The Honorable

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Vice Chairman

Outline

– Introduction to NTSB

– Accident Investigation Process

– Some Future Concerns

NTSB 101

- Independent federal agency that investigates transportation accidents and incidents, all modes
  - Aviation
  - Highway
  - Rail
  - Marine (NTSB or Coast Guard)
  - Pipeline
- Determine probable cause(s) and make recommendations to prevent recurrences
  - Do not determine blame or liability

Other NTSB Activities

- Conduct special studies and investigations
  - Review troubling trends
  - Make recommendations to address trends
- Assist victims and their families
  - Extensive assistance, first few days
  - Longer term, further assistance upon request

Independent

- 5 Members
  - Nominated by President, confirmed by Senate
- Political independence
  - Political party balance
  - Member terms are fixed and staggered
  - Requirement for relevant background, expertise
  - Objective: Conclusions from facts, not politics
- Functional Independence
  - Not a regulator or operator
  - Objective: Impartial and unbiased investigations

Purpose

- Single focus is *SAFETY*
- Primary product:
  Safety recommendations
- Not a regulator, can only recommend
- Recommendation recipients are not required to implement recommendations

Recommendations

- Safety recommendations are issued to any organization that has authority to address the problem, including operators, manufacturers, regulators (U.S. and foreign), labor unions, trade associations, and state and local governments

- Response to recommendations:
  > 80% favorable

NTSB On-Scene

- NTSB usually in charge of investigation
  - Coast Guard often in charge re maritime mishaps
- Exception: Criminal activity
  - NTSB requests FBI to take over
  - NTSB provides support, as requested
  - Facts no longer freely disclosed

Role of On-Scene Member

- Primary Member role is media liaison
  - May also be political liaison
- Facts are very sensitive, important to have NTSB as the only source
  - Unbiased
  - In context of the big picture
- Important to avoid speculation
- Preparation of Member includes history of similar accidents, recommendations

Keeping the Public Informed

- Objective: *TRANSPARENCY* of the facts and the process
  - Factual information is placed in the public docket (except proprietary information, as appropriate)
  - Sunshine Act requires Board deliberations to occur in public
  - Final NTSB accident report is also in the public docket

BUT . . .

- Final NTSB accident report is *not admissible in court*

After On-Scene

- On-Scene Member no longer serves as media liaison
- Facts placed in public docket
- Media liaison is through Public Affairs
  - PA may choose to include Chairman

Investigation Process: Collecting the Facts

- NTSB relies extensively on *PARTIES* to help develop the facts
  - Carrier/Operator
  - Manufacturers
  - Unions
  - Regulator
  - Others who may have been involved
- Parties are selected for technical expertise
  - Excludes plaintiffs, attorneys, insurers

Obligations of Parties

- Contribute their technical expertise to the investigation
- Share information with the other parties
- Avoid talking to media about the accident

Investigation Process: Undertaking the Analysis

- Once the facts are developed, NTSB undertakes analysis, makes findings, determines probable cause, and develops recommendations *without* the parties
- NTSB's neutrality is important for unbiased and impartial analyses, findings, and recommendations
- Parties, as well as the public, are free to submit their own analysis into the public docket

International Accidents

- Aviation: NTSB involved if
  - International treaty right (ICAO Annex 13) if US airline, manufacturer, or passengers, or
  - Otherwise requested by State in charge of investigation
- Other modes: NTSB sometimes involved in international maritime accidents, rarely in international accidents in any other mode
- Investigating State seeks technical expertise and support, i.e., staff, not Members

Some Future Concerns

- General
  - Fatigue
  - Personal electronic devices
- Aviation
  - Pilot professionalism
  - Overzealous criminalization
  - Increasing automation

General

- Fatigue
  - Most commercial transportation is 24/7, but humans are not
  - Fatigue is difficult to measure
  - Self-diagnosis is not reliable
  - Obstructive Sleep Apnea, Body Mass Index

- Personal Electronic Devices
  - Widespread belief re ability to multi-task
  - Fatal accidents in every mode
  - Worst problem, by far, is texting
    - Highways -- *23 times* (not 23%) more likely to crash if texting
    - Rail example -- Chatsworth, CA, 2008, 25 fatalities

Aviation

- Pilot professionalism
  - Loss of military pipeline
  - Civilian filters inadequate
  - Recent troubling events
- Overzealous criminalization of accidents
  - Undercuts proactive information programs
  - Hinders investigations
  - Reduces likelihood of addressing system issues

Increasing Automation: Good News, Bad News

- More complexity increases likelihood that operators will not completely understand the system
- More reliability increases likelihood that operators have never seen a given malfunction before, even in training
- Automation often masks the problem of less proficient pilots – until something goes wrong

Examples

- Strasbourg, France (1992)
- Cali, Colombia (1995)
- Amsterdam, Holland (2009)
- Rio to Paris (2009)
- Miracle on the Hudson (2009)
- San Francisco (2013)

Thank You

Questions?