



Aviation Investigation Final Report

Location:	SHELTON, Washington	Accident Number:	SEA99LA038
Date & Time:	March 2, 1999, 11:20 Local	Registration:	N194AC
Aircraft:	Sikorsky S-64E	Aircraft Damage:	None
Defining Event:		Injuries:	1 Fatal, 2 None
Flight Conducted Under:	Part 133: Rotorcraft ext. load		

Analysis

The pilot of the aero-logging helicopter had lowered a multiple-log load onto the landing site, hit the release switch to release the two choker cables, and then began to move away from the area. One of the choker lines momentarily failed to release, resulting in one end of one of the logs lifting into the air and then falling back to the ground. One of the ground crew members entered the landing area after the logs were initially lowered to the ground, but prior to the release of the second cable. When the end of the log lifted into the air and fell back to the ground, it fell on the crew member, inflicting fatal injuries. It was the opinion of some of the other crew members that the victim never noticed that the second cable had not yet released or that the end of the log was being lifted back into the air. According to Washington Administrative Code, Chapter 296-54, 'Logs shall be laid on the ground and the helicopter will be completely free of the choker(s) before workers approach the logs.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the victim to follow the procedure that required him to make sure that all choker lines had separated from the helicopter's release mechanism prior to entering the landing (collection area).

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: HOVER

Findings

1. (F) EXTERNAL LOAD CABLE/HOOK - SNAGGED

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: HOVER

Findings

2. (C) OBJECT - OTHER PERSON

3. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - GROUND PERSONNEL

Factual Information

On March 2, 1999, approximately 1120 Pacific standard time, a log being positioned by an aero-logging Sikorsky S-64E helicopter, N194AC, hit a ground crew member when a choker line momentarily failed to release from the long-line. The helicopter, which was being operated near Shelton, Washington, by Erickson Air Crane under 14 CFR Part 133, was not damaged, nor was its crew injured. The ground crew member received fatal injuries. The helicopter, which was bringing logs into the landing (collection point), was being operated under VFR conditions at the time of the accident.

According to the aircrew, as the pilot-in-command started to move the aircraft away from the landing after lowering a multiple-log load to the ground, one of the two choker lines momentarily failed to separate from the long-line release mechanism. This resulted in the one end of one of the logs lifting back into the air and then falling to the ground. According to witnesses, one member of the ground crew, who was positioned separately from the others, ran into the collection area immediately after the logs initially touched the ground. When one end of the subject log lifted into the air and dropped back to the ground, it landed on the crew member, inflicting fatal injuries. An inspection of the release mechanism did not reveal why the line failed to immediately release. According to other ground crew members, a representative of Erickson Air Crane, and the Washington Safety Compliance Inspector who responded to the scene, occasionally a choker line will momentarily hang up during the release sequence. It could not be determined why the crew member had entered the landing prior to both choker lines separating from the release, but some of the other ground crew members felt that the victim had simply failed to notice that the second choker line had not yet released. The witnesses also felt that since the victim ran into the landing with his head down, he probably did not see the end of the log being lifted back into the air.

During the investigation, it was determined that the victim had worked as a member of the aero-logging ground crew for the same company for about the last seven years (except for seasonal layoffs). During those years, he had performed duties both at the location where the logs were lifted out after being felled, and at the landings where the logs were decked (stacked). It was also noted that Washington Administrative Code (WAC), Chapter 296-54 (Safety Standards for Logging Operation), Section 296-54-559, Item 16, states that "Logs shall be laid on the ground and the helicopters will be completely free of the choker(s) before workers approach the logs."

Pilot Information

Certificate:	Commercial	Age:	45, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	March 30, 1998
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	16800 hours (Total, all aircraft), 1500 hours (Total, this make and model), 10000 hours (Pilot In Command, all aircraft), 45 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Sikorsky	Registration:	N194AC
Model/Series:	S-64E S-64E	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	64017
Landing Gear Type:	Tricycle	Seats:	3
Date/Type of Last Inspection:	February 20, 1999 AAIP	Certified Max Gross Wt.:	42000 lbs
Time Since Last Inspection:	14 Hrs	Engines:	2 Turbo shaft
Airframe Total Time:	7236 Hrs	Engine Manufacturer:	P&W
ELT:		Engine Model/Series:	JFTD-12-4A
Registered Owner:	ERICKSON AIR CRANE CO. LLC	Rated Power:	4500 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:	ERICKSON AIR CRANE	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	5 miles
Lowest Ceiling:	Overcast	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	4°C
Precipitation and Obscuration:	Light - None - Drizzle		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	11:10 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	None
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	1 Fatal	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 2 None	Latitude, Longitude:	47.230659,-123.20095(est)

Administrative Information

Investigator In Charge (IIC):	Anderson, Orrin
Additional Participating Persons:	CHUCK SICOTTE; RENTON , WA
Original Publish Date:	June 21, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=45872

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).