**AIRCRAFT DATA**

- **Time**: 1828
- **Departure Point**: Homer, AK
- **Type of Aircraft**: Hiller Acft FH100 N18845
- **Damage**: Destroyed
- **Intended Destination**: Homer, AK
- **Collision With Ground/Water**: Uncontrolled

**Probable Cause(s)**

- Pilot in Command - Improper In-flight Decisions Or Planning
- Pilot in Command - Continued VFR Flight Into Adverse Weather Conditions
- Pilot in Command - Spatial Disorientation
- Weather - Low Ceiling
- Weather - Fog
- Weather - Snow
- Weather - Icing Conditions - Includes Sleet, Freezing Rain, Etc.
- Weather - Unfavorable Wind Conditions
- Miscellaneous Acts, Conditions - Aircraft Came To Rest In Water
- Weather Briefing - Briefed By Flight Service Personnel, By Radio
- Weather Forecast - Forecast Substantially Correct
- Emergency Circumstances - Unknown/Not Reported
- Adverse/Unfavorable Weather

**Sky Condition**

- Overcast

**Visibility at Accident Site**

- 1/2 Mile or Less

**Obstructions to Vision at Accident Site**

- Fog

**Wind Direction-Degrees**

- 45

**Type of Weather Conditions**

- VFR

**Remarks**

IDENTIFICATION OF ACCIDENT
6 Nautical Miles on 220° True Bearing from Anchor Point, Alaska
12-19-77
Fairchild Hiller FH-1100, N18845

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION OF ITEM</th>
<th>NO. OF PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accident File Contents (NTSB Form 6120.3)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1)</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Factual Aircraft Accident Report (NTSB Form 6120.4)</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Letter from U.S. Coast Guard with maps</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Statement of Witnesses - 2 each. (NTSB Form 6120.11)</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Statement from Air Traffic Control Specialists - 2 each</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Chemical &amp; Geological Laboratories of Alaska, Inc., Analytical Report</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Release of Aircraft Wreckage and/or Parts (NTSB Form 6120.15)</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Photographs</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL NUMBER OF PAGES 28
## PILOT/OPERATOR AIRCRAFT ACCIDENT REPORT

**DEPARTMENT OF TRANSPORTATION**

This form is to be used for reporting civil aircraft accidents involving general aviation aircraft

### 1. LOCATION

- **CITY OR PLANT, STATE:**
  - [ ] YES
  - [ ] NO

- **AIRPORT:**
  - [ ] YES
  - [ ] NO

- **NAME OF AIRCRAFT:**
  - [ ] YES
  - [ ] NO

- **MAGNETIC READING FROM NEAREST AIRPORT DEGREES-MILES:**
  - [ ] YES
  - [ ] NO

- **RUNWAY DIRECTION LENGTH:**
  - [ ] YES
  - [ ] NO

- **TYPE OF SURFACE CONDITION:**
  - [ ] YES
  - [ ] NO

### 2. AIRCRAFT DATA

- **AIRCRAFT MAKE & MODEL:**
  - [ ] YES
  - [ ] NO

- **SERIAL NO:**
  - [ ] YES
  - [ ] NO

- **TOTAL TIME AIRCRAFT IN SERVICE:**
  - [ ] YES
  - [ ] NO

- **ENGINE OR MODEL:**
  - [ ] YES
  - [ ] NO

- **DATE OF LAST ANNUAL PROGRESSIVE INSPECTION:**
  - [ ] YES
  - [ ] NO

- **TIME SINCE LAST 100 HOURS INSPECTION:**
  - [ ] YES
  - [ ] NO

### 3. PURPOSE OF FLIGHT AND TYPE OF OPERATION

- **AIRLINE TRANSPORT**
  - [ ] YES
  - [ ] NO

- **PRIVATE**
  - [ ] YES
  - [ ] NO

- **FLIGHT INSTRUCTOR**
  - [ ] YES
  - [ ] NO

- **STUDENT**
  - [ ] YES
  - [ ] NO

- **ACROBATIC**
  - [ ] YES
  - [ ] NO

- **MULTI ENGINE FIXED WING**
  - [ ] YES
  - [ ] NO

- **SINGLE ENGINE FIXED WING**
  - [ ] YES
  - [ ] NO

- **SINGLE ENGINE LAND**
  - [ ] YES
  - [ ] NO

- **SINGLE ENGINE SEA**
  - [ ] YES
  - [ ] NO

- **MULTI ENGINE LAND**
  - [ ] YES
  - [ ] NO

- **MULTI ENGINE SEA**
  - [ ] YES
  - [ ] NO

- **HELICOPTER**
  - [ ] YES
  - [ ] NO

- **GYROPLANE**
  - [ ] YES
  - [ ] NO

- **Glider**
  - [ ] YES
  - [ ] NO

- **TYPE RATINGS OR STUDENT ENDORSEMENT LIMITATIONS**
  - [ ] YES
  - [ ] NO

### 4. PILOT/OPERATOR DATA

- **DATE OF ISSUE:**
  - [ ] YES
  - [ ] NO

- **CERTIFICATE NO:**
  - [ ] YES
  - [ ] NO

- **NATIONALITY OF PILOT:**
  - [ ] YES
  - [ ] NO

- **MEDICAL CERTIFICATE:**
  - [ ] YES
  - [ ] NO

- **NAME OF PILOT:**
  - [ ] YES
  - [ ] NO

- **CERTIFICATE NO:**
  - [ ] YES
  - [ ] NO

- **NATIONALITY OF PILOT:**
  - [ ] YES
  - [ ] NO

- **MEDICAL CERTIFICATE:**
  - [ ] YES
  - [ ] NO

- **NAME OF PILOT:**
  - [ ] YES
  - [ ] NO

- **CERTIFICATE NO:**
  - [ ] YES
  - [ ] NO

- **NATIONALITY OF PILOT:**
  - [ ] YES
  - [ ] NO

- **MEDICAL CERTIFICATE:**
  - [ ] YES
  - [ ] NO

### 5. PILOT FLIGHT TIME (IN HOURS)

- **SOURCE OF FLIGHT TIME INFORMATION:**
  - [ ] YES
  - [ ] NO

- **PILOT FLIGHT LOG:**
  - [ ] YES
  - [ ] NO

- **OPERATOR'S EST:**
  - [ ] YES
  - [ ] NO

- **FAA RECORDS:**
  - [ ] YES
  - [ ] NO

- **OTHER:**
  - [ ] YES
  - [ ] NO

### 6. SECOND PILOT NAME

- **SECOND PILOT NAME:**
  - [ ] YES
  - [ ] NO

- **CERTIFICATE NO:**
  - [ ] YES
  - [ ] NO

- **NATIONALITY OF PILOT:**
  - [ ] YES
  - [ ] NO

- **MEDICAL CERTIFICATE:**
  - [ ] YES
  - [ ] NO

### 7. SECOND PILOT FLIGHT TIME (IN HOURS)

- **SOURCE OF FLIGHT TIME INFORMATION:**
  - [ ] YES
  - [ ] NO

- **PILOT FLIGHT LOG:**
  - [ ] YES
  - [ ] NO

- **OPERATOR'S EST:**
  - [ ] YES
  - [ ] NO

- **FAA RECORDS:**
  - [ ] YES
  - [ ] NO

- **OTHER:**
  - [ ] YES
  - [ ] NO

### 8. PERSONNEL

- **NAME OF PERSONNEL:**
  - [ ] YES
  - [ ] NO

- **ADDRESS AND SEAT OCCUPIED:**
  - [ ] YES
  - [ ] NO

- **DEGREE OF INJURY:**
  - [ ] YES
  - [ ] NO

### 9. NUMBER OF PERSONS ABOARD AIRCRAFT

- **NUMBER OF PERSONS ABOARD AIRCRAFT:**
  - [ ] YES
  - [ ] NO

- **NUMBER OF NON-OCCUPANTS INJURED:**
  - [ ] YES
  - [ ] NO

**NTSB Form 420-1 (A-68)**

(If additional space is required, attach a supplemental sheet, identify by page No.)

---

This page contains the form for reporting civil aircraft accidents involving general aviation aircraft. It includes fields for location, aircraft data, purpose of flight, pilot data, second pilot data, flight time, and personnel information. The form is designed to capture comprehensive details about the accident, including the circumstances, equipment, and personnel involved. The form is approved by the Bureau of Budget, with a specific form number for reference.
WEATHER AT ACCIDENT SITE

10. Weather Conditions and Restrictions to Visibility

- FOG
- HAZE
- RAIN
- SNOW
- Thundershowers
- Freezing rain
- Hail
- Ice
- Thundery conditions
- Fog
- Haze
- Rain
- Snow
- Thundershowers
- Freezing rain
- Hail
- Ice
- Thundery conditions

11. Flight Plan Filled

- Yes
- No (if "Yes," list the name of the part, manufacturer, part number, etc.)

12. Mechanical Failure/Malfunction

- Yes
- No (if "Yes," list the name of the part, manufacturer, part number, etc.)

13. History of Flight

DEGREE OF AIRCRAFT DAMAGE

- Demolished
- Substantial
- Minor
- None

DESCRIPTION OF DAMAGE TO AIRCRAFT AND OTHER PROPERTY

OPERATOR/OWNER SAFETY RECOMMENDATIONS (Optional entry)

RECOMMENDATIONS (New and additional accident have been prevented)

I HEREBY CERTIFY that the above information is complete and accurate to the best of my knowledge.

DATE OF THIS REPORT: 12/21/77
SIGNATURE OF INVESTIGATOR: (Signature)
**FACTUAL AIRCRAFT ACCIDENT REPORT**

**GENERAL AVIATION**

**NTSB FORM N1**

**ACCIDENT IDENT. NO.**

**NATIONAL TRANSPORTATION SAFETY BOARD**

**6120.1 ANC78-F-AM15**

**FACTUAL AIRCRAFT ACCIDENT REPORT SUBMITTED**

**GENERAL AVIATION**

**REGISTRATION MARK**

**N-18845**

**DATE OF ACCIDENT**

**12-19-77**

**DISTANCE AND DIRECTION FROM NEAREST CITY OR PLACE, STATE**

6 Nautical Miles on 220° True Bearing from Anchor Point, Alaska

**ELEVATION**

**S.L. MSL**

**1828**

**TIME (Local)**

**AST**

**TIME ZONE**

**Part A – WHEN ACCIDENT OCCURRED DURING APPROACH TO OR DEPARTURE FROM AN AIRPORT—COMPLETE FOLLOWING:**

<table>
<thead>
<tr>
<th>AIRPORT NAME</th>
<th>RUNWAY IN USE</th>
<th>DIRECTION</th>
<th>MAG. DEGREES</th>
<th>LENGTH</th>
<th>ON AIRPORT</th>
<th>OFF AIRPORT</th>
<th>FROM AIRPORT</th>
<th>TYPE</th>
<th>RUNWAY SURFACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Part B – AIRCRAFT DATA**

<table>
<thead>
<tr>
<th>AIRCRAFT MAKE AND MODEL</th>
<th>SERIAL NO.</th>
<th>AIRCRAFT TOTAL TIME</th>
<th>DATE LAST ANNUAL OR PROGRESSIVE INSPECTION</th>
<th>TIME SINCE ANNUAL OR PROGRESSIVE INSPECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairchild Hiller FH-1100</td>
<td>201</td>
<td>215</td>
<td>10-15-77</td>
<td>74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE MAKE AND MODEL</th>
<th>ENGINE TOTAL TIME</th>
<th>TIME SINCE LAST 100 HOUR INSPECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison 250-C18</td>
<td>930</td>
<td>74 hours</td>
</tr>
</tbody>
</table>

**NAME AND ADDRESS OF OWNER OR OPERATOR**

Totem Helicopters Inc. Box 357
Homer, Alaska 99603

**CATEGORY OF AIRWORTHINESS CERTIFICATE**

Normal

**PURPOSE AND TYPE OF OPERATION (Check all applicable boxes)**

- Over water - Shore to ship

**Part C – PILOT-IN-COMMAND DATA**

<table>
<thead>
<tr>
<th>NAME AND ADDRESS</th>
<th>SEAT OCCUPIED</th>
<th>PILOT CERTIFICATE NO.</th>
<th>DEGREE OF INJURY</th>
<th>OCCUPATION</th>
<th>NATIONALLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary Allen Terry</td>
<td>Front right</td>
<td>2067251</td>
<td>Presumed fatal</td>
<td>Professional pilot</td>
<td>U.S.A.</td>
</tr>
</tbody>
</table>

**TYPE RATINGS OR MEDICAL CERTIFICATE**

- None

**SOURCE OF TIME**

- None

**TOTAL FLIGHT TIME**

- 3313

**NOTE:** N/A=NOT APPLICABLE. N/O=NOT OBTAINED
### Part D - SECOND PILOT DATA

<table>
<thead>
<tr>
<th>NAME AND ADDRESS</th>
<th>SEAT OCCUPIED</th>
<th>PILOT CERTIFICATE NO.</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>DEGREE OF INJURY</th>
<th>SOCIAL SECURITY NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>NATIONALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AIRLINE TRANSPORT</th>
<th>AIRPLANE</th>
<th>COMMERCIAL</th>
<th>HELICOPTER</th>
<th>ROTORCRAFT</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PRIVATE</th>
<th>STUDENT</th>
<th>OTHER</th>
<th>MULTI-ENGINE</th>
<th>SINGLE-ENGINE</th>
<th>TYPE RATINGS OR MEDICAL CERTIFICATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LAND</td>
<td>SEA</td>
<td>GYROPLANE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SINGLE-ENGINE</td>
<td>LAND</td>
<td>SEA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AUTOPSY</th>
<th>LIMITATIONS/WAIVERS</th>
<th>TOXICOLOGY</th>
<th>DATE OF BIRTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PILOT TIME</th>
<th>LAST 24 HOURS</th>
<th>LAST 90 DAYS</th>
<th>TOTAL TO DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DUAL PIC</td>
<td>DUAL PIC</td>
<td>DUAL PIC</td>
</tr>
<tr>
<td>1. THIS MAKE AND MODEL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. NIGHT (All Models)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. DAY (All Models)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. INSTRUCTIONS</td>
<td>ACTUAL</td>
<td>SIMULATED</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOURCE OF TIME</th>
<th>PILOT FLIGHT TIME</th>
<th>PILOT/OPERATOR EST.</th>
<th>FAA RECORDS</th>
<th>OTHER (Specify)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>5. SINGLE ENG. FIXED WING</th>
<th>6. MULTI-ENG. FIXED WING</th>
<th>7. GLIDER</th>
<th>8. ROTORCRAFT</th>
<th>9. OTHER:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>TOTAL FLIGHT TIME</th>
<th>(5, 6, 7, 8, 9)</th>
</tr>
</thead>
</table>

### Part E - OTHER PERSONNEL

<table>
<thead>
<tr>
<th>NAME</th>
<th>ADDRESS (CITY AND STATE)</th>
<th>Other Crew</th>
<th>Passenger</th>
<th>Non-occupant</th>
<th>Fatal</th>
<th>Serious</th>
<th>Minor</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack Hopkins</td>
<td>Seldovia, Alaska</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Part F - IF COLLISION WITH OTHER AIRCRAFT - SUPPLY THE FOLLOWING ON THE OTHER AIRCRAFT

<table>
<thead>
<tr>
<th>MAKE AND MODEL</th>
<th>REGISTRATION MARK</th>
<th>DAMAGE</th>
<th>DEGREE OF INJURY</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N</td>
<td>N/A</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>DEMOLISHED</th>
<th>SUBSTANTIAL</th>
<th>MINOR</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: N/A = NOT APPLICABLE. N/O = NOT OBTAINED.
**SOURCE OF INFORMATION**
Container Ship
S.S. Great Land, USCG & Homer FSS

**SKY COVER**
Snow squalls

**CEILING**
Unknown

**WIND**
FROM N.E.

**TRUE DIRECTION**
VELOCITY 25 kts., GUSTS 30 kts.

**LIGHT & VARIABLE**

**TURBULENCE**
NONE

**LIGHT CONDITIONS**
DAYLIGHT

**VISIBILITY**
Zero to 1/2 MILES

**ALTIMETER SET.**
30.05 HG.

**WEATHER CONDITIONS AND VISIBILITY RESTRICTIONS**
TEMPERATURE 33° at accident site.

**DEW POINT**
(HOMER) 17°F

**Fog**

**Rain**

**Snow**

**Sleet**

**Freezing**

**Thunderstorms**

**Haze**

**Hail**

**Smoke**

**Dust**

**Rain**

**Icing Conditions**

**Part H - FLIGHT PLAN INFORMATION**

**DEPARTURE POINT**
Homer, Alaska

**DATE AND TIME OF DEPARTURE**
Departed Homer 12-19-77 at 1808 AST

**DESTINATION**
Container ship GREATLAND

**ETA (If any)**
Unknown

**INTERMEDIATE POINTS OF LANDING**
None

**SERVICE PRIOR TO LAST TAKEOFF**
Unknown

**FUEL ON BOARD LAST TAKEOFF**
62 GALS/LBS. Jet-B Grade

**FLIGHT PLAN FILED:**

**NONE**

**VFR**

**IFR**

**SPECI ALE VFR**

**OTHER:**

**DESCRIBE WEATHER BRIEFS OBTAINED:**
From whom, when, where and how received.

**AND ENROUTE WEATHER REPORTS REC'D.**

Pilot filed VFR flight plan with Homer FSS via aircraft VHF radio and received weather briefing which was: 1700 feet scattered, 2500 overcast, no visibility reported. First report subsequent to accident - Homer - 1700 scattered, estimated 2300 broken, 5000 overcast, visibility 7 miles in light snow. Millibar pressure 1017.9, temperature 26, dewpoint 19, wind 340° at 4 knots, altimeter 30.06. Remarks: Wind over the Homer Spit 060° at 7 knots.

Weather report by the S.S. GREAT LAND which was in accident area at time of accident was: Visibility 0 - 1/2 mile in snow and fog, wind N.E. 25 - 30 knots, seas slight. FAA Communications Center reported waves 3 - 5 feet, water temperature 36°F, air temperature 33°F.

**Part I - COMPONENT/SYSTEM FUNCTIONAL FAILURE**

**NO**

**YES** (If "Yes", give part name, mfr., part no., serial no., etc.)

Unknown - Missing aircraft

**TIME ON PART**

**TOTAL**

**SINCE OVERHAUL**

**Part J - AIRCRAFT AND GROUND DAMAGE**

**DEGREE OF AIRCRAFT DAMAGE**

**PRESUMED**

**FIRE**

**IN FLIGHT**

**ON GROUND**

**DESCRIPTIVE GROUND DAMAGE (If any)**

N/A
History of the Flight

Float equipped Fairchild Hiller, FH-1100 helicopter, N18845, is owned and operated by Totem Helicopters, Inc., Box 357, Homer, Alaska, 99603. On December 19, 1977, it was being piloted by Gary Allen Terry on a non-scheduled air taxi flight. The planned route of flight was to be from Homer, to Anchor Point, to the steam ship (S.S) Great Land located in Cook Inlet, and then return to Homer, Alaska.

The helicopter departed Homer at 1808 AST* with the pilot and one passenger on board. The passenger, a marine pilot, was to disembark on the S.S. Great Land which was enroute to Anchorage, Alaska.

Two witnesses observed a helicopter over Anchor Point at approximately 1820 hours flying in heavy snow with poor visibility.

Mrs. Marjorie Klein, who is a secretary for the Kenai Penninsula Borough, saw a helicopter with its landing light on as it passed low over her car at Mile 157 of the Sterling Highway. She stated that she thought the helicopter was trying to find a place to land because the weather was so bad. She continued to observe the helicopter and saw that the landing light went out; the helicopter made a sharp turn towards the bay (to the north-west) and disappeared in the snow and fog. A witness statement from Mrs. Klein is enclosed and included as part of this report.

At approximately the same time, around 1820 hours, Officer Bruce Bayes who is a Judicial Services Officer employed by the Alaska State Troopers observed a helicopter flying low over Anchor Point. Officer Bayes was also driving on the Sterling Highway. He stated that the visibility was so poor due to blowing snow that he had to reduce his automobiles speed and keep his headlights on low beam. With high beams on it was reported there was too much light reflecting off the heavy snowfall creating a blinding effect.

Neither witness could positively identify the helicopter as N-18845.

Captain Harold L. Small, who is the Ship Master of the S.S. Great Land stated that due to encountering poor weather conditions while approaching Anchor Point, he decided to change his ships course from a northerly heading to 120 degrees true in order to run up under land for embarking the marine pilot from the helicopter. The ships original course would have taken it to a point where the helicopter normally rendezvous with the S.S. Great Land which is 4 to 5 miles due west of Anchor Point.

Captain Small advised the helicopter by radio that due to poor weather in the vicinity of Anchor Point he was turning into Kachemak Bay to make the pick up in the "bluff area" about 2/3rds of the way from Anchor Point to Homer. The helicopter pilot then advised Captain Small that he was hovering in the area of Anchor Point. Captain Small suggested to the helicopter pilot that he fly down to and then out from the bluff area to meet up with the ship because the weather was better there. About ten-minutes later Captain Small observed the helicopter on the ships radar heading generally toward the ship in a southerly direction. This would place the helicopter out over Cook Inlet.

Captain Small advised the helicopter pilot that he had him on radar. The pilot requested a vector to the ship which Captain Small furnished. The helicopter was

* All times are Alaska Standard Times based on the 24-hour clock.
observed drifting westerly from a southerly course. When advised by the S.S. Great Land, that he was drifting off course, the helicopter pilot radioed the ship that his "compass was out". It is not known exactly what the helicopter pilot meant by that transmission or just what the specific problem was. A short time later, the helicopter pilot stated he could not find the ship and asked for a vector back to the beach. Captain Small gave a vector of 080 degrees magnetic.

The next transmission was "MAYDAY" received two times in rapid succession. One MAYDAY was received on the airborne frequency of 123.6, and the other was received on Marine band VHF.

According to Captain Small, shortly after the distress call the helicopter disappeared from the radar screen. Captain Small fixed the helicopters position to be over water on a true bearing of 220 degrees, 6 miles from Anchor Point.

The S. S. Great Land, the U.S. Coast Guard Cutter Sedge, numerous commercial fishing vessels, two Coast Guard C-130 airplanes and one Coast Guard HH3F helicopter were on scene in the search area within a very short time. Helicopter N-18845, could not be found.

Injuries to Persons

The pilot of the helicopter has not been found and he is presumed to have received fatal injuries. The passenger of the helicopter received fatal injuries. The passengers body was found the morning after the accident at 1035 hours by the USCG Cutter Sedge. The body was in a yellow, EAM-5, five man life raft that was carried aboard N-18845. The life raft was located at coordinates 59 38.5N, 152 02.8W and was partially filled with water.

Damage to Aircraft

The aircraft is missing and is presumed to have been destroyed. The only portion of the helicopter that was found was the right pontoon. The USCG Cutter Sedge retrieved the pontoon from the water at coordinates 59 43.1N, 152 03W at 1156 hours the morning after the accident.

Personnel Information

The pilot was born on March 23, 1948, and resided in Homer, Alaska. He held a Commercial Airman Certificate and is rated in airplane single engine land and sea, instrument, and helicopter, rotorcraft. He was not instrument rated in helicopters. He held a current Second Class Medical Certificate dated November 4, 1977, with no limitations.

The last entry in the pilot's log book was September 10, 1977. With additional information from the operator of Totem Helicopters, Inc., it has been determined the pilot had a total of 3,313 hours total flight time, 2,916 of which was in helicopters. Between September 10th and December 19, 1977, the pilot flew 150 hours.
PART U-NARRATIVE STATEMENT OF PERTINENT FACTS, CONDITIONS, AND CIRCUMSTANCES (Cont'd)

The pilot had 631 hours in the FH-1100 helicopter. His log book reflects 10 hours of actual instruments, 127 hours of instrument simulator time and 160 hours of night time.


The pilot had been employed by Totem Helicopters since March 1977. Prior to that time he had flown for Sea Airmotive, Inc., out of Anchorage, Alaska.

The pilot's log book indicates he had flown 1,553 hours in helicopters as a U.S. Army Aviator between March 1969, and December 1971.

Aircraft Information

The aircraft has not been recovered; however, an inspection of the aircraft and engine log books indicate that it was being maintained in accordance with current and applicable Federal Aviation Administration (FAA) regulations.

After the accident there was a question raised as to whether or not any radio equipment had been removed from N-18845 for repairs which could be considered contributory or otherwise related to the accident. On the evening of December 23, 1977, this investigator talked by telephone with Mr. Thomas Mayhan, who is employed by South Central Radar in Homer, Alaska. He stated that he had removed the marine band Very High Frequency (VHF) radio from N-18845 previous to the flight on December 19th and further stated that the pilot had checked out the aircraft Automatic Direction Finder (ADF) and Radio Altimeter, and that they were functioning normally. It was also reported that the power pack supplying the A.D.F. was working properly.

The aircraft was equipped with the following emergency equipment:


2. One Eastman Aero Marine (EAM-5) five man life raft equipped with sea anchor, heaving line and raft lanyard; raft light with water-activated batteries; survival kit with signal flares, rations, compass, signal mirror, 2 paddles, gloves, line, bailing bucket, police whistle, inflating pump, and several other items to sustain survival at sea. The life raft canopy was not on board the helicopter. It was reported that the raft light was illuminated and blinking when retrieved from the water; however, it was extremely weak.
3. There were enough standard airline type CO2 inflatable vests for each person on board the aircraft. The marine pilot was wearing his own, personal Mae West life vest at the time of the accident.

NOTE: The life raft, survival kit, and four life vests were inspected and repaired as necessary by Eagle Enterprises, Inc., in Anchorage, Alaska, on October 12, 1977. According to the inspection checklist there was no radio beacon on the raft.

Dual controls were not installed in the aircraft. It was equipped with cargo racks on top of the fixed floats and a cargo hook. It was reported the floats were rebuilt by Garrett in 1975, and that they were in excellent condition. The aircraft had an "auto-relite" capability in the event of engine failure (flame-out) which could be caused by excessive snow or precipitation entering the engine. A landing light, fixed at a 45° angle to the aircraft longitudinal axis was installed and reported to be operational. Seat belts were installed in the aircraft. There were no shoulder straps.

The aircraft had the following communication and navigational radios:

1. KY95 VHF transceiver radio.
2. Marine 10-channel, 30 watt, VHF radio. Note: This radio was out of the aircraft for repairs at the time of the accident.
4. Bonzer Mark 10 radar altimeter with decision height beeper.
5. KR86 ADF.
6. Humphrey Gyro (electric). Note: This gyro received a warranty check three months prior to this accident.
7. Magnetic (stand-by) compass.
8. Turn and Bank Indicator. (Maintenance records indicate the turn and bank to be inoperative.)
9. Rate of Climb Indicator.

The pilot could easily switch from airborne to marine band VHF transmitters by flipping a toggle switch (2-position) on the lower console between the pilot and co-pilot seat.
PART U-NARRATIVE STATEMENT OF PERTINENT FACTS, CONDITIONS, AND CIRCUMSTANCES (Cont'd)

It was reported that the passenger carried a hand held portable marine band VHF radio with transmit, receive capability. This would explain the two "MAYDAY" transmissions, one on the airborne radio; the other on marine band.

The passenger in the left front seat did not have access to a headset nor did he have the capability of transmitting on the aircraft VHF radio. The aircraft VHF receiver was connected to a speaker.

Since it is not known what deficiencies may be pertinent to the accident, below is a list of uncorrected faults up to an aircraft tach time of 66.4 hours. The tach time of 66.4 was given by the operator as the time of the accident.

1. Weight on tail rotor guard missing.
2. Check RPM trim for proper range.
3. Marine VHF weak. (This radio was removed for repairs and not aboard the aircraft.)
4. Rubber on throttle grip slips.
5. Radio altimeter inoperative over snow. (The operator stated that he and the pilot discussed this discrepancy, and it was mutually understood that this problem only occurred over snow covered terrain, not over water.)
6. Turn and Bank inoperative.
7. Heater goes off when switched from low to high.
8. Filter light stays on. (Fuel filter.)

The operator gave this investigator a note which he stated was in the pilot's hand writing that had been found in the operator's daily record. It stated, "Dec 8 ODECO 8:30 P.M. Call AAI for Ocean Ranger - called Tommy (Tommy Craig) Ak. Helicopters - fuel filter light came on in flight - went off on landing. O.K. for now."

This investigator talked to Mr. Craig at Alaska Helicopters on December 23, 1977, and was furnished the following information.

The aircraft is equipped with a dual bypass filter system. The 1st stage airframe filter is a 25 micron filter. The 2nd stage is located inside the airframe filter and it utilizes a 50 micron filter.
ANC78-F-A005

PART U-NARRATIVE STATEMENT OF PERTINENT FACTS, CONDITIONS, AND CIRCUMSTANCES (Cont'd)

The airframe fuel filter micro switch and valve was replaced on October 15, 1977. The aircraft total time was 2076.4. A 5 micron filter was installed in the engine fuel pump on September 2, 1977. The aircraft total time was 1976.3.

This type of aircraft is equipped with engine anti-ice utilizing bleed air from the engine. This helicopter does not have any other anti-ice or de-ice capability. It did have a reverse scoop for air entering the engine. This reverse scoop was designed primarily to minimize the possibility of engine flame-out which could be caused by flying through heavy precipitation.

Weight and balance is not considered to be a factor contributing to or being related to this mishap. Besides the passenger in the front seat, the only other items reported to be on the helicopter were the previously mentioned pieces of emergency equipment.

The operator reported that the aircraft had 62 U.S. gallons of Jet-B fuel on board at last takeoff.

Meteorological Information

When the pilot filed a VFR flight plan with Homer FSS via the aircraft VHF radio, he received the following weather: Homer - cloud condition 1,700 feet scattered, 2,500 feet overcast, no visibility reported. The first official weather reported by Homer FSS subsequent to notification of the accident was: Clouds 1,700 scattered, estimated 2,300 broken, 5,000 overcast, visibility 7 miles in light snow, millibar pressure 1017.9, temperature 26, dewpoint 19, wind 340° at 4 knots, altimeter setting 30.06 inches of mercury. Remarks - wind on the Homer Spit 060° magnetic at 7 knots.

Weather reported by the S. S. Great Land in the vicinity of the accident site and at the time of the accident was: Visibility zero to one-half mile in snow and fog, wind out of the northeast at 25 - 30 knots, seas slight. It was reported by the USCG that the wave height at the accident site was 3 to 5 feet, water temperature 36°F and the air temperature was 33°F. Information received from the U.S. Coast Guard HH3F helicopter indicated that they encountered heavy snow and moderate aircraft icing at the accident site. The USCG helicopter from Kodiak, Alaska, was on-scene within 40 minutes of the time of the accident.

When Officer Bruce Bayes of the Alaska State Troopers saw the helicopter over Anchor Point, he stated the weather to be heavy snow, visibility less than one-half mile, with strong winds out of the north.

The light condition was dark night.
Aids to Navigation

As mentioned in the witness statement given by Captain Harold L. Small, the S. S. Great Land has the capability of emitting a 410 kilocycle signal which would enable the helicopter pilot to "home" to the vessel with the helicopter ADF. Captain Small stated that after the helicopter was picked up on radar and given a vector, the pilot requested the radio beacon. The Great Land radio operator immediately transmitted the 410 kilocycle signal but the helicopter pilot advised he was not receiving it. The signal was then sent using maximum transmission strength.

The helicopter pilot came back and advised the ship that he was still not receiving the signal. Possibly, this is what the pilot was referring to when he radioed the ship and said, "my compass is out".

Communications

The FSS at Homer received "MAYDAY, MAYDAY Helicopter 845, 6 west Anchor Point" at 1828 AST, and the S.S. Great Land received "two quick MAYDAYS over VHF" (marine band radio) at the same time. This would indicate the pilot transmitted on the airborne VHF, while the passenger transmitted on his hand held portable marine band VHF.

Wreckage and Impact Information

The aircraft is missing. The only portion of N18845 that was recovered was the right pontoon and several small pieces of plexiglass that were caught in a fold of the floats canvas. A metal tube which runs inside a canvas sleeve on top of the float was bent approximately 18°. The bend was near the aft portion of the tube which would indicate the aircraft impacted the water in a relatively nose high attitude. Deformation to the float and metal tube also indicate impact to be relatively level in relation to the roll axis of the helicopter. Impact velocity can not be accurately determined; however, due to the absence of any impact injuries on the passenger, this would indicate impact velocities between minor and moderate. Either the pilot or the passenger was able to inflate the emergency raft and then the passenger was able to get in it.

Medical and Pathological Information

An autopsy and toxicological study was performed on the passenger by Donald R. Rogers, M.D., Pathologist, at the Walsh Mortuary in Kenai, Alaska. There was nothing noted in the autopsy or toxicological screen that could be considered contributory to the accident. The cause of death was diagnosed as drowning due to possible hypothermia. When the life raft was found, there was water inside of it.
Survival Aspects

Based upon the fact that the passenger had no impact injuries; he was able to exit the helicopter; inflate the life raft, and get into it; this accident must be classified as survivable.

Intense search and rescue efforts began immediately after the distress call was received by two Coast Guard C-130 aircraft. A Coast Guard HH3F helicopter, a Coast Guard Cutter, the S.S. Great Land, and numerous commercial fishing vessels from the Homer and Soldotna area aided in the search.

The only logical reason why the life raft was not spotted on the evening of the accident is because of heavy snow and drastically reduced visibility. Neither Coast Guard C-130 airplane was able to pick up an ELT signal in the vicinity of the accident and was therefore unable to pin-point the helicopters location.

It was reported that the emergency life raft was of such a size that it could easily be carried between the passengers feet on the left side. This is also due to the fact that the dual controls were not installed. It is not known whether this kit was in the front or in the back on this particular flight. The raft had a lanyard which the passenger could have hung on to (its intended purpose) which may have made it easier for the passenger to reach the raft once in the water and then to inflate it.

Based upon the U.S. Coast Guard report which is enclosed and included as part of this report; the life expectancy for a man in the water, given on-scene conditions, was two hours.

Tests and Research

A fuel sample was taken from the fuel tank that N1845 refueled from prior to this flight. It was analyzed at Chemical and Geological Laboratories of Alaska, Inc. in Anchorage, Alaska. Their report indicates the sample met the necessary specifications for Jet-B fuel. That analytical report is enclosed and included as part of this report.

No additional information at this time.
From: Commanding Officer, USCG Air Station, Kodiak, Alaska
To: Mr. Jon L. Osgood, Air Safety Investigator National Transportation Safety Board, Anchorage, Alaska
Via: Commander, Seventeenth Coast Guard District (osr)

Subj: Totem Helicopter FH-1100 Crash, information concerning

Ref: (a) NTSB ltr to CGAS Kodiak dtd 28 DEC 77

1. In response to reference (a) the following information has been taken from the case folder on the Anchor Point Totem Helicopter crash (CCK-065)(UNC-047(MUCN-0027)).

   a. COGARD COMMSTA Kodiak received initial notification of subject aircraft crash at 191838 local DEC 77 from the M/V Great Land/WNDF via MF CW.

   b. The aircraft involved and hours flown on SAR were:
      1. HC130 CG 1500 (fixed wing) 1 Sortie 2.0 hrs
      2. HC130 CG 1503 (fixed wing) 1 Sortie 2.5 hrs
      3. HH3F CG 1493 (Helicopter) 2 Sorties 7.8 hrs

   c. Chronological order of aircraft movement (all times local)
      1. 191840W HC130 CG 1500 diverted to scene for SAR
      2. 191850 CG 1500 arrived on scene
      3. 191909 HH3F CG 1493 airborne from Kodiak enroute scene
      4. 192008 CG 1493 arrived on scene
      5. 192008 CG 1500 dptd scene enroute Elmendorf to refuel
      6. 192042 CG 1500 arrived Elmendorf RON
      7. 192225 CG 1493 dptd scene enroute Kenai to refuel
      8. 192304 CG 1493 arrived Kenai RON
      9. 200822 HC130 CG 1503 airborne from Kodiak enroute scene
     10. 200845 CG 1493 airborne from Kenai enroute scene
     11. 200905 CG 1493 arrived on scene
     12. 200917 CG 1503 arrived on scene
     13. 201058 CG 1503 dptd scene enroute Kodiak
     14. 201119 CG 1493 dptd scene enroute Kodiak
     15. 201200 CG 1503 arrived Kodiak area
     16. 201232 CG 1493 arrived Kodiak
Subj: Totem Helicopter FH-1100 Crash; information concerning

d. Local Weather for Anchor Point:

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<th>TIME</th>
<th>WIND</th>
<th>SEAS</th>
<th>AIR</th>
<th>SEA</th>
<th>VIS</th>
<th>REMARKS</th>
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<td>(1) 192350W</td>
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<td>0-½ mi Snow Showers</td>
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<td>N</td>
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<td>1 mi Snow Showers</td>
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<td>(5) 201745</td>
<td>--</td>
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<td>2-4 ft</td>
<td>31F</td>
<td>42F</td>
<td>3/4 mi Snow Showers</td>
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<td>(6) ICING:</td>
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<td>See Paragraph (g)</td>
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e. Tides/Currents off Anchor Point:

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<th>SEA</th>
<th>VIS</th>
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<td>Slack</td>
<td>1638W</td>
<td>Flood</td>
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<td>Direction of Flood 000 Degrees True</td>
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<tr>
<td>20 DEC</td>
<td>0149</td>
<td>Ebb</td>
<td>1.3 kts</td>
<td>Direction of Ebb 195 Degrees True</td>
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<td></td>
<td>1712</td>
<td>Slack</td>
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f. Due to an extensive search of debris area conducted by Coast Guard aircraft and surface units, after recovery of liferaft resulted in negative significant findings, the life expectancy for a man in the water given on-scene conditions was two hours, the on-scene weather was not conducive for search, and the low probability of locating further survivors or debris, Coast Guard Air Station Kodiak requested suspension of Case at 201745W DEC 77 pending further developments. Official case suspension permission was given by NORPACSARCOORD Juneau at 201915W DEC 77 pending further developments.

g. Icing conditions at Anchor Point search area described by Coast Guard Helicopter 1493 Aircraft Commander as moderate for HH3F model helicopter but would probably be worse for the Totem helo.
STATEMENT OF WITNESS

The purpose of this statement is intended solely for use in determining the facts, conditions and circumstances, and the probable cause of the subject accident.

Date: 23 December, 1977

I. Place of accident: Anchor Point, Cook Inlet
Date: 19 December, 1977
Hour: 1830

II. Aircraft: Tote Helicopter
FAA Certificate No.: ________________________________

III. What is your name: Harold L. Small
Age: 55

IV. Address: McFarland Shores, New Harbor, Maine 04554

V. Occupation: Ship Master
By whom employed: Interocian Management Corp.

VI. Where were you at the time of the accident: On bridge of S.S. Great Land

VII. Tell in your own words what you saw or heard before and at the time the accident occurred:

At approx 1815 hours on 12-19-77 while approaching Anchor to pick up pilot to Anchorage, I changed vessels course to 120 degrees true to run up under land for embarking pilot from Helicopter, due to heavy snow and NE wind approx 30-35 knots. Shortly thereafter, I picked up helicopter bound to vessel from Anchor Point. I confirmed to Helicopter that I had them on radar and gave a magnetic compass vector from their position to vessel, approx 160 mag. Vessel also gave their request a radio keyed signal for their RDF. Helicopter unable to pick up our signal. Signal strength increased however helicopter unable to receive. Helicopter then noted on radar screen to be drifting off course to the west. I advised helipilot of this situation advising to correct to his left. Helicopter then advised that his compass was out, and requested a vector back over Anchor Point. I gave O80 degrees magnetic but noted that helicpter was continuing approx due west. At 1830 helicopter called out two quick Maydays over VHF. I immediately plotted Helicopters position on radar, range 6.0 miles, bearing 220 degrees out from Anchor Point and brought ship around in a tight turn to the right heading to helicopters position. A few moments later helicopters blip disappeared from the Radar Screen. A VHF message was immediately dispatched to the USCG and to the helicopter base, giving details. Vessel engaged in search through to 0803 hrs., 12-20-77 when relieved by USCG Cutter Sage.

(Signature)
STATEMENT OF WITNESS

The purpose of this statement is intended solely for use in determining the facts, conditions and circumstances, and the probable cause of the subject accident.

Date Dec. 21, 1977

I. Place of accident Anchor Point, Ak Date Dec. 19, 1977 Hour 6:20 pm.

II. Aircraft E.H.1100 FAA Certificate No.

III. What is your name Margaree Klein Age 38

IV. Address Box 42 Anchor Point, Ak 99569

V. Occupation Secretary By whom employed Kenai Peninsula Borough

VI. Where were you at the time of the accident Mile 15 7 Sterling Hwy

VII. Tell in your own words what you saw or heard before and at the time the accident occurred.

About 6:15 - 6:20 p.m. Monday night I was driving down the highway toward home. I was about in front of the Anchor View Inn when I saw a white light coming from the sky about 1 mile down the road. After a little bit he turned off the light and I could see the blue aircraft light as I knew it was a plane. I then drove to Bob Moore's house about a mile from Anchor Point and was in their driveway facing Anchor Point. It wasn't too long until I saw the blue light coming toward the car and about even with Grimes' driveway the blue light turned sharply toward the bay - North West. I turned the car around and the aircraft was still heading toward the bay when it disappeared in the snow and fog. It was growing very heavy and the vision was very poor. I knew when it turned it was a helicopter.

Margaree Klein

(Signature)
At 0428 I heard N8845 declare "Mayday Mayday, Helicopter 845 6W Anchor Point". The transmission was very quick and the last portion was somewhat muffled and garbled but understandable. The aviation VHF radio in N8845 was generally not clear but with experience in listening to it, it was generally understandable.

The pilot's voice was not noticeably excitable, but the transmission was very quick and there was no further contact or signal from N8845. It was definitely not a panicky transmission, just quick.

James Holcomb
JAMES HOLCOMB JH
ATCS, Homer FSS
I, Thomas M. O'Neill, while working Pos. B at Homer FSS; heard "Mayday 845".

The transmission was quick and precise; although it did trail off at the end. There was no sign of fright or panic in his voice and the transmission came across loud and clear.

THOMAS M. O'NEILL
TO
ATCS, Homer FSS
ANALYTICAL REPORT

PRODUCT: JET B
TANK NUMBER: Fuel Tank that refueled FH-1100 N18845
DATE: December 26, 1977
OTHER: NTSB# Anc 78 FA005

P.O. NUMBER: ________ LAB NUMBER: 7063

General Characteristics

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<th>Parameter</th>
<th>Results</th>
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<th>Jet B</th>
<th>Av 80/87</th>
<th>Av 100/130</th>
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<td>Min 70</td>
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RESULTS:
[X] Meets specifications for product checked above.
[ ] Does not meet specifications for product checked above and violation circled.

ENGELER DISTILLATION

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<th>550</th>
<th>50</th>
<th>45</th>
<th>40</th>
<th>35</th>
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DISTILLATION GRAPH

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# DEPARTMENT OF TRANSPORTATION
## NATIONAL TRANSPORTATION SAFETY BOARD
### RELEASE OF AIRCRAFT WRECKAGE AND/OR PARTS

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#### 1. Release of aircraft wreckage
- Register owner or owner's authorized agent

#### 2. Receipt of material
- Investigator in charge or engineering Div.

#### 3. Registered owner or owner's authorized agent
- Name: Rosemurgy & Co., Inc.
- Address: 424 Third Ave., W.
- City and State: Seattle, WA. 98119

#### 4. Investigator in charge or engineering Div.
- Name: Jon L. Osgood
- Address: 632 6th Ave. RM. 454
- City and State: Anchorage, AK. 99501

#### 5. Aircraft identification, date, and location of accident
- Aircraft identification: Totem Helicopters, Inc. Homer, AK. N-18845
- Make: Fairchild Hiller
- Model: FH-1100
- Date of accident: 12/1/77
- Location: Near Anchor Point, Alaska

#### 6. National Transportation Safety Board has, has not completed its investigation of the aircraft wreckage described above.
- Has not completed its investigation.

#### 7. All wreckage except that listed below in box 11 is hereby released to the registered owner for appropriate disposition. (If no parts are retained, insert NONE.)
- NONE

#### 8. NTSB representative's signature
- Title: Air Safety Investigator
- Date: 12/29/77
- Signature: Jon L. Osgood
#1. This photo shows all that was recovered from Helicopter N-18845. The EAM-5 five man life raft was partially filled with water when found. When the right float was retrieved from Cook Inlet it was buckled and folded in the center. Several small pieces of plexiglass fell from the fold in the canvas when it was laid out on the deck of the U.S. Coast Guard Cutter Sedge. The metal float tube (left side of photo) was just barely attached to the end of the float as it was pulled from the water.

#2. Closeup of identifying numbers on the emergency life raft. This serial number matches the number of the raft inspected by Eagle Enterprises, Inc., in Anchorage, Alaska, on 10-12-77, which was placed in N-18845.
3. Photo showing inboard side of right float and metal float tube.

4. Closeup of mid-section of inboard side of right float.
#5. View showing outboard side of right float.

#6. View showing where metal float tube is normally positioned inside of canvas sleeve running down the top of the float. Note where bend in tube and tear in canvas sleeve match up. This would indicate the helicopter impacted relatively nose high.