



**NTSB** *TRAINING CENTER*

# **NTSB General Aviation Accident Investigations**

**Jill Demko**  
**Technical Training Officer**

# History of the Agency

In the beginning...

Civil Aeronautics Board



# History of the Agency

1974 = Independent Safety Board Act

- Severed ties with DOT and all other modal agencies



# Structure of the National Transportation Safety Board

- The NTSB consists of 5 Members, appointed by the President, by and with the advice and consent of the Senate.
- Members serve 5-year staggered terms.



# Mission

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating **every civil aviation accident** in the United States and **significant accidents in the other modes** of transportation -- railroad, highway, marine and pipeline -- and **issuing safety recommendations** aimed at preventing future accidents.

# Mission

The NTSB is additionally charged with:

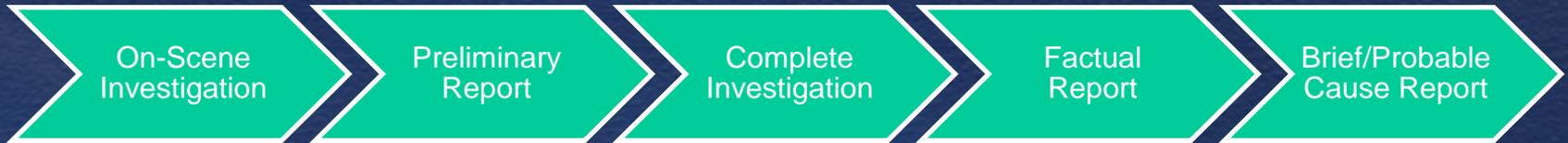
- conducting special studies and investigations
- coordinating resources to assist victims and their families after an accident.
- Court of Appeals (through ALJ) for airmen, mechanics, and mariners who have certificate actions against them

# Unofficially

- **We are:**
  - “The eyes and ears of the American public on the accident scene.”
- **And we do so with:**
  - “Transparency, integrity and accountability.”



# Investigative Process



# The Party System

- Persons, government agencies, companies, & associations whose employees, functions, activities, or products were **involved in the accident**
- and who can provide **suitable qualified technical** personnel to actively assist in the field investigation.



# Parties to the Investigation

- FAA, Manufacturers, Unions, Operators
- Possess unique knowledge/technical expertise
- Force multipliers
- Effect change
- Must adhere to strict regulations



# Excluded from the Investigation

- **Specifically excluded:** “any person who also represents claimants or insurers,” and any person who occupies a “legal position.”

(See 49 CFR 831.11(a)(3).)

- **Lawyers**
- **Insurance Agents**
  - Allow establishment of claim
  - Share investigative plans; release wreckage
- **The Media**
- **Family Groups**

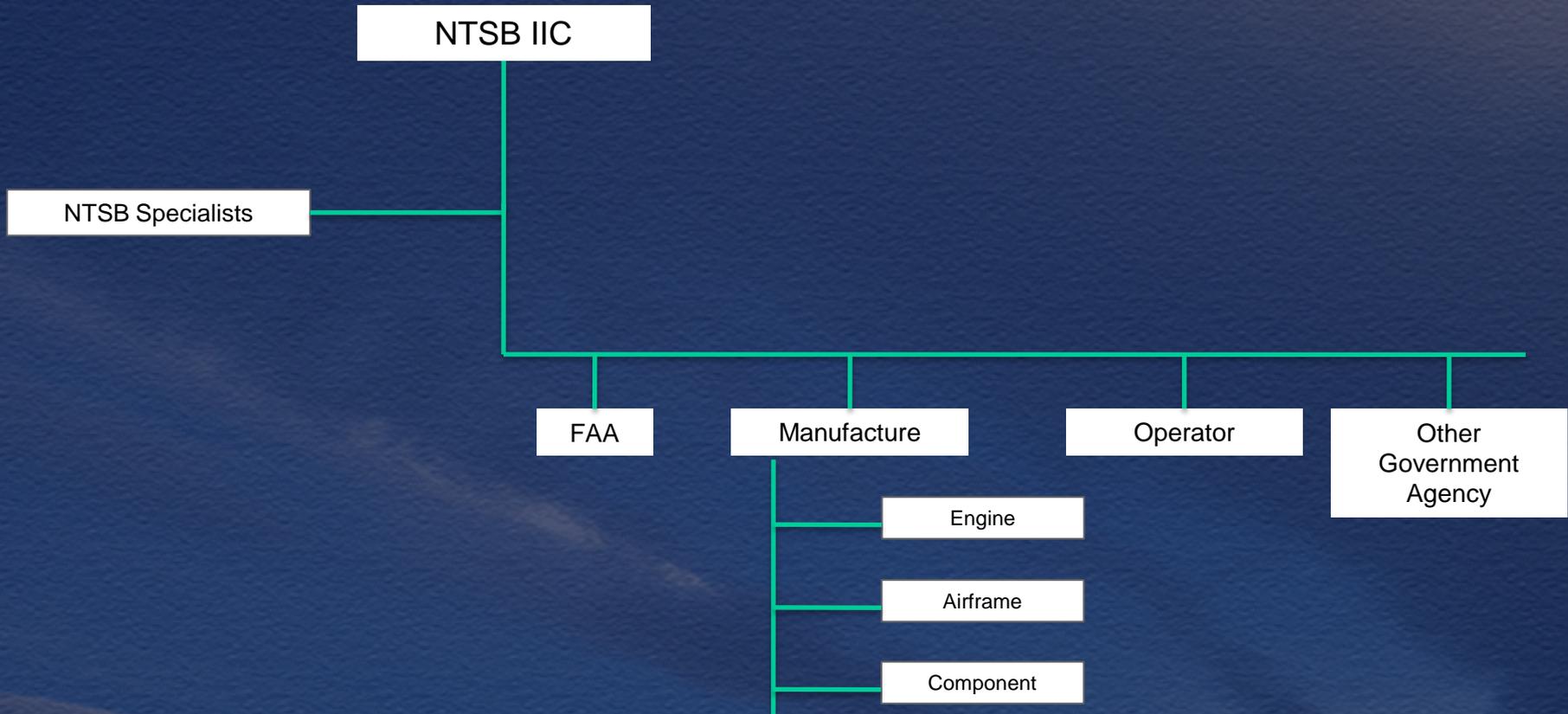
# Non-Participants

- Property Owners
- Insurance Adjusters
- Local Authorities
- Salvage Operators
- Families and their Attorneys
- The Media



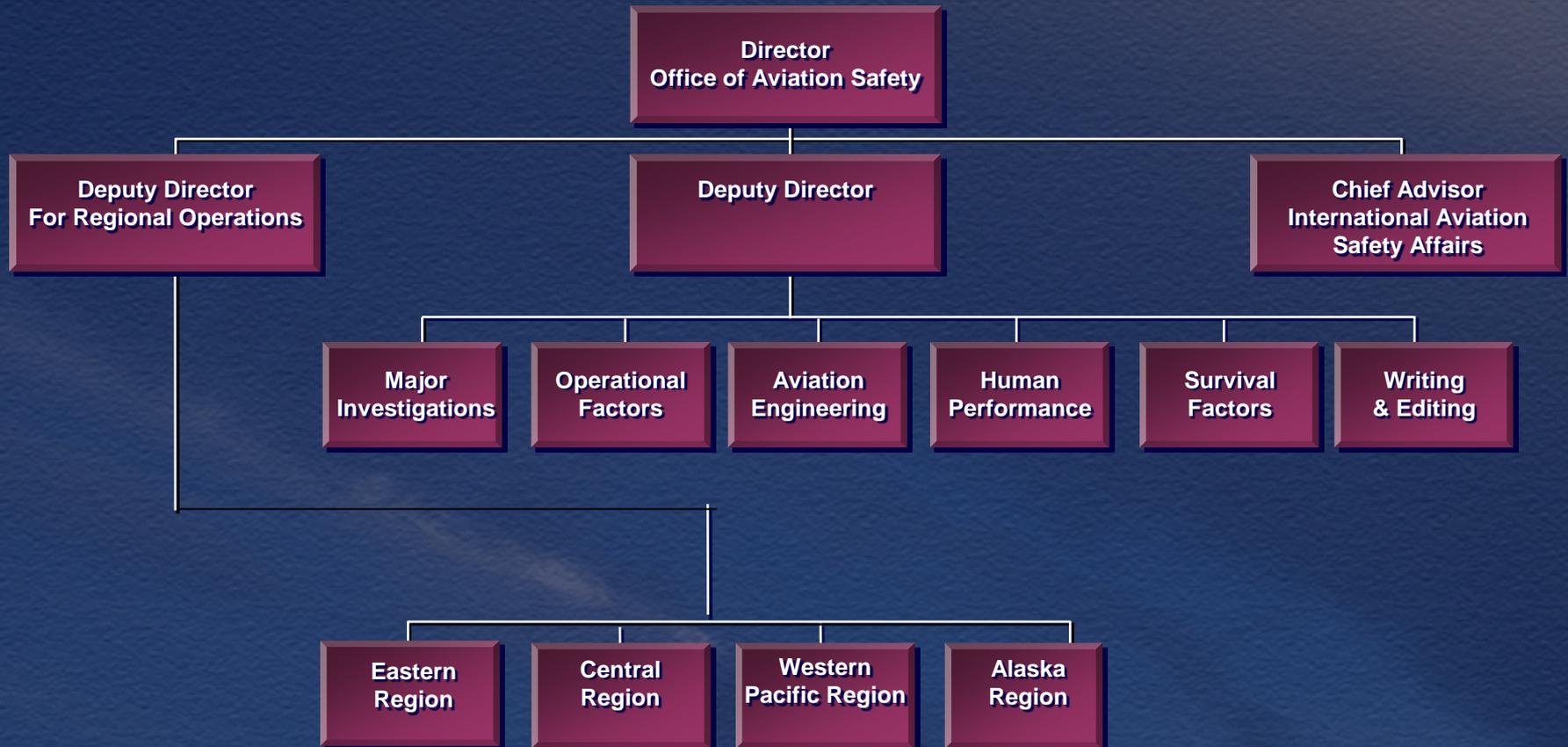
# Coordination of Participants

## Organizational Chart: Regional Investigation

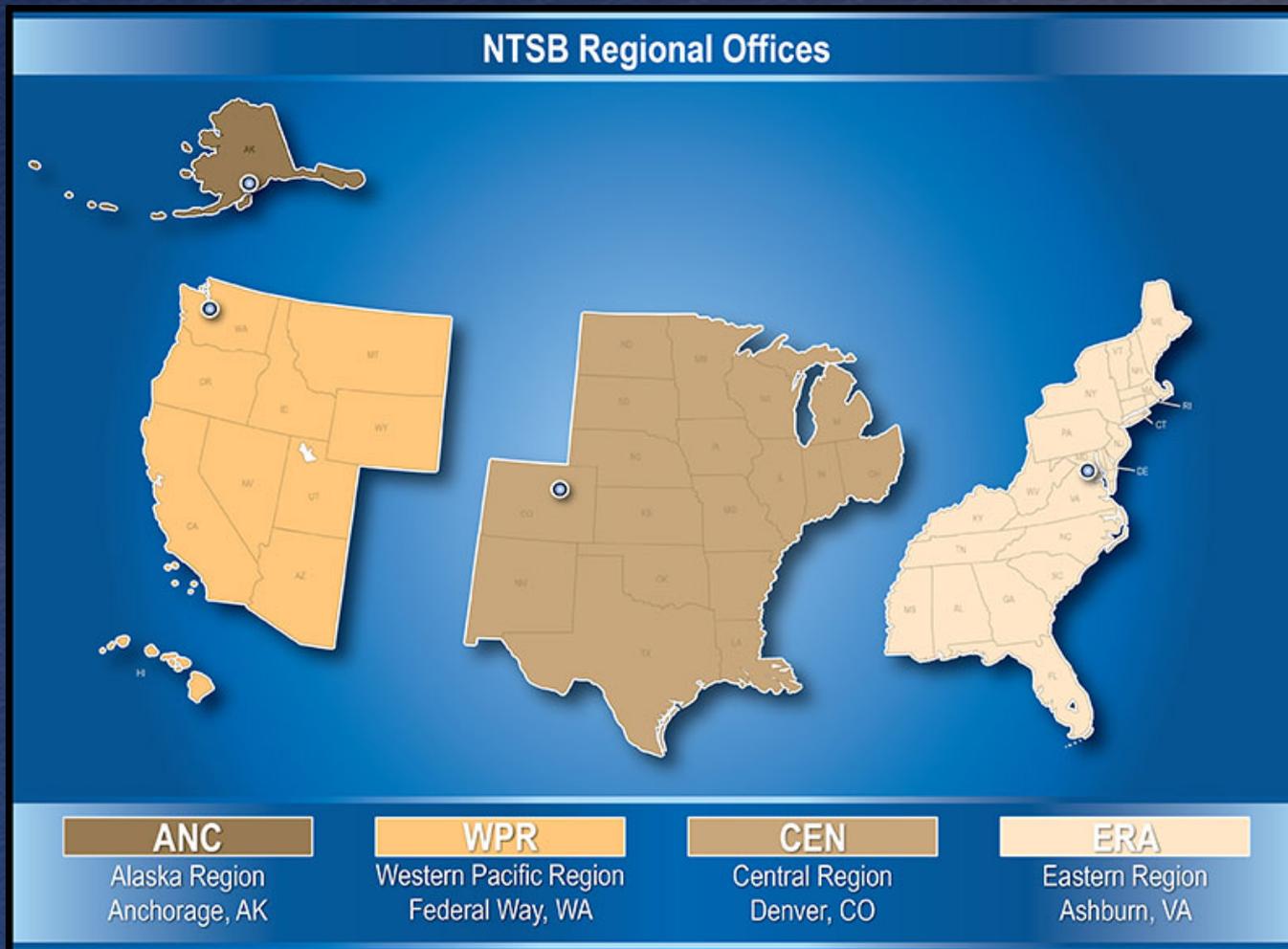


# The Office of Aviation Safety

Responsible for the Safety Board's aviation accident investigations



# NTSB Regional Structure



# Regional Offices

- Investigate general aviation accidents and many incidents involving commercial carriers
- Support major investigations



# Your Closest Regional Office

## Eastern Regional Aviation (ERA)

45065 Riverside Parkway

Ashburn, Virginia 20147

Phone: 571-223-3930

FAX: 571-223-3926

Chief: Mr. Steven Gottlieb 571-223-3925

Deputy Chief: Mr Jeff Kennedy 305-597-4625

**NTSB Communications Center: 202-314-6290**

## What is an Accident?



# What is an Accident?

## What is the definition of an aircraft accident?

An occurrence associated with the operation of an aircraft which:

- takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which
- any person suffers death or serious injury, or in which
  - the aircraft receives substantial damage

# Unmanned Aircraft

## What is the definition of an unmanned aircraft accident?

An occurrence associated with the operation of any public or civil unmanned aircraft system that takes place between the time that the system is activated with the purpose of flight and the time that the system is deactivated at the conclusion of its mission, in which:

1. Any person suffers death or serious injury; or
2. The aircraft has a maximum gross takeoff weight of 300 pounds or greater and sustains substantial damage.



# What is an Accident?

## Serious Injury

Any injury which:

- Requires hospitalization for more than **48 hours**, **commencing within 7 days** of the date that the injury was received;
- Results in a **fracture** of any bone (except simple fractures of fingers, toes, or nose);

Cont'd:

- Causes severe hemorrhages, nerve, muscle, or tendon damage;
- Involves any **internal organ** or;
- Involves **2<sup>nd</sup> or 3<sup>rd</sup> degree burns**, or burns affecting more than 5% of the body surface

# What is an Accident?

## Substantial Damage

Substantial Damage is...

Damage or failure which:

- Adversely affects the structural **strength, performance, or flight characteristics** of the aircraft, and which
- Would normally require **major repair or replacement** of the affected component

Substantial Damage is **not**...

- Engine failure or damage limited to an engine if only one engine fails or is damaged,
- Bent fairings or cowling
- Dented skin
- Small punctured holes in the skin or fabric
- Ground damage to rotor or propeller blades
- Damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered “substantial damage” for the purpose of this part.

# What is an Accident?

## Incidents

**“An occurrence other than an accident associated with the operation of an aircraft, which affects or could affect the safety of operations.”**

**- 49 Code Federal Regulations 830.2**

# Notification and Reporting

The operator of an aircraft shall *immediately* and by the *most expeditious means available* notify the nearest NTSB Field Office when an *aircraft accident* or any of the following *incidents* occur:

- Flight control system malfunction
- Inability of any crew member to perform normal flight duties as a result of injury or illness
- In-flight fire
- Damage to property, exceeding \$25,000
- Aircraft collision in flight

# Notification Requirements

## Updated Incidents (830.5)

- Uncontained engine failure (turbine)
- Release of propeller blade (not ground)
- Failure of more than 50% of cockpit displays (EFIS, EICAS, PFD, PND, etc.)
- TCAS resolution advisory with risk of collision
- Damage to helicopter rotors (major replacement)

# Important to Adequately Assess Level of Effort for Each Case



Public Visibility



Complexity



Fleet Issues

Injury Severity



Public Trust



# Types of Accident Investigations

- Major
- Field
- Limited
- Collection



# Major Accident Investigation

- Large aircraft
- High visibility
- Normally handled by HQ “go team”
- Regions may be part of investigation
- Regions may be in charge



# Field (FA) Investigation

- Regional investigator and parties
- Typically involves a fatality
- May not arrive until the following day



# Limited (LA) Investigation



- NTSB does not travel to the accident site
- FAA can act as the “eyes and ears” of the NTSB at the scene
- FAA 9 areas of responsibility
- Additional NTSB requests
- Probable cause by NTSB
- FAA asking as part of FAA investigation or NTSB investigation?

# Data Collection (CA) Investigation

- One-time report
- Known circumstances
- No obvious safety issues/mechanical issues
- No fatalities or “critical” serious injuries
- Not high public visibility



# Incident (IA) Investigation

## Gemini Air Cargo MD-11F, Overrun into EMAS



# Suspected Criminal Behavior

- Requires consultation between the Chairman of the NTSB and the US Attorney General
  - If circumstances reasonably indicate
  - Intentional criminal act
  - FBI takes lead
- If Federal law enforcement agency suspects criminal activity may have been caused by intentional criminal act:
  - NTSB preserves evidence of criminal act



# Criminal Events



# POP QUIZ

# Accident or Incident?



# Accident or Incident?

## Scenario...

- An **Ercoupe airplane** is taxiing parallel to a set of hangars.
- At the same time, the owner of a **Zodiac CH 601** is running the engine of his airplane outside a hangar to test new monitoring equipment.
- The left wing of the **Ercoupe** collides with the Propeller of the **Zodiac CH 601** and the wing is substantially damaged.



## Accident or Not?...

- The **Zodiac CH 601** was running his engine without **intent for flight** while the **Ercoupe** was taxiing to the runway for flight. In this case the **Zodiac CH 601** would be classified as a “vehicle”.

# Accident or Incident?

## Scenario...

- A fuel truck is driving on the ramp and strikes a parked Kitfox airplane. The resulting damage consists of a bent propeller blade, punctured and torn engine cowling, dented wing skin, and a bent wing spar.

## Accident or Not?...

- An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the **intention of flight** and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage

# Accident or Incident?

## Scenario...

- An experimental RV-6 airplane lands and disembarks a passenger. Another passenger begins to board while the propeller is still turning. He is struck by the turning propeller and sustains serious injuries.

## Accident or Not?...

- An occurrence associated with the operation of an aircraft which takes place **between the time any person boards the aircraft** with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage

# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



# Accident or Incident?



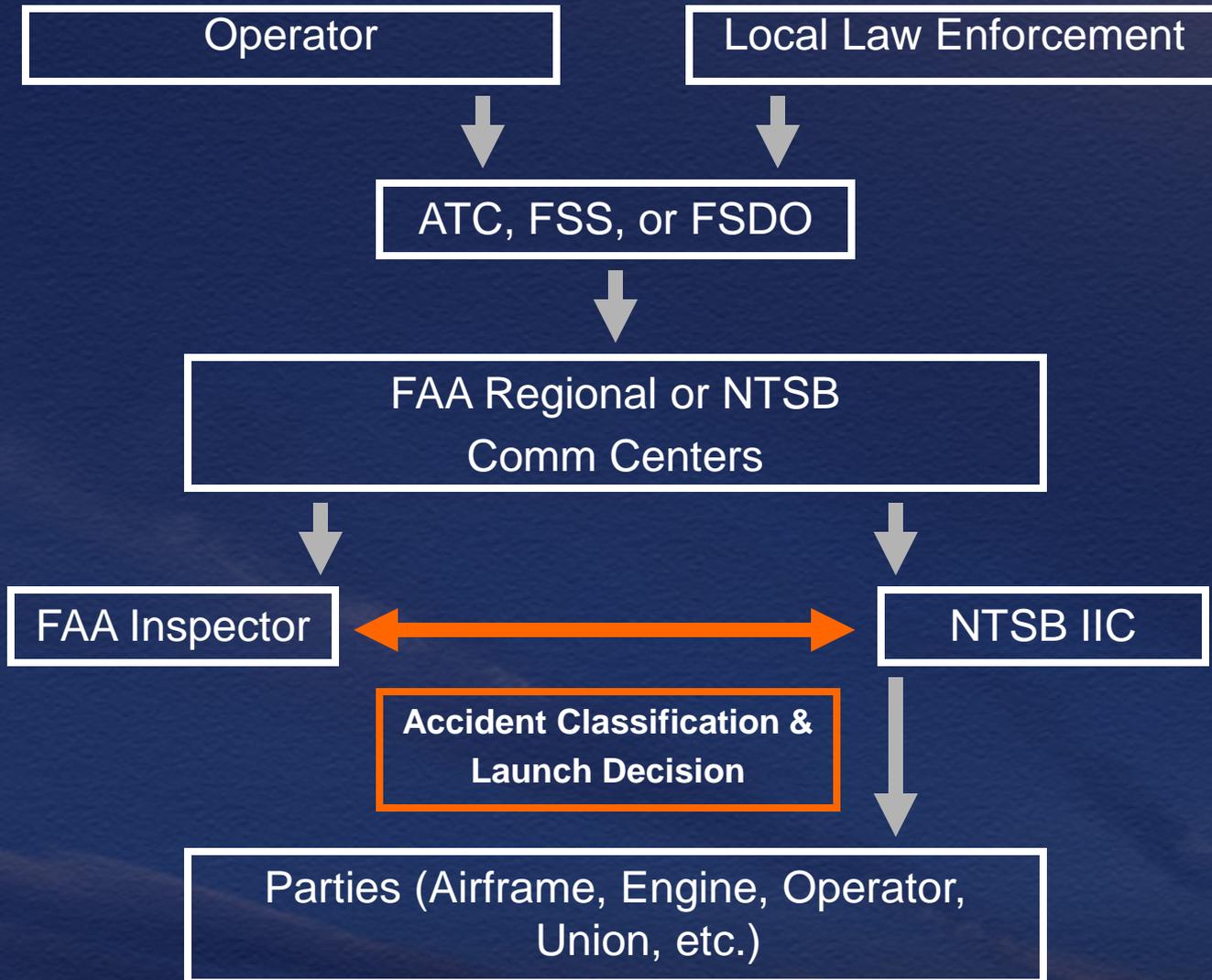
# Accident or Incident?



# Accident Reporting

- Notify NTSB field office or NTSB HQ.
- Contact information on NTSB website <http://www.nts.gov>
- Notify local FAA FSDO or ATC
- Law Enforcement will typically notify an FAA Ops Center

# Notification Process



# Preservation of Wreckage

- Operator is responsible for preserving wreckage and records
- May not be disturbed unless
  - To remove persons injured or trapped
  - To protect from further damage
  - To protect public from injury
- If necessary, operator takes pictures, makes diagrams, etc.



# NTSB Form 6120 (Pilot/Operator Report)

- Satisfies “Reports and statements to be filed” (830.15)
- Can be obtained from NTSB website
- Complete as much information as possible
- Narrative statement
- Must be sent within 10 days

NATIONAL TRANSPORTATION SAFETY BOARD PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT This form to be used for reporting civil and public use aircraft accidents and incidents		
BASIC INFORMATION		
<b>Accident/Incident Location</b> Nearest City/Place: _____ State: _____ ZIP: _____ Country: _____ Latitude: _____ (00:00:00 N/S) Longitude: _____ (000:00:00 E/W)		<b>Date/Time</b> Date: _____ mm/dd/yyyy Local Time: _____ Time Zone: _____
<b>Phase of Operation</b> <input type="checkbox"/> Standing <input type="checkbox"/> Takeoff (incl. initial climb) <input type="checkbox"/> Cruise <input type="checkbox"/> Hover <input type="checkbox"/> Taxi <input type="checkbox"/> Climb <input type="checkbox"/> Maneuvering <input type="checkbox"/> Other <input type="checkbox"/> Descent <input type="checkbox"/> Landing <input type="checkbox"/> Approach <input type="checkbox"/> Unknown		<b>Collision with Other Aircraft</b> <input type="checkbox"/> Midair <input type="checkbox"/> On-ground <input type="checkbox"/> None
		<b>Altitude of In-Flight Occurrence</b> _____ ft MSL



# What to do if you are involved in an accident/incident

- Notify NTSB
- Preserve wreckage
- Take photos
- Retain records
- Complete NTSB Form 6120 (Pilot/Operator Report)
- Cooperate with investigators



# Preliminary Report

- Released about 10 days after accident [Except the one-time Collection Report (CA) 30 days]
- Contains initial information that is subject to change
- Available at [www.nts.gov](http://www.nts.gov)

 National Transportation Safety Board <b>PRELIMINARY REPORT</b> <b>AVIATION</b>	NTSB ID: IAD05FA	
	Occurrence Date: 08/01/2005	
	Occurrence Type: Aviation	
Location/Time		
Nearest City/Place	State	Zip Code

# Factual Report

- Released about 4 to 12 months after accident
- Contains much more detailed information
- Available at: [www.nts.gov](http://www.nts.gov)

National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CH103FA138	Aircraft Registration Number: N36DR		
		Occurrence Date: 05/25/2003	Most Critical Injury: Fatal		
		Occurrence Type: Accident	Investigated By: NTSB		
<b>Location/Time</b>					
Nearest City/Place Woodruff	State WI	Zip Code 54668	Local Time 1754	Time Zone CDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 0.5		Direction From Airport: 330	
<b>Aircraft Information Summary</b>					
Aircraft Manufacturer Piper			Model/Series PA-31P		Type of Aircraft Airplane
Sightseeing Flight: No			Air Medical Transport Flight: No		
<b>Narrative</b>					
Descriptive statement of facts, conditions and circumstances pertain to the accident/incident: HISTORY OF FLIGHT					
<p>On May 25, 2003, at 1754 central daylight time, a Piper PA-31P, N36DR, piloted by an airline transport pilot, sustained substantial damage when it impacted trees and terrain after takeoff from runway 26 (9,150 feet by 100 feet, asphalt), at the Lakeland Airport/Bohle F. Lee Memorial Field (AEV), near Woodruff, Wisconsin. The airplane was consumed by fire subsequent to the impact. The 14 CFR Part 91 Flight plan had been filed but not activated. All four occupants of the airplane were fatally injured. The flight was originating at the time of the accident. The DuPage Airport (DPA), West Chicago, Illinois, was the intended destination.</p> <p>The airplane was reported to have been flown from DPA to AEV by the pilot and pilot rated passenger in order to pick up two passengers and return to DPA.</p> <p>The airplane impacted into level wooded terrain about 1/2 mile north of the departure end of the runway and left of the extended runway centerline.</p> <p>A witness who is a pilot reported seeing the airplane "hardly climbing at 60+- feet just above the (runway) 19 threshold. At this point he was making some power and no engine abnormalities or prop sounds were heard. The plane was very slow with a 5 (degree) pitch up then I saw the nose leveled and I knew he was in serious trouble. I saw the plane going straight for a few more seconds then lost sight. I listened as I ran to my truck. I then heard it hit the trees and impact."</p> <p>Another witness reported seeing the airplane take-off. He reported that the sound was not normal and that this is what drew his attention to the airplane. He said that the airplane sounded labored. He reported that the airplane was not gaining altitude as expected and the airplane was much lower than he was accustomed to seeing. He stated that he lost sight of the airplane due to obstructions to his view. He stated that from the time the airplane drew his attention, to the time the airplane started hitting the trees, the engine sounds did not change.</p>					
PERSONNEL INFORMATION					
<p>The pilot held an airline transport pilot certificate with ratings for multi-engine land airplanes with commercial privileges for single engine land airplanes. The pilot was type rated in Boeing 757, Boeing 767, McDonnell Douglas DC-9, and Cessna 500 series aircraft. The pilot also held a flight engineer certificate for turbojet-powered airplanes and a flight instructor certificate with a rating for single engine airplanes. The pilot's flight logbook was not recovered. The pilot served as a chief pilot for a major airline. According to airline records, the pilot had accumulated 9,524 hours of flight time in Boeing 767 and McDonnell Douglas MD-80 aircraft. An airline representative estimated that the pilot also had approximately 4,000 hours in Boeing 727</p>					
FACTUAL REPORT - AVIATION					Page 1



# Brief/Probable Cause Report

National Transportation Safety Board Washington, DC 20594			
Brief of Accident Adopted 12/26/2004			
ANCD4FA016B File No. 16809	12/28/2003	Picotta, AZ	Aircraft Reg No. N274KS Time (Local): 13:12 MST
Make/Model: Schleicher / ASK 21 Engine Make/Model: Aircraft Damage: Destroyed Number of Engines: 1 Operating Certificate(s): None Type of Flight Operation: Part 91: General Aviation Reg. Flight Conducted Under:	Fatal: 1 Serious: 0 Minor/None: 0	Crew: 1 Pass: 1	
Last Depart. Point: Destination: Airport Proximity:	Same as Accident/Incident Location Same as Accident/Incident Location Off Airport/Arstip	Condition of Light: Day Weather Info Src: W/ness Basic Weather: Visual Conditions Lowest Ceiling: None Visibility: 50.00 SM Wind Dir/Speed: Light and Variable Temperature (C): 21 Obstr to Vision: None Precipitation: None	
Pilot-in-Command Age: 30		Flight Time (Hours) Total All Aircraft: 2530 Last 90 Days: 146/N Total Make/Model: 146/N Total Instrument Time: 146/N	
Certificate(s)/Rating(s) Comments: Private, Single-engine Land, Glider Instrument Ratings: None			
<p>The commercial certificated pilot of an aerobatic glider, with one passenger, was performing a series of aerobatic maneuvers within an aerobatic box, which was adjacent to runway 5L at an uncontrolled airport. The aerobatic box measured 1 kilometer square, and extended from the surface up to 6,000 feet msl (5000' agl). The southern boundary of the aerobatic box was located about 1,400 feet north of runway 5L's centerline. Concurrently, a Piper 37C airplane with the commercial pilot/pilot-in-command/airplane owner seated in the front seat, and a private pilot seated in the rear seat, departed runway 5L, and made a left downwind turn into the area where the glider was performing the aerobatic maneuvers. Witnesses said that as the glider reached the top of the loop, the nose lowered, eventually pointing straight down. As the glider began to recover from the maneuver, about 400 feet agl, the left wing of the oncoming Piper struck the tail of the glider between the empennage and the main fuselage, severing the empennage of the glider. Witnesses said that during the collision, a large portion of the left outboard wing of the Piper separated, and both the glider and the Piper entered uncontrolled descents. Both aircraft came to rest close to the center of the aerobatic box. According to the airport facilities directory, aircraft departing from runway 5L are instructed to fly a right-hand traffic pattern. However, the airport's segmented circle depicts a left-hand departure from runway 5L. Radio equipped aircraft may utilize a common traffic advisory frequency of 121.9 MHz. Neither of the aircraft involved in the accident had a radio, nor were they required to. The front seat pilot of the Piper had based the accident airplane at the accident airport for several years, and was familiar with the procedures for operating at the airport.</p>			

Analytical summary

Coding of causes, factors, and findings

Brief of Accident (Continued)			
ANCD4FA016B File No. 16809	12/28/2003	Picotta, AZ	Aircraft Reg No. N274KS Time (Local): 13:12 MST
Occurrence #1: MIDAIR COLLISION Phase of Operation: MANEUVERING			
Findings			
<ol style="list-style-type: none"> <li>(C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND</li> <li>(C) VISUAL LOOKOUT - INADEQUATE - PILOT OF OTHER AIRCRAFT</li> <li>(F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT OF OTHER AIRCRAFT</li> </ol>			
Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER			
Phase of Operation: DESCENT - UNCONTROLLED			
Findings			
<ol style="list-style-type: none"> <li>TERRAIN CONDITION - GROUND</li> </ol>			
Findings Legend: (C) = Cause, (F) = Factor			
<p>The National Transportation Safety Board determines the probable cause(s) of this accident as follows: The inadequate visual lookout by the pilots of both aircraft, which resulted in their failure to see and avoid each other's aircraft and a subsequent midair collision. A factor associated with the accident was the airplane pilot's failure to determine that the aerobatic box was in use by the glider prior to his entry into the aerobatic box.</p>			

Probable Cause statement



# Public Docket

- Contains all supporting documents for a case
- Released concurrently with factual report
- Now available on the web

The screenshot displays the NTSB Docket Management System interface. At the top, there is a logo and the text "NTSB: Docket Management System" with navigation buttons for Home, Search, Help, and Support. Below this is the heading "Docket And Docket Items". A message states: "Below is the Docket you selected and its list of contents. Click on any Document title to view the item."

**Project Information**

**Aviation**

NTSB Accident ID	Occurrence Date	Location
ERA10FA283	May 26, 2010	Bozborough, MA, United States

**Docket Information**

Creation Date	Last Modified	Public Release Date & Time
Dec 02, 2010	May 24, 2011 15:11	May 24, 2011 15:12

Buttons: MS Word TOC, Print TOC

**List of Contents** Results 1 through 15 of 27  
Total Pages 76/Photos 7

Sort:  Ascending  Descending  
Order Documents By:  Sequence  Date  
Document Title:  Find

Document	Filing Date	Document Title	Pages	Photo
1	Dec 02, 2010	<a href="#">Commercial Pilot Interview</a>	6	0
2	Dec 02, 2010	<a href="#">Commercial Pilot Statement</a>	1	0
3	Dec 02, 2010	<a href="#">Toxicological Report</a>	1	0
4	Dec 02, 2010	<a href="#">Pilot Operator Aircraft Accident Report, NTSB Form 6120.1</a>	8	0
5	Dec 02, 2010	<a href="#">Witness Interviews</a>	3	0
6	Dec 02, 2010	<a href="#">Designated Pilot Examiner (DPE) Interviews</a>	3	0
7	Dec 02, 2010	<a href="#">Operator Interview</a>	3	0
8	Apr 06, 2011	<a href="#">Mechanic Interview</a>	1	0
9	Dec 03, 2010	<a href="#">ATC Pilot (courtesy of FAA)</a>	1	1
10	Feb 04, 2011	<a href="#">Operator FOI excerpt</a>	2	0
11	Apr 06, 2011	<a href="#">Hawthorn Field Airport Recorded METARS</a>	1	0
12	Apr 06, 2011	<a href="#">FAA Inspector Pilot Logbook (excerpt)</a>	12	0
13	Apr 19, 2011	<a href="#">FAA Inspector Flight Experience Paperwork</a>	8	0
14	Apr 07, 2011	<a href="#">Commercial Pilot Logbook (excerpt)</a>	3	0
15	Apr 07, 2011	<a href="#">Schweizer Pilot's Flight Manual (excerpt)</a>	2	0

1 2 Next Last

# Where can I find these reports?

Reports

The screenshot shows the NTSB website with the following elements:

- Header:** NATIONAL TRANSPORTATION SAFETY BOARD with a search bar.
- Navigation Menu:** HOME, NEWS & EVENTS, TRANSPORTATION SAFETY, INVESTIGATIONS, DISASTER ASSISTANCE, LEGAL, ABOUT.
- Main Content Area:**
  - NTSB News:** A featured article titled "NTSB launches team to aviation accident in Thomson Georgia" with a "Read More" button.
  - Accident Dockets:** A navigation link with a red arrow pointing to it.
  - Safety Recommendations:** A navigation link.
  - Aviation Accident Database:** A navigation link with a red arrow pointing to it.
  - Data & Stats:** A navigation link.
  - Training Center:** A navigation link.
- Left Sidebar:**
  - NTSB Logo:** An Independent United States Federal Government Agency.
  - Mission Statement:** "The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the U.S. and significant accidents in other modes of transportation-railroad, highway, marine and pipeline. [more >](#)"
  - Actions:** Contact NTSB, Report an Aviation Accident, Submit a TCAS Notification, Eyewitness Report, FOIA Request.
  - NTSB Report:** "NTSB releases the Preliminary..."
- Right Sidebar:**
  - Photo of the Week:** A photo of a man speaking to a group of people.
  - Member Rosekind:** "Member Rosekind talks to St. Joseph's University students today about the NTSB and its activities with a focus on fatigue, distraction, and alcohol-impaired driving."
  - News @ NTSB:** A list of recent news items with social media icons.

Public Dockets



# Safety Improvements

- Safety Results
- Safety Accomplishments
- Safety Recommendations



National Transportation Safety Board  
Washington, D.C. 20594

## Safety Recommendation

Date: April 20, 2011

In reply refer to: A-11-32 through A-11-34

The Honorable J. Randolph Babbitt  
Administrator  
Federal Aviation Administration  
Washington, DC 20591

On October 25, 2010, about 1352 mountain daylight time,<sup>1</sup> a Mooney M20J airplane, N201HF, collided with mountainous terrain near Lander, Wyoming.<sup>2</sup> The pilot and three passengers were fatally injured, and the airplane sustained substantial damage. The airplane was operated under the provisions of 14 *Code of Federal Regulations* (CFR) Part 91 as a personal flight. Instrument meteorological conditions likely prevailed at the time of the accident,<sup>3</sup> which operated on an instrument flight rules (IFR) flight plan to Pierre Regional Airport (PIR), Pierre, South Dakota. The flight originated from Jackson Hole Airport (JAC), Jackson Hole, Wyoming, at 1305.

After review of the air traffic control (ATC) services provided to the pilot by Jackson Hole Air Traffic Control Tower and Salt Lake City Air Route Traffic Control Center (Salt Lake Center), the National Transportation Safety Board (NTSB) is concerned that the published IFR departure procedures available to aircraft departing JAC may be inadequate. In addition, the NTSB believes that the en route automation modernization (ERAM) ATC software in use at Salt Lake Center needs improvement to ensure that IFR aircraft are afforded necessary en route minimum safe altitude warning (E-MSAW) protection.

### Background

According to Federal Aviation Administration (FAA) records, the pilot of the Mooney filed an IFR flight plan from JAC to PIR, departing from JAC to the north. When the airplane was ready for departure, the wind was from the south and JAC was using runway 19. At the time of the accident, the published departure procedures had restrictions that required the pilot to

<sup>1</sup> All times in this letter are mountain daylight time.

<sup>2</sup> Preliminary information about this accident, WPR11FA032, can be found on the National Transportation Safety Board's (NTSB) website at <http://www.ntsb.gov>.

<sup>3</sup> The exact weather conditions are not known because the airplane was not near a weather reporting station. Available meteorology information indicates that instrument meteorological conditions likely existed at the time of the accident.

8297

6

safety purposes, no change was issued because the approaching hazard. The NTSB concludes that t of conformance with required MIAs and providing such aircraft would allow sufficient time for pilots to num altitude. Therefore, the NTSB recommends that cautionary warnings are provided to controllers when gon below the MIA.

ollowing recommendations to the Federal Aviation

ture procedures that provide transition routes ; altitude information for aircraft cleared over from Jackson Hole Airport and similarly

ization software such that en route minimum ided for aircraft in coast track status that are . (A-11-33)

demization software such that cautionary rs when an aircraft is predicted to enter a altitude (MIA) polygon below the MIA.

lations in this letter, please refer to Safety -34. If you would like to submit your response ou may send it to the following e-mail address: se includes attachments that exceed 5 megabytes, how to use our secure mailbox. To avoid confusion, (that is, do not submit both an electronic copy and a

van HART, and Members SUMWALT, ROSEKIND, idations.

[Original Signed]

By: Deborah A.P. Hersman  
Chairman



# Are all Accidents Preventable?

(Or could a good pilot just have a bad day?)





**NTSB** *TRAINING CENTER*