being compromised.

Shortly thereafter, Operations Section Chief II Musser radioed GMIHC and asked if they could spare resources to assist in Yarnell. Either Marsh or GMIHC Captain Steed responded that they were committed to the black and that Musser should contact BRIHC working in the valley (during his interview Musser stated that he wasn't sure who he was talking with).

At approximately **1550** hours, McDonough noticed that the fire head, which had been steadily progressing northwards, had switched directions, was approximately two miles wide, and burning southward towards his position. The fire had reached his trigger point to just to the north of his lookout position.

McDonough radioed his supervisor GMIHC Captain Steed and explained that the fire had reached his trigger point and he was leaving. Steed confirmed the message and could see the fire and McDonough in the valley below his position. McDonough hiked south while looking for a reasonable location to deploy his shelter should he become entrapped. He made his way to the old abandoned grader at the dozer line where brush had been cleared earlier that day. During his interview, he stated that he believed this area to be his best option as a safety zone. His other option was to hike up the steep mountain slope to previously burned wildland.

Frisby contacted Steed to determine Granite Mountain's progress. Steed stated to Frisby that they needed another hour to complete their work. Marsh overheard that conversation and requested that Frisby drive back up to the ridge for a face to face conversation. Frisby drove his utility vehicle west along the dozer line towards Division A and noticed very active fire and smoke pushing up the hill where McDonough had been stationed as a lookout.

While standing at the grader, McDonough keyed his radio to call BRIHC for pick-up; when simultaneously, Frisby drove up on a utility vehicle. Frisby picked up McDonough, turned around and they drove east down the dozer line past the

approaching fire front. Frisby radioed Steed that he had picked up McDonough and then he contacted his crew and instructed them to move to their vehicles and get ready to evacuate.

During the interview with McDonough, McDonough stated that he believes that had his escape been delayed for any number of reasons, he would have been faced with shelter deployment and burn-over.

At **1555**, fire was burning along the ridge north of Yarnell. Frisby dropped McDonough off at the GMIHC Superintendents truck. They then helped move the GMIHC crew carriers. At **1558** Air Attack (Collins) abruptly leaves the fire and goes to Deer Valley. He turned air tactical operations over to Bravo 33 who was very busy dealing with lead plane duties at the time. Bravo 33 received a very brief update as the Air Attack had departed the fire. Bravo 33 was unaware of either Division Breaks and on the ground fire fighter locations. Bravo 33 had been ordered as a lead plane thinking that the Air Attack function was covered.

At approximately **1600** hours, Cordes notified Abel that trigger points for Structure Protection Group 1 had been met indicating a one-hour evacuation time. Shortly thereafter, Abel was notified that Structure Protection Group 1 trigger point #2 had been reached - it was time to evacuate Yarnell. Abel radioed AZ Dispatch the evacuation notice. Cordes advised Structure Group 1 crews to move out of Yarnell and Glen Ilah. He estimated the fire front to be traveling approximately four miles per hour.

At **1601** hours, radio transmissions captured on video tape documented portions of a conversation between Marsh and Steed. Marsh reported that he "knew this was coming" and inquired about Steed's comfort level. Steed reported that "the fire had almost made it to the two-track road that they had hiked in on" earlier that morning.

Following this conversation, GMIHC and Marsh decided to move from their position. According to BRIHC unit logs, Eric [Marsh] says, *"I copy fire is progressed to the buggies, Also going to make our way through out escape route."* Brian [Frisby] asks, *"Are you in good black?"* Eric says, *"picking our way through the black to the rd in the bottom out towards the ranch."* Brian thinks he meant towards the two track. To confirm Brian says, *"the rd we came on w/ the ranger...affirm."*

Musser heard the radio transmission but didn't recall the exact words. Abel and Musser reportedly were not aware of the location of Marsh's reported predetermined route.

At **1604**, a GMIHC crew member sent a photo of the fire to family members with a text message about the fire.

At approximately **1610** hours, Esquibel, working at the east side of Division Z, noticed increasing fire behavior, and that the fire was moving south with large flame lengths. He noticed a horizontal vortex in that the wind at his location was calm, but the north side of the mountain was getting north winds.

At approximately **1620** hours, Esquibel met with the Sun City West E-103 Engine Boss and talked about the current conditions. Esquibel reportedly thought it was about time to evacuate his crews. At that point the fire had reached the trigger point at a ridge approximately one half mile north of their position.

At **1620** fire personnel near Yarnell heard thunder.

At approximately **1620** hours, fire activity at the east side of Division Z substantially increased. Wind gusts were reportedly 45 mph and visibility had reduced to approximately 150 yards. Crews working Division Z collected at their vehicles.

At **1624**, Doppler radar showed a fire plume at 31,500 feet that grew to 38,700 feet by 1633.

At **1630**, the thunderstorm outflow boundary moves across the southern end of fire boundary.

At 1630, backfiring operations are completed on the Peebles Valley fire front. The wind changed direction and fire behavior decreased.

At approximately **1630** hours, Esquibel's crew, BRIHC, McDonough, and Peebles Valley Engines E-54 and T-64, assembled at their vehicles, accounted for all members, and began driving out to their safety zone at the Ranch Restaurant. The fire was at the perimeter of Glen Ilah although firefighters on the ground could not see the flaming front as the sky was dark and the atmosphere smoky. Crew members drove through extreme smoke, ash, and blowing embers to escape the fire.

Cordes reported that two engines working Shrine Road got "pinched." The crews had hiked in to work the dozer line at Division Z, and when they returned, their vehicles were missing. Cordes believed that a water tender operator had previously moved their vehicles to a safer location without the engine crew's knowledge.

At **1634**, the outflow boundary of the fire crested the southern ridge of the Weaver Mountains.

At **1637**, Bravo 33 flew a drop path for a VLAT north of Yarnell from west to east. This drop went over Marsh's location at the time. Marsh communicated with Bravo 33 informing him that was where the retardant was needed. Bravo 33 circled the south end of the fire above Yarnell to line up a final flight path for a tanker drop.

At **1639**, the aircraft crew was in the middle of a discussion with Abel on the air-to-ground frequency and the pilot was talking to the VLAT on the air-to-air frequency when an over-modulated and static-filled transmission came over the air-to-ground frequency. At this point, it had been determined that the GMIHC were in the front of the flaming front.

More broken communication was exchanged and due to poor reception, Bravo 33 could only understand fragments. The rapid advance of the fire toward Yarnell had generated a lot of radio traffic about structure protection. Bravo 33 assumed the broken and unclear transmission was one of the structure protection units calling to request a retardant drop. He said he did not suspect it was GMIHC since they had been in a safe area when he talked to them earlier.

By **1640**, the last firefighters, with the exception of the GMIHC, reached Highway 89 and confirmed on TAC1 with Cordes that they were safe. At around the same time, Cordes directed Bravo 33 to drop retardant at will to stop the fire from reaching the town.

At **1642**, the outflow boundary of the fire crested the Harper Canyon ridge just to the north of Yarnell for the second time.

Between **1640** and **1642**, the final communications occurred between GMIHC, Bravo 33, and Abel. The exchange affirmed that GMIHC needed air support. Abel released Bravo 33 from structure suppression to help GMIHC. Bravo 33 contacted Marsh to ascertain their location. Marsh informed Bravo 33 that their escape route had been cut off and that they were preparing a deployment site. They were burning out the brush around them. Bravo 33 asked if they were on the south side of the fire and Marsh affirmed that location. That was the last known communication with Marsh.

Soon after **1642**, the GMIHC deployed their fire shelters, they were entrapped, and the fire burned over them resulting in the death of 19 firefighters.

By **1700** hours, the fire front bypassed Yarnell but had burned completely through Glen Ilah and was approaching Highway 89A.

Conclusions:

Please refer to the details of each citation worksheet.

For fatality investigations, was next of kin contact info available?

- ☐ No
☒ Yes

If available, note date condolence letter sent:

Date: August 5, 2013

OPENING CONFERENCE

- ☒ Presented credentials
☒ Presented a copy of the ACT and ADOSH Poster
☒ Explained reason for the inspection

☒ Explained scope of the inspection

Are employees represented?

☒ No

☐ Yes Name of org. or rep.:

If yes, did a representative participate in the inspection?

☐ Yes

☐ No - Reason:

Notes/comments regarding the opening conference:

UNUSUAL CIRCUMSTANCES
(Describe as appropriate)

☒ None

☐ Denial of entry (see denial memo)

☐ Delays in conducting the inspection.

☐ Trade Secrets

☐ Other

Comments:

RECORDKEEPING

Is the employer completing the OSHA 300 log?

☒ Yes

☐ No

☒ Copy of log(s) included in file.

☐ Not applicable for this employer.

Reason:

SAFETY AND HEALTH PROGRAM

Does the employer have an overall safety and health program?

☒ Yes

☐ No

If yes, type of program:

☒ Written

☒ Verbal

☒ Copy of program included in file.

Comments:

EVALUATION OF SAFETY PROGRAMS

(Check those programs that are in place and provide any relevant comments)

- | | |
|--------------------------|--|
| <input type="checkbox"/> | Fall protection program/plan |
| <input type="checkbox"/> | Fall protection training records |
| <input type="checkbox"/> | Alternative fall protection methods |
| <input type="checkbox"/> | Forklift Program |
| <input type="checkbox"/> | Forklift training/certification records |
| <input type="checkbox"/> | Scaffold safety program/training |
| <input type="checkbox"/> | Lockout Tagout Program |
| <input type="checkbox"/> | Punch press inspection |
| <input type="checkbox"/> | Punch press injuries (reported in 30 days) |
| <input type="checkbox"/> | Punch press maintenance and training records |
| <input type="checkbox"/> | Crane inspections |
| <input type="checkbox"/> | Crane training records |
| <input type="checkbox"/> | Chain, wire rope, hook, sling inspections |

Comments: All Arizona State Forestry Division safety programs and Standard Operational Guidelines (SOG's) are developed in compliance with NWCG Wildland Fire Incident Management Guide (2013), NWCG Interagency Standards for Fire and Fire Aviation (2013), and NWCG Incident Response Pocket Guide (2010).

EVALUATION OF HEALTH PROGRAMS

(Check those programs that are in place and provide any relevant comments)

- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Emergency action plan |
| <input checked="" type="checkbox"/> | Emergency response plan |
| <input type="checkbox"/> | Confined space program |
| <input type="checkbox"/> | Permit required confined space training |
| <input type="checkbox"/> | Non-permit required confined space training |
| <input type="checkbox"/> | Hearing conservation program |
| <input checked="" type="checkbox"/> | Bloodborne Pathogens Program |
| <input checked="" type="checkbox"/> | Bloodborne pathogens training |
| <input checked="" type="checkbox"/> | Personal protective equipment hazard assessment |
| <input checked="" type="checkbox"/> | Personal protective equipment training |
| <input checked="" type="checkbox"/> | Hazard Communication Program |
| <input checked="" type="checkbox"/> | Respiratory Protection Program |

Comments:

ADOSH SAMPLING

Was employee exposure sampling conducted by ADOSH?

☐ Yes

☒ No

If yes, explain type:

Sampling duration:

☐ Screening
☐ Full shift

Comments regarding ADOSH sampling:

EMPLOYER'S MONITORING PROGRAM

Is the employer conducting exposure sampling?

☐ Yes
☒ No

If yes, explain type:

Who conducted the sampling?:
What sampling method was used?:
What was the sampling frequency?:
Were overexposures documented by the employer?

☐ Yes
☐ No

Comments:

Were results obtained by ADOSH?

☐ Yes
☐ No

RATING THE EMPLOYER'S SAFETY AND HEALTH PROGRAM (0=Nonexistent, 1=Inadequate, 2=Average, 3=Above Average)

2	Written safety and health program
1	Communication to employees
2	Safety training program
2	Health training program
2	Training records
1	Accident investigation program
1	Preventive action taken

Comments:

CLOSING CONFERENCE


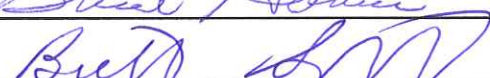
<input type="checkbox"/>	No violations were observed
<input checked="" type="checkbox"/>	Reviewed apparent violations
<input checked="" type="checkbox"/>	Discussed employer rights/obligations
<input type="checkbox"/>	Provided employer a copy of employer rights pamphlet
<input checked="" type="checkbox"/>	Discussed/encouraged informal conference
<input checked="" type="checkbox"/>	Offered abatement assistance
<input checked="" type="checkbox"/>	Discussed consultation programs
<input checked="" type="checkbox"/>	Discussed employee rights and prohibition against discrimination.

Were any unusual circumstances encountered such as, but not limited to, abatement problems, negative employer attitude, etc.?

<input type="checkbox"/>	Yes
<input checked="" type="checkbox"/>	No

Comments regarding the closing conference:

A closing conference was conducted on December 3, 2013 from 0930 to 1120 with State Forester Scott Hunt, Fire Management Officer David Geyer, Assistant Attorney General Paul A Katz, and Assistant Attorney General Brock Heathcotte. The closing was of a cordial nature. The apparent violations and potential penalties were addressed as well as employer responsibilities, employer rights, follow-up inspections, ADOSH Consultation, and employee discrimination under the OSHA Act.

CSHO Signature		Date	12/3/13
Accompanied By			12/3/13

 12/3/13