

Zoë Keliher – NTSB, Air Safety Investigator **Eliott Simpson** – NTSB, Air Safety Investigator

Person Contacted: Ritchie Bourgeis Date: -------Phone: -------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Bourgeis:

Mr. Bourgeis, an alternate crew (third-wrench) employed by Carson Helicopter Services, Inc., stated that he was assigned to perform maintenance on the accident helicopter, Helitanker 766 (HT 766). He recalled that he normally performed the turn-around maintenance on the helicopter. During the last refueling prior to the accident, he performed one of the routine checks on HT 766. He noted that both engine intakes were covered in ash, however the first stage stator was clean. He checked the oil levels, which were all sufficient. Upon an inspection of the main rotor blades, he discovered they were covered with a thick layer of ash on the leading edge. He began to wipe the blades with a rag, which in turn effortlessly cleaned the blades free from debris. He recalled that the quantity of ash was more than he had seen on this particular fire, but he has seen the equivalent amounts while the helicopter was working other fires.

Mr. Bourgeis added that after the helicopter landed Jim Ramage told him that Roark Schwanenberg, the pilot, had passed his checkride; then he retreated inside temporarily and then came back out to the helicopter. While Mr. Bourgeis was wiping the blades, Roark indicated that they had to depart immediately and there was a following discussion between the flight crew as to if they would be able to complete all three remaining troop shuttles.

Mr. Bourgeis further stated that he asked Roark how the helicopter was "running," to which he replied that it was operating well. Mr. Ramage had cleared the ride with the helicopter manager, and decided to remain on the helicopter, not as part of a checkride (which had ended), but as a joyride.



Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Sean Moretz – Carson Helicopters, Inc., Director of Operations Jim Morrison – Forest Service, Air Safety Investigator Dave Glose – Forest Service, Helicopter Operations Specialist

Person Contacted: Matt Vassel Date: ------Phone: ------Phone: ------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Vassel:

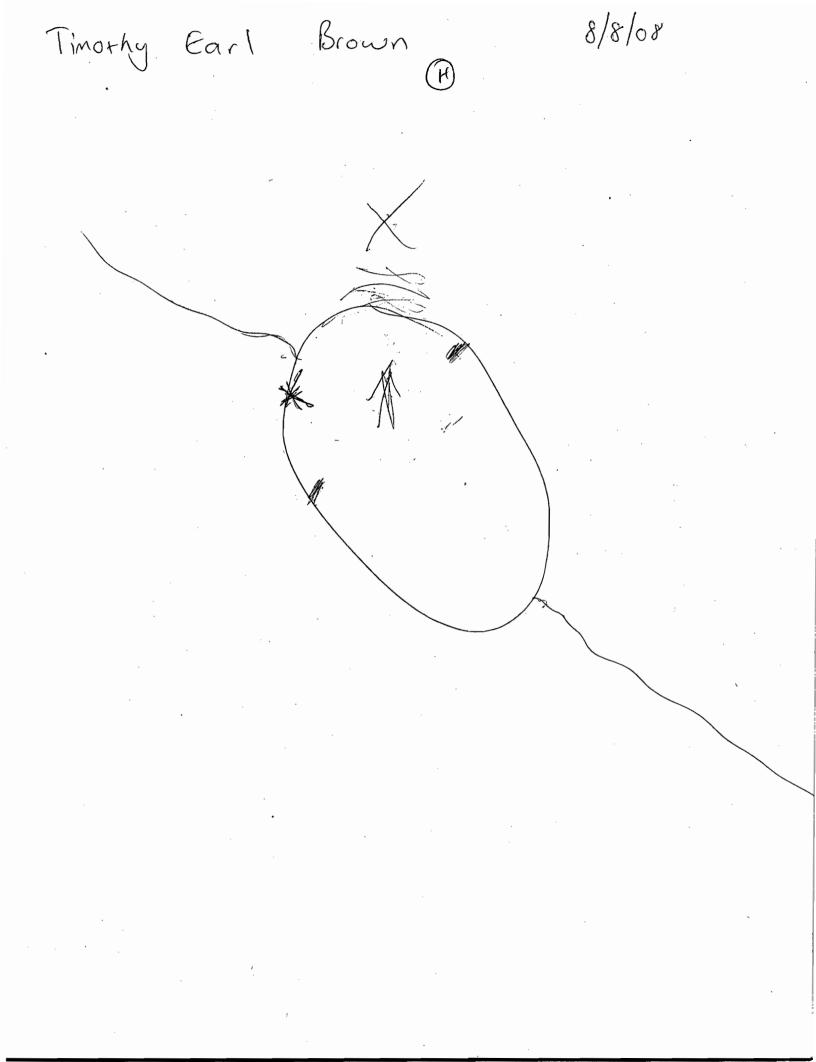
Mr. Vassel, a senior firefighter with Trinity Helitak, stated that he was at Willow Creek Helibase in the morning and asked if he wanted to perform manifest functions. He accepted the assignment and was transported to Helispot H-44 with Ulf Peters. They received a list of people to be transported from Grayback and Ferguson crews. Helitanker 766 (HT 766) came in to land and, as it created a severe dust storm in its wake, it aborted the landing. A Bell 212 followed by dumping water on the area in an effort to minimize the dust. The landing zone was changed to an area adjacent to the original and was primarily comprised of rock. A safety briefing was given to the crews and staged in their manifest groups.

Mr. Vassel recalled that Matt Lingenfelter boarded people and the first flight departed uneventfully. The staging area was changed to a better area south of the landing zone, which further accommodated a quick boarding scenario. The helicopter returned for the next flight and Mr. Lingenfelter asked the pilot if he was confident that they would be able to complete all the transport flights, to which he confirmed that he would. People were loaded on the helicopter and it departed again. It returned a while thereafter and there was talk about bringing in another helicopter to help expedite the transport. The crew load was again loaded on helicopter and he was positioned in the area of the original landing zone, where he could see the left side of the fuselage. The helicopter lifted up moving slow with little forward motion.

The helicopter started to approach the trees and as it crested off the down sloping knoll he witnessed debris coming from the left side. A fire erupted instantly and as he approached the wreckage he noted a funnel of flames shooting up from an escape hatch. Mr. Vassel transmitted on the radio immediately, making positive communication with Willow Creek Helibase. He

repeatedly walked up and down the hill trying to obtain more information. He did not report fatalities over the radio because he thought that people with scanners would pickup that information.

Mr. Vassel noted that H-44 was similar in terrain with that of the Trinity Helibase. The helicopter had always taken of in the same manner as part of the departure procedure, and the takeoff on the accident flight was extremely slow speed and low altitude.





Eliott Simpson – NTSB, Air Safety Investigator Jim Morrison – Forest Service, Air Safety Investigator Shawn Moretz – Carson Helicopter

Persons Contacted: Timothy Earl Brown Phone: ------Date: August 08, 2008 Time: 1430 Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Brown:

Mr. Brown is the squadron leader with Ferguson management South.

He observed the helicopter being loaded before the accident. He had arranged his team and was ready to go on the next flight. He watched the takeoff from the left side of the helicopter and described it as 'wayward' as it lifted from the ground and he stated that it then 'geared up' as if the engine was increasing in power. It then hit the treetops, 'rolled up' and collided with the ground.

Mr. Brown further reiterated that the initial sound the helicopter made as it first took off was one of lower than normal power. It appeared to struggle to climb and then began to move forward. As it hit the trees, the engine power sound increased. He estimated the maximum altitude that the helicopter reached to be approximately 50 feet.

After the accident, he ran down to the scene and observed that two passengers were already out of the helicopter. He helped them move further away. He observed black smoke coming from the helicopter and could hear passengers on board screaming. A few seconds later he described it as 'all over' as a fire erupted in the helicopter. Within 10-15 seconds the fire became so intense that he had to move away, at this point the screaming also ceased.

Mr. Brown had observed this helicopter take off two times earlier in the day. He noted that the other flights would take off straight up, and then go forward. For the accident flight the helicopter started to move forward and up at the same time. Then it hesitated, moved forward and hit trees.



Zoë Keliher – NTSB, Air Safety Investigator **Eliott Simpson** – NTSB, Air Safety Investigator

Person Contacted: Richard Schroder Date: ------Phone: ------

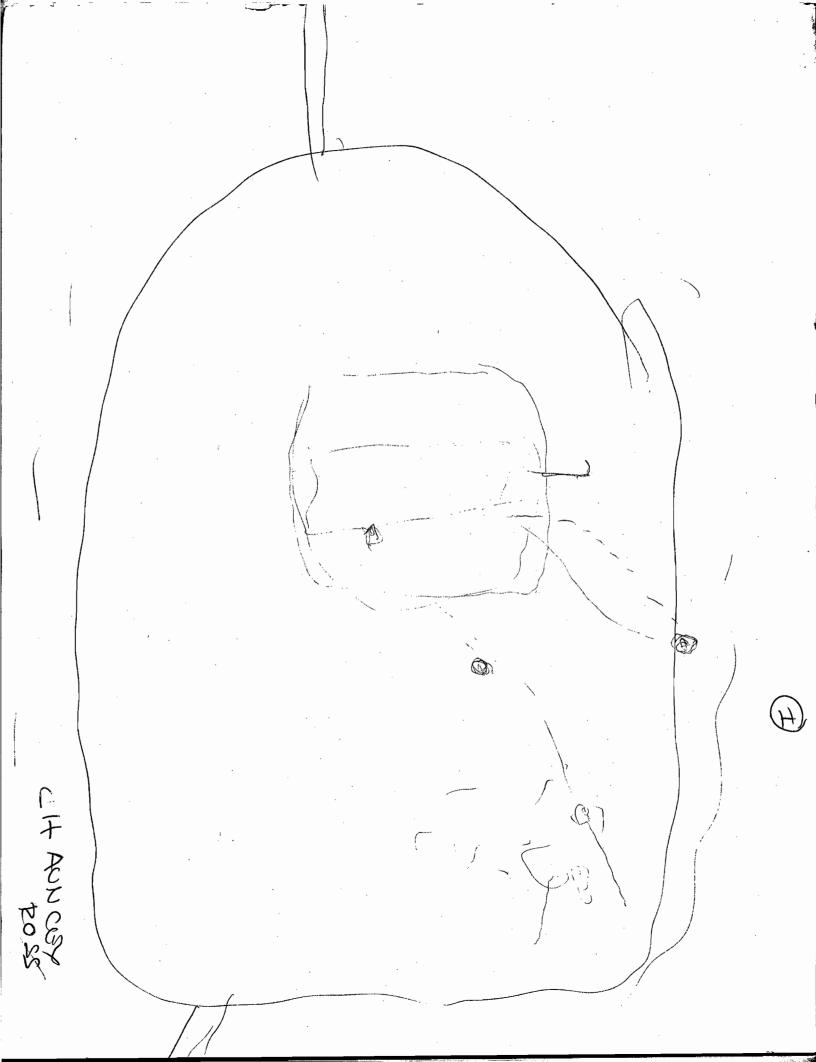
Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

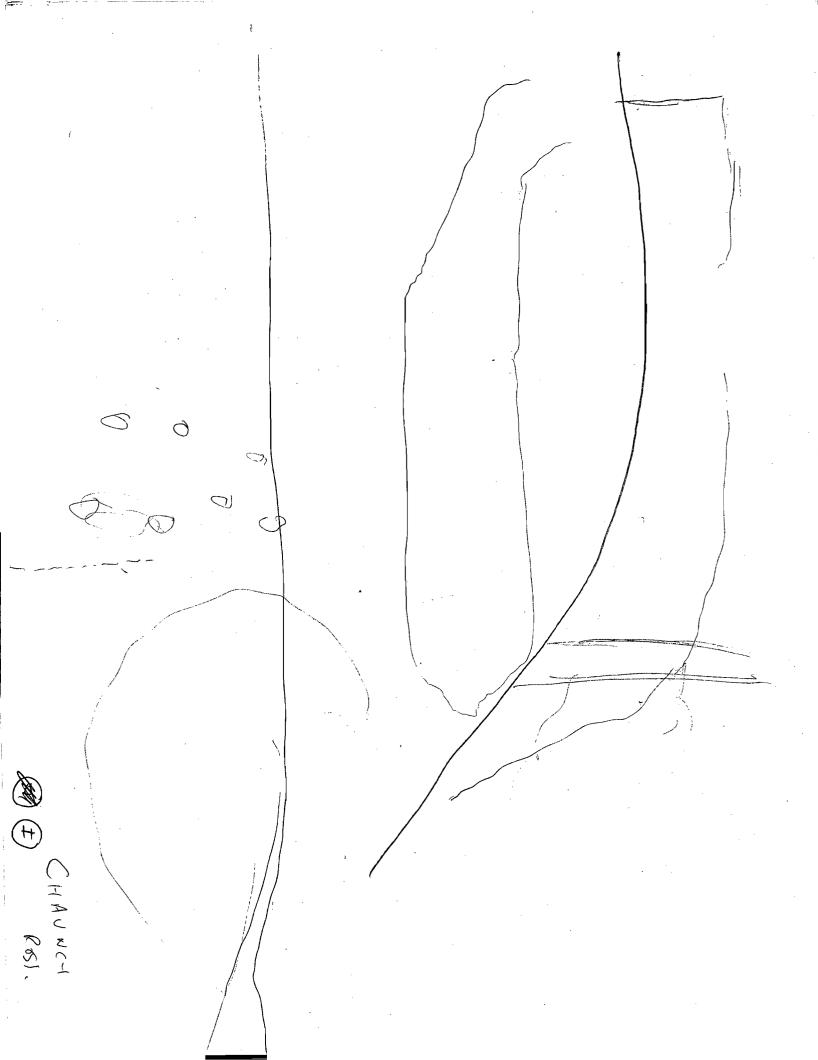
The following is a summary of conversation with Mr. Schroder:

Mr. Schroder, a crewmember of the Grayback hand crew, stated that he was sitting next to the window, just behind the co-pilot, with Mike Brown in the seat directly next to him. He recalled that when he initially boarded he left his left seatbelt harness loose in fear that he would not be able to egress from it easily. He witnessed the co-pilot give a thumbs up indication and the helicopter began to lift upward. Shortly thereafter, the checkpilot (sitting across the isle from Mr. Brown), who was looking out the window periodically, began to wave frantically and yelling at the crew members to put their heads between their legs. He looked out the window as they were approaching trees, which appeared very close to the helicopter continued toward the trees and he re-tucked his head between his legs. He felt the helicopter shift to the left (which he thought was from contact with the trees) and he lifted his head. The helicopter shifted right, left, right, then left again, prior to going straight down.

Mr. Schroder blacked-out, to awaken to a massive pressure (in excess of 300 pounds) weighing his body down; his head was still between his legs. He did not try release his seatbelt and instead wiggled out of the shoulder harness; his helmet had come off. He could see the pilot on the left side of the cockpit moving around, trying to kick out a window. There were flames coming from the back of the helicopter and he looked up at the window nearest to him, which was bent inward. After several attempts, he broke the window outward (popped out).

Mr. Schroder added that this was his first time in the S61. His injuries included numerous scratches and fractures to his vertebrae; he did not have bruising from his seat restraint system.







Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Sean Moretz – Carson Helicopters, Inc., Director of Operations Jim Morrison – Forest Service, Air Safety Investigator

Person Contacted: Chauncey Ross Date: August 07, 2008 Phone: ------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Ross:

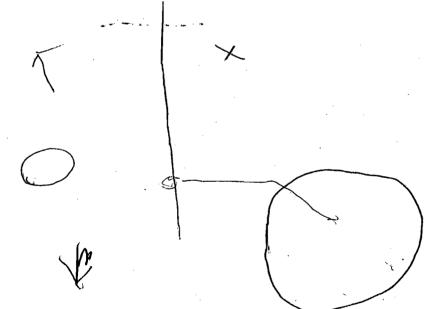
Mr. Ross, a crewmember with Trinity Helitack, stated that around 1430 he was notified that he would be supporting a transport mission from Helispot H-44. The flight on Helitanker 766 (HT 766) departed between 1630 and 1700, and he noted that the pilot, Roark Schwanenberg was being given a checkride with Jim Ramage. With the Trinity Helitack crew members on board, including Mr. Ross, the flight began with reconnaissance of the landing area at H-44, which was followed by a power check. They flight continued to Helispot H-36, where several Trinity Helitack members were to be dropped off. While en route, the flight crew overflew H-36 by several miles, as there was some confusion about the coordinates. The location issue was resolved and the flight crew performed reconnaissance of the landing zone.

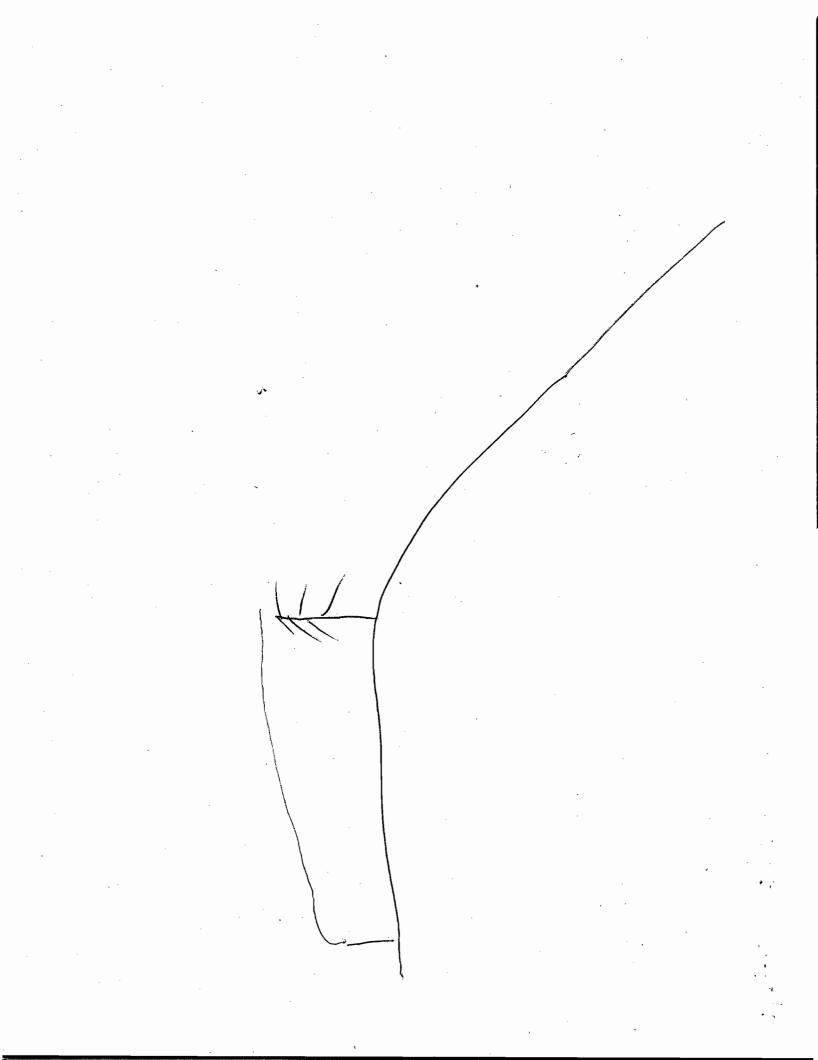
The helicopter set down at H-36 uneventfully and dropped off the predetermined helitack crew members. The helicopter departed back to H-44 and upon first attempt to land, encountered a dust storm from the rotor downwash. On the second attempt the flight crew landed at a location about 100 feet to the right from the original spot, which was less dusty. Matt Lingenfelter cleared the helicopter as being in a good location [clearance from the ground] and the remaining helitack crew disembarked. The helicopter made two transport loads of crew members from H-44 to H-36, followed by a diversion to the Trinity Helibase for refueling. The crew staging area was changed to a different location and Mr. Ross watched as HT 766 approached H-44 and set down.

The third load of crew members boarded and the helicopter began to lift off. The vertical ascension appeared very slow and the helicopter look "labored," as though it did not have enough power. The helicopter began to move forward in a nose-low configuration, and was drifting right [nose was still pointing in the same direction]. The flight path continued toward an area of naturally lower trees. The nose of the helicopter contacted a tree, bending the top branches over. Mr. Ross began walking backwards, still thinking that Roark would be able to recover. The helicopter then dropped, coming to rest on its left side.

Mr. Ross was later interviewed in a telephone conversation with Zoë Keliher on August 08, 2008. He stated that he had witnessed William Coultas, the co-pilot utilize a bungee cord to hold the collective down. He had seen Mr. Coultas flip the bungee over the collective just prior to the accident flight, while at H-36. Mr. Ross described it as being 3-4 inches in length with metal hook ends.

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Zoë Keliher – NTSB, Air Safety Investigator Sean Moretz – Carson Helicopters, Inc., Director of Operations Jim Morrison – Forest Service, Air Safety Investigator Gary Morgan – Forest Service, Natural Resource Specialist

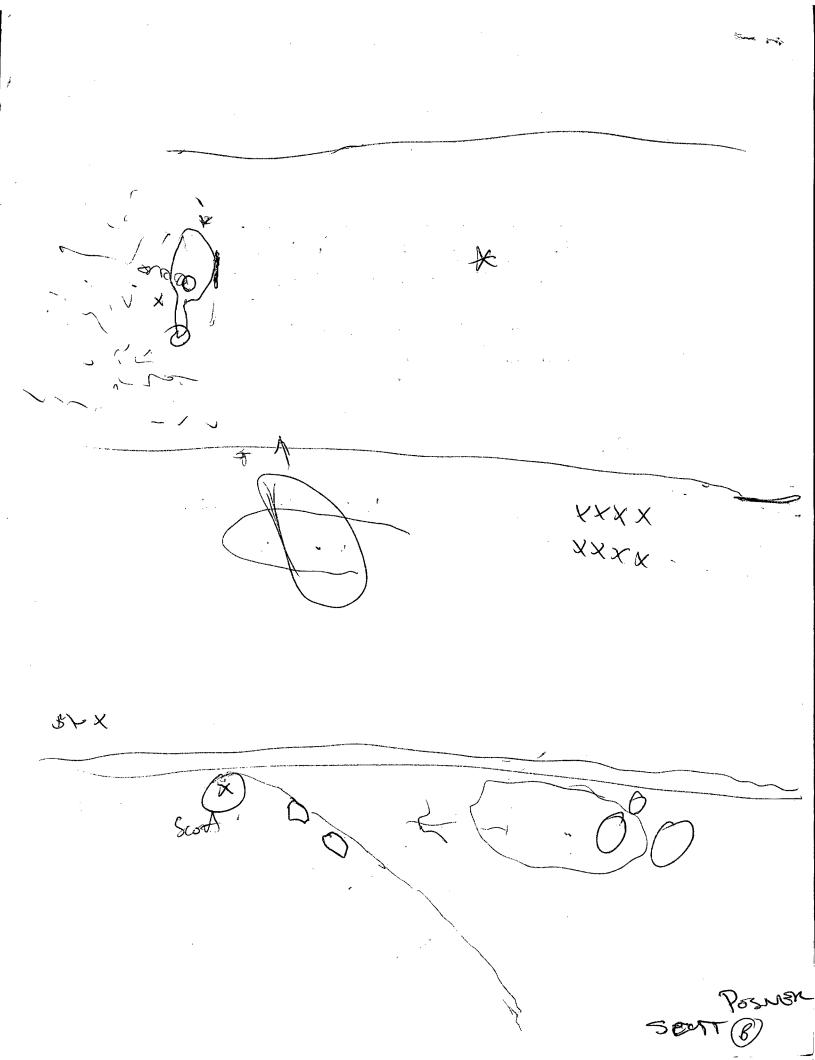
The following is a summary of conversation with Mr. Rhea:

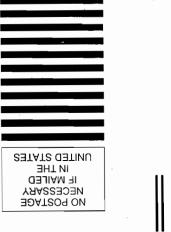
Mr. Rhea, a crewmember with Trinity Helitack, stated that he was at Helispot H-44 to help with a crew transport mission. Helitanker 766 (HT 766) approached normally on what was to be its third crew transporting flight. He loaded cargo and cleared the helicopter standing about 80 to 100 feet to the right side of the cockpit. The helitack and pilot exchanged thumbs-up hand signals and the helicopter began to depart.

Mr. Rhea recalled the helicopter sounded normal, though he was not looking towards the departure at the beginning, due to the strong rotor wash. He transitioned his eyes to the helicopter when it was about 20 to 30 feet above the terrain. The helicopter drifted sideways to the right [nose remaining pointed in the same forward position]. The helicopter did not appear high enough, as though it was not at full power. As the helicopter continued forward, the right side of the belly contacted the tree tops; the tail rotor then contacted trees. He noted that it was moving extremely slow, inconsistent with the last two departures. The nose did not drop down during the forward motion, which he had seen it do in the past.

Mr. Rhea stated that the helicopter sounded normal, but noted that he was wearing a helmet with sound barrier capabilities (i.e. built-in headsets). The helicopter descended toward the downhill slope on its left side and came to rest in that attitude. He ran downhill toward the wreckage, which was engulfed in flames. He witnessed a survivor that was outside the wreckage and tended to the co-pilot. He queried the co-pilot as to what had occurred. The co-pilot responded that he didn't know what happened and that he was sorry.

Mr. Rhea noted that the wind was about 3 to 7 miles per hours out of the south-southeast. He added that he had seen the pilot and co-pilot fly together in the past, and thought they appeared to make a good flight crew together.





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Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Sean Moretz – Carson Helicopters, Inc., Director of Operations Jim Morrison – Forest Service, Air Safety Investigator Dave Glose – Forest Service, Helicopter Operations Specialist

Person Contacted: Scott Posner Date: August 07, 2008 Phone: ------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Posner:

Mr. Posner, a task force leader for the Ferguson hand crew, stated that an Incident Meteorologist (IMET) had notified him of possible lightning in the areas of his crew later that night. Based on the discussions of the possible weather, management decided to attempt to transport several crews from Helispot H-44 to H-36. The Grayback hand crew was one of the crews to be transported. He reported to H-44 around 1600 and received an operational safety briefing from Trinity Helitak, who began talking about manifests. After briefs discussions, the crews opted to transport the drivers out first and the crews were given a safety briefing by helitak.

Mr. Posner further stated that following the briefing the accident helicopter, Helitanker 766 (HT 766) came in to land. On the first attempt the helicopter created a brown out as the main rotor downwash propelled dust into the air. The flight crew aborted the landing and a different landing zone was established in an adjacent, less dusty area. The helicopter landed uneventfully and two flights were conducted with a full load of crew transported. The helicopter diverted to refuel and discussions were ongoing with regards to if the crews' personal gear would be transported as well.

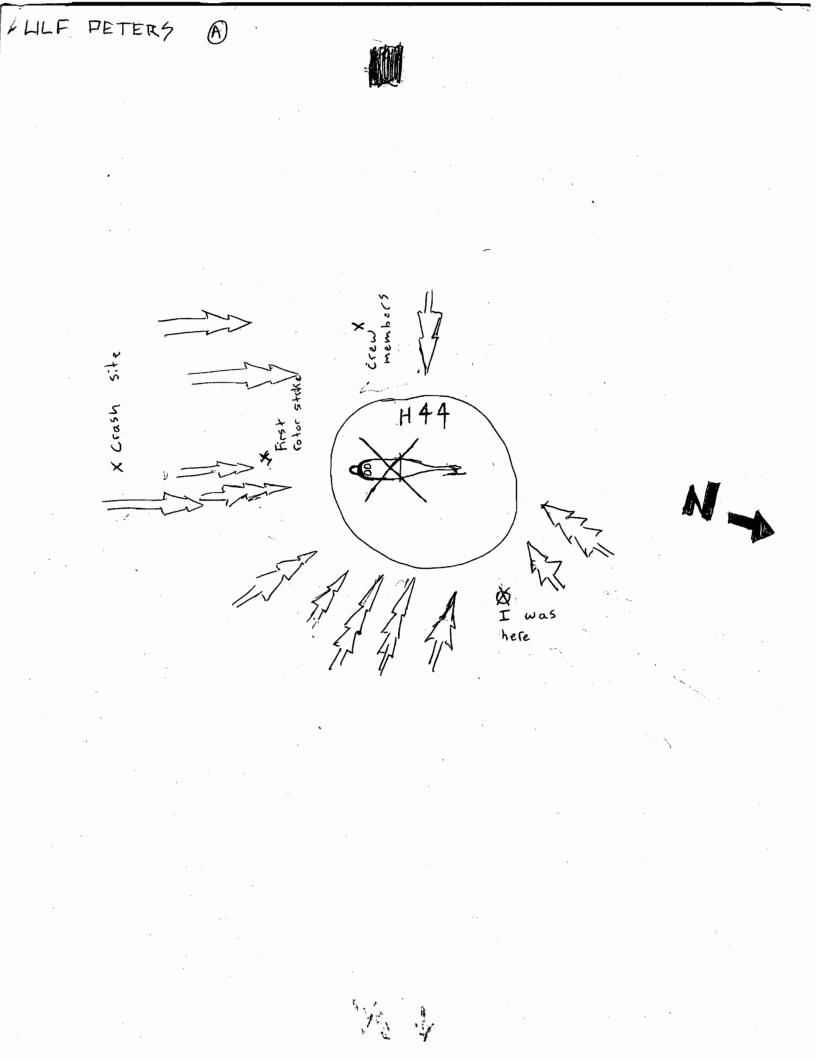
The third loading seemed normal as the helitak crew assisted people onto the helicopter. Mr. Posner took cover behind a tree as he did not want to encounter the dust again. As the helicopter lifted off the ground, dust began to stir up and it continued to ascend vertically. The helicopter hesitated and then moved forward a very low airspeed, barely clearing the tree tops around 40 feet above ground level (AGL). He noted that the helicopter appeared low and he could audibly distinguish the sound of the main rotor blades, as if it were under a heavy or strained load. The helicopter disappeared out of his sight and pieces of a tree blew in the air. He ran down the slight

downslope and witnessed the helicopter positioned on its left side with the belly facing west; there was smoke present and almost instantaneously the helicopter became engulfed in flames.

Mr. Posner, the first person to the wreckage, observed a survivor walking away from helicopter and, although he was concerned about an ensuing explosion, he helped that survivor to the landing spot. The smoke from the wreckage was thick and he opined that the remaining crews on the helicopter had perished.

Following the accident, Matt Lingenfelter from the Willow Creek Helibase, took over communications for H-44. The communications were difficult due to the repeater disconnecting.

Mr. Posner added that the winds were calm and it was still light outside when the accident occurred.





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Person Contacted: Ulf Peters Date: August 07, 2008 Time: ------Phone: (------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Peters:

Mr. Peters, employed by the Teton Interagency Helitack, recalled witnessing the helicopter accident that occurred on August 05, 2008. He stated that he was stationed at Helispot 44 (H-44) to manifest the different firefighting crews being shuttled from his location to Helispot 36 (H-36). Prior to the accident helicopter approaching, Helitanker HT 11M performed two water drops on the dusty terrain. While at the helispot the accident helicopter, Helitanker (HT 766) did an initial approach toward the landing zone, and as it became lower encountered a severe amount of dust creating a brown-out. The pilot aborted the landing and continued onto H-36 to unload 5 of the fire crew. After the departure, they arranged to have water dropped at H-44 in an effort to settle the dust.

Following the water drop HT 766 came back and unloaded the Trinity Helitak crew. Thereafter the Trinity crews briefed the fire crews that were to be transported (Ferguson and Grayback), while he finished the manifest, which he designed in accordance to necessity (e.g., the drivers were to leave first). HT 766 landed and shortly after set down, 10 fire crew personnel were loaded (about a five minute process). They were transported to H-36 and HT 766 made another run back to H-44 to again pick up 10 more fire crew and transport them to H-36. After the second run, the pilot, Roark Schwanenberg, indicated that they were going to Trinity Base to refuel. About 30 minutes after the refueling, the helicopter again landed at H-44.

Mr. Peters further stated that he was located north of the helicopter on the edge of the tree line that made up the perimeter of the helispot. From his location he could see the left side of the helicopter's fuselage. After the fire crew boarded and the door was just, the helicopter slowly lifted airborne. It began to progress forward while continually gaining more altitude until leveling off about 50 feet above the terrain (as referenced from the ground to the main wheels).

The helicopter continued toward the tree line ahead, maneuvering toward a natural lower pocket of trees. As the helicopter slowly approached the tree tops he observed a main rotor blade striking a tree on the left side of the flight path. The helicopter yawed to the left and contacted a second, larger Ponderosa tree. Thereafter, the helicopter collided with numerous trees as it descended and crashed into the down sloping terrain. He witnessed black smoke immediately emanating from the accident site.

Mr. Peters added that the helicopter's attitude during forward flight appeared to be level. He noted that as the helicopter lifted upward that he could audibly distinguish the helicopter having less power than normal, as it was not as loud. The wind at the time of the accident was light, and provided a slight headwind of 0-5 mph. As he was the person to perform the manifest calculations, he relayed that he uses passenger's self-reported weights and predetermined set weights for gear. He was wearing earplugs.

Statement approved by Mr. Peters (August 18, 2008)



Zoë Keliher – NTSB, Air Safety Investigator Gary Morgan – Forest Service, Natural Resource Specialist

Person Contacted: Josiah Obst Date: August 08, 2008 Phone: ------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Obst:

Mr. Obst, the manager of Helitanker 766 (HT 766), stated that about 0830 the morning of the accident there was a briefing at the Trinity Helibase. During the briefing there was a discussion about maps, fire behavior, weather, and pilot IAP (radio frequencies, victor airways, potential missions, etc.). Around 1100 to 1130 the helibase received a call requesting HT 766 for a troop relocation mission. The pilots provided the load calculations, utilizing information of the high outside air temperatures (OAT) predicted and landing zone altitudes expected. These calculations were performed at the following altitudes: 500; 3,500; and 7,000 feet.

The helicopter was requested to make water drops at 1250 in division Foxtrot for the Buckhorn fire. Around 1400 Matt Lingenfelter and Mr. Obst engaged in discussions about helitack positions and the pending troop relocation mission. The helicopter arrived back at the helibase around 1440 and the flight crew ate lunch. Jim Ramage arrived at the helibase around 1615 and the pilot, Roark Schwanenberg met him to discuss the flight and upcoming checkride that would be performed in conjunction with the transport flights. Mr. Obst was to be the H-36 manager (where the crewmembers were being transported to) and Mr. Lingenfelter was to be the manager at H-44.

Following a full briefing provided by Mr. Schwanenberg, HT 766 departed the Trinity Helibase and performed both a high and low reconnaissance prior to landing at 1720; the OAT was recorded at 28 degrees. The helicopter then departed to H-36, normally a 6-minute flight, landing around 1735 (the helicopter had over flown the base originally). Helitack crew members were dropped off and HT 766 again departed to H-44. It made two trips with loads of 10 people from the Ferguson and Grayback hand crews. Following the second transport flight, the helicopter had to return to the Trinity Helibase to refuel. He noted that the flight appeared to be rushed and the pilot seemed rushed (apparent in voice inflections, etc.).

Mr. Obst started communications to get another helicopter to help with the transport effort, as it was getting late. He then heard about the crash via a radio transmission.



Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Gary Morgan – Forest Service, Natural Resource Specialist Jim Morrison – Forest Service, Air Safety Investigator Dave Glose – Forest Service, Helicopter Operations Specialist

Person Contacted: Timothy O'Brien Date: August 07, 2008 Time: 1300 Phone: (------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

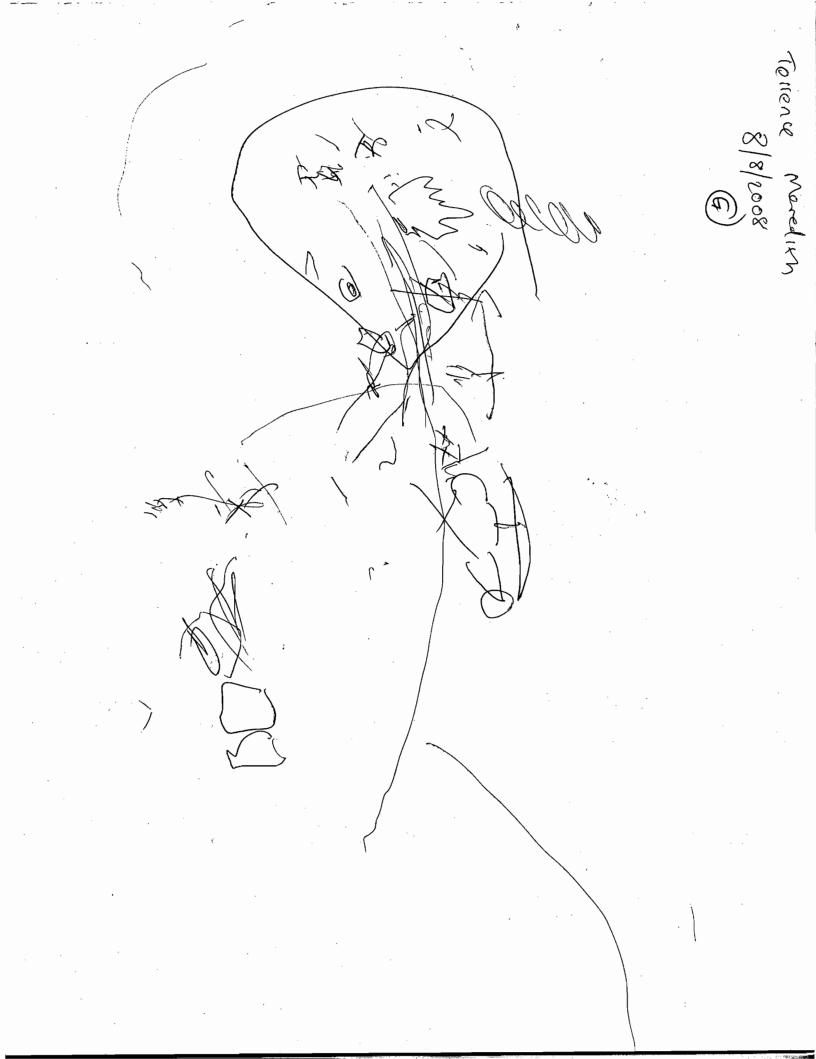
The following is a summary of conversation with Mr. O'Brien:

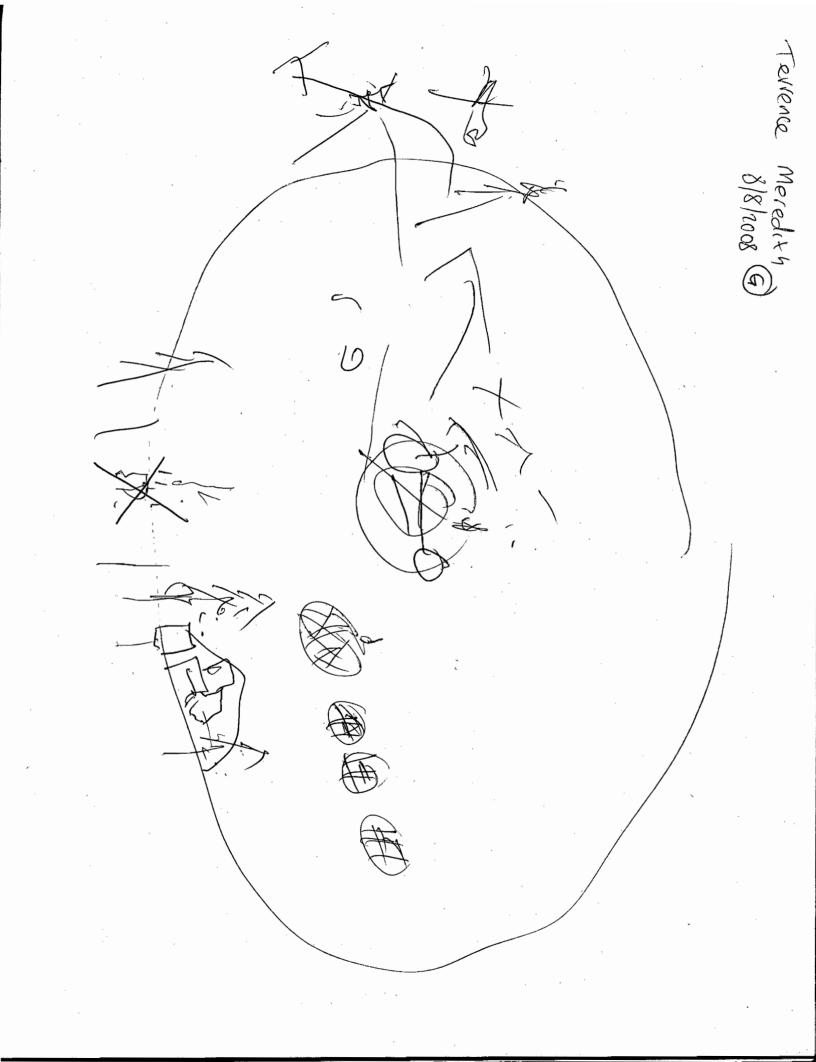
Mr. O'Brien, an alternate crew chief employed by Carson Helicopters, Inc., stated that he was assigned to perform maintenance on the accident helicopter, Helitanker 766 (HT 766). He recalled speaking to the co-pilot on the day of the accident. When querying the co-pilot as to the helicopter's performance that day, he responded by saying "she is flying great." He appeared very happy with the helicopter and was in an overall good mood.

Mr. O'Brien further stated that when HT 766 came into the base to land for the final fueling, he began a quick overview of the condition of the helicopter as part of his normal maintenance. He noted that the rotor blades were covered with ash on the leading edge. He de-cowled the engines and observed a thick layer of ash around the inlet. He began to wipe the areas, but the pilot insisted that they had to depart rapidly as dark was approaching. He estimated that the helicopter was on the ground for 20 minutes and departed around 1915; it was usually back by 2030. He stated that the main fuel tanks were full and there was 100 pounds in the center tank.

Mr. O'Brien observed the helicopter depart with Roark Schwanenberg in the left seat and Bill Coultas in the right seat.

He thought the following events transpired: -2 hours cycle of dropping water -Refueling (Trinity base) and preflight -Departure for checkride and transport mission -Refueling (Trinity base) -15 minutes to accident site







Eliott Simpson – NTSB, Air Safety Investigator Jim Morrison – Forest Service, Air Safety Investigator Shawn Moretz – Carson Helicopter

Persons Contacted: Terrence Meredith Phone: h: -----Date: August 08, 2008 Time: 1450 Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

Mr. Meredith is the squadron leader with Ferguson management.

He was on the ground at the time of the accident and had completed the manifests for the next helicopter load. He noted that prior to arrival, the helicopter had just refueled and was away for an hour, which was longer than usual between troop loads. He opined that this was due to the helicopter fueling.

After the helicopter was loaded with passengers he moved aside and put his head down. He was on the left side of the helicopter. He could hear the engines 'power up,' he noted that he has 'an ear for engines.' He was alarmed because this time he heard a high pitch sound that he had never heard before. The sound was such that he assumed there was a problem and that the helicopter would land again. He looked up and observed the helicopter continue to move forward and collide with trees.

He then started running towards the helicopter and saw black smoke coming from the helicopter. As he got closer he saw flames begin to erupt from the helicopter, soon after he could see people were walking around and it began to burn intensely. He observed a helitack crew member getting close to the helicopter to assist a victim who was on the ground and close to the fire.

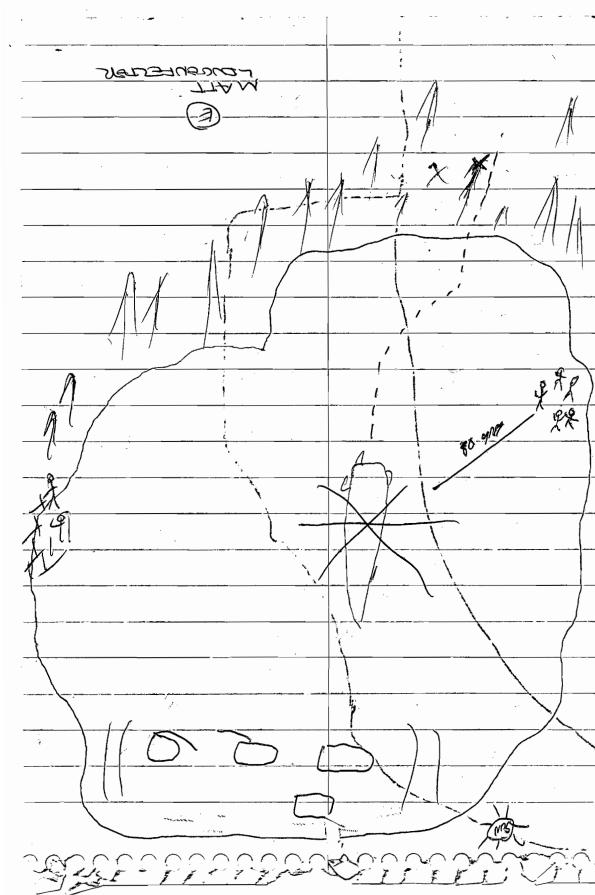
He observed the helicopter depart on two prior occasions that day. He noted that on the previous flights, he would see the helicopter depart, fly over the ridge to the south and go out of view, then the helicopter would then climb up over the ridge and would be back into view.

Mr. Meredith further explained the takeoff sequence, and he noted that the main rotors often make sounds during takeoff but the unusual sound he heard was not the sound of rotors. He described the sound as one of a snapping/grinding. He described it as a high-pitched 'schhhhhh' sound akin to a high pitch grinding. He opined that something was wrong with something that

was spinning. As soon as he heard the unusual sound he looked at the helicopter, noted that it was hovering between 20 to 40 feet AGL, it began moving forward towards the crest, and it then collided with trees.

He was located in the same position as the two prior helicopter departures, he stated that he had observed and flown in an S61 ten days prior to the accident but that was the extent of his experience with the type of helicopter.

He did not observe smoke coming from the helicopter during the sequence prior to the accident and he was wearing earplugs throughout.





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The following is a summary of conversation with Mr. Lingenfelter:

Mr. Lingenfelter, a Trinity Helitack crewmember, stated that he planned for the earlier part of the day to consist of developing repelling procedure in the S61 and the latter afternoon performing a crew-transporting mission. He received a telephone call in the afternoon that the transporting mission was to commence around 1700. Shortly thereafter, the individual helitack crewmembers were tasked with specific duties and the accident helicopter, Helitanker 766 (HT 766) departed. He was not in communication with the pilots while they were in the helicopter. The pilot was to perform a checkride during the ensuing flights and the examiner was riding in the jump seat.

Upon arriving at Helispot H-44, the flight crew performed a high and then low reconnaissance. The pilot performed a power check and they departed onto Helispot H-36, where the crews were to be transported. The pilot overflew the location of the helispot by several miles before realizing the error and turning back. A high and then low reconnaissance was performed at H-36, followed by an uneventful set down. Part of the helitack deplaned and Mr. Lingenfelter moved into a seat where he was could be in radio communication with the flight crew. The flight crew departed and made contact with the helitack at H-44. After a normal approach, the helicopter set down and the dust was stirred up, rendering it impossible for him to see outside. The flightcrew aborted the landing and a new, less dusty, area was selected in an adjacent area.

The next landing was uneventful and the flightcrew seemed pleased with the new landing zone; the helitack crew was dropped off and prepared to load. Both Ulf Peters and Matt Vassel manifested the crews, dividing them up into groups of 10 people. The crews were given a safety briefing and the pilot was given the calculated gross weights and notification of HAZMAT onboard. After the transporting 2 loads of crews to H-36, the pilot announced that they would have to refuel at Trinity Helibase prior to picking about the remaining 2 loads. He left the next

crew to be loaded at the staging area and began discussions with Mr. Peters and Vassel about transporting personal gear.

The helicopter made and approach and set down, identical in nature to the 2 pervious times. Jessica Huntoon loaded 10 people in the helicopter and secured their safety belts. The helicopter door was closed and the helitack crew positioned themselves about 80 yards from the cockpit on a 45-degree angle to ensure good visibility with the pilot. The pilot gave a thumbs-up signal and Mr. Lingenfelter communicated the weight and HAZMAT notification via a radio transmission, to which the pilot replied, "perfect."

Mr. Lingenfelter observed the helicopter vertically ascend and then move to the right [nose still positioned in the same direction]. He noted that it was moving very slowly and appeared to be to the right of normal departure flight path; the trees were naturally more sparse and lower on the new, altered flight path. As the helicopter continued forward, he thought that it would clear the trees. The nose collided with a tree, pushing the top over. He observed the main rotor blades contact a few trees and the helicopter subsequently setting in the vegetation canopy on its left side about 150 feet from the departure point.

Mr. Lingenfelter recalled the witnesses going into panic as they all ran toward the wreckage; the terrain was downslope to the wreckage. The engines were making a winding noise and numerous "popping" sounds. He opted to take over the radio duties as an incident commander and attempted to try to talk with Junction City, to no avail. To communicate on the portable radio he had to communicate through Air Attack. He counted 26 people on site and 4 survivors, which left 9 unaccounted for. He did not have the ability to look inside the burning wreckage to discern if people were inside.

Mr. Lingenfelter noted that it was not normal procedures to have a checkpilot onboard, and usually a helitack crewmember would be a safety officer.



Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Gary Morgan – Forest Service, Natural Resource Specialist Jim Morrison – Forest Service, Air Safety Investigator Chuck Taylor - Forest Service, National Helicopter Program Manager

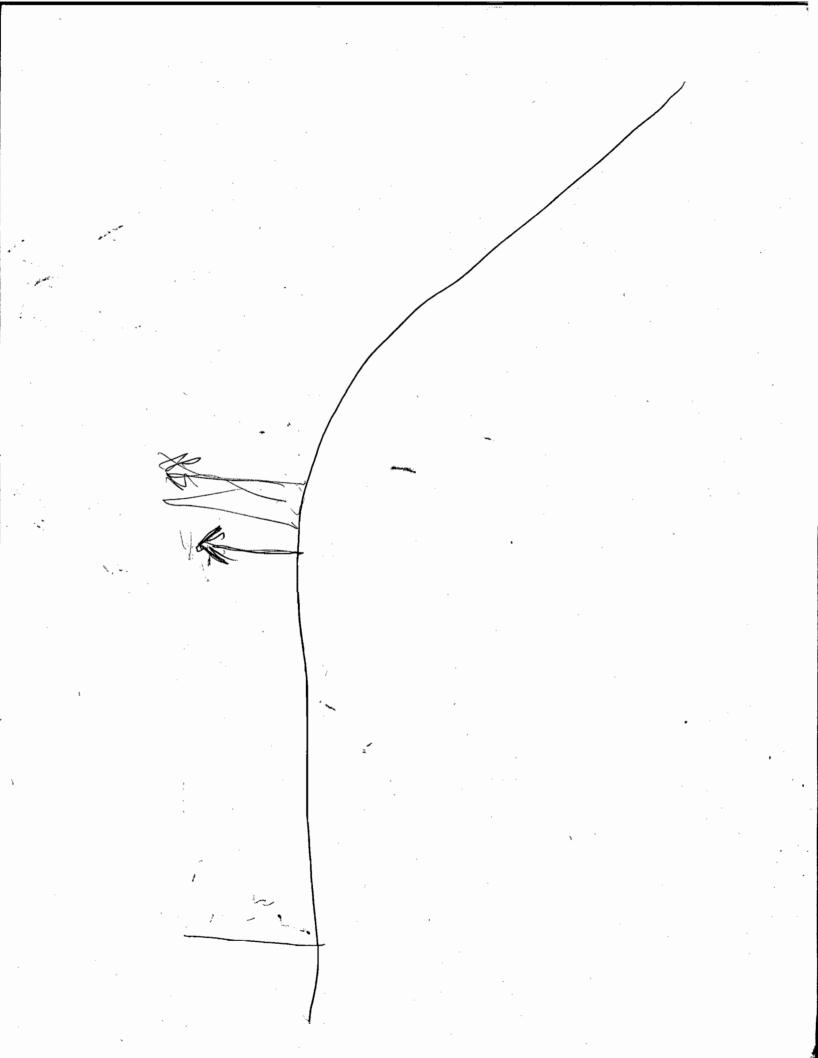
Persons Contacted: Ryan Kaiser ------Jackson Rowsel------David Gomez ------Date: August 07, 2008 Time: 1000 Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

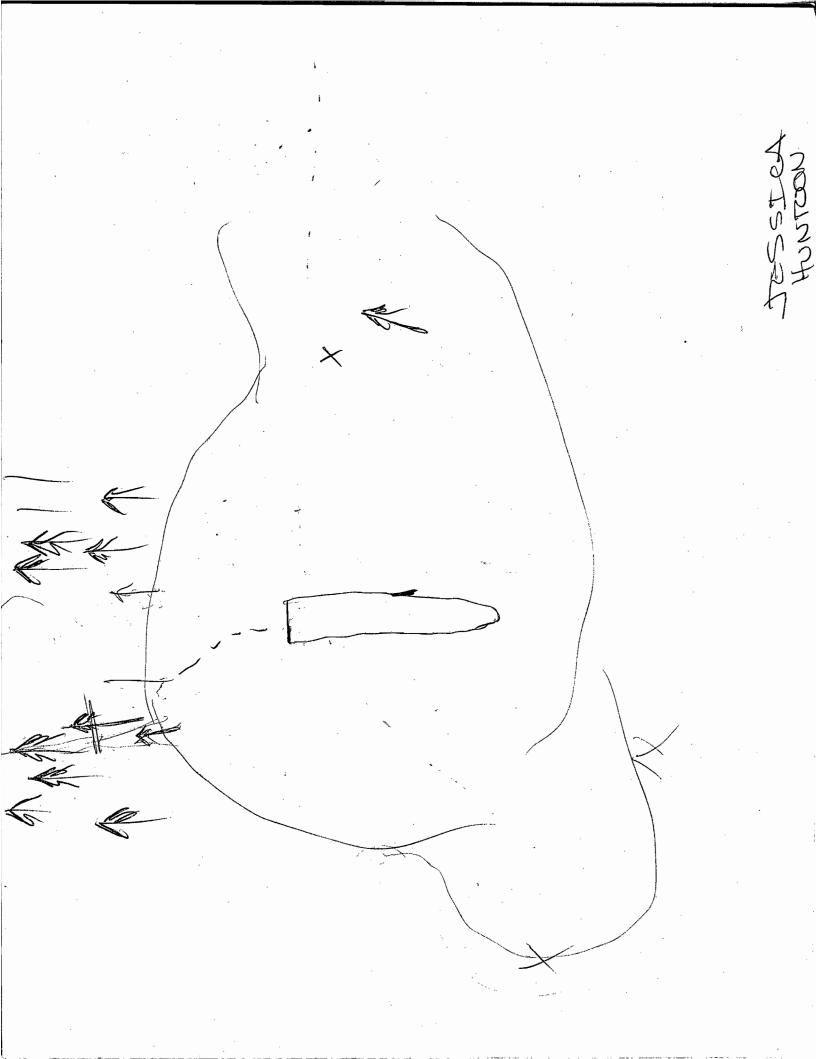
The following is a summary of conversation with Mr. Kaiser:

Mr. Kaiser, detailed to Teton Interagency Fire, recalled that he was part of the Teton Helitack crew that responded to the accident shortly after it transpired (around 2000). He noted that when they landed it was still light and the winds were negligible. When he first responded to the accident, he was told that there were 4 people on the helicopter, but later discovered that there were in fact 12 people on board, with only four survivors. He added that although the wreckage was engulfed in flames, the area had been burned-out the day prior.

Mr. Rowsell, detailed to Teton Interagency Fire, recalled that he was initially called about the accident around 1950. Upon landing at Helispot 44, he witnessed numerous people wandering around the accident and was confused as to who was involved in the actual crash. The area became dark as night approached which added to the confusion of determining who the survivors were.

Mr. Gomez stated that the wind was calm and visibility was good.







Zoë Keliher – NTSB, Air Safety Investigator Gary Morgan – Forest Service, Natural Resource Specialist

Person Contacted: Jessica Huntoon Date: ------Phone: ------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Ms. Huntoon:

Ms. Huntoon, a crewmember with Trinity Helitack, stated that Helitanker 766 (HT 766) had diverted in the midst of a crew relocation mission to the Trinity Helibase in an effort to refuel. The helicopter set down for what was to be the third crew transport load. The people to be transported, all of which were from the Grayback hand crew, boarded the helicopter. She helped several people with their seatbelts and checked for proper wear while Mr. Ramage helped with the remaining crew. Three of the other helitack members loaded cargo and an exchange was performed by means of thumbs-up hand signals.

Ms. Huntoon recalled the helicopter begin a vertical ascent and noted that it did not sound normal (quieter). The helicopter was moving very slow and drifting forward; it made a jog to the right (toward the helitack crew) and then went forward. The main rotor disc struck one of the trees and the helitack crew ran in the opposite direction. After the helicopter crashed and the rotor blades stopped turning, the helitack crew ran downslope to the wreckage. The helicopter was on fire as they approached the area and she witnessed two men egressing the area. The copilot was laying 150 feet from the wreckage in front of the cockpit. As she approached to within 20 feet of the wreckage, she recognized that it was too hot to get closer.



Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Dave Glose – Forest Service, Helicopter Operations Specialist Jim Morrison – Forest Service, Air Safety Investigator

Person Contacted: Ted Hass Date: August 11, 2008 Phone: (------Subject: ------ ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Hass:

Mr. Hass was a Chief of the Air Ops division (branch director) and Air Support of the Iron Complex Incident Command Post (ICP), which entails, amongst many duties, overseeing the Helibase managers. He was asked to act as Chief, as there were limited people in Air Ops and he was continuing in that function. During the day he monitors air-to-air communications on the Victor link, while operating out of the communication trailer. Earlier in the day, around 1000, the Incident Meteorologist (IMET) predicted lightning for that night. Operations opted to try to relocate the ground crews in the areas of Helispots H-44 and H-61 due to their locations situated on the crests of hills.

Mr. Hass further stated that the transport mission from H-61 had begun and around 1800 Helitanker (HT 766) started taking passenger loads from H-44. He went to a meeting around 1930, during which he overheard a radio transmission about a helicopter having crashed. He immediately contacted Air Attack in Redding, California, and around1945 Air Attack was en route to the accident site. He relocated to the communications trailer to listen to the Victor link. A water drop was made on the accident site.

Air Attack arrived around 2000 and a Medivac helicopter was en route. It was determined through a string of communications that only four people could be located. Air Attack was trying to ascertain whether there were additional injuries, but the radio operator on the ground at H-44 only said that the fire from the wreckage was too intense to approach. Both he and Mr. Gordon, Air Assets for ICP, had to communicate through Air Attack to make inquires to ground personnel on site. From what he could discern there was grave confusion on the ground because of the large amount of Helitack crew members. At this point Mr. Hass was still unsure if the helicopter crashed while on approach or departure. Eventually the ground personnel read off a list of name of everyone on the ground (a 20 minute process within itself).

The ground operator reported that they performed a grid and found no one else in the area, aside from the 26 on the ground; most of the named were part of the Ferguson and Trinity Helitack crew. Around 1045 it was transmitted that the helicopter was "leaving the landing," and Mr. Hass concluded that was likely a full passenger load was onboard during the crash; at this point he had no idea that Jim Ramage was on the helicopter.

Mr. Hass opted to leave the crew situated until morning and Air Attack left around 1100. He reported the mishap to the Deputy of Incident Command, Joe Mulk.



Zoë Keliher – NTSB, Air Safety Investigator Eliott Simpson – NTSB, Air Safety Investigator Dave Glose – Forest Service, Helicopter Operations Specialist Jim Morrison – Forest Service, Air Safety Investigator

Person Contacted: Dennis Brown Date: August 11, 2008 Phone: -- -Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Brown:

Mr. Brown, an Aviation Safety Officer with the US Forest Service stated that he was in Sacramento, California when he was first notified of the accident. He recalled that on August 05, 2008 at 1956 he was notified by Shawn Walters and Aaron Utterback from the Trinity Helibase that a mishap had transpired. Mr. Walters had indicated that he had overheard radio traffic concerning the mishap, but the information was not specifically relayed to the Trinity Helibase. At that point Mr. Walters was not sure as to what phase of flight the helicopter was in during the mishap (e.g., landing or departure), and therefore could not estimate the possible people that would have been on board. They did hear a radio transmission stating that people were moving around outside the wreckage [survivors] and relayed the information to Mr. Brown that Jim Ramage, a check pilot with the US Forest Service, was onboard the helicopter when it departed from Trinity Helibase.

Mr. Brown further stated he was out with his family when receiving the call and did not have a complete phone list on his person. He immediately telephoned the Fire Director (Region 5), followed by his immediate supervisor, the Manager of the Aviation Program in California, and then Arlen Cravens, Deputy Chief of Fire and Aviation Management. Following these initial notifications, either Mr. Walters or Mr. Cravens [could not remember which one of them] again spoke with him and reported that there were four people taken out on Medivac helicopters; three minor injuries, and six uninjured. Shortly thereafter, about 2245, Mr. Brown contacted the National Transportation Safety Board via the Southwest Region Federal Aviation Administration communication center. He conveyed the aforementioned injuries (four serious, three minor, and six uninjured) to Zoë Keliher [author].

He then telephoned Mr. Ramage's wife to relay to her that her husband would be late, as he had been involved in an accident, but was okay. He stated that Mr. Ramage and he had been friends

for over 30 years and he did not want Mrs. Ramage to worry. Later the next morning, around 0145 to 0200, Mr. Cravens telephoned Mr. Brown from the hospital where three survivors were transported. He stated that the Trinity Helibase had received information that there were 26 people accounted for at Helispot H-44, with 4 people having been Medivac'd. After a process of elimination, they had deduced that 9 people were still unaccounted for.

Mr. Brown opted not to relay this information until he had more solidified information. After sleeping, he called the office of Ms. Keliher around 0800, informing her of the 9 unaccounted for people.

Mr. Brown is the California Air Safety Investigator, who receives incident notifications. In the event of an air mishap that occurs within the 18 National Forests of California, Standard Operating Procedures dictate that he is to be immediately notified. In the normal order of notification an aircraft dispatcher would notify him.

Typically, California is separated into two individual aircraft dispatch zones: North and South Operations, both of which have their own respective Geographic Area Coordination Center (GACC). Under a GACC, each individual forest has an Emergency Communication Center (ECC), which is joint with the state. Within the individual fires, if the magnitude is great enough, an Incident Command Post (ICP) is tasked. In the circumstance of the accident, there was the Iron Complex ICP that encompassed the Buckhorn fire. Mr. Brown reiterated that he never received a notification from the ICP, which would have come from the Area Command for that division.

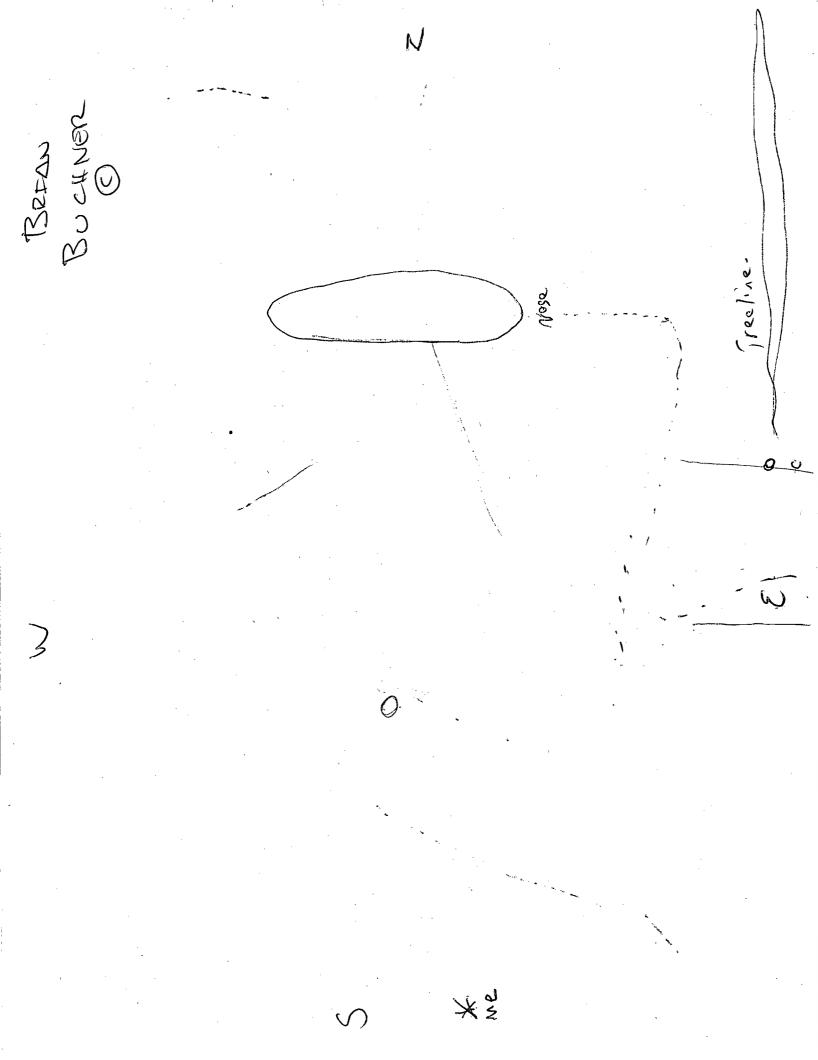
In the chain of notification for the accident circumstances Willow Creek Helibase is to contact Air Ops division of the ICP, who will then contact Area Command:

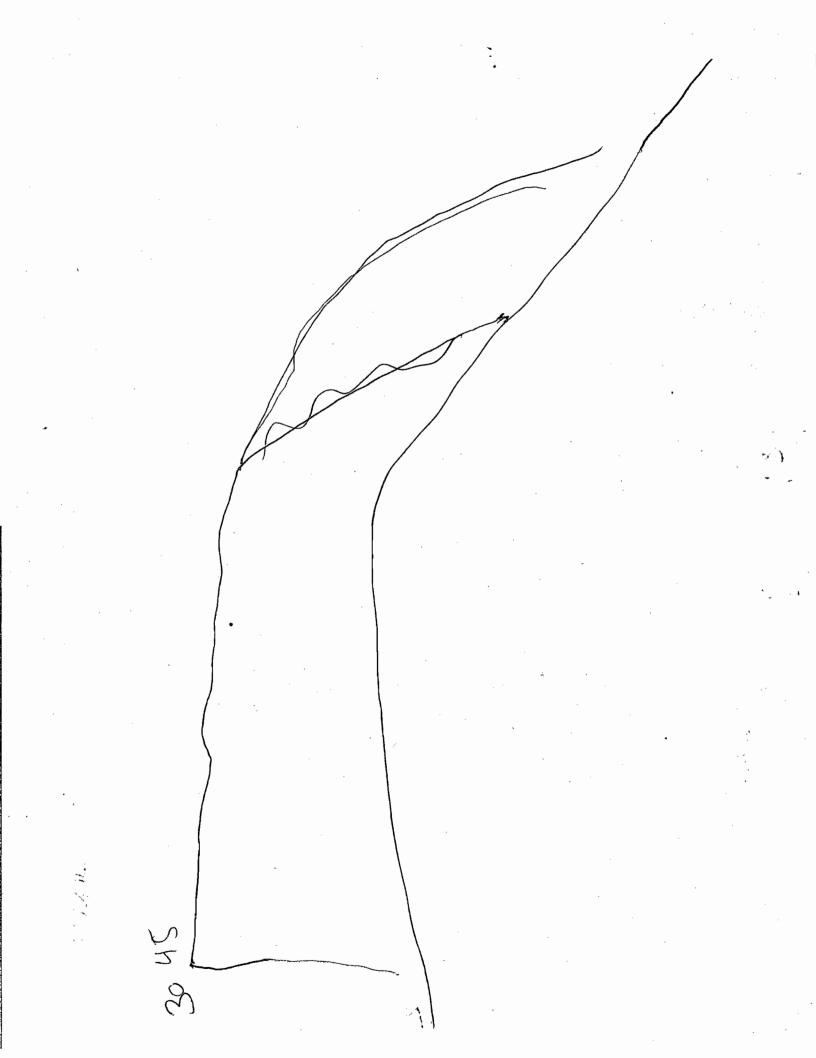
Area Command ↓ Incident Command Post (incident command team) ↓ Air Ops

The established protocol for US Forest Service mishaps is for a Safety Officer to be notified prior to the NTSB. There is an incident response sheet provided to each ECC with Safety Officer phone numbers; there is additionally the IHOG which is to be followed. If a Helibase hears of an accident they are to contact ECC, who will then contact their respective GACC, who will then notify the Safety Officer, who in the accident case was Mr. Brown.

Mr. Brown further stated that the Willow Creek Helibase was confused as to who to notify with regards to the mishap and he did not have the direct contact number for the Helibase on his person.

Mr. Brown noted that an accident occurred in Montana several years prior, where a US Forest Service airplane had mistakenly declared passengers deceased that were not. He thought this may have contributed to the resistance for people to relay information about those unaccounted for.







Zoë Keliher – NTSB, Air Safety Investigator Sean Moretz – Carson Helicopters, Inc., Director of Operations Jim Morrison – Forest Service, Air Safety Investigator Gary Morgan – Forest Service, Natural Resource Specialist

Person Contacted: Brian Buchner Date: August 08, 2008 Phone: ------Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Buchner:

Mr. Buchner, a crewmember with Trinity Helitack, stated that he was at Helispot H-44 to help with a crew transport mission. Helitanker 766 (HT 766) came in to pick up a third load of crew members and was using a landing zone comprised of decomposed granite. Jessica Huntoon boarded people, helping them with seatbelts (Matt Vassel had given a safety briefing prior). The gear was additionally loaded, and the helitack crewmembers walked clear of the helicopter, which was about 80 to 100 yards from the cockpit [on the pilot's right side]. The flight crew and helitack crew exchanged thumbs-up signals and the helicopter began to depart.

Mr. Buchner further recalled that he kept his eyes affixed on the helicopter as it lifted off more slowly than normal. After a vertical ascension of about 20 feet the helicopter began to move forward and about 40 feet to the right [nose remained pointed in the same forward direction]. As the helicopter continued forward toward a section of lower tress, the belly of the fuselage contacted trees; it appeared as though the helicopter would fit between trees, though the main rotor blades were not high enough to clear the trees. Debris began to fly from the surrounding tress and the helicopter settled into the vegetation.

Mr. Buchner stated that he ran toward the wreckage about 15 to 20 seconds after the accident transpired. The helicopter was on fire and as he approached the wreckage he could not continue toward it due to the severe heat and minor explosions. He witnessed survivors that were out of the wreckage and attempted to provide them with assistance. The co-pilot was about 60 yards downslope from the wreckage.

Mr. Buchner noted that the flight seemed rushed, as they were attempting get all the crew out of H-44 prior dark. He thought that the transport mission was running about 1.5 hours behind schedule. The purpose of the transport was the meteorologist's prediction of lightning in the area that night. Over the entire afternoon he noted light winds out of the southeast.



Zoë Keliher – NTSB, Air Safety Investigator

Persons Contacted: Mike Brown ------Jonathan Frohreich -----Date: August 10, 2008 Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Brown:

Mr. Brown, a crew member of the Grayback hand crew, stated that he remembered the helicopter landing, and he was to be on the third load of crew members. He lined up with the rest of the crew members and was loaded in the front of the helicopter [does not remember where]. He recalled lifting off slowly and the main rotor disc contacting branches. He could not remember anything else with regards to the accident. As a result of the accident, he received facial fractures and head injuries; he had no bruising from the seat belt restraint.

The following is a summary of conversation with Mr. Frohreich:

Mr. Frohreich, a crew member of the Grayback hand crew, stated that the helitack crew lined up his predetermined crew load of 10 people. The helicopter set down at the landing zone and he was seating in the last bench seat, closest to the isle. He could see outside via looking through the cockpit window and the side window on his left. The helicopter began to lift off, reaching a maximum of 100 feet above the ground. He could see the co-pilot manipulating the throttle control up high by the cockpit window. It appeared that he almost gave full throttle (forward motion) and kept putting more and more throttle; the flight crew never seemed to be in panic or make rapid movements. The helicopter approached the crest and began to follow the down sloping terrain. After reaching the downhill embankment he felt as though the helicopter had experienced a loss of power.

Mr. Frohreich could see large trees outside the cockpit window and the rotor blades colliding with the trees outside the side window. The cabin lights turned off and everything became dark inside. The helicopter tilted on its left side and he blacked out. He woke up and the seats had broken away from where they were originally position. He was lying on the left side of the fuselage, with his helmet partially off his head. He could hear people complaining about their injuries and the pain they were in; there were many expletives expressed. He could additionally

hear people moving around. There was fire in front of him (mid fuselage) and below him, subjecting him to extraordinarily extreme heat.

Mr. Frohreich was wearing thick leather gloves and attempted to release his seatbelt by rotating the buckle. Although he made numerous attempts to release his seat belt, the buckle was frozen in place, as though it had melted locked. He squirmed out of the harness and made it to the window above him (on the fuselage's right side behind the air stairs). He punched the plastic window three times before he could get out. His hard hat could not fit through the window, making him have to remove it. He ran about 30 feet from the wreckage and collapsed. People yelled at him to keep running and he tried to get up.

As a result of the accident he had L1 and L3 fractures to his back. He had sustained 2nd degree burns on his face, neck and nose. His watch had burned his wrist and he had cuts on his shin. His leather gloves had come off and his hands had some burns. He additionally suffered burns to his lungs, despite him trying not to breath following the crash (due to the excessive heat).

