Some Issues of Interest to the NTSB

Presentation to: NATCA
Communicating for Safety 2011
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Date: March 22, 2011
Outline

• NTSB Basics

• Some Issues of Interest To NATCA

• Some Future Concerns
NTSB Basics

- Independent agency, investigate transportation accidents, all modes

- Determine probable cause(s) – but not blame or liability – and make recommendations to prevent recurrences

- Single focus is safety

- Primary product: Safety recommendations
  - Cannot impose requirements, but recommendation acceptance rate > 80%
Some Issues of Interest

– Runway Safety

– Fatigue

– Professionalism
Runway Safety: Excursions, Too?

For commercial aircraft, 1995-2008:

– 431 of 1429 (30%) of accidents involving major or substantial damage were runway related

– Within those 431, excursions outnumbered incursions by a factor of more than 40 (417 excursions, 10 incursions, and 4 runway confusions)

– 41 of those 431 (10%) were fatal

– 34 of those 41 fatal accidents (83%) were excursions
Runway Excursions by Type

Total Excursions

- Takeoff: 79%
- Landing: 21%

Takeoff Excursions

- Veer-off: 37%
- Overrun: 63%

Landing Excursions

- Veer-off: 53%
- Overrun: 47%
Category A&B Runway Incursions

Runway Incursions per 1,000,000 Airport Operations

* Rates are based on Estimated Tower Operations

Source: FAA

March 22, 2011

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NTSB Recommendations

– Immediate Collision/Incursion Warning in the Cockpit
  (Open, Unacceptable; MWL)

– Specific Clearance for Each Runway Crossing
  (Closed, Acceptable)

– Cockpit Moving Map Displays
to Alert re Wrong Runway
  (Open, Unacceptable, MWL)

– Landing Distance Assessment
  With Adequate Safety Margin
  (Interim: Closed, Unacceptable, MWL)
  (Standardized: Open, Acceptable, MWL)
Fatigue

– Problem in all modes, 24/7
– Science not well developed
  – Difficult to measure
– Can’t control off-duty activities
– Effect of crossing time zones?
Fatigue Factors

- Sleep
- Diet/Weight
- Exercise
- Alcohol/Tobacco
- Age
- Other?
Sleep Disorders

- Sleep apnea
  - Central sleep apnea
  - Obstructive sleep apnea
- Insomnia
- Narcolepsy
- Restless legs syndrome
- Nocturnal leg cramps
- Other
Current Status

– NTSB recommended fatigue awareness and countermeasures program for controllers

– NATCA and FAA are working together to develop guidelines
  (Training: Closed, Acceptable, MWL)
  (Overall Program: Open, Acceptable, MWL)

– Other transportation modes are struggling mightily to address the problem
Professionalism

– Minneapolis, Teterboro, JFK
  – Systemic problem?
  – Adverse trend?
Trend re Commercial Pilots?

- Loss of military pipeline of pilots
  - Let’s try FL 410 (2004)
- Takeoff without runway lights (2006)
  - Minneapolis over-flight (2009)
  - Stick shaker: PULL! (2009)
Improved Understanding?

Help pilots and controllers better understand each other’s environment and issues

– Charlotte, early 1990’s
– GAIN success stories
– Familiarization rides
– Pilots visiting ATC facilities
– Very positive feedback when I flew AOV staff
Another Remedy

– Collection, analysis, and sharing of data/information

– Information as fuel for improvement

– Success stories:
  • FOQA, ASAP
  • TCAS, TAWS

– Applaud implementation of ATSAP
Some Future Concerns

– Pilot professionalism

– Criminalization of accidents
Criminalization

– Systems getting more complex

– Good people trying to do the right thing

– Inadvertent human error: *PUNISH!*

– Possibility of criminal prosecution:
  • Hinders mishap investigation
  • Chills flow of information for improvement
Thank You!!!

Questions?