 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: SEA99FA146		Aircraft Registration Number: N6070K	
		Occurrence Date: 08/23/1999		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place CHIMACUM		State WA	Zip Code 98325	Local Time 1305	Time Zone PDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer Republic		Model/Series RC-3 /RC-3		Type of Aircraft Airplane	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>HISTORY OF FLIGHT</p> <p>On August 23, 1999, approximately 1305 Pacific daylight time, a Republic RC-3 "SeaBee" amphibious aircraft, N6070K, recently purchased and being operated by a private pilot, was destroyed during an in-flight collision with water following a loss of control while maneuvering near the south end of Discovery Bay, five nautical miles southwest of Chimacum, Washington. Both pilots sustained fatal injuries. Visual meteorological conditions existed, and no flight plan had been filed. The flight, which was personal, was to have been operated under 14CFR91, and originated from the Fairchild International airport, Port Angeles, Washington, approximately 1215. The flight was destined for Corvallis, Oregon.</p> <p>On the morning of August 23rd, the pilot/purchaser and an associate flew to Port Angeles in the pilot's Cessna 185 (N185SL) with a stop over in Yelm, Washington. The safety pilot, who was to accompany the pilot/purchaser on the return trip from Port Angeles to Corvallis, was picked up at Yelm. During the Yelm to Port Angeles flight, the pilot/purchaser and safety pilot discussed prospective water landing sites for the Port Angeles to Corvallis trip in the RC-3, and the pilot/owner indicated his desire to not conduct practice landings in salt water conditions (refer to ATTACHMENT RH). The associate reported in a telephonic interview that he observed the safety pilot take what appeared to be a "candy," "breath mint" or "lozenge" out of his pocket and place it in his mouth (refer to attached TOX reports).</p> <p>Upon arrival at Port Angeles, the RC-3 was examined by the pilot/purchaser and safety pilot during which several maintenance items were attended to. The aircraft was then fueled and taxi tested after which the pilot/purchaser, occupying the left seat, was joined by the safety pilot in the right seat, and the aircraft departed for Corvallis. The associate reported observing the aircraft perform a run-up and then depart on runway 26. The associate, now flying the Cessna 185, was delayed approximately 5-10 minutes after the RC-3's departure due to arriving traffic. The associate reported that after he departed he caught up with the RC-3 and noted that it was flying fairly low and close to the water. He reported that the last time he saw the RC-3 it was still low and in the vicinity of Crane, Washington, headed southeast. He reported that he was unable to establish two-way radio communication with the RC-3 (refer to ATTACHMENT RH).</p> <p>Three witnesses co-located approximately 1,000 feet northwest of the crash site along the western shoreline of Discovery Bay all reported observing the aircraft. One witness reported seeing the aircraft "...near the far side of the mountain flying level and [it] appeared to be headed for Seattle" and that "after this plane crossed well above the power lines he started a smooth right turn that would put him flying in the opposite direction and started to descend." "The turn back into the bay by the plane was such a nice arc that I was not aware of any trouble he might be having with the plane and did not see it falter for any reason." The witness further reported that "the pilot took no evasive action that I was aware of until the plane was maybe 500 feet from the</p>					
FACTUAL REPORT - AVIATION					
Page 1					

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: SEA99FA146

Occurrence Date: 08/23/1999

Occurrence Type: Accident

Narrative (Continued)

power lines. He then did a sharp 90 degree left turn and dive at the same time. The plane slid sideways in the air almost up to the lines." "...the plane hit the water with a boom and then shot back up in the air again maybe 50 feet or more as he was still moving with plenty of speed" (refer to ATTACHMENT JW). The two collocated witnesses confirmed that the aircraft made an abrupt heading change just south of the power lines and then impacted the water, bouncing and re-entering at a steep, nose-down attitude. They then observed the aircraft nose over and come to rest (refer to ATTACHMENTS AC and HC).

A fourth witness, located on Highway 101 near the southern edge of Discovery Bay, reported observing the aircraft "...turning to the north over the ridge to the southeast of the bay..." and that "the plane continued northerly over the water dropping [in] elevation. Then it dropped steadily and hit the water at about 45 [degrees]. It bounced up about 50 feet, came back down nose first, hit the water and flipped over on its back" (refer to ATTACHMENT MF).

Two additional witnesses located at a construction site approximately one-half mile east of the accident site and along the eastern shore of Discovery Bay observed the aircraft. One witness observed the aircraft immediately after the water impact (refer to ATTACHMENT CG). The other witness, who did not provide a written statement, was interviewed and reported seeing the aircraft approaching the power lines from the south. He described the aircraft as wobbling when it hit the water, and then it bounced and came to rest inverted.

Another witness, who provided a statement to the Jefferson County Sheriff's Office, reported in that statement essentially the same observations as those in ATTACHMENT JW. Additionally, this witness reported that "the airplane's left wing was lower than the right 'by about 10 degrees.' The left pontoon hit the water, then the right pontoon hit. The airplane shot up in the air about 75 feet, turned and went nose down, 'at about a 70 degree' angle, landing prop first into the water. The plane then flipped over on it's [sic] top" (refer to ATTACHMENT JCSCO).

PERSONNEL INFORMATION


LEFT SEAT PILOT

The pilot/purchaser's most recent logbook was reviewed. The log was opened with an initial entry dated 09/08/1997, and a total of 797 flight hours were brought forward from previous log(s). With the exception of one entry in this logbook for a Cessna 152, all 41 of the remaining flights logged were conducted in Cessna 185 aircraft. The last entry was dated 08/13/99, and the pilot's total flight time logged was 1,104 hours. The pilot/purchaser had been issued a private pilot certificate by the Federal Aviation Administration (FAA) on 10/07/1966, and the only rating he possessed was airplane single-engine land. The pilot/purchaser's wife, as well as an associate, reported that he had no floatplane or amphibious aircraft experience.

The pilot/purchaser had been issued an FAA third class medical on 07/28/1998 which contained the limitation "must wear corrective lenses." It was unknown whether he was in compliance with this requirement at the time of the accident.

RIGHT SEAT PILOT

The safety pilot's most recent logbook was reviewed. The log was opened with an initial entry dated 10/07/1990, and a total of 3,805 flight hours were brought forward from previous log(s). The last entry was dated 03/06/1999, and the safety pilot's total flight time logged was 4,664 hours. A review of this log showed a total of five flights (9.2 hours total) logged in the "SeaBee" aircraft during the approximate nine year duration of this log. According to the safety pilot's logbook, he had been originally issued a commercial/flight instructor's pilot certificate in 1944, and FAA records indicated that he possessed airplane single-engine land/sea, and instrument airplane ratings, as well as a current flight instructor (airplane single-engine and instrument)

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA99FA146
	Occurrence Date: 08/23/1999
	Occurrence Type: Accident

Narrative (Continued)

rating.

A computer printout of the safety pilot's flight experience from 1941 through 1998 was included with the logbook. The printout showed a total of 551 hours of "Amphib-SeaBee" flight experience.

The safety pilot had been issued an FAA second class medical on 09/13/1998 which contained the limitation "must wear corrective lenses." It was unknown whether the pilot was in compliance with this requirement at the time of the accident.

AIRCRAFT INFORMATION

The RC-3 "SeaBee" was manufactured in 1947 as serial number 250. According to the aircraft logs and aircraft Hobbs meter, the aircraft had a total of 1,151 hours of flight time of which the last 10 hours had been logged between 07/24/1987, and the accident. The aircraft had just been purchased by the pilot/purchaser, however, no documentation had been received formally transferring ownership from the previous owners. The aircraft's Franklin engine had, according to the engine logbook, undergone a major overhaul, and was signed off on 06/11/1990. The total engine time as of that date could not be accurately established. The engine was subsequently installed in N6070K between the overhaul date and 08/31/1995, at a Hobbs reading of 187.0 hours. The Hobbs reading subsequent to the accident was 197.2 hours.

The aircraft was fueled prior to departure with approximately 43 gallons of 100 low lead aviation fuel. This was added to an estimated 25 gallons already within the aircraft's fuel tank to take the fuel load to at or near full capacity (70 gallons).

METEOROLOGICAL INFORMATION

According to local surface weather observations, clear to high scattered clouds and sunny conditions prevailed at the time of the accident, as well as light to calm winds.

A pilot who responded to the crash site shortly after the accident landing his float plane in Discovery Bay reported the following conditions: "the water was rough..." and "the gusts were continuous at 300 to 700 feet apart. The water was white-capping all over the bay and streaking slightly through the center of the bay." The pilot also commented that "the westerly wind in the straights and the summer northerlies plus the upslope winds on sunny days tend to make Discovery Bay windy and gusty after 11 AM on a warm summer day. This day was no exception." (refer to ATTACHMENT CL).

WRECKAGE AND IMPACT INFORMATION

The aircraft crashed in Discovery Bay in approximately five feet of tidal water approximately five nautical miles southwest of Chimacum, Washington. The accident site coordinates were approximately 47 degrees 59.7 minutes north latitude and 122 degrees 52.7 minutes west longitude (refer to CHART I). The location of the aircraft's resting site was approximately 75 feet south of a power line oriented along a 290/110 degree magnetic bearing line. The unmarked power lines were supported on multiple wooden poles crossing the southern end of Discovery Bay, and the height of the lines was estimated above the water's surface as not more than 50 feet (refer to photographs 1 and 2).

One of the witnesses interviewed subsequent to the accident reported walking out to the site of the accident the following morning under low tide conditions. He reported that the aircraft was lying on the mud inverted and that a shallow crater in the mud was noted approximately 20 feet away. He also reported that numerous pieces of broken Plexiglas, instruments and small pieces of wreckage were scattered around the perimeter of the crater.

The aircraft was recovered by barge (refer to photograph 3) from the crash site and transported to

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: SEA99FA146

Occurrence Date: 08/23/1999

Occurrence Type: Accident

Narrative (Continued)

the William R. Fairchild International airport for further examination. The recovery crew reported that the only major component separated from the airframe was the left pontoon. It was observed floating in the water and subsequently retrieved.

The airframe was examined and the forward portion of the fuselage was observed to have been deformed upwards and aft more than 45 degrees. The deformation was slightly more pronounced on the left side (looking forward from the cockpit) of the aircraft's nose (refer to photographs 4 and 5).

The forward portion of the cockpit, including both the left and right pilot seats, was substantially deformed. Both main landing gear were observed in the retracted position.

Both left and right wings had been removed during the recovery process. The right wing, whose flap and aileron had also been removed, displayed only minor leading edge damage. The left wing displayed a large area of aftward compressive deformation nearly perpendicular to the wing's chordline and over most of the outboard half of the wing's leading edge. Bending deformation was also noted at the leading edge wing root area and the flap and aileron remained attached to the wing (refer to photograph 6).

The empennage and associated vertical and horizontal surfaces remained attached and displayed little damage, with the exception of some upwards and aftward leading edge deformation to the right horizontal stabilizer (refer to photographs 7 and 8). The aircraft's elevator trim tab was established in an approximate 10-15 degree tab "UP" position.

The right pontoon, which had been removed during recovery, displayed a slight amount of outboard (left to right) bending deformation where its strut attached to the float (refer to photograph 9). The left pontoon, which had been found floating at the site, displayed a substantial amount of inboard (left to right) bending deformation where its strut attached to the float, as well as vertical compression of the top portion of the pontoon (refer to photograph 10).

The Franklin engine remained within its compartment and, with its attached Hartzell propeller, displayed minimal damage (refer to photograph 11). A witness mark was noted at the outboard upper trailing edge of the left flap in line with the edge of the aileron (refer to photograph 12). Both left and right hydraulically operated flaps appeared to be in the fully retracted position during the recovery from the site (refer to photographs 13 and 14).


A control continuity check was accomplished between the cockpit and the three control systems (ailerons inboard of the detached wings) and for the elevator trim tabs system, with no malfunctions noted. The engine was examined by a Federal Aviation Administration maintenance inspector during the wreckage review. He found compression on five of the six cylinders along with continuity of the crankshaft and accessory gear section. The one cylinder (#5), which would not develop compression, was observed to produce blow-by out through its respective exhaust valve. The spark plugs were examined and found to be in good condition with no evidence of wear or deposits. The magnetos were found to be water soaked and could not be tested. The main fuel screen was found to be clear of any debris as was the carburetor filter screen. Fuel was recovered from the aircraft's gascolator bowl.

MEDICAL AND PATHOLOGICAL INFORMATION

Post-mortem examination of both pilots was conducted by Daniel Selove, M.D., at Kosec Funeral Home, Port Townsend, Washington, on August 24, 1999.

Toxicological evaluation of samples from both pilots was conducted by the FAA's Toxicology Accident and Research Laboratory, Oklahoma City, Oklahoma. The following findings were reported (refer to attached TOX reports):

FRONT LEFT SEAT PILOT

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA99FA146
	Occurrence Date: 08/23/1999
	Occurrence Type: Accident

Narrative (Continued)


All findings were negative.


FRONT RIGHT SEAT PILOT

All findings were negative with the exception of a determination of an unspecified amount of Benzocaine in both blood and urine.

ADDITIONAL INFORMATION

The aircraft was recovered from Discovery Bay on August 24, 1999, and examination of the wreckage was conducted on August 25, 1999, at the William R. Fairchild International Airport, Port Angeles, Washington. The wreckage was verbally released to Rite Bros. Aviation on the afternoon of August 25th. Written wreckage release to the estate of the owner was accomplished on September 4, 1999, and is documented on NTSB form 6120.15 (enclosed).

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: SEA99FA146			
		Occurrence Date: 08/23/1999			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown: NONE					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer Republic		Model/Series RC-3 /RC-3		Serial Number 250	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Amphibian					
Amateur Built Acft? No	Number of Seats: 4	Certified Max Gross Wt. 2980 LBS		Number of Engines: 1	
Engine Type: Reciprocating		Engine Manufacturer: Franklin		Model/Series: 6A8-215-B8F	
				Rated Power: 215 HP	
- Aircraft Inspection Information					
Type of Last Inspection Annual		Date of Last Inspection 08/1999	Time Since Last Inspection 0 Hours		Airframe Total Time 1151 Hours
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type Yes /		ELT Operated? No	ELT Aided in Locating Accident Site?		
Owner/Operator Information					
Registered Aircraft Owner LOONEY, JAMES, C.		Street Address 540 NW 33RD STREET			
		City CORVALLIS		State OR	Zip Code 97330
Operator of Aircraft LOONEY, JAMES, C.		Street Address 540 NW 33RD STREET			
		City CORVALLIS		State OR	Zip Code 97330
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Personal					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA99FA146
	Occurrence Date: 08/23/1999
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 70
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Sex: M	Seat Occupied: Left	Occupational Pilot? Retired	Certificate Number: On File
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Certificate(s): Private

Airplane Rating(s): Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): None

Instructor Rating(s): None

Current Biennial Flight Review?

Medical Cert.: Class 3	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 07/1998
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	1104		1104							
Pilot In Command(PIC)										
Instructor										
Instruction Received										
Last 90 Days	59		59							
Last 30 Days	21		21							
Last 24 Hours										

Seatbelt Used? Yes	Shoulder Harness Used? Unknown	Toxicology Performed? Yes	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: None


Departure Point	State	Airport Identifier	Departure Time	Time Zone
PORT ANGELES	WA	CLM	1300	PDT
Destination	State	Airport Identifier		
CORVALLIS	OR	CVO		

Type of Clearance: None

Type of Airspace: Class G

Weather Information

Source of Wx Information:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA99FA146
	Occurrence Date: 08/23/1999
	Occurrence Type: Accident

Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
NUW	1255	PDT	47 Ft. MSL	24 NM	17 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			20000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None			0 Ft. AGL	Visibility: 7 SM	Altimeter: 29.00 "Hg
Temperature: 17 °C	Dew Point: 12 °C	Weather Conditions at Accident Site: Visual Conditions			
Wind Direction: 260	Wind Speed: 7	Wind Gusts:			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM				
Precip and/or Obscuration:					

Accident Information

Aircraft Damage: Destroyed	Aircraft Fire: None	Aircraft Explosion: None
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- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot	1				1
Second Pilot	1				1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -	2				2
Other Ground	0	0	0		0
- GRAND TOTAL -	2	0	0		2

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: SEA99FA146

Occurrence Date: 08/23/1999

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

STEVEN A. MCCREARY

Additional Persons Participating in This Accident/Incident Investigation:

DAVID WUNSCH
RENTON, WA