PACIFIC SOUTHWEST REGION

August 1st, 2015

Rapid Lessons Sharing

Firefighters Hit By Retardent

On August 1st 2015 during Initial Attack operations on the Scale Fire located on the San Bernardino National Forest Two engine crew members were directly hit by a retardant drop from an Airtanker. Both crew members received minor injuries as a result of the incident. The firefighter's injuries were evaluated in the field; one crew member was transported by ground to a regional medical center for further evaluation and released that day.

On August 1st 2015 the forest helicopter was flying a recon mission looking for lighting fires when they detected a ¼ acre fire off the Northbound Highway 15 at the same location of a vehicle accident was initially reported as a Multi Casualty Incident (MCI). The dispatch center started a 1st alarm response to the Scales Fire. The engine arrived around 13:10 and were instructed by the Incident Commander to take action on a new spot fire north of the main fire along a frontage road just off the highway. The fire was burning in grass and brush, when the engine crew engaged the spot fire that later became Division Z. The Assistant Fire Engine Operator (AFEO) and another firefighter started working on the heel of the fire to establish an anchor point. By the time the crew secured the anchor point the fire had grown to approximately 1/8 of an acre and was running up a small bowl. After the crew secured the anchor point they went to work on the right flank establishing a simple hose lay. They progressed about half way up the right flank when the AFEO heard radio traffic over Air to Ground that retardant drops would be coming in soon. After hearing this, the AFEO started scanning the sky for aircraft. The AFEO and one other firefighter continued working the hose lay while the other firefighter returned to the engine for another hose pack.

" Whenever you hear that drops are coming in you start looking for aircraft" AFEO

The first drop came in across the head of the fire running north to south. Division Z came over Tac 1 and advised the AFEO that drops would be coming in and apologized that he didn't get that info to him before the 1st drop. The AFEO assured Div Z that he understood and he heard the traffic on Air to Ground prior to the drop. After the initial drop the AFEO and firefighter extend the hose lay another 100 feet and stopped. They wouldn't be able to turn the corner until the fire finished burning out the bowl. As they waited they continued working to improve the existing control line.

The AFEO saw the airtanker approaching from the south east and making a turn to the West towards the head of the fire. He notified the firefighter that was with him of the incoming drops, they stopped improving the line and dropped their hose. They proceeded to clear the line moving into the black and down the line. They reached a point that they perceived to be a reasonable safe distance from the intended line. The aircraft finished its turn, leveled off for his approach. After 2-3 minor stick corrections the plane was headed directly at the crew. At no time did the AFEO lose sight of the aircraft until the drop was released.

"I saw the tanker approach from the south east and made a turn towards the head of the fire heading to the west. I advised my crewmember that a drop was coming in, we put down the hose lay and moved down the line and into the black to make way for the drop." ~ **AFEO**

The AFEO quickly recognized that there would not be enough time to escape further down the line and due to the terrain they could not move any further into the black. The AFEO directed his crewmember get down. The firefighters hit the deck head facing the drop. AFEO was about ¾ away from the ground when the drop hit him. Because of their location in the black both firefighters received minor burns. The AFEO received burns on the right knee, elbow and hip. The other firefighter was burned on the lower right leg as well. Once the drop had passed the AFEO checked on his fellow firefighter and notified the Air Attack of the incident. The two firefighters concluded that their injuries were minor and they'd be able to complete the hose lay before returning to the engine for further evaluation. After being examined by a medically trained firefighter the AFEO was transported to a regional medical center for further evaluation and was released later that day.

"Once the bay doors open and I saw the massive payload headed right for our location I gave the command to get down." AFEO

There is video of the airtanker drop, which identified that the drop was delivered at the appropriate drop altitude and that ground forces had been advised of the incoming airtanker drop.

Lessons Learned

All of the conditions present show sound decision making and judgment. The firefighters involved did what they where trained to do. The operational environment of initial attack, aircraft working direct with ground support is generally fast paced. The operational tempo this day was considered "normal" by all involved responders. The make up of the crew was very experienced and have worked together for sometime.

The firefighters cleared the area with intent, anticipating a direct drop. The fire was burning in grass and brush with no overhead hazards. They cleared the line and moved into the black for visibility: to be able to maintain a visual on the aircraft and as a means to be more clearly seen.

The AFEO was mindful in quickly recognizing any further escape was not assured due to the terrain. Moreover the concern for their safety and potential for injury would be higher if they got hit on the run. The firefighters utilized the emergency protocols outlined in the Incident Response Pocket Guide, Aerial Retardant Safety page 56.

When asked what insight would you offer from your experience the response was ***"Expect the unexpected!***" So how do we do that? When you really think about it, it falls into two arenas increasing our margins for error and validating our assumptions.

- A commonly used tool for planning is the PACE model. PACE stands for Primary, Alternate, Contingency, and Emergency. Going through the PACE model is a means to prompt decision makers to consider alternative courses of action that might not have otherwise.

- The validation of assumptions is part of a continuous self assessment and is supported by the 5 communication responsibilities referenced in the IRPG page ix: Brief others, Debrief you're actions, Communicate hazards, Acknowledge the message, and Ask if you don't know.

For more information follow the links bellow to review lessons from the 2015 RT-130

2015 WFSTAR , Margins: http://youtu.be/p-L9GlQd7yg

2015 WFSTAR, Tools for Communication: http://youtu.be/6MHeNCmAKdY