



Aviation Investigation Final Report

Location:	IPSWICH, South Dakota	Accident Number:	CHI98LA217
Date & Time:	June 25, 1998, 09:00 Local	Registration:	N31677
Aircraft:	Air Tractor AT-301	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported that shortly after rotating during a takeoff to the north, a sudden gust of wind from the south was experienced. He reported the airplane stalled and then 'mushed.' The airplane traveled off the end of the runway into a wet oat field where the airplane nosed over. The pilot reported the local winds were from the west at 6 knots. The 0856 cdt weather observation for Aberdeen, South Dakota, 19 miles east of the accident site, reported the winds were from 230 degrees at 7 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inadequate evaluation of the weather conditions and his failure to maintain aircraft control which resulted in a stall/mush. Factors associated with the accident were the tailwind condition and the soft terrain.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) WEATHER CONDITION - TAILWIND
2. (C) WEATHER EVALUATION - INADEQUATE - PILOT IN COMMAND
3. (C) AIRCRAFT HANDLING - NOT MAINTAINED - PILOT IN COMMAND
4. (C) STALL/MUSH

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Occurrence #3: NOSE OVER
Phase of Operation: OTHER

Findings

5. (F) TERRAIN CONDITION - SOFT

Factual Information

On June 25, 1998, at 0900 central daylight time, an Air Tractor AT-301, N31677, operated by Tri County Ag Service, Inc., collided with the terrain and nosed over following a loss of control on takeoff from Rappe Field, a private airstrip, in Ipswich, South Dakota. The pilot was not injured. The airplane was substantially damaged. The 14 CFR Part 137 aerial application flight was operating in visual meteorological conditions without a flight plan. The flight was originating at the time of the accident.

The airplane was taking off to the north when the accident occurred. The pilot reported that during the initial takeoff climb, shortly after rotation, a sudden gust of wind from the south was experienced. He reported the airplane stalled and then "mushed." The airplane traveled off the end of the runway into a wet oat field where the airplane nosed over.

The pilot reported the local winds were from the west at 6 knots. The 0856 cdt weather observation for Aberdeen, South Dakota, 19 miles east of the accident site, reported the winds were from 230 degrees at 7 knots.

Pilot Information

Certificate:	Commercial	Age:	34, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 21, 1998
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2150 hours (Total, all aircraft), 1100 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N31677
Model/Series:	AT-301 AT-301	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	570
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	November 24, 1998 Annual	Certified Max Gross Wt.:	7900 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	P&W
ELT:		Engine Model/Series:	R-1340
Registered Owner:	TRI COUNTY AG SERVICE, INC.	Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ABR ,1301 ft msl	Distance from Accident Site:	19 Nautical Miles
Observation Time:	09:56 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	21°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(PVT)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	RAPPE FIELD SD25	Runway Surface Type:	Grass/turf
Airport Elevation:	1521 ft msl	Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:	2600 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	45.440639,-99.020553(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	DANIEL L MCKINNEY; RAPID CITY , SD
Original Publish Date:	May 19, 1999
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=10931

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