



# Aviation Investigation Final Report

<b>Location:</b>	LAS ANIMAS, Colorado	<b>Accident Number:</b>	FTW97FA229
<b>Date &amp; Time:</b>	June 19, 1997, 08:05 Local	<b>Registration:</b>	N7308E
<b>Aircraft:</b>	Air Tractor            AT-301	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

There were no witnesses to the accident. The pilot was reported to have been almost finished spraying a 33 acre corn field with a herbicide called 'Lightning.' The airplane was found burning in a field that was on an approach and adjacent to the field being sprayed. The sheriff reported that the wind was calm. The pilot had been treated for Reiter's Syndrome for the previous 3 years. Reportedly, the condition was under control with prescribed medication. Toxicology tests disclosed no evidence of alcohol, drugs, cyanide, or carbon monoxide. About a week after the accident, the farmer reported finding two areas of stunted and discolored corn at opposite ends of his field. The NTSB was not made aware of this finding until four months after the accident. Soil sample tests disclosed a trace amount of oil and grease.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: in-flight collision with terrain, while maneuvering, for undetermined reason(s).

### Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

#### Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED



## Factual Information

### HISTORY OF FLIGHT

On June 19, 1997, approximately 0805 mountain daylight time, an Air Tractor AT-301, N7308E, registered to the pilot d/b/a 007 Dusting, L.L.C., was destroyed while maneuvering 6 miles northwest of Las Animas, Colorado. The commercial pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the aerial application flight being conducted under Title 14 CFR Part 137. The flight originated approximately 0730 from La Junta, Colorado.

The accident occurred on the 068 degree radial from the Lamar VORTAC at 38.5 miles DME. There were no witnesses to the accident, but several people had observed the airplane moments before. They reported nothing unusual. According to information provided by a friend and business associate, the pilot should have been almost finished spraying a 33 acre corn field with a herbicide called "Lightning," a mixture containing imazethapyr and imazapyr. He had sprayed two fields prior to the accident flight, and was scheduled to spray several more that morning.

At 0815, the Bent County Sheriff's Office received a 9-1-1 call, advising that an airplane was down at 1731 Road GG. The sheriff said that while en route, he observed two columns of smoke ascending vertically from the accident site. Upon arrival, he found the cockpit area engulfed in fire. The fire was quickly extinguished by fire department personnel. The sheriff reported the wind was calm.

### PERSONNEL INFORMATION

The pilot's logbook, containing entries from October 6, 1988, to April 12, 1997, was examined. He received his agricultural pilot endorsement [FAR 139.19(e)] on June 24, 1992. His most recent biennial flight review was completed on December 21, 1995.

The pilot's flight time (in hours) by aircraft type was as follows: Cessna 120, 119.8; Cessna 140, 16.7; Cessna 152, 27.8; Cessna 172, 13.9; Beech V35, 11.9; Aeronca AC-11-5, 16.7; Bellanca 17-30, 0.9; Bellanca 8KCAB, 4.7; Piper J-3, 40.0; Piper PA-25, 1,161.4; Grumman G-164, 8.7; Weatherly 620B, 18.4; Air Tractor AT-502, 601.4; Air Tractor AT-503, 3.2; Air Tractor AT-301, 6.4.

Even though the last entry in the pilot's logbook was dated April 12, 1997, business associates and FAA records indicated he had flown regularly in aerial application operations. Exact flight times were not available.

## AIRCRAFT INFORMATION

According to the aircraft maintenance records, the airplane and propeller received an annual inspection and the engine received a 100-hour inspection on March 25, 1997. At that time, the tachometer registered 439.5 hours, and the airplane had accrued 4,031.5 hours and the engine had accrued 4,297.5 hours time in service. Airworthiness Directives 92-07-14 (spar cap corrosion inspection); 96-23-19 (flap actuator overtravel stop nut disengagement from jack screw), and 96-24-08 (King brake valve) were accomplished. The engine was last overhauled (major) on March 5, 1996, at an estimated 4,140 hours time in service. The propeller was last overhauled on January 13, 1995.

## WRECKAGE AND IMPACT INFORMATION

The on scene investigation disclosed a ground scar and gouge, 35 feet apart and 35 feet in length, and aligned on a magnetic heading of 065 degrees. The gouge was just to the right of the scar. The ground scar contained fragments of the left wing landing light and yellow paint chips. The airplane came to rest about 55 feet away, facing the opposite direction of flight. The cockpit and chemical hopper had been destroyed by fire.

Examination of the propeller, which remained attached to the engine, disclosed some 45 degree chordwise scratches on the three blades. Elevator, aileron, rudder, flap, and trim tab control continuity was established. The throttle, mixture, and propeller controls were found in the full forward, midrange, and high pitch/low rpm positions, respectively. The manifold pressure gauge indicated 21.5 inches of mercury, the altimeter was set to 29.82 inches of mercury, and the wet compass was jammed at 070 degrees. The hopper tank had been destroyed by the fire. GPS (global positioning system) altitude at the accident site was 4,473 feet.

## MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed by the El Paso County Coroner's Office, Colorado Springs, Colorado, for the Bent County Coroner's Office. Death was due to head trauma. No soot was found in the trachea. Toxicological protocol (#9700136001) was performed by FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma. According to CAMI's report (see exhibits), no carbon monoxide or cyanide was detected in blood, and no ethanol or drugs were detected in urine.

It was discovered that the pilot was being treated for Reiter's syndrome, a debilitating and inflammatory condition that causes joint pain and swelling and sometimes abnormal heart rhythms. NTSB's medical officer was then asked to conduct an investigation into the pilot's medical history. According to the medical officer's report, the diagnosis was made by a rheumatologist in August 1994. The pilot complained of pain in his right shoulder, arm, and neck, intermittent pain and stiffness in his lower back, and swelling in his feet, toes and left knee. He was prescribed the anti-inflammatory drug Tolectin and Azulfidine. The pilot

complained that the former medication made him feel "a little spacey at times," and the dosage was reduced. By June 1995, the symptoms had subsided somewhat, and the doctor advised FAA that the pilot could "fly without problems." The doctor last saw the pilot in November 1996 [for detail information, see NTSB medical officer's report, attached].

## ADDITIONAL INFORMATION

Approximately one week after the accident, the property owner contacted the sheriff's office and reported finding two large areas of dead vegetation at opposite ends of his field that had been sprayed. A consultant with AgSkill, Inc., and an agronomist with Pioneer Seed went to the site and found some areas of stunted and discolored corn crops. When this information was made available to NTSB, the agronomist was contacted and arrangements were made to have soil samples taken for analysis. The agronomist noted that when he visited the site, the corn crop had matured and was starting to dry. The samples were submitted to Evergreen Analytical for testing. According to the agronomist's report, no grease or oil [threshold value is 20 ppm (parts per million)] were found in the sample taken from the west end of the field. Soil samples taken from the east end of the field contained 23 ppm grease and oil [for details, see the agronomist's report attached as an exhibit to this report].

Other than the Federal Aviation Administration, there were no other parties to the investigation.

The wreckage was released to a representative of the company that insured the pilot and airplane on June 19, 1997.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	27, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	March 12, 1997
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2051 hours (Total, all aircraft), 6 hours (Total, this make and model), 1955 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Air Tractor	<b>Registration:</b>	N7308E
<b>Model/Series:</b>	AT-301 AT-301	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	301-0625
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	March 25, 1997 100 hour	<b>Certified Max Gross Wt.:</b>	6000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	R-1340-S3H1G
<b>Registered Owner:</b>	MILES B. & CHI-ANN BOND	<b>Rated Power:</b>	600 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>	007 DUSTING	<b>Operator Designator Code:</b>	BBOG

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	LHX ,4238 ft msl	<b>Distance from Accident Site:</b>	6 Nautical Miles
<b>Observation Time:</b>	07:53 Local	<b>Direction from Accident Site:</b>	245°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	22°C / 12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	LA JUNTA , CO (LHX )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	07:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	38.060192,-103.219711(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Scott, Arnold
<b>Additional Participating Persons:</b>	STEVEN R SCULLY; DENVER , CO
<b>Original Publish Date:</b>	May 21, 1998
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=20040">https://data.ntsb.gov/Docket?ProjectID=20040</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).