An Inside Look at the NTSB

The Aviation Webinar Series

Presenters

Mark Dombroff

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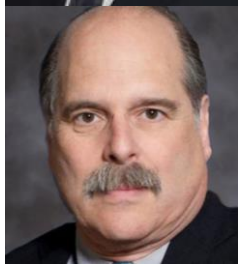

David Tochen

An Inside look at the NTSB

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- Part I: Background Information on the NTSB
- Part II: NTSB Investigation of a Major Accident
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Part I: Background Information on the NTSB

Background Information on the NTSB

NTSB's Mission

- Making transportation safer by conducting independent accident investigations, advocating safety improvements, and deciding pilots' and mariners' certification appeals.

Legislative Mandate

- Maintaining congressionally mandated independence and objectivity
- Conducting objective, precise investigations and safety studies
- Performing fair and objective airman and mariner certification appeals
- Advocating and promoting safety recommendations
- Assisting victims of transportation accidents and their families

What is the NTSB Authorized to do?

- Investigate each accident involving civil aircraft
- Investigate accidents in other transportation modes: highway, marine, rail, pipeline, and accidents involving transportation of hazmat
- Determine the facts, conditions, and circumstances of the accident
- Determine the cause or probable cause of the accident
- Serve as the “court of appeals” for airmen, mechanics, or mariners whenever the FAA or the USCG takes a certificate action (“Split enforcement”)

What is the NTSB Authorized to do?(cont.)

- Issue transportation safety recommendations
- Conduct safety studies
- Assist family members, friends, and survivors in the aftermath of an accident
- Advocacy – Most Wanted List of critical changes needed to reduce transportation accidents and safe lives
- Operates a Training Center for NTSB investigators and others from the transportation community to improve their practice of accident investigation techniques.

Structure of the NTSB

- By statute, 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.

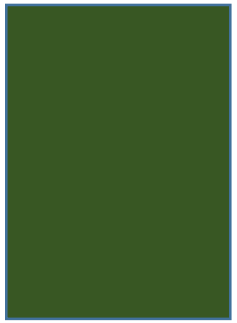
Earl Weener,PhD
Member

T. Bella Dinh-Zarr,PhD
Member

Robert L. Sumwalt
Chairman

Christopher A. Hart
Member

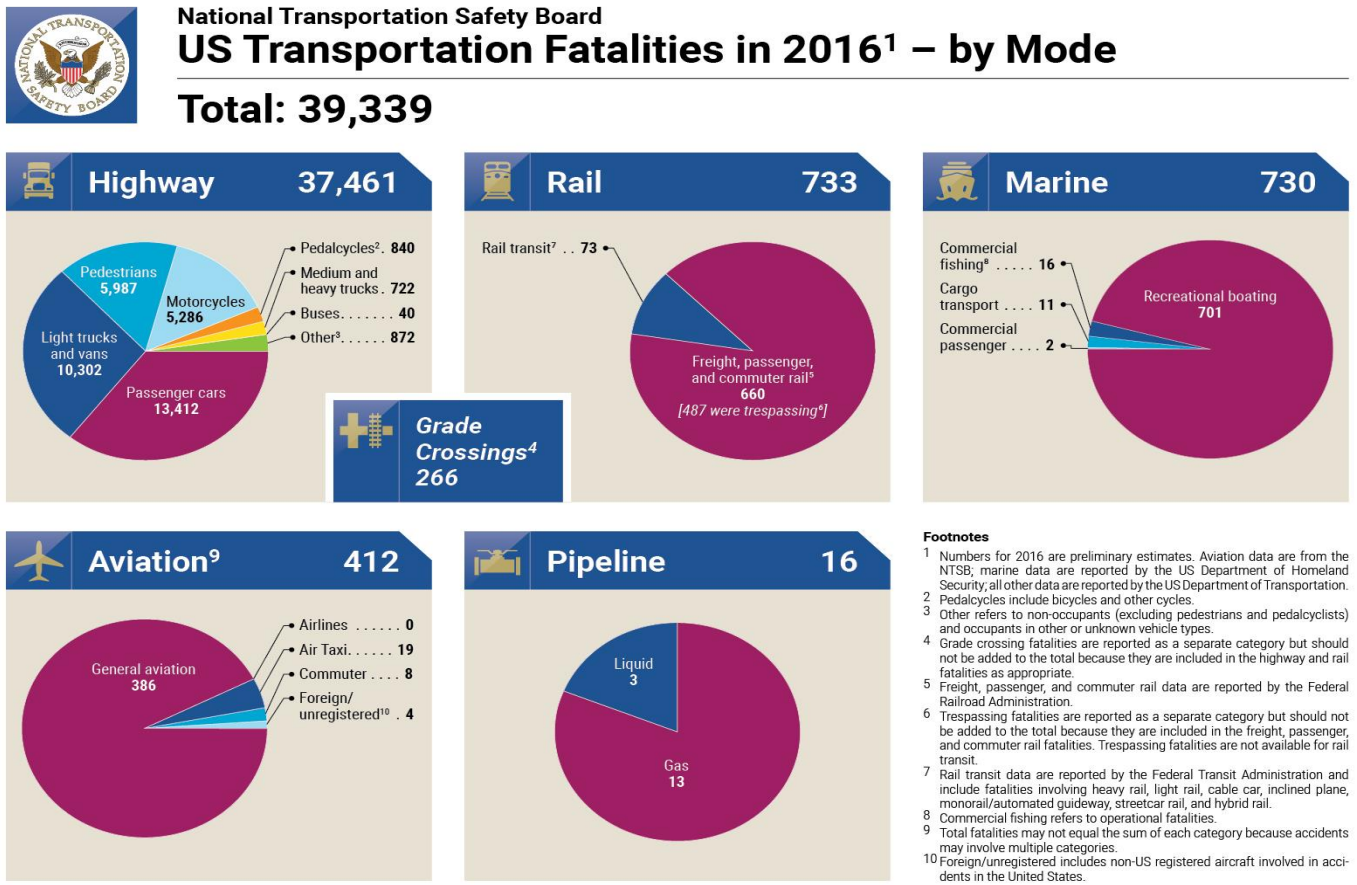
Vacant



Functions of Board Members

- Accompany “go-team” on major launches, serving as on-scene spokesperson
- Review and approve accident reports, probable cause determinations, and safety recommendations
- Serve as advocates of the NTSB's work before Congress and before federal, state, and local governmental agencies concerned with transportation safety

U.S. Transportation Fatalities by Mode- 2016



NTSB Resources

- NTSB employs ~428 personnel in headquarters, Alaska, Denver, Seattle, and Ashburn, VA
- NTSB FY 2018 Budget Request: $140M (annual)
- Compare:

  FAA 2018 Budget Request = $44M per day

  US DOT 2018 Budget Request = $208M per day

NTSB Reauthorization Bill, S. 2202

- Reported by Senate Commerce Committee on 12/13/2017
- Key provisions:
  - Would amend 49 U.S.C. § 41113 and 49 U.S.C. § 41313 to require family assistance plans of domestic air carriers' and foreign air carriers providing foreign air transportation, respectively, to address "any loss of life" rather the current "major [or in some places, "significant"] loss of life."
  - Would require the NTSB to provide assistance to families of passengers in any aircraft accident resulting in any loss of life *"in which the {NTSB] will serve as the lead investigative agency*."
  - Would require the NTSB, to the maximum extent practicable, to ensure that families of individuals involved in an aviation accident described in 49 U.S.C. § 1136 or a rail passenger accident described in 49 U.S.C. § 1139 are briefed about the accident and its causes prior to any public briefing about the accident.

NTSB Reauthorization Bill, S. 2202 (cont.)

- Would amend subsections (c) and (d) of 49 U.S.C. § 1114 to require the NTSB, in the course of making safety recommendations, to publicly disclose still images obtained from a video recorder provided that the agency protects from public disclosure any information that readily identifies an individual, including a decedent.
- Would require the NTSB to prepare a report describing "the methodology used to select recommendations to be included" in each Most Wanted List it issues. The report must include a description of: how the agency accounts for the "risk of safety addressed in each of its recommendations"; the types of data, reports, or studies used to identify safety risks; the reduction of the safety risk over time by implementation of each recommendation; alternate means of reducing the safety risk; the extent to which the agency considered prior investigations and safety recommendations or other actions in selecting each Most Wanted List recommendation.
- Would require the agency, within 2 years of enactment of S. 2202 to include in each investigative report that includes any safety recommendations a methodology section describing the "process and information underlying the selection of each recommendation."

NTSB Reauthorization Bill, S. 2202 (cont.)

- Would require the NTSB no later than June 1, 2019, and subject to public comment, to complete a “comprehensive review” of its safety recommendations classified as “Open”. The review of each recommendation would include consideration of public comments received, an assessment of whether the recommendation is “outmoded, unclear, or unnecessary” and a determination by the agency as to whether to update, close, or reissue the recommendation.

Part II:

NTSB Investigation of a Major Accident

NTSB Investigation of a Major Accident

1. NTSB Notified of an Accident
2. NTSB Collects Preliminary Information
3. Launch/No-Launch Decision made by Chairman, Board Member On-Call, Director of the modal Safety Office and staff, and other NTSB Executives
4. NTSB Chairman Call to Company CEO

On-scene ~ 1 week

- Fact Gathering and Evidence Collection
- Witness Interviews
- Investigator-in-Charge (IIC) issues subpoenas and designates Parties to the investigation
- Organizational meeting
- Establish Investigative Groups (*e.g.,* Highway Factors, Human Performance, Survival Factors, Recorders, Weather, Emergency Response, and Voice and Data)

The Party System, 49 CFR § 831.11

- NTSB conducts investigations under its party system
- Invites companies and organizations to become parties to the investigation
- Leverages technical expertise
- Each Party must sign a *Certification of Party Representative* (available at: https://www.ntsb.gov/investigations/process/Documents/NTSB_Investigation_Party_Form.pdf)

The Party System, 49 CFR § 831.11 (cont.)

- Parties are limited to those persons, gov't 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.

The Party System, 49 CFR § 831.11 (cont.)

- Excluded from Party System is: "any person who also represents claimants or insurers," and any person who occupies a "legal position." § 831.11(a)(3).
- The investigator-in-charge (IIC) and the Office of General Counsel work with insurance personnel and attorneys consistent with investigative needs to:
  - Permit establishment of claims
  - Share investigative plans
  - Release wreckage, if possible, with approval of the owner
  - Provide factual information given to family and press

Role of NTSB Office of General Counsel in Support of Accident Investigations

- Assists with on-scene legal issues
- Explains the NTSB party system and information sharing issues to party counsel
- Communicates with local prosecutors, state attorneys general, US Attorney Offices
- Signs subpoenas (several hundred issued per year)
- Advises on evidence and wreckage handling issues and family assistance issues

After On-Scene Work is Completed

- Additional Fact-Gathering Continues
- Modal Safety Office issues a public preliminary report within several weeks after the accident
- Modal Safety Office recommends to the Board whether or not an investigative hearing is needed to obtain additional facts
- Once fact-finding is completed, Modal Safety Office shares final drafts of Group Chairmen's factual reports with opportunity for Parties to submit comments (Technical Review)

Post Evidence Gathering Phase:

- Analysis Phase Commences – NTSB only; no participation by Parties
- Analysis work typically includes work by the NTSB's Materials Laboratory Provision, Voice and Data Recorders Division
- Modal Safety Office prepares draft Board Accident Report for internal "Directors' Review" prior to Board Member review

Post Evidence Gathering Phase (cont.):

- Draft Report consists of Factual Information, Analysis, Findings, Probable Cause Statement, and Recommendations
- Approximately 8 weeks prior to submission of draft report for Board Member review, Office of Aviation Safety opens public docket

Pre-Board Meeting Phase

- Each Board Member may separately meet with staff to discuss the draft Board Accident Report. Also, Board Members submit written comments to staff
- Agency publishes Sunshine Act meeting notice in the *Federal Register* announcing time and date on Board Meeting to deliberate and vote on the Board Accident Report.

TIP: Prior to the Board Meeting, the Manufacturer, OEM, or Operator may schedule a meeting with Board Members individually to discuss the accident. Modal Safety Office staff and General Counsel staff will likely attend these meetings

Board Meeting Phase

- Board meets in public session to deliberate and vote on the proposed findings, statement of probable case, recommendations, and the Accident Report
- Board Members may reserve the right to file concurring and/or dissenting statements
- The full report typically appears on the web site several weeks later

Post-Board Meeting Phase

- Petitions for Reconsideration (PfR): A Party of other person having a direct interest in the investigation may submit a PfR based on the discovery of new evidence or on a showing that the Board's findings are erroneous. **(See 49 CFR §845.32).**

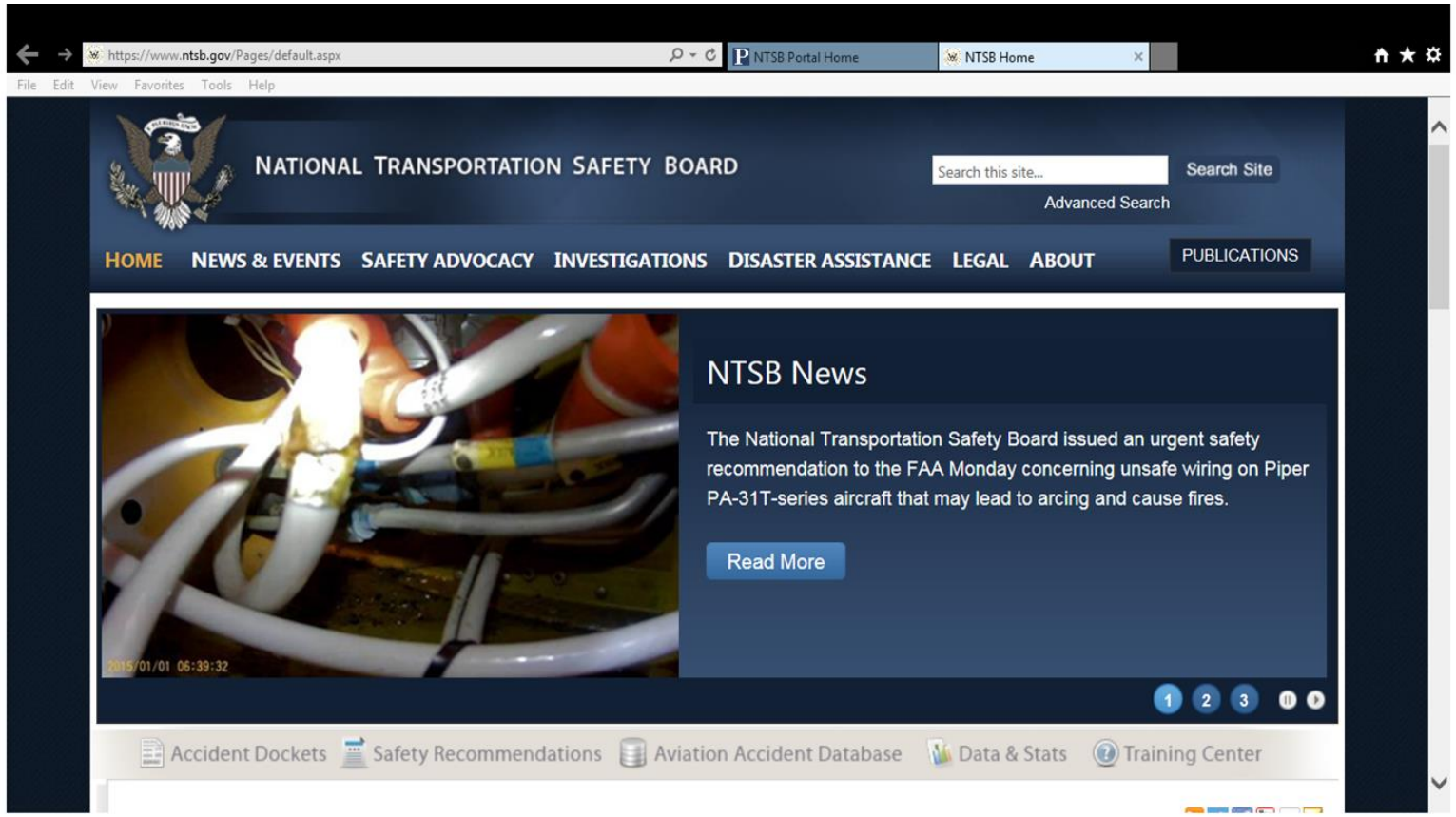
NTSB Investigation of a Major Accident (cont.)

- 49 U.S.C. § 1154(b): “No part of a report of the Board, related to an accident or an investigation of an accident, may be admitted into evidence or used in a civil action for damages resulting from a matter mentioned in the report.”

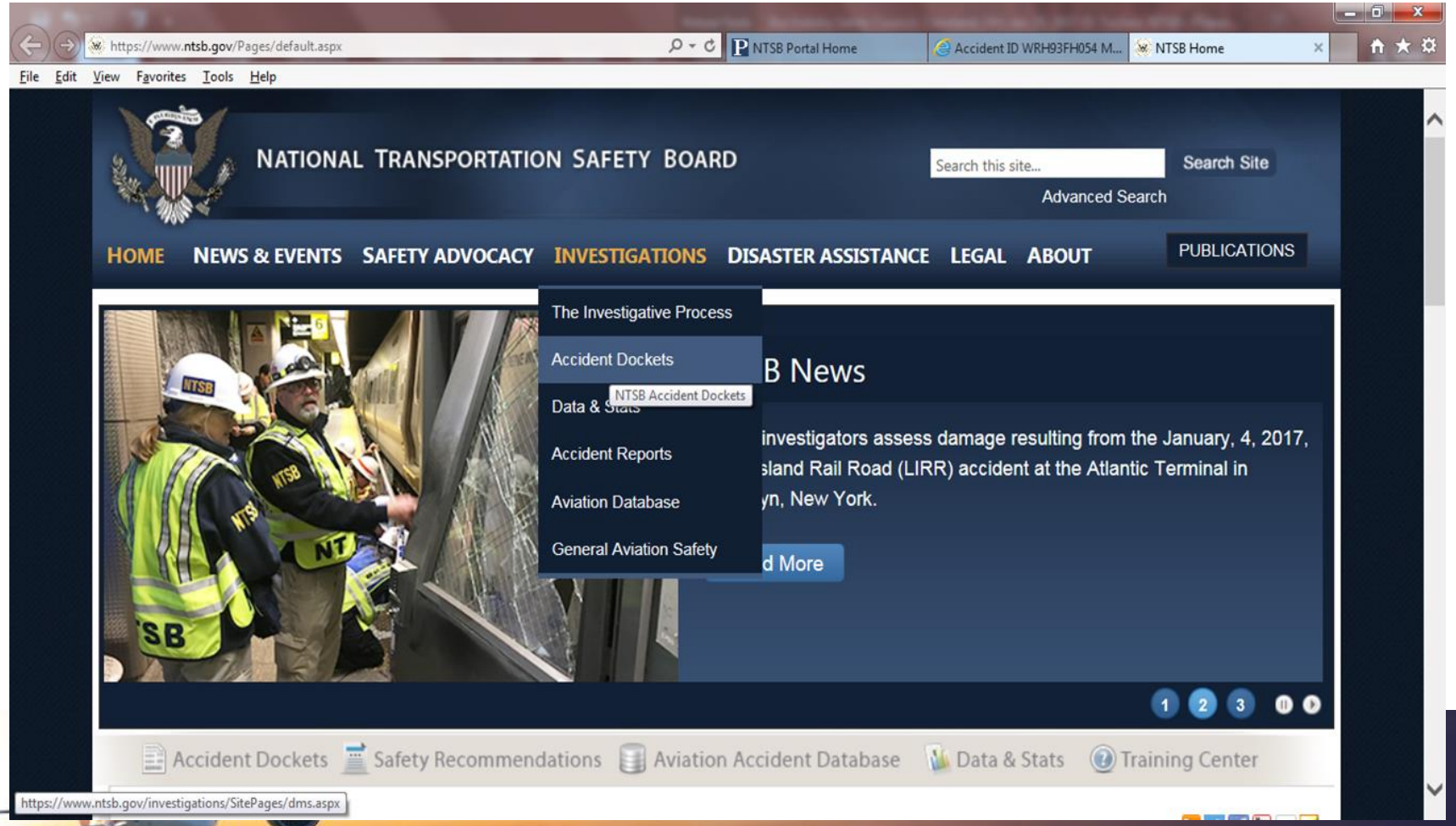
BUT: NTSB Factual Reports are admissible as evidence in court.

Part III: Public Dockets

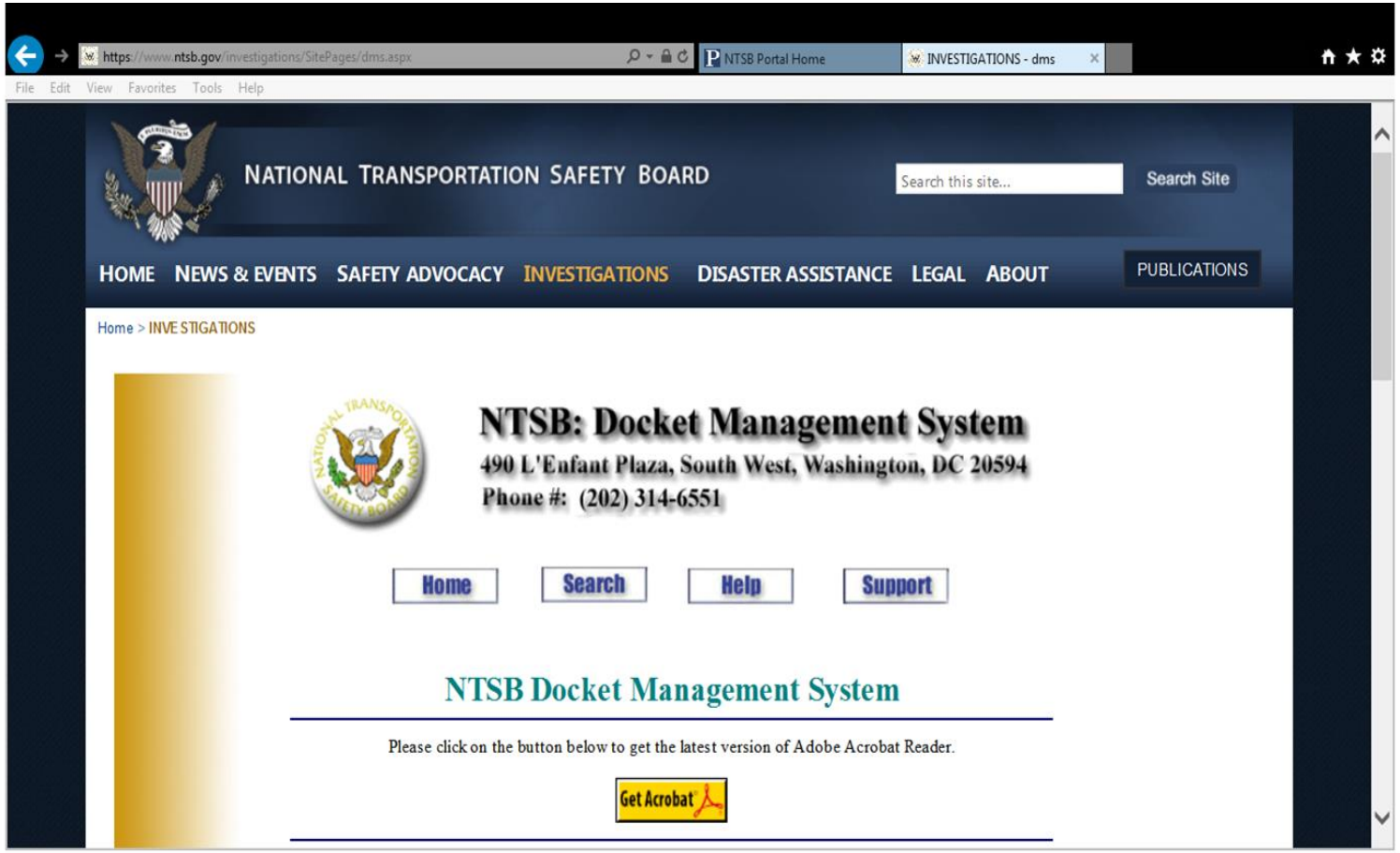
Public Dockets



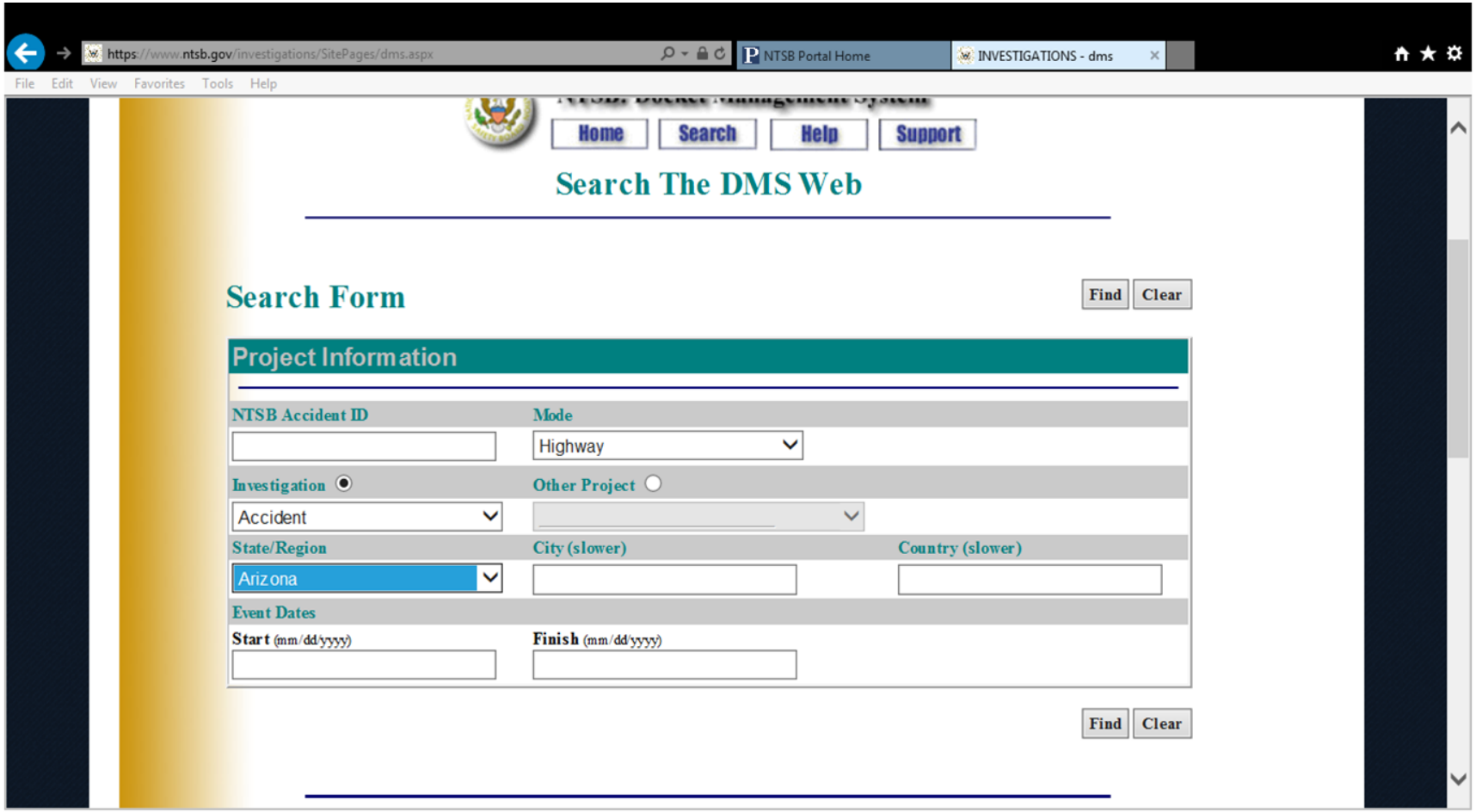
Public Dockets



Public Dockets



Public Dockets



Public Dockets

Part IV: References

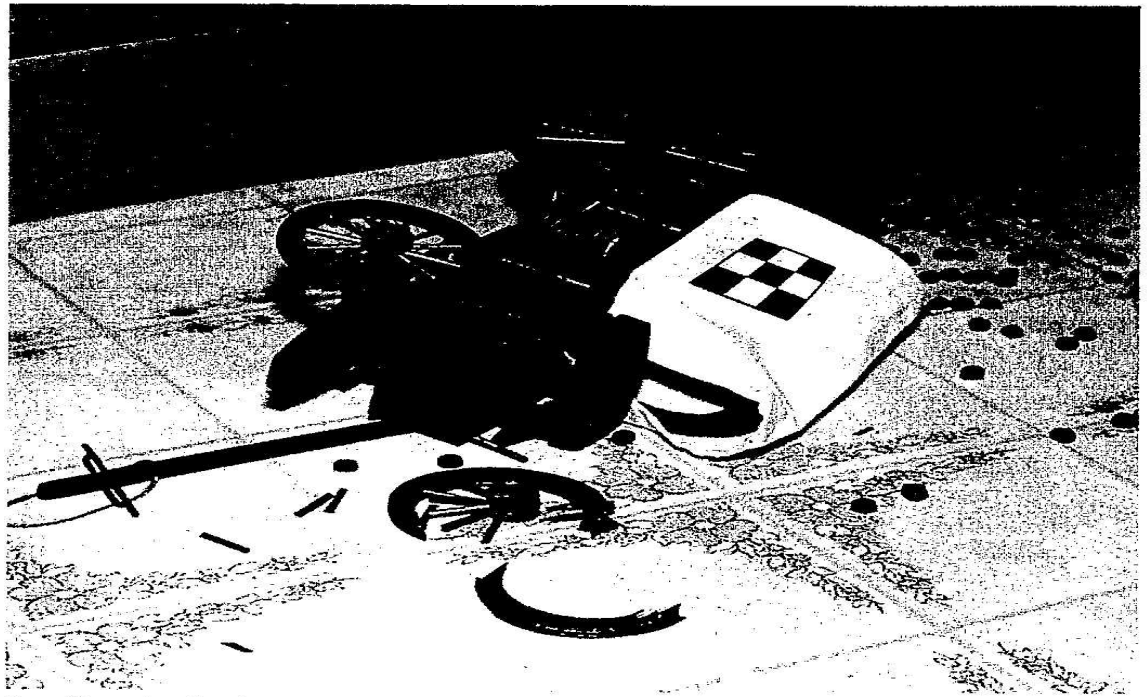
References

- LeClair Ryan's *Plane-ly Spoken* blog (https://plane-lyspoken.com)
- NTSB Statutory Authority: 49 U.S.C. chapter 11 (sections 1101-1155)
- NTSB Regulations: 49 C.F.R. chapter VIII (49 C.F.R. parts 801-850).
  - See, in particular, revisions to 49 C.F.R. part 831, Investigative Procedures, revised (as published in the *Federal Register* on June 29, 2017 (82 FR 29670)
  - Note: The above-referenced revisions do not include procedures for marine investigations. Marine investigations are addressed in a separate interim final also published in the *Federal Register* on June 29, 2017 (82 FR 29690)
- NTSB, Fiscal Years 2018-2022 Strategic Plan (December 2017), available at: https://www.ntsb.gov/about/reports/Documents/FY2018-2022strategicPlan.pdf
- NTSB Fiscal Year 2018 Budget Request (May 2017), available at: https://www.ntsb.gov/about/reports/Documents/FY18_NTSB_CongBud.pdf
- NTSB 2017-2018 Most Wanted List, available at:
- https://www.ntsb.gov/safety/mwl/Pages/default.aspx
- S. 2202, the National Transportation Safety Board Reauthorization Act, available at: https://www.commerce.senate.gov/public/index.cfm?a=Files.Serve&File_id=3408223B-5681-41CD-8AD6-434FCDEE1AAC

From February 12, 1998

INVESTIGATION

Family Dog Suspected Cause Of Miniature Chuck Wagon Disaster



Above: The wreckage from last week's fatal miniature-chuck-wagon crash in a San Jose, CA, kitchen. Investigators have ruled out driver error and now believe the disaster to be dog-related.

SAN JOSE, CA—Though Federal Microvehicular Safety Administration officials stressed that it is too early to draw definitive conclusions, a family dog is widely regarded as the probable cause of the miniature-chuck-wagon disaster that shocked the nation Wednesday.

According to an FMSA report released Monday, the crash—which resulted in the deaths of the chuck wagon's miniature driver and four passengers, as well as the loss of more than one pound of hearty Chuck Wagon-brand gravy-flavored dog-food cargo and a team of four miniature draft horses—is in all likelihood attributable to the presence of one or more pet dogs in the kitchen at the time of the accident.

"Preliminary studies of the chuck-wagon wreckage, combined with analysis of data recovered from the minuscule carriage's 'black box,' strongly suggest that, unknown to chuck-wagon traffic controllers monitoring the wagon's progress, the kitchen was occupied by at least one pet animal, probably a dog, which pursued and overtook the chuck wagon in the final moments before it vanished from radar screens," FMSA chief

see CHUCK WAGON page 7

CK WAGON from page 1

ncent Renaldo said.

In the 48 hours immediately following the aster, safety investigators examined a de variety of on-site evidence. The chuck gon's original fuselage, scattered across an approximate eight-tile area of linoleum in the "breakfast nook" region of the kitchen, was painstakingly reassembled by FMSA investigators in an attempt to better understand the events leading up to the crash.

The rebuilt chuck wagon's key structural elements—particularly the glue-fastened wooden dowels used as tiny spokes in the load-bearing miniature wagon wheels, the itsy-bitsy swing-axle steering rack, and the teensy-weensy whip used to make the miniature horses accelerate in times of danger—were then subjected to a battery of stress tests in an effort to determine whether equipment failure or driver error was to blame.

While the tests are still not complete, FMSA officials say the discovery of a two-inch "bite radius" breaching the chuck wagon's hull indicates severe canine mastication, strongly supporting the dog-attack hypothesis.

"The old saw about how 'the great taste of Chuck Wagon stops dogs in their tracks' has taken on grim new overtones in light of these findings," Renaldo said.

Though Chuck Wagon Transit Authority officials insist that proper safety procedures were followed during the chuck wagon's fateful final voyage, a number of dog-food-industry whistleblowers are coming forward in the wake of the crash, insisting that such a tragedy was inevitable, given the CWTA's longtime failure to address serious driver-safety issues.

"This sort of thing happens all the time," said former miniature-chuck-wagon driver Randall "Tex" West, who claimed he was fired by Chuck Wagon Transit after refusing to do any more kitchen runs until the dog problem was addressed. "I can't tell you how many times a chuck wagon will tear through a kitchen, hell-bent for leather, hootin' and hollerin' to beat the devil, with a happy, hungry hound right on its tail, just inches behind."

Above: Scruffers.

Continued West: "A lot of these drivers consider it kind of a 'macho' thing to see how close they can cut it before zipping under the kitchen counter into the dog-food bag at the last minute, leaving the puzzled mutt wondering where all them tasty treats disappeared to. Sure, it seems kind of funny at first, the way the dog looks around and blinks, like it can't figure out where that old chuck wagon up and went all of a sudden. But when something like this happens, it's a damn shame."

Two-inch-tall wagon-driver Roy "Speedy" Sanders agreed, but noted that thrill-seeking drivers are not the only reason for the increased risk of accidents. According to Sanders, ever-increasing dog-food delivery quotas leave drivers with no choice but to speed.

"It's impossible to pull off the typical dog-food-delivery schedule and meet federal safety standards at the same time," Sanders said. "Every day, in kitchens across the U.S., drivers run their teams at full gallop through routes that traffic control knows damn well are dog-occupied. But the traffic controllers look the other way, because if they didn't, delivery quotas would never be met. Drivers whip their teams up to full speed and chance it, hoping either to outrun or out-maneuver the dog, figuring they can always pivot at the last minute and send the animal sliding across the linoleum if it gets too close. That way, management is happy, and they get to keep their jobs."

Though Chuck Wagon Transit authorities have cooperated with investigators, the group's official position remains that Wednesday's crash was an isolated incident that is in no way symptomatic of a larger safety problem.

FMSA investigators are not so certain.

"The kitchen in question is a well-established nap-zone for a mid-sized dog named Scruffers, and we have solid evidence demonstrating that the driver regularly made a practice of exceeding his wagon's per-axle cargo limit by as much as 20 to 30 bite-sized chunks," FMSA Special Investigator Richard Sobell said. "Dogs like Scruffers can't corner as well as chuck wagons on your basic no-wax kitchen-tile surfacing; their greater mass gives them more inertia, making it harder for them to turn, especially if they're running at a full sprint."

"Ninety-nine times out of a hundred, your skilled miniature-wagon handler can pull it off," said Sobell, looking out over the crash site. "But that hundredth time? That's the one these hot-shot drivers need to start seriously thinking about." ⌀

Thank You