LESSONS LEARNED

Northern Region Aviation Safety

Helibase Fire

SUMMARY OF INCIDENT:

On Sept 10th 2012 around 10:00 a Boeing Vertol helicopter was dispatched to work on the fire. The helicopter was located on Pad 7 at the air strip helibase. The aircraft had just started up and the mechanics were doing the standard bucket checks and remote long line hook checks. The helicopter was running at flight idle and about ready to depart when all of a sudden there was a fire under the cargo hook. The mechanics and helicopter manager signaled for the helicopter to take off right away as the flight deck was on fire. There was very dry grass where the helicopter was parked and it appeared that when the pilots did the hook check there was either a spark from the long line or a static discharge that ignited the dry grass under the helicopter.

The rotor wash from the helicopter blew the fire in several different directions. One of the mechanics grabbed the closest fire extinguisher and put the fire out around the equipment trailer while the helicopter manager screamed into the radio FIRE ON THE FLIGHT DECK, FIRE ON THE FLIGHT DECK on the helibase deck frequency. The helicopter manager went to grab the second fire extinguisher and realized it was in the service van so instead grabbed a fire shovel and started to throw dirt on the fire to get the fire out from under the fuel truck. The manager was successful on the attempt as the grass had flattened down from driving on it. At that point the crash rescue vehicle showed up and deployed their hard line attacking the west flank of the grass fire that was around 200 by 300 feet and spreading in several directions. The helicopter then returned with a bucket of water and dropped around the vehicles on the east flank of the fire. This saved the vehicles and stopped the spread of the fire to the south. All three helicopter mechanics at this point had grabbed shovels and were working on the east flank of the fire that was working its way towards the highway, while the crash rescue crew attacked the west flank of the fire. Several other people and engines show up at this point and continued to attack the fire. The helibase radio operator's instructed several other helicopters to launch with their buckets. The Vertol returned with another bucket of water and continued to aid the firefighters. With the aid of 3 helicopters and several engines the fire was contained at about 1.5 acres.

WHAT WAS DONE WELL:

Helicopter manager and helicopters mechanics quick actions were able to save all equipment and vehicles including the 6,000 gallon fuel truck that the fire burned under.

Helicopter launched when the fire started and departed the area to keep the helicopter from burning up.

Helicopter went straight to the river and returned with a bucket of water to aid in the suppression effort and kept the fire from spreading into the maintenance van and vehicles parked at pad 7.

Everyone on the helibase pitched in as directed to suppress the fire.

Helibase radio operators did an outstanding job of directing resources to deal with the incident within an incident.

The fuel truck and area was clean with no residual fuel and nozzle properly secured. Residual fuel or small leaks could have lead to different outcomes.

Crew was wearing PPE in anticipation of operations and had been given fire shelter deployment training.

CONTRIBUTING FACTORS:

Due to dry fine fuel conditions the incident happened in the blink of an eye and rapidly grew into a serious issue.

The aircraft departing blew the fire in several different directions towards the fuel truck the equipment trailer and the service van.

The fire moved toward another Type 1 Helicopter that was having maintenance and unable to move. Crew removed the other fuel truck from the scene.

Mow helibases prior to use to remove excess grass and do not park vehicles in long grasses at helibase.

RECOMMENDATIONS:

As a Seasoned manager I could have had more fire extinguishers available on site (we had 2 but one was in the truck).

We as helitack personnel and ground folks working on a helibase can NOT and I repeat can NOT let our guard down when working with aircraft. We have to be ready for anything to go “Quote” wrong at a moment’s notice. This incident could have turned very bad had not the right action’s been followed by all involved. We have to be vigilant about having both crash rescue and trained personnel on site whenever we are working with aircraft. We should not ever assume that it won’t happen to me because when it does it could be a life changing event for all involved.

Ensure helibases and area around the aircraft are policed up and keep flammables to a minimum on the ground.

In the AM startup fuel trucks to get air pressures in the truck systems up to working pressures to avoid delays if have to move truck rapidly.

Add a few tools and a bladder bag to the crash rescue kit in areas where fuels are appropriate.

Be ready and be Prepared!!!

Possible cause of ignition

Setup prior to fire

Service trailer crewmember was able to protect with the helispot fire extinguisher

Location of 2nd Type 1 Helicopter in relation to fire

Location of Fuel Truck and Support Trailer To Helicopter

Hose and cable layout at Pad 7

Equipment on the ground could be subjected to fire damage

Having fuel truck hoses connected can cause problems if trying to move from flame front

It is important to have contractors wearing PPE if operations are being conducted. Fighting fire in shorts can hurt.

Suppression aids brought in after incident to bolster capabilities due to helibase size