Informational Summary Report of Serious or Near Serious DFFM Injuries, Illnesses and Accidents

GREEN SHEET

Burn Injuries

March 16, 2018

Laguna Fire

AZ-A4S-180223

18-AZ-0003

A4S

SUMMARY

At approximately 1024 in the morning, a crew member with the Department of Forestry and Fire Management (DFFM) Type II crew fell into a hot ash pit, when the ground gave way on a berm where the employee was conducting mop up operations. The employee suffered burn injuries requiring immediate medical intervention, emergent transport to a local hospital, and subsequent aeromedical transport to a burn center.

CONDITIONS

Weather:
Temperature: 71° Fahrenheit
Relative Humidity: 18%
Winds: W/SW 5-10 mph
Visibility: Clear (Reported as 5 miles at Yuma Airport)
Fuel Type: Salt Cedar with berms of organic material and dirt (Photo 1)
Topography: Flat base in very fine agriculture soil. A mechanically constructed berm approximately 42" above base. The other side of the berm transitions down toward the river at approximately a 20% slope into additional ash pits
Fire Behavior: smoldering

SEQUENCE OF EVENTS

At approximately 0745 all crews were present in the staging area/incident command post.

At approximately 0815 all crews were briefed by the IC trainee for the day's activities. The brief included weather, potential hazards associated with the berms, and general safety regarding mop up operations adjacent to the Colorado River. The crew was assigned to the north end of the fire to conduct mop up operations along the berm adjacent to the Colorado River.

At approximately 0840 the crew conducted an individual crew safety brief and commenced with mop up operations.

At approximately 1010 a crew member from the type II crew fell into an ash pit, after ground gave way on a mechanically constructed berm the crewmember was mopping up with a branch line (photo 2). The crewmember advanced a hose line up the berm and upon reaching the top the employee stepped toward the downhill side facing the Colorado river and berm gave way (photo 3). The employee went down to approximately the knee level in a void space created by burning material being consumed under the crust of the berm. The employee fell forward towards the downhill side adjacent the Colorado River (photo 4). The employee had forward inertia and momentum which continued him downhill with a section of ash and dirt. The section was approximately 38 inches wide and 18 inches long. The employee extended their hands and arms to provide protection while falling forward. The employee because of body weight and that inertia sunk into the hot ash pit and displaced debris sunk up to approximately the armpit and shoulder, additional hot rolling material followed the employee downslope encompassing lower extremities and upper torso. As the employee was falling and adjacent crewmember heard the employees screaming. The witness employee was approximately 6 feet to the south

on the same berm as the employee who fell. The witness employee stated that they did not see the original fall; however, observed the employee who fell sinking up to the armpits and shoulders and then rolling forward. The employee also recounted seeing the employee who fell struggling to get out of the ash pit, and then once self-extricated beginning to walk/run around trying to get hot material off the employees' body and personal protective equipment (photo 5).

At approximately 1012 the witness employee began yelling for assistance and a radio to notify the crew overhead of an injury/incident. The witness employee generated a radio call as well as a physical call for additional assistance.

At approximately 1013 several members of the crew including the crew boss, the foreman, and the squad bosses started toward the scene. The crew boss contacted the incident commander via radio regarding the potential injury/incident involving a crew member. The injured crewmember moving at a rapid pace walk north along the bank until encountering a squad boss and additional crew members who began assisting and understanding the nature of the mishap. The crew boss requested the first-aid kit, and additional medical resources to assist. The crew boss began to cut off the PPE from the employee. The crew boss noted there were no gloves on the hands of the employee. The crew brought first-aid kits to the scene to assist the crew boss and employees rendering first-aid.

At approximately 1024 Fish and Wildlife Engine 2162 with two emergency medical technicians arrived on scene to continue patient care. The emergency medical technicians continued to expose and evaluate the nature of the injuries.

At approximately 1027 an update on the employee's medical condition was given via radio to the incident commander. The incident commander notified Arizona dispatch, requesting an ambulance to transport the employee and start the notification process to the fire staff. The crewmember was ambulatory and communicating. The decision was made to walk the injured employee to a waiting crew agency vehicle to be driven and rendezvous with the ambulance at the ICP (photo 6).

At approximately 1030 the district manager, the safety officer, and the fire management officer were notified of the incident. The district manager and the safety officer were both in route to the incident upon notification.

At approximately 1043 the injured employee, emergency medical technicians, and crew boss rendezvoused with a paramedic ambulance. The paramedic evaluated the employee and started advanced life support care while in route to the local hospital emergency traffic. The crew boss rode in with the employee to the hospital.

At approximately 1054, the employee arrived via ambulance to the local hospital emergency department. The employee was further stabilized and evaluated by the

emergency physicians and the determination with its to transport the employee to a burn center via aero-medical transport.
At approximately 1339 the employee was transported via helicopter to the burn center.

At approximately 1500 the district manager and the safety officer arrived on scene at the incident. The district manager took command of the incident for the remainder of the operational period. The safety officer conducted interviews with individuals associated with the incident. Additionally, the safety officer took photographs, measurements, and did an overall scene assessment including PPE.

INJURIES/DAMAGES

The employee suffered second-degree and third-degree burns over approximately 14% of the employees' body. Primarily full circumference burns to the employees' hands (some third-degree on the fingertips), wrists, forearms, and biceps. Additionally, there were partial circumference second-degree and some first-degree burns to the employees' shoulders, thighs, shins, and face.

SAFETY ISSUES FOR REVIEW

- Based on the nature of the injury, statements of witness employees, and the injured employees' gloves hanging on a D ring on the employees' pack. At the time of this report it appears the injured employee was not wearing gloves during the incident (photo 7).

- The Situational Awareness of the employee regarding ash pits, the employees' understanding of the leader's intent for the operational task assigned.

INCIDENTAL ISSUES/LESSONS LEARNED

- Situational Awareness including understanding of special hazards such as berms built mechanically with agricultural tilled soil as a base verse a naturally developed berm. https://www.wildfirelessons.net/search?executeSearch=true&SearchTerm=ash+pits&l=1
- The IC communicating with Agency Administrator/Duty Officer regarding Objectives, Strategy, and Tactics being utilized for an Incident.
- Assuring instructions are heard and understood by all employees with clear leader's intent (Task, Purpose, and End State).
- Wearing of proper PPE for tasks assigned

PHOTOS/SITE DIAGRAMS/MAPS