S. HRG. 109–1145

# REAUTHORIZATION OF THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB)

## HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

## COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

MAY 24, 2006

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ONE HUNDRED NINTH CONGRESS

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# REAUTHORIZATION OF THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB)

**WEDNESDAY, MAY 24, 2006**

U.S. SENATE,
SUBCOMMITTEE ON AVIATION,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
*Washington, DC.*

The Committee met, pursuant to notice, at 8:55 a.m. in room SD–562, Dirksen Senate Office Building, Hon. Conrad Burns, Chairman of the Subcommittee, presiding.

## OPENING STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Senator BURNS. We'll call the Committee to order. I assume that I'll have some colleagues come by. Looks like we're going to have a 9:30 vote, of all things, and, you know, Senators don't even wake up until about 11:30, so there may be lots of votes changing. You know, the brain doesn't wake up until about noon and mine has the problem of, "you think you're early don't you?"

[Laughter].

Senator BURNS. But, I thought we'd get started, and I think Senator Lautenberg and Senator Snowe will be here later on. I appreciate the witnesses coming at 9 a.m. this morning, I realize it's a little early for the hill to start, but not for you. You folks are already at work, we don't have to call you up. But nonetheless, you do have to call the rest of us. Although, if I had my druthers, I'm a farm broadcaster and worked around the stockyards all my life and any time after, any time, if you haven't got your work done by 8:30 or 9 a.m. in the morning, you're just doing nothing but burning daylight, and so we like to get up and get around.

I'll just have a short statement this morning, and I appreciate the early hour of you all coming. Today, we review the authorization, or the reauthorization of the National Transportation Safety Board. It's an independent agency determining the probable cause of transportation accidents and promoting transportation safety. The Agency has played a key role throughout the years in improving the safety of the traveling public across all modes and across this land.

Since the 1960s, the NTSB has investigated more than 124,000 aviation accidents, at least 10,000 accidents in other transportation modes, including rail, pipeline, maritime, and highways. Through those investigations, the Board has issued 12,000 safety recommendations, and more than 82 percent of those have been adopted by the regulatory and transportation communities.

The Board reauthorization runs out on October 1 of this year. That's the reason that we're moving ahead to make sure that it gets done, and, therefore, in coordination with Senator Lott, and the members of the Surface Transportation Subcommittee, we will soon produce a NTSB Reauthorization bill. So, I am hopeful that we can move that bill through Congress and complete our work by the October deadline. I look forward in working with all my Co-Chairmen on this committee to get it out.

I believe a timely review of the NTSB is important. The Committee is confident that proper management practices are in place at the Agency, and effective use of taxpayer dollars are ensured. The Committee has had questions regarding accident investigator staffing levels, usage of NTSB Academy, and the timeliness and process of investigations, and we appreciate Dr. Dillingham being here this morning and the work that he has done on this. I don't know if anybody in this town knows more about the NTSB than Dr. Dillingham. I will tell you that every Committee that we've ever talked about, well he has always been a part of that, and I appreciate your work and your institutional knowledge is terrific.

With that, I appreciate our witnesses coming early this morning as we get into this business of reauthorization.

And, first off, we want to welcome Mark Rosenker, the Acting Chairman of the NTSB to the table this morning and thank you for coming, and thank you for the visit in my office and we appreciate your energy and your efforts with regard to this vital part of government. Thank you for coming, looking forward to your statement.

**STATEMENT OF HON. MARK V. ROSENKER, ACTING CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD**

Mr. ROSENKER. Thank you, Mr. Chairman. Good morning. As Acting Chairman of the National Transportation Safety Board, I'm pleased to appear before you today in support of our request for reauthorization. I've submitted a more comprehensive statement for the record.

Senator BURNS. Well I, let me say that there'll probably be some questions coming because we've only got this half hour and your full statement will be made part of the record, and then any questions will come after we close this session this morning. You can respond to the Committee and to the individual Senator if you would please.

Mr. ROSENKER. I'd be delighted to do that, sir.

Senator BURNS. Thank you.

Mr. ROSENKER. I'm very proud of the National Transportation Safety Board. For nearly four decades the NTSB has been at the forefront of transportation safety issues. The Board enjoys a well earned reputation as the most effective and authoritative independent safety body in the world. The men and women who make up the NTSB, very simply, are the best in the business. I am privileged to be serving as Acting Chairman, and particularly honored that President Bush has recently sent my nomination to be Chairman of the NTSB to the full Committee for your consideration.

Our critical mission is to investigate transportation accidents, to determine what happened, and why, and make recommendations

so that future accidents can be prevented. My job is to ensure that the Board maintains the technical staff and investigative tools that are needed to confidently and efficiently conduct the thorough and unbiased investigations that the public deserves and the Congress has come to expect.

Since our last reauthorization, the Board has investigated more than 4,500 aviation accidents and hundreds of surface transportation accidents. During this time, we published more than 5,000 aviation accident briefs, 12 major aviation accident reports, 19 highway accident reports, 31 railroad reports, 10 marine reports, 5 pipeline reports, 4 hazardous material reports and 7 other studies in special reports.

Since the beginning of this fiscal year, excuse me, since Fiscal Year 2003, our laboratories have read out 187 flight data recorders, 203 cockpit voice recorders, and performed 458 wreckage examinations. During this time, the Board has issued more than 450 safety recommendations.

We've also made some significant leadership changes at the Board. In March 2005, Joe Osterman was appointed our new Managing Director with new senior leadership and the support of our Board Members, the NTSB has reinvigorated its focus on the completion of investigations and the production of accident reports.

During the past year, the Board has changed personnel in 14 of the top 24 leadership positions, and we are currently actively recruiting a Chief Information Officer, who will join the agency's management team with the responsibility of managing the agency's information infrastructure. We are tightening the performance management system throughout the agency and have focused our efforts on leadership, communication, and the Board's core mission.

The Safety Board is asking for authorized resource levels capable of funding 399 full-time equivalent positions in Fiscal Year 2007, and 475 FTEs in both Fiscal Years 2008 and 2009. We also have a few other proposals. The Board's last reauthorization legislation provided the authority for the NTSB to enter into contract, without competition when necessary, to expedite an investigation.

We are grateful to have been entrusted with this special exemption to competitive contracting rules. We have judiciously used this authority—mostly for relatively small contracts for investigative services. This important authority expires September 30 in 2006 and we are asking that this sunset provision be deleted so the special contracting authority becomes a permanent part of our legislation.

The Board also asks to be authorized to handle reimbursements in the same manner it currently handles Academy course fees. Occasionally, we are reimbursed by third parties for accident services for those parties who are required to provide, such as disaster mortuary services, and we sometimes agree to conduct accident investigations on a reimbursable basis. Without legislative change, these reimbursements often must be re-deposited into the Treasury, unavailable for use by the Board. We are asking that we be allowed to treat reimbursement as "no year" money, so that these funds remain available until expended.

The Board has a proposal that concerns the paying of services for the DOT Inspector General. As you know, the Inspector General is

authorized to review the financial management, property management, and business operations of the Board. The IG is reimbursed by the Board for the costs associated in carrying out these activities. We are asking that, in lieu of the Board reimbursing the IG, the IG's Office should be appropriated directly for these activities. This would facilitate better resource management, and I am pleased to report that the DOT Inspector General concurs with this proposal.

Our last proposal concerns how to authorize appropriations for our training center, as part of the broader authorization for the agency. Rather than as a separate or distinct entity, we're actively working to more fully integrate the center into our overall mission and programs, and we believe that a single authorization is consistent with this goal. In addition, we propose incorporating the content of the Training Academy's annual report into the Board's annual report to Congress.

When we were last reauthorized, our Training Academy in Ashburn, Virginia, was not yet open. Although it has been operational for just two years, we are pleased that the Academy has made great strides in developing and delivering high quality programs for the transportation community. During Fiscal Year 2005, we offered 31 programs, 14 of which were designed specifically for NTSB employees. Over 1,600 participants attended these programs and the Board collected almost a half a million dollars from tuitions and fees from the attendees.

Nonetheless, the Safety Board senior management has significantly revised the philosophy for the Academy, and has created a plan to develop and sustain programs through partnerships and contracting opportunities that will reduce the demands on NTSB investigative resources. The Academy will rely more heavily on outside instructors, and it will provide greater training opportunities for all NTSB staff.

We will also work with and review the operations of other government facilities to ensure that we benefit from their experiences and best practices. One of our goals is to more tightly integrate the Academy into the Safety Board's operation and ongoing work.

As I close, I want to assure you that we are working hard to guarantee the American people that the resources of the Board are well managed. In fact, I am proud to tell you that in each of the last three fiscal years, our timely and accurate financial statements have received clean audit opinions. Important things are happening at the Safety Board every day, but we need the continued support of Congress to ensure we continue to achieve our goals. I thank you, Mr. Chairman, for the opportunity to appear before you today, and I'm happy to respond to any questions you or the Committee may have.

[The prepared statement of Mr. Rosenker follows:]

PREPARED STATEMENT OF HON. MARK V. ROSENKER, ACTING CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD

Good morning, Chairman Burns, Ranking Member Rockefeller, and members of the Aviation Subcommittee. As Acting Chairman of the National Transportation Safety Board, I am pleased to appear before you today in support of our request for reauthorization. I am delighted to be serving as Acting Chairman of the NTSB at such an important time at the Board. As you know, the Safety Board has a critical

mission: We investigate transportation accidents to determine what happened and why—not so that we can assign blame or determine fault. Rather, we do this work so that future accidents can be prevented. The core mission of the Safety Board has remained the same since the Board's inception in 1967. We are, however, reframing our efforts and activities on that core mission, by examining all of our programs and activities to ensure that we are diligently focused on conducting accident investigations and issuing safety recommendations. Transportation accidents are increasingly complex, and the tools and technology available for accident investigation are also increasing in sophistication. However, we intend to ensure that despite these changes, our emphasis remains on quality investigations and timely safety recommendations that prevent transportation accidents, and reduce the deaths and injuries resulting from accidents that do occur. Our job is to work with you to ensure that the Board maintains the technical staff and investigative tools that are needed to confidently and efficiently conduct the thorough and unbiased investigations that the public deserves.

**Safety Board Activity**

Let me give you a brief overview of what the Board has accomplished since our last reauthorization. Since the beginning of Fiscal Year 2003, the NTSB has held 6 public hearings and 47 Board meetings. We adopted 56 reports at those Board meetings. We also investigated more than 4,500 aviation accidents, and hundreds of surface transportation accidents. During this time, we published more than 5,000 aviation accident brief reports, 11 major aviation accident reports, 19 highway accident reports, 32 railroad reports, 11 marine reports, 5 pipeline reports, 4 hazardous materials reports, and 8 other studies and special reports. Since the beginning of Fiscal Year 2003, our laboratories read out 187 flight data recorders, 203 cockpit voice recorders, and performed 458 wreckage examinations. During this time period, the Board issued more than 450 safety recommendations (about 45 percent pertain to aviation, and the remaining recommendations pertain to surface transportation). Already, 67 (about 15 percent) of these recommendations have been successfully implemented.

On March 7, the Board held a meeting to consider two accident investigation reports: the capsizing of a water taxi in Baltimore, Maryland, and the crash of a Sikorsky S–76 helicopter in the Gulf of Mexico, about 70 nautical miles from Galveston, Texas. Five of the 23 water taxi occupants were killed, and all 10 of those aboard the helicopter died in that accident.

Some of the other investigations that we concluded since our last reauthorization include:

- The January 6, 2005, collision of two Norfolk Southern trains in Graniteville, South Carolina,which resulted in the release of chlorine gas from a breached tank car, and killed 9 people.
- The November 28, 2004, crash of a Canadair Challenger airplane during takeoff from Montrose Regional Airport, Colorado. There were 6 persons aboard, 3 of whom were killed. Among the passengers were NBC television executive Dick Ebersol and members of his family.
- The October 24, 2004, crash of the Beech King Air that was transporting employees of Hendrick Motorsports. The airplane crashed while attempting to land at Martinsville, Virginia. All 10 persons aboard the airplane died.
- The October 19, 2004, crash of Corporate Airlines Flight 5966, a British Aerospace "Jetstream" that crashed short of the runway while attempting to land at Kirksville Regional Airport, Missouri. The 2 pilots and 11 of the 13 passengers were killed.
- The October 15, 2003, accident involving the Ferry *Andrew J. Barberi,* which struck a maintenance pier at the Staten Island Ferry terminal. Eleven passengers died and 70 were injured.
- The October 12, 2003, Chicago, Illinois, Metra commuter derailment that resulted in 3 injuries and more than $5,000,000 dollars in damage.
- The October 1, 2003, tractor-trailer collision with a specialty bus that killed 8 elderly passengers in Hampshire, Illinois.
- The February 14, 2003, accident in which a motorcoach crossed a highway median in a rainstorm striking an SUV and killing 7 in Hewitt, Texas.
- The Beechcraft King Air that crashed near Eveleth, Minnesota, on October 25, 2002, killing all 8 people aboard, including Sen. Paul Wellstone.
- The May 26, 2002, accident that resulted when the towboat *Robert Y. Love* rammed a pier supporting the Interstate 40 bridge over the Arkansas River

near Webbers Falls, Oklahoma. The impact collapsed a 503-foot section of the bridge, which fell into the river and onto the barges below. The accident resulted in 14 fatalities and 5 injuries.

- The November 12, 2001, crash of American Airlines flight 587, an Airbus A300, which crashed into a Queens, New York, neighborhood shortly after taking off from John F. Kennedy International Airport. All 260 people aboard the plane died, as did 5 persons on the ground. This is the second deadliest aviation accident in American history.

The Board also issues special reports and studies. For example, since we were last reauthorized, we issued a safety report on the Rollover Propensity of 15-Passenger Vans. Also, we issued a special report on medical oversight of noncommercial drivers. Late last year, we published a study on liquid pipeline control and data acquisition systems, and we also published a study on general aviation flights in bad weather. In January of this year, the Board issued a special report on emergency medical services (EMS) flights that resulted in a number of safety recommendations to the FAA. We undertook the special report after investigating fifty-five EMS accidents over the three-year span between January 2002 and January 2005.

We also have a number of important accident investigations in progress. These include:

- The February 8, 2006, fire involving a UPS DC–8 cargo airplane at Philadelphia International Airport.
- The December 19, 2005, Chalk's Airlines passenger seaplane accident in Miami, Florida, that killed all 20 on board.
- The December 13, 2005, natural gas explosion in Bergenfield, New Jersey that killed 3.
- The December 8, 2005, Southwest Airlines runway overrun at Chicago's Midway airport that killed a six-year-old boy who was an automobile passenger.
- The October 2, 2005, tour boat *Ethan Allen* capsizing in Lake George, New York, which resulted in 20 deaths.
- The September 23, 2005, bus fire near Wilmer, Texas, that killed 23 people who were being evacuated due to Hurricane Rita.
- The February 16, 2005, accident in Pueblo, Colorado, involving a Circuit City Cessna Citation 560 corporate jet. The 2 pilots and 6 passengers were killed in the crash.
- The February 2, 2005, accident involving a Canadair CL–600 corporate jet, at Teterboro Airport in New Jersey. The airplane overran the runway during an aborted take-off resulting in 4 seriously injured persons.

In addition to domestic accidents, the Board often sends investigators to other countries to investigate aviation accidents, and I want to highlight this important responsibility. When a U.S.-manufactured, U.S.-registered, or a U.S.-operated aircraft is involved in an accident overseas, the Safety Board leads the U.S. participation in the investigation. Each year, our investigators participate in about 20 major foreign aviation accidents. For example, in August of last year, the Board sent a team to participate in the investigation of a Sikorsky S–76 helicopter that crashed into the Baltic Sea off the coast of Estonia. Also last year, the Board sent investigators to participate in the investigation of an Airbus A340 runway overrun in Toronto, and Boeing 737 crashes in Indonesia, Nigeria, and Greece. Also, last summer, the State Department asked the Board to send a team to assist in the investigation of the crash of a Russian-built M–172 helicopter near the Sudan/Uganda border. The crash killed 14 people, including Sudan's First Vice President John Garang. Our involvement in this investigation has helped allay fears among the Sudanese people that the aircraft was brought down by a criminal act. Our foreign work is vitally important to aviation safety because some countries may lack the technology and expertise that we possess, and it protects U.S. interests by ensuring that a proper and fair investigation results when American-built and American-registered aircraft are involved in accidents in other countries. Also, because many of the accidents that happen in other countries could have happened here, our participation in these investigations results in major safety improvements for the domestic fleet.

Each investigation is important, but our goal is preventing future accidents, saving lives, and reducing injuries. That is why we often say that safety recommendations are our most important products. Each year, the Board meets to determine which of its open recommendations should appear on its list of Most Wanted transportation safety improvements. Our 2006 Most Wanted list includes several aviation safety recommendations to the Federal Aviation Administration (FAA), urging them

to reduce the dangers of in-flight icing, eliminate flammable vapors in transport category airplane fuel tanks, prevent runway incursions, require restraints for children under age two, and to improve the crashworthiness of recorders. The most important safety improvement needed for our country's railroads is positive train control. If the Federal Railroad Administration (FRA) required positive train control systems, it would prevent collisions and overspeed accidents. The Most Wanted safety improvements for the highway mode include improving motor carrier safety, preventing medically unqualified drivers from operating commercial vehicles, and enhancing the protection of bus passengers. The list also includes recommendations to the Department of Transportation (DOT) modal administrations to update the hours of service rules for transportation workers. In addition, our Most Wanted list includes recommendations to the states to enact laws that promote seatbelt usage, ensure child occupant protection, improve youth highway safety, and to eliminate hard-core drinking and driving. The list also includes recommendations to improve school bus safety and make grade crossings and recreational boating safer.

Although open safety recommendations are important, standing alone they do not represent safety improvements. The results that we need are the actions of industry and government representatives to improve safety by implementing the Board's recommendations. When the recipients of the Board's recommendations respond, we carefully consider the actions taken, and, if appropriate, close the recommendations by majority vote of the Board Members.

When we appeared before you during our last reauthorization cycle in 2002, the Board had more than 1,100 open safety recommendations, and that many had been open for several years. About half of the open recommendations were to the DOT and its modal administrations. We have been working with all of the modal administrations to implement the recommended safety actions, and to close the old recommendations. I am pleased to report that our safety recommendation acceptance rate is over 82 percent, and in 2005, the Board reduced the number of open safety recommendations to 810, the lowest number since 1971. We are proud of these numbers, but remain committed to holding our ground on each recommendation, ensuring that the most sensible safety actions are implemented.

Another issue that we pointed out to you when we last came forward for reauthorization was the state of relations between the Safety Board and the Coast Guard. At that time we had been working on a Memorandum of Understanding (MOU) for six years without being able to come to an agreement on investigating marine accidents. There was a need for a closer and more productive working relationship. I am pleased to tell you that the memorandum was finalized and signed in September 2002, and the MOU is working quite well. More importantly, our relations with the Coast Guard have improved tremendously in the last few years, and we look forward to continued partnership in the years to come.

When we were last reauthorized, our Academy in Ashburn, Virginia, had not yet opened. In September 2003, the Academy staff took up occupancy in the new building, which has 5 classrooms, office space, a large laboratory to house the TWA flight 800 reconstruction, and other laboratory spaces and meeting rooms. The facility is also home to one of our aviation regional offices. Finally, it also serves as the Board's continuity of operations (COOP) site, and as a backup COOP site for two other Federal agencies.

A part of the Academy's mission is to provide training on transportation safety and accident investigation. Since the Academy became operational, its staff has focused primarily on improving and expanding existing programs. In response to Congressional concerns about the use of investigative resources to support Academy courses, in 2006, Safety Board management significantly revised the philosophy for the Academy. We will focus upon developing and sustaining innovative and state-of-the-art training courses and programs. The Board will explore partnership and contracting possibilities that will yield higher returns, with decreased demands on NTSB investigative resources by relying more heavily on instructors from academia, government, and the private sector. This will also provide greater training opportunities for all NTSB staff. We also plan to establish a Training and Academic Oversight Board composed of senior NTSB staff. The Oversight Board will oversee the curriculum developed by contractors and other third parties. We will also work with and review the operations of other government training facilities to ensure that we benefit from their experience and best practices. One of our goals is to more tightly integrate the Academy into the Safety Board's operation and ongoing work. To reflect this change in emphasis, we are considering changing the name of the facility to the NTSB Training Center.

Although it has been operational for just over two years, we are pleased that the Academy has made great strides in developing and delivering high quality programs that are highly relevant to the transportation community. During Fiscal Year 2005,

we offered 31 programs, 14 of which were designed primarily for NTSB employees. Over 1,600 participants attended these programs, and the Board collected almost half a million dollars from tuitions and fees from the attendees, which included representatives from organizations like National Aeronautics and Space Administration's Engineering and Safety Center, Federal Bureau of Investigation's Evidence Response Team, and the Civil Aviation Administration of China. This new strategic and management vision will position the training center to move forward and to better serve the needs of the Board and its staff.

I want to take a moment to assure you of our continued commitment to investigating general aviation accidents. There has been some concern that we are not investigating as many general aviation accidents as we should. But I want you to know that we lead an investigation into every one of the nearly 1,800 general aviation accidents that occur each year; however, our regional aviation investigators cannot travel to every accident site so we rely on some of the FAA's 3,500 inspectors to assist us. We ask these trained aviation inspectors to document the on-site findings and to collect evidence for us. Whether we travel to the accident scene or not, we still conduct the research, necessary interviews, and follow-up examinations required for an appropriate investigation. For each case, we write the report and determine probable cause. That is our mandate and we carry it out.

**Reauthorization Request**

The Safety Board is asking for authorized resource levels capable of funding 399 full-time equivalent (FTE) positions in Fiscal Year 2007, and 475 FTEs in both Fiscal Years 2008 and 2009. The necessary resource levels for Fiscal Years 2007–2009 are $79.594 million, $99.974 million, and $104.844 million, respectively.

We began Fiscal Year 2006 with the equivalent of 416 full-time employees on board. This is more than our Fiscal Year 2006 budget can support, so we have been allowing attrition to shrink this number to a sustainable level. We currently have 396 FTE on board, and we can sustain this number with our current budget. In the last two months, we have initiated some very important human capital planning to help us better prepare the NTSB for the future. Our planning indicates that to carry out the mission of the Board, we need 475 full-time staff; consequently, this is the number that we have proposed for Fiscal Years 2008 and 2009. We recognize that this represents growth, but this staffing level is needed to allow us to investigate accidents appropriately and issue timely and effective safety recommendations.

Our reauthorization request also contains several proposals for specific legislative language that would improve the Board's operation.

The Board's last reauthorization legislation provided the authority for the NTSB to enter into contracts without competition when necessary to expedite an investigation. We are grateful to have been entrusted with this special exemption to competitive contracting rules, and we have judiciously used this authority, mostly for relatively small contracts for investigative services. For example, we have used the authority to contract for non-destructive imaging of aircraft components, as well as for marine vessel stability calculations. It can also be used to retrieve important—perhaps perishable—evidence while it is still available. This important authority expires on September 30, 2006, and we are asking that the sunset provision be deleted so that the special contracting authority becomes a permanent part of our legislation.

The Board also proposes that you authorize appropriations for our training center as part of the broader authorization for the agency, rather than as a distinct entity. As I mentioned, we are actively working to more fully integrate the center into our overall mission and programs, and we believe that a single authorization is consistent with this goal. Also, we propose incorporating the content of the training academy annual report into the Board's annual report to Congress.

The Board also asks to be authorized to credit all reimbursements as offsetting collections that would remain available until expended (this authority already exists for training center course fees). This would help us better manage our funds when we are reimbursed by third parties for accident services that those parties are required to provide. For example, airlines are required to fund disaster mortuary services when these services are needed at crash sites. To ensure the immediate delivery of these important services, the Board may commit its own funds immediately after an accident, and seek reimbursement later when there is time to sort out the financial responsibility. Also, we occasionally agree to conduct accident investigations on a reimbursable basis. For example, the Department of State is reimbursing us for conducting the investigation into the helicopter accident that killed the First Vice President of Sudan. Without a legislative change, these reimbursements may have to be redeposited into the treasury account, unavailable for use by the Board. We need the authority to carry forward reimbursements like these.

Our last proposal concerns paying for the services of the DOT Inspector General (IG). As you know, the IG is authorized to review the financial management, property management, and business operations of the Board. The IG is reimbursed by the Board for the costs associated with carrying out these activities. Instead of the Board reimbursing the IG, we are asking that the IG's office be appropriated directly for its activities. This would facilitate better resource management, and I am pleased to report that the DOT IG concurs with our proposal.

As I close, I want to assure you that we are working hard to ensure that the people and resources of the Board are well managed. In fact, I am proud to tell you that in each of the last three fiscal years, our timely and accurate financial statements have received clean audit opinions from the DOT IG.

There have been significant leadership changes at the Board recently. In March 2005, Joe Osterman began serving as the Board's Managing Director, its highest-ranking career leader. Mr. Osterman is effectively leading a highly talented management team, and as I mentioned previously, under his leadership, the Safety Board has reinvigorated its focus on the completion of investigations and the production of accident reports.

In fact, over the past year, the Board has changed personnel in 14 of the top 24 leadership positions. These positions have been filled by highly qualified and experienced professionals from both within and outside the Board. Some noteworthy new members of the team are Jack Spencer, the Director of our Office of Marine Safety, and Gary Halbert, our General Counsel. Dr. Spencer—an MIT-educated naval architect—comes to us from the private sector, and Mr. Halbert—an accomplished attorney—recently retired from the U.S. Air Force. Both have hit the ground running, and are already making important contributions to the Board. Also we are currently recruiting for a Chief Information Officer who will join the agency's management team with the responsibility of managing the agency's information infrastructure. We are improving our performance management system throughout the agency, and we have refocused our efforts on leadership, communication, and the Board's mission.

As I said at the beginning of my testimony, there are important things happening at the Safety Board every day. But we need the support of Congress to ensure that we have the resources needed to accomplish our mission. I thank you for the opportunity to appear before you today, and I am happy to respond to any questions you may have.

Senator BURNS. Thank you very much. We have been joined by my friend and colleague from New Jersey. Senator Lautenberg do you have a statement? We've only got about a half hour, I guess we're going to have 9:30 votes, is that your understanding?

Senator LAUTENBERG. That is my understanding also that there is a residual, Mr. Chairman——

Senator BURNS. Turn your microphone on, would you please, so people can hear your docile tones.

## STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM NEW JERSEY

Senator LAUTENBERG. That's from being with my wife, she said don't talk so loud.

In any event, Mr. Chairman, thanks for calling this hearing, and I apologize for the interruption between the sequence here. Thanks for calling this hearing and as usual, you've focused on matters of safety and transportation, and this is an excellent way for us to begin a review. The National Transportation Safety Board is a critical, critical factor in our functioning. Transportation has always been one of my top priorities in the Senate. A good transportation system is critical to our economy and our quality of life, and in the State of New Jersey, the most densely populated state in the Union, we desperately need to make sure that we're operating safely and the NTSB is one of the ways to ensure that.

One absolute requirement beyond safety, is the fact that beyond the direct response of an accident is to give us the knowledge and the experience to go on to further legislative redress, or rule changes, to make the operation of our aviation system and our transportation systems more efficient. Most visible of part of the NTSB's job is to investigate actions like airplane disasters. The Stanton Island ferry, for instance, is a couple of years ago, or accidents on transit systems.

We rely heavily on the NTSB to help us learn from these extraordinary accidents, so we can avoid repeating them. But, we must also look to the NTSB to help make our highways safer through such measures as reducing drunk driving. NTSB recommendations provide the basis for change in our laws that protect the traveling public, and for example, I've introduced a bill to change the way we deal with high-risk drunk drivers, based primarily on NTSB research. We've made a lot of head way in fighting drunk drivers over the last 20 years, and we've saved a lot of lives.

For example, in 1984, I was able to pass a bill that led states to increase the drinking age, and that measure has saved more than 20,000 lives, and you know, Mr. Chairman, I get asked frequently about, well if someone can go to fight, why can't they buy a drink and so forth and my response is that, if they've gone to fight, or they're traveling here in our country, we don't want to make their risks for survival any greater than they would be. And, so while it raised a challenge, it saves lives as well. I wholeheartedly support the mission of the NTSB. Like all government agencies, the NTSB should be efficient, and in order to do that it has to have sufficient resources to have the strength to pursue its mission to better protect the traveling public and make our transportation system as safe as possible.

And, Mr. Chairman, this is a good review and a good time to look at it and make sure that we're poised to provide the kind of funding and the kind of interest that NTSB needs to do its job well.Thank you.

Senator BURNS. Thank you, Senator Lautenberg. Now, Dr. Dillingham, thank you for coming this morning, and I look forward to your testimony.

**STATEMENT OF GERALD L. DILLINGHAM, PH.D., DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, UNITED STATES GOVERNMENT ACCOUNTABILITY OFFICE (GAO)**

Dr. DILLINGHAM. Thank you, Chairman Burns, Senator Lautenberg. Several months ago, you requested GAO to undertake a comprehensive review of the NTSB. That review is ongoing, but we're pleased to be here today to discuss the findings and recommendations that we've developed to date.

First, GAO agrees with Mr. Rosenker that NTSB has achieved a worldwide reputation as a preeminent agency in transportation accident investigations. Our research to date has found nothing that would have an immediate material affect on that reputation. My testimony today addresses the extent to which NTSB is making progress in three areas:

First, following leading practices in selected management areas; second, addressing challenges in completing accident investigations

and closing safety recommendations; and third, utilizing the Academy and generating sufficient revenues to cover its costs.

With regard to management practices, we found that NTSB has recently made progress in this area, but it is very much a work in progress. For example, NTSB has begun to develop a strategic plan and a performance management system. However, the performance management system will not be fully functional until the strategic plan has results, oriented objectives and specific strategies for achieving them.

Another example of work in progress is in the area of human capital management. NTSB has recently developed a draft staffing plan that addresses the agency skills and competency needs, and includes strategies for increasing the number of investigators. However, that draft plan does not consider the agency's organizational structure and its balance of supervisory and nonsupervisory positions.

To its credit, NTSB has improved its financial management by hiring a Chief Financial Officer, and putting controls on its purchasing activites, which should address past problems with unapproved purchases on government credit cards. However, NTSB still lacks a full cost accounting system which would inform managers of the resources spent on individual investigations, and provide data to balance office workload.

With regard to completing accident investigations and closing safety recommendations, in the case of major aviation accidents, a variety of circumstances contribute to many investigations taking longer than two years to complete. The average time it takes NTSB to complete this kind of accident investigation increased from one and a quarter years in 1996, to three and a half years in 2006. Since its inception in 1966, NTSB has investigated over 134,000 transportation accidents and 82 percent of its recommendations have been implemented or acceptable progress towards implementation has been made.

However, the implementation of NTSB's recommendations can be a time-consuming process, which can work against the goal of quickly improving transportation safety. For example, Federal agencies can take years to develop regulations to implement NTSB's recommendations. Additionally, industry also requires time to comply with those recommendations. We found that over 300 NTSB recommendations have been open for five years or more. Mr. Chairman, one extreme example of that is the crash of TWA Flight 800 off of Long Island in 1996. Ten years after the crash, the final regulation that addresses the cause of the crash has not been issued.

Additionally, the process that NTSB uses to change the status of safety recommendations is paper-based, labor intensive and relies on many sequential reviews that can take months to complete. As a result, NTSB's scarce resources are tied up, and agencies don't know whether the responses are accepted or not accepted.

With regard to the extent to which NTSB is utilizing the Academy and generating sufficient revenues to cover its costs, we found that during the last fiscal year, 90 percent of the available classroom space at the Academy was not used. In FY 2006, NTSB employees are scheduled to take 97 percent of their requested training

from sources outside of the Academy, which translates into over $900,000 in costs to NTSB.

In terms of generating revenues, we found that for Fiscal Years 2004 and 2005 NTSB's Academy did not generate sufficient revenues to cover the direct cost of operating and maintaining the Academy. As a result, those portions of the Academy's cost that were not covered by the revenues from tuition and other sources, approximately $6.3 million in FY 2004, and $3.9 million in 2005, had to be offset by general appropriations to the agency. To its credit, NTSB has taken some action to generate revenues from other sources such as renting Academy space for conferences. However, these actions have not been sufficient to close the gap, nor are they likely to do so without a comprehensive marketing plan.

Chairman Burns, Senator Lautenberg, our written statement recognizes NTSB's recent efforts in each of these areas that we've discussed, and makes recommendations to the Chairman of the Board. To improve the management practices, we recommended that NTSB develop a revised strategic plan that has results oriented objectives and specific strategies for achieving them.

We also believe that the development of a full cost accounting system is a critical need for resource management. To enhance the efficiency of the report development and recommendation close-out processes, we recommend that the Chairman identify effective practices from throughout NTSB and apply them to all modes.

And to enhance the utilization of the Academy and improve the ability to generate revenues, we recommend that the Chairman develop a comprehensive marketing plan. The plan should consider the feasability of sub-leasing a portion of the Academy space. Additionally, NTSB should conduct a study to determine the cost and feasability of moving certain functions from headquarters to the Academy facility in preparation for renegotiating the headquarters lease, which expires in 2011. We also recommend that NTSB develop a core investigative curriculum for each mode, and deliver that training at the Academy.

Chairman Burns, Senator Lautenberg, we believe that the extent to which NTSB continues to address these types of management issues, will become increasingly critical if NTSB is to continue to carry out its safety mission and maintain its world-class status and preeminent position in the field. Thank you, Mr. Chairman, Senator Lautenberg.

[The prepared statement of Dr. Dillingham follows:]

PREPARED STATEMENT OF GERALD L. DILLINGHAM, PH.D., DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, UNITED STATES GOVERNMENT ACCOUNTABILITY OFFICE (GAO)

Mr. Chairman and members of the Subcommittee:

We are pleased to be here today to discuss the reauthorization of the National Transportation Safety Board (NTSB). NTSB is a relatively small agency that plays a vital role in transportation safety. With a staff of about 400 and a budget of $76.7 million in Fiscal Year 2006, NTSB is charged with investigating every civil aviation accident in the United States and significant accidents in the other modes—railroad, highway, marine, and pipeline—determining the probable cause of these accidents and issuing recommendations to address safety issues identified during accident investigations. NTSB has gained a worldwide reputation as a preeminent agency in conducting transportation accident investigations. Since 1967, it has issued 1,340 major accident investigation reports, over 130,000 brief accident reports, and made

over 12,000 safety recommendations. To support its mission, NTSB built a training academy that opened in 2003 and provides training to NTSB investigators and other transportation safety professionals, including those from foreign countries. It is critical that the agency uses its resources in an efficient manner to carry out its safety mission and maintain its preeminent position. For this reason, you asked us to conduct a comprehensive review of NTSB's management functions such as strategic planning, human capital management, and mission-critical investigation activities. My testimony today is based on our ongoing work for you, and it addresses the extent to which NTSB is: (1) following leading practices in selected management areas; (2) addressing challenges in completing accident investigations and closing safety recommendations; and (3) generating sufficient revenues to cover costs at its academy. We will be reporting additional results of our ongoing work to the Committee later this year.

In summary:

- While NTSB has recently made progress in following leading management practices, its overall record is mixed. For example, NTSB generally follows leading practices in the area of financial management. Over the last several years, NTSB has hired a Chief Financial Officer and improved its financial management by putting controls on its purchasing activities, which should address past problems with unapproved purchases with government credit cards. However, NTSB lacks a full cost accounting system, which would inform managers of the resources spent on individual investigations and provide data to help assure balanced office workload. Other areas, such as performance management, human capital, and communications, partially follow leading practices. For example, NTSB has begun to develop a performance management system that should eventually link each individual's performance to the agency's strategic goals and objectives. However, the performance management system will not be fully functional until NTSB has a strategic plan with results-oriented objectives and specific strategies for achieving them, which are lacking in the current strategic plan. In the area of human capital management, NTSB has recently developed a draft staffing plan that addresses the agency's skills and competencies needs and includes strategies to increase the number of investigators and thereby strengthen the agency's ability to carry out its transportation safety mission. However, the draft plan does not address organizational structure or the balance between supervisory and nonsupervisory positions. While NTSB has recently taken positive steps to improve communications from senior management to the staff—such as periodically sending e-mail to all staff to share information on new developments and policies—the agency does not regularly hold general staff meetings or undertake anonymous surveys to obtain employee feedback.
- NTSB is accomplishing its accident investigation mission, but it faces challenges that affect the efficiency of the report production and recommendation close-out processes. In terms of accomplishing its mission, since its inception in 1966, NTSB has investigated over 134,000 transportation accidents, and 82 percent of its recommendations have been implemented, or acceptable progress toward implementation has been made. However, investigations are often—sometimes necessarily—lengthy; NTSB routinely takes longer than 2 years to investigate major accidents. Lengthy investigations, combined with lengthy processes for federal agencies to regulate and industries to implement NTSB's safety recommendations, can work against the goal of improving transportation safety. One factor that adds to the duration of investigations is that when new investigations are launched, inspectors are pulled from working on previous accidents to work on new ones. Other factors that may affect the duration of report production include the multiple revisions of draft investigation reports at different levels in the organizations and resource issues. NTSB has recently taken several actions that may help shorten report development time, such as reemphasizing its policy on holding report development meetings to obtain early buy-in on report messages and holding modal directors accountable for specific issuance dates. We also identified practices in certain offices, such as the use of a project manager or deputy investigator-in-charge to handle report production, which may improve the efficiency of report development if used by all modal offices as they all are similar in what they do. The processes for implementing NTSB's safety recommendations, and for NTSB to change the status of recommendations are also lengthy and labor intensive. As a result, unsafe conditions may continue to exist until federal transportation agencies, and ultimately, transportation industries, fully implement the recommendations, and the extended period it takes to change the status of recommendations ties up NTSB's scarce resources. As of May 2006, 305 of the 852 open recommendations

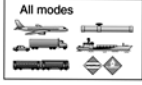
have been in open status for 5 years or more. While Department of Transportation (DOT) officials have been working with NTSB to find acceptable means of implementing its recommendations, they cite the lengthy rule-making process as a challenge to speedy implementation. In addition, the process that NTSB uses to change the status of safety recommendations is paper-based, labor intensive, and relies on a series of sequential reviews that can take months to complete. As a result, resources within NTSB are inefficiently used and DOT agency officials told us they remain unaware whether their response has been accepted or not accepted.

- For Fiscal Years 2004 and 2005, NTSB's academy did not generate sufficient revenues to cover the costs of providing training. As a result, those portions of the academy's costs that were not covered by the revenues from tuition and other sources—approximately $6.3 million in Fiscal Year 2004 and $3.9 million in Fiscal Year 2005—were offset by general appropriations to the agency. Although there is no statutory requirement that revenues from NTSB's academy generate sufficient revenues to cover the costs, NTSB was encouraged in the Senate report accompanying the Fiscal Year 2006 DOT Appropriations Act to be more aggressive in imposing and collecting fees to cover the costs. While NTSB has taken action to generate revenue from other sources, such as renting academy space for conferences, it does not have a business plan that seeks to optimize opportunities for additional revenues at the academy. Additionally, NTSB is missing opportunities to find other uses for academy space. For example, during Fiscal Year 2005, less than 10 percent of the total classroom space was used. About 14 percent of the academy students in Fiscal Year 2005 were NTSB employees. However, in 2006, NTSB employees are scheduled to take 97 percent of their requested training from sources other than the academy, such as DOT's Transportation Safety Institute. The academy is not utilized more by NTSB staff, in part, because the agency has not developed a core curriculum for its staff, which it could then offer at the academy. Furthermore, many academy courses are similar to those taught elsewhere, which may affect the agency's ability to attract non-NTSB students.

**Background**

NTSB was established in 1966 as an independent government agency located within the newly formed DOT.[1] In 1974, Congress made NTSB completely separate from DOT.[2] NTSB's principal responsibility is to promote transportation safety by investigating transportation accidents, determining the probable cause, and issuing recommendations to address safety issues identified during accident investigations. Unlike other transportation agencies, such as the Federal Aviation Administration (FAA), NTSB does not have the authority to promulgate regulations to promote safety, but makes recommendations in its accident reports and safety studies[3] to other agencies that have such regulatory authority. The federal agencies that receive NTSB recommendations include the DOT's FAA, Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA), Federal Transit Administration (FTA), National Highway Traffic Safety Administration (NHTSA), Pipeline and Hazardous Materials Safety Administration (PHMSA), and the U.S. Coast Guard. NTSB also makes recommendations to others, such as state transportation authorities and industries. As *Figure 1* indicates, NTSB has varying degrees of flexibility in its statutory mandate, as it pertains to initiating an investigation. By statute, NTSB has limited discretion in deciding which aviation accidents to investigate and the greatest amount of discretion to investigate highway accidents.

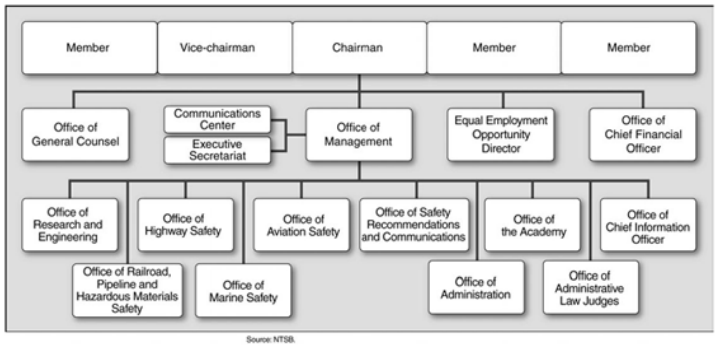
**Figure 1: NTSB's Investigative Policy by Mode**

| Mode | Key regulations and policy | Investigation policy |
|---|---|---|
| Aviation  | 49 USC 1131 (a)(1)(A)<br>49 CFR part 800<br>ICAO annex 13 | Investigates all civil and certain public aircraft accidents in the United States and participates in the investigation of international accidents where the United States is the state of registry, operator, design or manufacture. |
| Highway  | 49 USC 1131 (a)(1)(B) | Investigates selected accidents. |
| Railroad  | 49 USC 1131(a)(1)(C); 1116(b)(5)<br>49 CFR part 840 | Investigates accidents involving more than one fatality, substantial property damage, or a passenger train. |
| Pipeline  | 49 USC 1131 (a)(1)(D) | Investigates accidents in which there is a fatality, substantial property damage, or significant injury to the environment. |
| Marine  | 49 USC 1131(a)(1)(E); 1131(b)<br>49 CFR part 850<br>US Coast Guard/NTSB memorandum of understanding from 9/12/2002 | Investigates selected major accidents and incidents, collisions involving public vessels with any nonpublic vessel, accidents involving significant safety issues related to Coast Guard safety functions, and international accidents within the territorial seas and where the United States is the state of registry. |
| Hazardous materials  | 49 USC 1116(b)(5) | Investigates releases of hazardous materials in any mode that involves a fatality, substantial property damage, or significant injury to the environment. For all modes, NTSB also evaluates the adequacy of safe guards and procedures for the transportation of hazardous material and the performance of other departments, agencies, and instrumentalities of the government responsible for the safe transportation of that material. |
| All modes  | | Investigates selected accidents that are catastrophic or of a recurring nature. |

Source: GAO summary of legislation.

NTSB is comprised of a five member board—a Chairman, Vice Chairman, and three Members—appointed by the President with the advice and consent of the Senate.[4] The Chairman is NTSB's Chief Executive and Administrative Officer. As of March 2006, the Board was supported by a staff of 396, which includes 210 investigators assigned to four modal offices—aviation; highway; marine; and rail, pipeline, hazardous materials. (See *Fig. 2.*) The agency is headquartered in Washington, D.C., and maintains 10 field offices nationwide and a training academy in Ashburn, Virginia, in suburban Washington, D.C. In recent years, the agency has shrunk in size due to budget constraints, which it has largely dealt with by using attrition to downsize the staff. In 2003, NTSB had 438 full-time employees compared with the current level of 396. During the same period, the number of full-time investigators decreased from 234 to 210. NTSB's modal offices vary in size, with the aviation office having 125 employees; the rail, pipeline, and hazardous materials office having 38; the highway office having 30; and the marine office having 16 employees as of May 2006. An additional 42 employees work in the Office of Research and Engineering, which provides technical, laboratory, analytical, and engineering support for the modal investigation offices. For example, it is responsible for interpreting data recorders, creating accident computer simulations, and publishing general safety studies. NTSB's budget increased from $62.9 million in Fiscal Year 2001 to $76.7 million in Fiscal Year 2006, or about 22 percent. After adjusting for inflation, this represents an increase of about 9 percent. The President has requested $79.6 million for NTSB in Fiscal Year 2007.

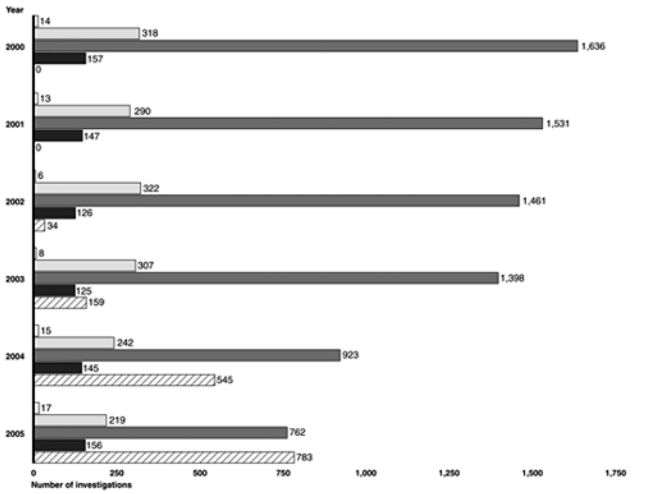
Figure 2: NTSB's Organization




Source: NTSB.

Since 1966, NTSB has investigated over 124,000 aviation accidents and over 10,000 surface transportation accidents. *Figure 3* shows the total number of aviation investigations that NTSB has undertaken over the past 6 years and the degree to which NTSB was involved in the investigations. NTSB lacks the resources to conduct on-scene investigations of all aviation accidents. As a result, for general aviation accidents, NTSB delegates the gathering of on-scene information to FAA investigators, as allowed by statute.[5] In these limited investigations, FAA sends the accident information to NTSB, and NTSB then determines a probable cause for the accident. In addition, NTSB participates in the investigations of foreign aviation accidents in conformance with Annex 13 of the International Civil Aeronautics Organization Treaty. These investigations involve a U.S. carrier or U.S.-built aircraft, or occur at the request of a foreign government. NTSB aviation investigators told us that there is often significant value in participating in such investigations; the findings often have safety implications for U.S. carriers, since most foreign airlines use U.S.-made aircraft, engines, and other parts and multiple foreign air carriers operate within the United States.

Figure 3: NTSB Involvement in Aviation Accidents, Fiscal Years 2000-2005




Source: GAO's analysis of NTSB data.

Note: Limited investigations are those in which NTSB delegates the gathering of on-scene information to FAA inspectors.

**NTSB Has Made Recent Progress in Following Leading Management Practices, But Overall Record Remains Mixed**

Through our work government-wide we have identified a number of key functional areas and leading practices in areas that are important for managing an agency. This testimony focuses on NTSB's performance in five key functional areas—strategic planning, performance management, human capital, financial management, and communications—and how NTSB's practices compare to leading practices in those areas. As illustrated in *Figure 4,* NTSB, generally, is following leading practices in financial management, only minimally following leading practices in strategic planning, and has mixed results for the other functions. Much of NTSB's progress toward following leading practices is due to recent management initiatives. The report we will be issuing later this year, will provide additional information on NTSB's performance relative to these five management functions, as well as information technology, acquisition management (including the agency's use of contracting), knowledge management, and capital decisionmaking.

**Figure 4: Extent to Which NTSB Is Following Leading Practices in Selected Management Areas**

| Management area | Extent to which NTSB is follows leading practices |
|---|---|
| Strategic planning | ○ |
| Performance management | ◐ |
| Human capital workforce planning and staff development | ◐ |
| Financial management | ● |
| Communications | ◐ |

● Leading practices are mostly followed
◐ Leading practices are partially followed
○ Leading practices are minimally followed

Source: GAO's analysis of NTSB information.

*NTSB's Strategic Plan Lacks Certain Performance-Based Elements and Performance Management Plans Closely Follow Leading Practices But Are Not Fully Functional*

The Congress and the President have encouraged better management of federal agencies by means such as results-oriented strategic planning, but NTSB's strategic plan generally does not follow performance-based practices. Without effective short- and long-term planning, federal agencies risk delivering programs and services that may or may not meet the Nation's most critical needs. The Government Performance and Results Act of 1993 (GPRA)[6] and guidance contained in the Office of Management and Budget's (OMB) Circular A–11, provide performance-based strategic planning guidelines. GPRA was intended to achieve several broad purposes, including improving federal program effectiveness, accountability, and service delivery, and enhancing Congressional decisionmaking by providing more objective information on program performance. GPRA requires federal agencies to develop strategic plans in which they define their missions, establish results-oriented goals, and identify the strategies that will be needed to achieve those goals. For instance, GPRA requires strategic plan updates at least every 3 years, and requires that agencies set objectives and goals that are specific outcomes that the organization wishes to accomplish (called outcome-related objectives).

To its credit, in December 2005, NTSB issued a strategic plan for the years 2006 through 2010, which was the first time the agency had a strategic plan in 6 years.

In developing that plan, senior agency officials told us that they modeled their plan on examples from other federal agencies with similar structure and mission, such as the Federal Communications Commission. We compared NTSB's strategic plan to selected elements required by GPRA. (See *Fig. 5.*)

**Figure 5: Extent to Which NTSB's Strategic Plan Follows GPRA Elements**

| GPRA elements | Follows GPRA elements |
|---|---|
| Mission statement | ✓ |
| General goals and objectives | |
| Approaches or strategies to achieve goals and objectives | |
| Relationship between general goals and annual goals | |
| External factors | ✓ |
| Program evaluations | |
| Five year time frame | ✓ |
| Stakeholder involvement | |

✓ Follows GPRA elements

Source: GAO's analysis of NTSB data.

While NTSB's 5-year strategic plan has a mission statement, four general goals and related objectives, and mentions key factors, such as declining resources, that could affect the agency's ability to achieve those goals, the plan lacks a number of key elements—including information about the operational processes; skills and technology; and the human capital, and information resources—required to meet the goals and objectives. In addition, the goals and objectives lack sufficient specificity to know whether they have been achieved. One goal states "NTSB will maintain its response capacity for investigation of accidents and increase its analysis of incidents." An objective of that goal is to "continuously assess the most robust and efficient approaches to accident investigation." Although such a goal is important for the safety of the transportation industry, this and the other three goals, and related objectives, are not measurable. As a result, it will be difficult for NTSB and others to determine if the goals have been achieved.

In addition, the plan lacks specific strategies for achieving those goals. According to GPRA, the strategies should include a description of the operational processes, skills and technology, and the resources required to meet the goals and objectives. Since NTSB's strategic plan lacks such a description, it does not align staffing, training, or other human resource management to strategic goals. That is, the plan does not explicitly explain how NTSB will use its resources to meet its mission and goals. While the plan explains that each program office has its own objectives linked to the agency's goals and objectives, the plan contains no information to understand how each office contributes to those goals and objectives. In addition, NTSB's strategic plan does not describe how the performance goals contained in the annual performance plan are related to the general goals and objectives in the strategic plan, as required by GPRA.

GPRA also requires federal agencies to provide a description in their strategic plans of the program evaluations used in establishing or revising general goals and objectives and a schedule for future program evaluation. NTSB's strategic plan lacks this information. As a result of having no program evaluations, it is unclear how or whether NTSB reviews its efforts to identify strengths it can maximize and weaknesses it should address. In developing a strategic plan, GRPA requires agencies to consult with Congress and other stakeholders. We have previously reported that other stakeholders of federal agencies include state and local governments, other federal agencies, interest groups, and agency employees. NTSB's strategic plan does not mention consultation with any stakeholders in its development. Furthermore, board members and agency staff told us that they had no involvement in the devel-

opment of the strategic plan. Some current and past board members additionally stated that they believed that their involvement would be beneficial in providing a strategic vision for the agency. NTSB's senior management told us they expect to revise the strategic plan in the near future and contacted us regarding assistance to develop a more comprehensive, results-oriented plan as part of this study.

NTSB has begun to develop a performance management system that should eventually link each individual's performance throughout the agency to the agency's strategic goals and objectives. We have reported that performance management systems are crucial for agencies because if developed properly they allow employees to make meaningful contributions that directly contribute to agency goals.[7] NTSB has developed a comprehensive performance management plan for Senior Executive Series (SES) employees that links individual performance to strategic goals. Furthermore, the plan states that NTSB will link performance management with the agency's results-oriented goals and set and communicate individual and organizational goals and expectations.

This plan establishes individual performance criteria and the appraisal process. The appraisal process defines performance standards and explains performance elements that determine individual ratings. Because NTSB recognizes in this plan the importance of aligning organizational performance with individual performance and contributions to the agency's mission, the performance management plan is a step in the right direction.

Along with the SES plan, NTSB issued in August 2005, a performance plan for its overall workforce, which includes some elements of linking individual performance to organizational goals. However, without having results-oriented goals in the strategic plan itself, neither of the two performance management plans are fully functional. That is, until NTSB's goals are more fully articulated in the strategic plan, it will be impossible for staff to know whether their performance contributes to meeting those goals. As with the strategic plan, NTSB staff was not involved in the development of the performance plan, and there was no mechanism for employee feedback after the plan was initially developed. Employee involvement provides greater assurance that policies are accepted and implemented because employees had a stake in their development.

*NTSB's Staffing Plan Is a Step in the Right Direction, But the Organizational Structure Has Not Been Reviewed*

NTSB developed a draft agencywide staffing plan in December 2005, that follows several leading practices, but lacks a workforce deployment strategy that considers the organizational structure and its balance of supervisory and non-supervisory positions. Existing strategic workforce planning tools and models suggest that certain principles should be followed in strategic workforce planning, such as determining the agency's skills and competencies needs; involving stakeholders (e.g., management and employees) in the planning process; and developing succession plans to anticipate upcoming employee retirement and workforce shifts.[8] Further, in workforce deployment, it is important to have human capital strategies to avoid excess organizational layers and to properly balance supervisory and nonsupervisory positions.[9] NTSB's draft staffing plan addresses the agency's skills and competencies needs and includes strategies to deal with workforce shifts. For example, the staffing plan proposes to increase the number of investigative staff by 21, which will help with the agency's resource needs. In addition, while some stakeholders (*i.e.,* managers) were involved in the planning process, employees were not included. As we mentioned previously in this testimony, employee input provides greater assurance that policies are accepted and implemented because employees have a stake in their development.

To develop the staffing plan, each modal office director submitted to NTSB's Managing Director an ideal staff size for his office, including additional slots for investigators. The increase in investigative staff is consistent with requests by modal offices to enhance their ability to conduct their investigative mission. Managers told us that current staffing constraints inhibited their ability to conduct more accident investigations and indicated an increase in staff would be helpful. For example, directors of the highway and rail/pipeline offices told us they could not initiate investigations on more than two accidents at a time because they lacked sufficient investigative staff to do more.[10] The modal office directors' request for staff resulted in a total agency allotment of 455 full time equivalents (FTEs) plus 20 co-op positions. The Managing Director reduced this number to 404, which corresponds to NTSB's current funding level of 395, allowing for attrition and turnover. The Managing Director's allocation resulted in a proposed increase of 21 investigators agencywide and a proposed reduction of certain staff positions to accommodate the increase in investigators. This increase in investigative staff is consistent with a recommenda-

tion by RAND Corporation, which evaluated NTSB's accident investigation process and workload in 1999.[11] To help implement the realignment, senior managers told us that they would like to transition some existing administrative and support staff with appropriate background and training into investigator roles where possible. The draft plan set a target date of May 2006 to begin creating developmental opportunities for staff to transition to investigative roles and to develop reduction strategies for staff that fall outside the staffing plan.

*NTSB Lacks A Strategic Approach To Training Staff*

Training is another key area of human capital management. It is important for agencies to develop a strategic approach to training its workforce, which involves establishing training priorities and leveraging investments in training to achieve agency results; identifying specific training initiatives that improve individual and agency performance; ensuring effective and efficient delivery of training opportunities in an environment that supports learning and change; and demonstrating how training efforts contribute to improved performance and results.[12] NTSB has not developed a strategic training plan, nor has it identified the core competencies needed to support its mission and a curriculum to develop those competencies. As a result of not having a core curriculum that is linked in this manner, NTSB lacks assurance that the courses that staff take provide the technical knowledge and skills necessary for them to be competent for the type of work they perform.

*Financial Management Is Improved, but NTSB Lacks a Full Cost Accounting System*

Sound financial management is crucial for responsible stewardship of federal resources.[13] In recent years, NTSB has made significant progress in improving its financial management. In March 2001, NTSB hired a Chief Financial Officer who has emphasized the importance of sound financial management based on best practices. Similar to private-sector companies, government agencies are required to report their financial condition in publicly-available financial statements. As a result of actions taken by NTSB, the agency received an unqualified or "clean" opinion from independent auditors on its financial statements for the fiscal years ending September 30 for the years 2003, 2004, and 2005. The audit report concluded that NTSB's financial statements presented fairly, in all material respects, the financial position, net cost, changes in net position, budgetary resources, and financing in conformity with generally accepted accounting principles for the three years. NTSB has also improved its purchasing and contracting activities after identifying problems in those areas in 1999. In 2001, DOT's Office of Inspector General (DOTIG) reviewed the agency's contracting and procurement activities and recommended that NTSB institute accountability and controls in its purchase card program as well as other purchasing activities. As a result of this and another DOTIG audit,[14] NTSB has taken a number of initiatives to improve its purchasing and contracting activities. For example, NTSB restructured its purchase card system and guidelines to address problems, such as unrestrained and unapproved purchases on government credit cards. NTSB hired a manager of the contracting function to manage the agency's acquisition function and implement the DOTIG recommendations. In our full report, we will analyze some of these initiatives in more detail.

In 2000, RAND recommended that NTSB develop systems that would allow the agency to better manage its resources by permitting full-cost accounting[15] of all agency activities.[16] To accomplish this, RAND recommended putting in place a timekeeping system, in which individual project numbers were assigned to each investigation and support activities such as training. With this information, project managers could better understand how staff resources were utilized and project workload could be actively monitored by the Managing Director. NTSB has begun to implement this recommendation by upgrading a software system in November 2005 that tracks employee annual leave and sick leave. However, the system is not being fully utilized to track the number of hours staff spend on each investigation. Also, this system is not used to track time staff spend in training or at conferences. As a result, RAND's previous conclusion that "NTSB managers have little information they can use to plan the utilization of staff resources or manage staff workloads properly" remains current.

*Communications From Senior Management To Staff Have Increased And Communications Among Offices Is Generally In Place, But Upwards Communications Mechanisms Are Lacking*

We have identified useful practices related to managing employees that include seeking and monitoring employee attitudes, encouraging two-way communication between employees and management, and incorporating employee feedback into new policies and procedures.[17] In response to issues raised by NTSB employees in a government-wide survey conducted by OPM in 2004, NTSB's senior management made

changes to improve the way it is communicating information to staff. For example, the Managing Director periodically sends "management advisory" e-mail to all staff that share information such as policy changes or new developments at the agency. However, we found no formal processes that encouraged two-way communication, such as town hall meetings, regular staff meetings, or anonymous employee surveys; or incorporated employee feedback into policy-making.

The 23 investigators and writer editors with whom we spoke, had mixed views on the effectiveness of communications within the agency.[18] The four investigators from one modal office that we spoke with told us that they are pleased to now hear about policy changes at the agency, but said that there is too much reliance on the Internet for these communications. They also told us that although they believe the increased communications are positive, they found it difficult to find the time to read the material and still conduct their regular investigative duties. The four investigators that we spoke with from another modal office agreed that staff meetings occur infrequently and that they do not receive information on new policies from their managers. Further, they said that new policies or agency issues are not discussed with staff prior to issuance, and there was no formal mechanism to provide feedback during the policies' development. In the past, regular formal meetings occurred between union leadership and senior NTSB management, which allowed for such input, but that practice ceased. Although formal communication processes from the staff level to management are lacking, informal e-mail communications do take place occasionally between staff and senior management.

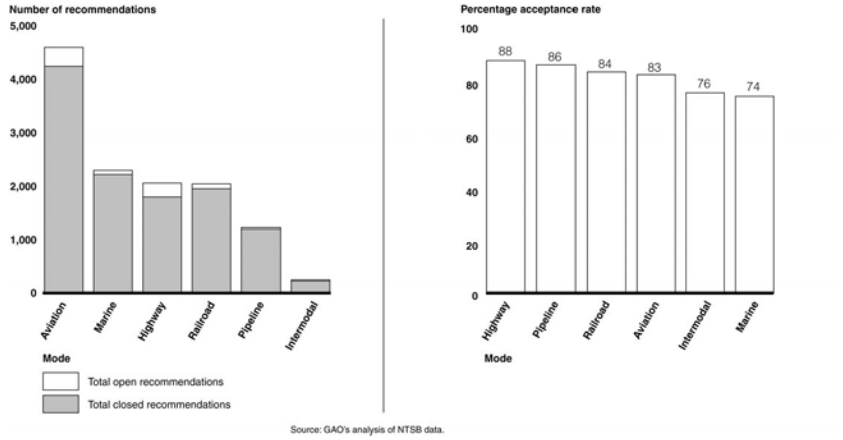
Communication and collaboration across offices at all levels can improve an agency's ability to carry out its mission by providing opportunities to share best practices and helping to ensure that any needed input is provided in a timely manner. We found that communication and collaboration between the Research and Engineering office and the modal offices appears to be regular. This is shown by the inclusion of Research and Engineering staff as core members of major investigative teams. Also, our review of workload in the Research and Engineering office shows a large number of projects that support all modes, and a Research and Engineering manager told us that his office frequently interacts with investigative staff.

In contrast, NTSB lacks processes that would allow investigators and writer editors to communicate across the modal offices regarding the investigative process and other issues, according to staff we spoke to. The four investigators that we spoke with from one modal office told us that they are isolated from the rest of the agency and that lessons learned are not shared across offices. The investigators from another modal office told us that they are on permanent teams that share the same priorities in completing accident analysis, which enhances communication and teamwork in the office. In addition, in previous years, all writer editors were located in one group and reported directly to the Managing Director. Now, each modal office has its own staff of writers and editors. While they have retained personal working relationships from when they were located in the same office, four of the eight writer editors we spoke with said that they no longer share information with each other regularly.[19] As a result, efficiencies and lessons learned that investigators and writer editor staff in one office might develop might not be shared with other offices. However, NTSB officials pointed out that every 6 months writer editors have the opportunity to meet with the publications specialist for training and to exchange information.

### NTSB Is Accomplishing Its Accident Investigation Mission, But Opportunities Exist to Gain Efficiencies

While NTSB is accomplishing its accident investigation mission, it faces challenges that affect the efficiency of the report production and recommendation closeout processes. In terms of accomplishing its mission, since its inception, NTSB has investigated over 134,000 transportation accidents. Eighty-two percent of its recommendations have been "accepted," a term NTSB uses to include recommendations that recipients have said they would implement as well as those that have already been implemented. *Figure 6* shows that highway recommendations have the highest acceptance rate and marine recommendations have the lowest.

Figure 6: Recommendations and Acceptance Rates of Recommendations by Mode, 1967-May 2006

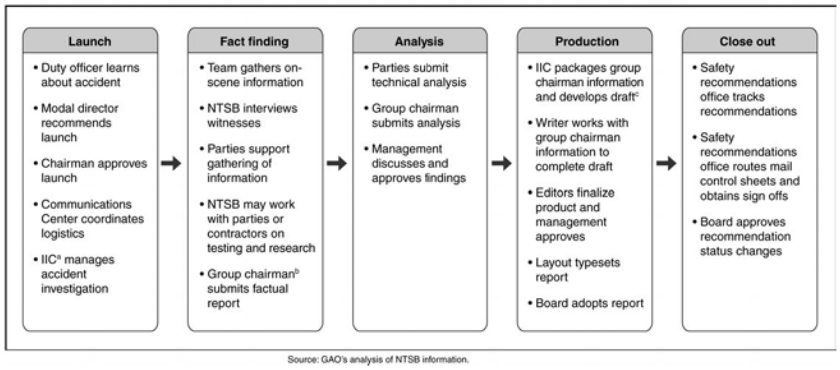



Source: GAO's analysis of NTSB data.

*NTSB Investigations Are Often Lengthy, in Part Because Investigators Must Launch New Investigations Before Completing Ongoing Investigations*

Investigations have four phases—the "launch," fact finding, analysis, and report production. After a report is issued and recommendations made, the progress of implementing the recommendations is tracked during a fifth close-out phase. *Figure 7* describes these phases.

Figure 7: Components of an NTSB Investigation and Recommendation Close Out



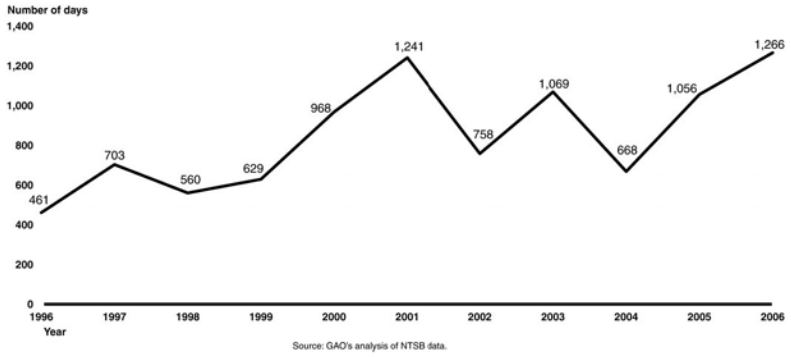

Source: GAO's analysis of NTSB information.

[a]IIC is the "investigator in charge."

[b]A group chairman is a technical specialist who is responsible for developing the facts and analysis for a particular area of an investigation.

Investigations are often lengthy and sometimes necessarily so. NTSB routinely takes longer than 2 years to complete major aviation investigations. For example, the total time to complete major aviation investigations has increased from an average of about 1.25 years in 1996 to an average of almost 3.5 years in 2006. (See *Fig. 8.*) In 2004, NTSB contracted with Booz Allen Hamilton to examine and make recommendations to improve the report development process and the recommendation close-out process. Booz Allen Hamilton [20] reported that the average time to complete major investigations across all the modes was either 1.8 months or 1.9 months for 4 out of 5 years.[21] Lengthy investigations, combined with lengthy processes for federal agencies to develop regulations based on those recommendations and industries to implement the recommendations can work against the goal of improving transportation safety.

Figure 8: Average Duration of Major Aviation Investigations, 1996-2006

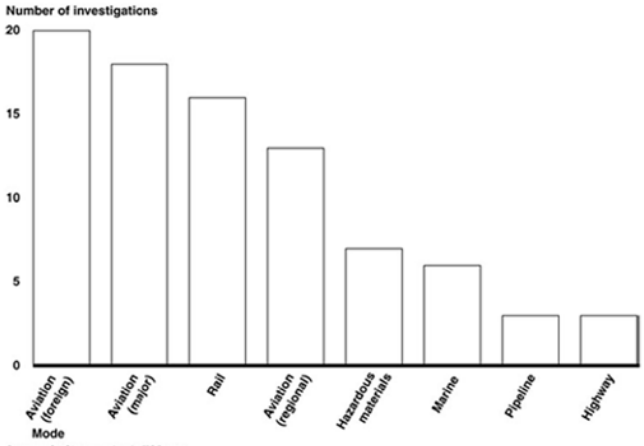



Source: GAO's analysis of NTSB data.

Note: Several complex, lengthy investigations were completed in 2000, including the crash of TWA flight 800, which took over 4 years to complete.

One factor that adds to the duration of investigations is that when new investigations are launched, investigators are pulled from working on previous accidents to work on new ones. For example, when a major commercial aviation accident occurs, an NTSB "go team" is dispatched from Washington, D.C., usually within hours of notification of the accident. In such cases, the team members must leave the investigations they had been working on to begin fact-finding on the new accident. In the cases of rail and highway accidents, NTSB investigators must also arrive quickly on-scene to gather information because the accident scenes will be cleared quickly so that traffic can resume. The manager of one department told us that all of his ongoing reports would be delayed by 2 months if a sudden launch were to occur. The number of major investigations that are ongoing for each mode is shown in *Figure 9*.

Figure 9: Number of Ongoing Major Investigations by Mode, As of February 2006




Source: GAO's analysis of NTSB data.

Note: This table does not include limited aviation investigations, in which FAA has the primary fact-finding role.

*Writing and Report Production Is a Bottleneck in the Process*

Another reason for the expansive time frame for accident investigations is that reports receive multiple revisions at different levels in the organization, including the office directors and the Managing Director's office, prior to going to the board members for final voting and approval of the draft report. An investigation report typically goes through the following reviews: the modal office, the Office of Research and Engineering, the Executive Secretariat, the Office of Safety Recommendations, the Office of General Counsel, the Deputy Managing Director, the Managing Director's office, and each Board Member and the Chairman. For any review, there may be multiple iterations. Eleven investigators and 6 writer editors told us that the review process often results in improved clarity for report recommendations.[22] However, investigators and writer editors also told us that they believe the levels of management review and approval for written products are excessive. All eight writer editors agreed that the reviews by the Executive Secretariat's office, which services a quality assurance function, was a bottleneck for getting products approved. They told us that it is common for correspondence and other products to be delayed in this office for 1 week or more, which they viewed as excessive. While it may be a reasonable expectation for short products, such as correspondence, to be reviewed in less than a week, that expectation may not be reasonable for reports. Booz Allen Hamilton confirmed multiple iterations of review as the draft was routed through numerous offices. On average, Booz Allen Hamilton found that there were 7 levels of reviews within a given modal office that resulted in an average of 28 separate reviews. A senior NTSB official stated that the many levels of review were needed to get the appropriate perspectives from relevant offices that had been involved in report development, such as the Research and Engineering Office and Safety Recommendation Office. The official also noted that the process can be streamlined on a case-by-case basis in which the usual process of sequential reviews is replaced with concurrent reviews. The NTSB official told us that there are no explicit criteria for determining when the streamlined process could be used.

NTSB staff with whom we spoke reported that resource issues contributed to other bottlenecks. For example, four writer editors pointed out that NTSB has only one final layout and typesetting person. As of May 2006, the final layout process had a backlog of approximately 10 reports that have been approved for issuance at Board meetings, but have not yet been published. NTSB adopts about 2 reports a month and issues on average 4 reports a month. In addition, some investigators have the perception that the workload of writer editors is another bottleneck. For example, one investigator told us that he submitted draft reports to the senior writer editor in September 2005, and as of April 2006, no additional writing had been done on his project. Writer editors from each modal office told us they typically worked on five or more products at one time.

*Certain Agency Practices May Help Shorten Report Development*

NTSB has recently taken several actions that, along with potentially better practices in one modal office, may help shorten report development time. First, in response to a recommendation by Booz Allen Hamilton to gain management's buy-in to the report message before writing the report and thereby reduce the number of review iterations, NTSB management has reemphasized its policy for report development meetings. NTSB has a long-standing order that calls for holding message development meetings with internal stakeholders who will be reviewing the report prior to report writing. According to a senior NTSB official, however, the agency had stopped following that policy before Booz Allen Hamilton conducted its study in 2004. The official further stated that subsequent to that recommendation, NTSB's Managing Director sent a memorandum reminding staff to follow the policy. While NTSB has no data on whether the message development meetings are actually taking place, officials told us that the Managing Director's recent emphasis on these meetings was resulting in more of them occurring than in previous years.

Second, since the Spring of 2005, NTSB has initiated production meetings with senior management with the goal of reducing the duration of investigations. These meetings occur every 2 weeks and focus on report development and production. NTSB modal directors are held accountable for a specific issuance date within a six month planning window prior to issuing a report. During the bi-weekly meetings, the directors discuss with NTSB's Managing Director and senior executives their progress and commitments to complete the investigations. The meetings result in a production schedule that is available for subsequent review. The modal directors stated that they believe the new system is effective in reducing the duration of investigations; however because these meetings began so recently, it is too early to evaluate their effectiveness.

Third, the highway office—which has the swiftest rate of accident investigation completion—uses a concept called a "project manager," who serves as a supervisory writer editor and interface between the investigative staff and the writer editor staff. As a result, the project manager assumes some of the report development roles typically supported by the investigators-in-charge. In comparison, investigators-in-charge in the marine and rail, pipeline, and hazardous materials offices submit a draft report to the writer editor, who then edits and sometimes substantially rewrites the report. In aviation, investigators-in-charge do not write reports, but rather writer editors develop the final report from interim technical reports drafted by specialists on the team. Booz Allen Hamilton recommended that all modes use a project manager or deputy investigator-in-charge so that the expertise of staff can be used more fully. In addition, such a practice might alleviate some of the workload issues that writer editors face as they complete multiple reports. NTSB managers told us that they agree with this recommendation, but they have not implemented it or developed any milestones for implementation.

Fourth, the highway safety office uses an incentive system for performance on developing reports. Booz Allen Hamilton reported the highway safety office rewards staff with a cash bonus for meeting key deadlines for producing accident reports. Again, the study recommended that the highway program be used as a model for the other modal offices. The study further recommended that the incentive program be slightly modified so that the incentives are based on delivering reports before deadlines, rather than meeting deadlines. In that way, the average time standard would be tightened and the overall report development time would be shortened. According to NTSB officials, they are currently examining how to implement improved awards and incentive programs that will result in improved quality and timeliness of report products.

*Safety Recommendations Close-out Process Is Time Consuming for Several Reasons*

The processes for federal transportation agencies to implement NTSB's safety recommendations, and for NTSB to change the status of recommendations it has made, are also lengthy because of complex processes involving many players. As of May 2006, 305 of NTSB's 852 open recommendations had been open for 5 years or more. Lengthy processes for federal agencies to develop regulations to implement NTSB's safety recommendations and industries to comply can work against the goal of quickly improving transportation safety. In addition, the lengthy, paper-based process for changing the status of recommendations ties up NTSB's scarce resources.

The length of time that NTSB recommendations remain open is due, in part, to challenges faced by federal transportation agencies in implementing those recommendations, particularly those that require changes to federal regulations, which take many years to complete. DOT modal officials with whom we spoke cited a lengthy rulemaking process, which includes budgeting and allocating resources to develop the proposed regulation, drafting and receiving comments on proposed rules, and waiting for the industry's subsequent response to implement the final rule. For example, TWA flight 800 crashed off Long Island in July 1996; NTSB issued safety recommendations pertaining to explosive fuel tanks in December 1996. NTSB adopted the accident report with further recommendations to FAA to reduce flammable vapors in aircraft fuel tanks in 2000; FAA issued a notice of proposed rule to address this recommendation in November 2005; the comment period for the notice ended on March 23, 2006. Thus, 10 years after the crash, the final rule has not been issued. Federal transportation officials also said the failure to satisfy a cost-benefit analysis might impede the implementation of NTSB recommendations. Although NTSB is required to only consider the safety implications of its recommendations and not consider the cost factors, if a proposed regulation is not cost beneficial, it cannot be approved by OMB.

Federal officials with whom we spoke at DOT, which receives the bulk of NTSB recommendations, indicated that they have been working with NTSB to find acceptable means of implementing recommendations. The process—recently called Safety With a Team—is designed for NTSB and federal agencies to work in cooperation to address open recommendations and implement needed safety improvements. NTSB and DOT officials told us that this process contributed to the closing of many recommendations. However, the process is not used with the Coast Guard, which has the lowest rate—74 percent—for accepting NTSB recommendations among the modes, as mentioned previously. According to a Coast Guard official we spoke with, the Coast Guard believes that it has an acceptable rate for closing NTSB recommendations and that it does not intend to act on recommendations that it deemed unnecessary.

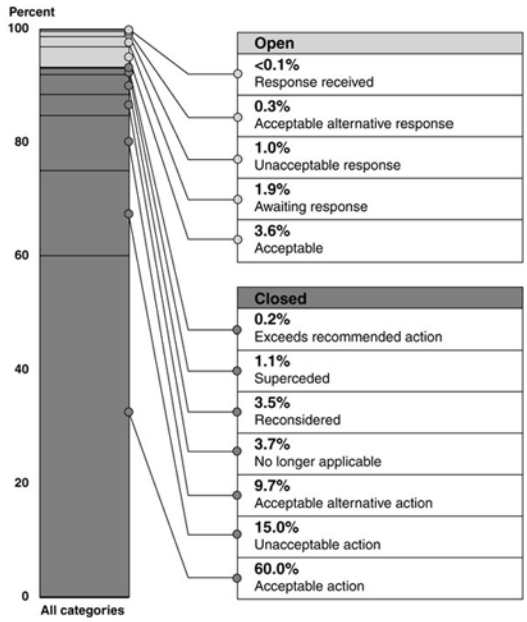
NTSB recognizes that open recommendations can have serious safety implications for the transportation industry. To spur implementation, the agency also publishes

a "most wanted" list of what it considers the most serious safety concerns. For example, in 2000, NTSB added to its most wanted list the need to improve the safety of motor carrier operations. NTSB recommended that FMCSA prevent motor carriers from operating if they put vehicles with mechanical problems on the road or unqualified drivers behind the wheel. As recently as May 2006, NTSB issued an additional recommendation that FMCSA "establish a program to verify that motor carriers have ceased operations after the effective date of revocation of operating authority."

The process that NTSB uses to change the status of or close out safety recommendations is paper-based, labor intensive, and relies on a series of sequential reviews; this process can take between 6 and 12 weeks. As a result, NTSB is delayed in communicating with agencies on whether NTSB considers the actions that have been taken to address the recommendation are sufficient to accept the recommendation. Consequently, agencies remain unaware that their response has been accepted or not accepted. And in the case of DOT, this lack of information affects its ability to accurately report annually to Congress on the status of implementing NTSB's recommendations in all its modal administrations.[23]

The process of closing recommendations is managed by NTSB's Safety Recommendation Office, which has responsibility for maintaining a recommendations database and administering the paper flow to change the status of recommendations. Adding complexity to the process—which NTSB calls the "mail control process"—is the fact that there are 12 separate categories of recommendations status. The 12 categories are listed in *Figure 10,* which also shows the percentage of recommendations in each category as of May 1, 2006.

**Figure 10: Status Categories for Recommendations Issued From 1967 to May 1, 2006**



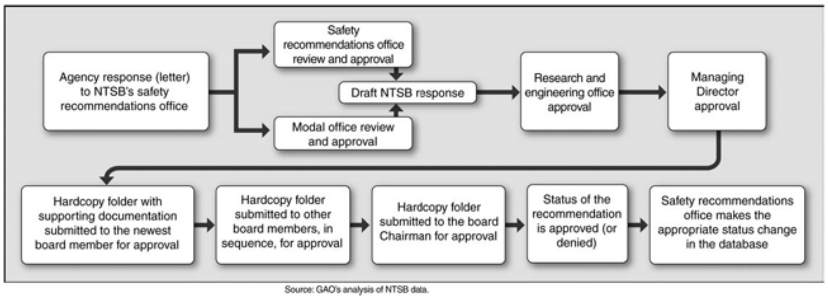

Source: GAO's analysis of NTSB data.

Note: NTSB issued 12,471 recommendations from 1967 to May 1, 2006.

The process begins when NTSB receives documentation from the recommendation recipient that would change the recommendation's status. The Safety Recommendation Office generates paper folders and supervises a process that is summarized in *Figure 11.* This process involves multiple, sequential approvals starting from the Safety Recommendation Office, to the modal offices and Research and Engineering Office, to the Managing Director's office, to the Board Members for final approval. Since none of these reviews happen concurrently, some 150 folders are in process

at any given time, according to the Director of the Safety Recommendations Office. There are no electronic communications or approvals throughout the process. In its study of NTSB, Booz Allen Hamilton identified this as an inefficient process. Officials at NTSB agree that efficiencies could be gained in this process and are considering eventually computerizing a number of processes such as this one. The agency expects to develop such plans after hiring a Chief Information Officer later this year.

**Figure 11: NTSB's Recommendation Close-Out Process**




Source: GAO's analysis of NTSB data.

**NTSB's Academy Does Not Generate Sufficient Revenues to Cover Costs and Is Not Fully Utilized**

Although there is no statutory requirement that revenues from NTSB's academy would generate sufficient revenues to cover the costs, in July 2005, NTSB was encouraged in the Senate report accompanying the Fiscal Year 2006 DOT Appropriations Act to be more aggressive in imposing and collecting fees to cover the costs.[24] The academy generates revenues through tuition fees, space rental to other agencies for events such as conferences, and contracts with federal agencies that would allow them to use academy space for "continuity of operations" in emergency situations. To the extent that NTSB maximizes the use of the academy, it can produce additional revenues that may help cover costs.

*Academy Costs Have Exceeded Revenues*

For the first 2 full years of operation, Fiscal Years 2004 and 2005, NTSB's academy did not generate sufficient revenues to cover the costs of providing training, as shown in *Table 1.* As a result, those portions of the academy's costs that were not covered by the revenues from tuition and other sources—approximately $6.3 million in Fiscal Year 2004 and $3.9 million in fiscal year 2005—were offset by general appropriations to the agency. The salaries and other personnel related expenses associated with NTSB investigators and managers teaching at the academy, which would be appropriate to include in academy costs, are not included in *Table 1* because NTSB told us that it does not choose to account for expenses in that manner. In addition, NTSB lacks a full cost-accounting system that would facilitate doing so. The table shows expenses directly associated with the academy and does not include an allocation of agency wide supporting services, such as the Managing Director's office, information technology, human resources, and legal support. Some of the expenses during these 2 years were one-time expenses—such as over $125,000 for furniture and equipment (included in *Table 1* as office supplies for Fiscal Year 2005) and $499,000 to move the wreckage of the TWA flight 800 airplane from storage near the crash site in New York to the academy (included in the table as miscellaneous government contract services in Fiscal Year 2004). Space rental is a fixed annual expense of about $2.5 million. When that fixed expense is excluded from academy expenses, the remaining operating expenses exceeded revenues by about $3.7 million in Fiscal Year 2004 and about $1.4 million the subsequent year.

**Table 1: Direct Expenses and Revenues for the NTSB Academy, Fiscal Years 2004 and 2005 (unaudited)**

| | FY 2004 | FY 2005 | Percentage difference |
|---|---|---|---|
| Personnel related | $1,011,716 | $978,591 | -3% |
| Travel | $24,428 | $56,912 | 133% |
| Space rental[a] | $2,521,440 | $2,500,896 | -1% |
| Maintenance/repair of buildings | $706,279 | $238,203 | -66% |
| Miscellaneous government contract services | $2,204,880 | $558,540 | -75% |
| Office supplies | $12,939 | $153,249 | 1084% |
| Miscellaneous expenses[b] | $29,320 | $28,887 | -1% |
| **Total expenses** | **$6,511,002** | **$4,515,278** | **-31%** |
| **Earned revenue** | **$258,760** | **$634,800** | **145%** |
| Overall deficit | -$6,252,242 | -$3,880,478 | -38% |
| Deficit when space rental expense is excluded | -$3,730,802 | -$1,379,582 | -63% |

Source: NTSB.

[a]NTSB leases the academy facility from George Washington University under a 20-year lease that will expire in 2021.

[b]Miscellaneous expenses such as telephone, mail, and photography services and printing.

In addition, while some courses presented during the first 2 years of academy operation did not recover the costs that NTSB attributes to them, revenues from other courses exceeded the cost. Of the 49 class sessions provided at the academy in Fiscal Years 2004 and 2005, revenues from 14 sessions, all of which occurred in Fiscal Year 2005, did not recover their cost, while revenues from the remaining sessions exceeded the cost.[25] According to the academy's Deputy Manager, courses are only expected to generate enough revenues to offset the costs specifically attributed to the course, with some additional allocation for research and development of other programs and, if possible, other academy costs. Accordingly, tuition prices are determined by estimating those costs (such as course material, contracted instructors and their travel expenses) and dividing that cost by the projected class size. Costs such as the building lease, maintenance, building security, and academy personnel are not allocated to the costs of individual courses.[26] In addition, consideration is given to setting tuition at a level that is competitive with similar courses by other institutions and that is not prohibitively high for prospective students from government agencies, according to the academy official.

Other sources of revenue are needed for NTSB to be able to recover the full costs of the academy. For Fiscal Year 2004, over $12,000 in revenue (about 5 percent of total revenues) was collected from sources other than course fees to cover some of those costs. For Fiscal Year 2005, the revenue from other sources increased to over $91,000 (about 14 percent of total revenues). Other sources of income during these 2 years included renting space to other organizations, such as the Society of Automotive Engineers, George Washington University, and the National Association of State Boating Law Administrators for meetings, conferences, and boat storage. In addition, NTSB has contracted with two agencies—the Federal Energy Regulatory Commission and the Virginia Circuit Courts—for continuity of operations. According to NTSB officials, it has explored this option with other organizations, but has not found others who will pay a yearly retainer for the service.[27] While NTSB has taken action to generate revenue from other sources, it does not have a business plan or marketing strategy that seeks to optimize opportunities for additional revenues. According to the academy's Deputy Manager, NTSB plans to develop a business plan. The agency, however, has no time-frames for doing so.

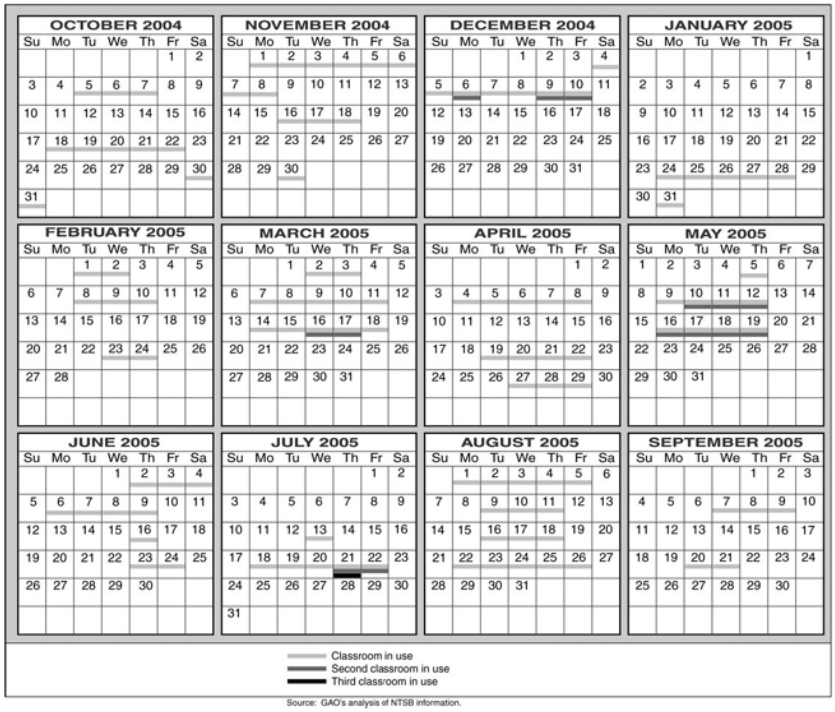
Our analysis of the academy lease indicates that NTSB has the flexibility to use the facility in other ways to generate revenues or potentially reduce costs. For example, the lease does not preclude NTSB from subletting unused space to other

users. Since certain space is already configured as classrooms and the academy is located in an academic setting on George Washington University's suburban Virginia campus, it may be possible to market space to academic users. Furthermore, NTSB is not precluded by its academy lease or its lease for headquarters space in Washington, D.C., from relocating some headquarters staff to the Virginia facility. The lease for the office space in Washington, D.C., expires in 2011. Such a move, however, would incur one-time costs that include relocating staff, moving furniture and equipment, reconfiguring space and utilities, as well as recurring travel costs for staff who must travel between the two locations. Such costs would have to be weighed against the reduced cost of leasing less space in Washington, D.C.

*Academy Classrooms Are Significantly Underutilized*

NTSB has not maximized the use of the facility, which could generate additional revenues that may help cover costs.[28] We estimate that, overall, less than 10 percent of the total classroom space was used during Fiscal Year 2005.[29] As shown in *Figure 12,* none of the five classrooms were used for 21 weeks in Fiscal Year 2005. In addition, at any given time, no more than three classrooms were in use. *Figure 12* shows the days in which classroom space was used for 31 class sessions and 12 other events, such as workshops and seminars by organizations that rented the space during Fiscal Year 2005.

**Figure 12: Utilization of Classrooms by Academy Classes and Other Events, Fiscal Year 2005**



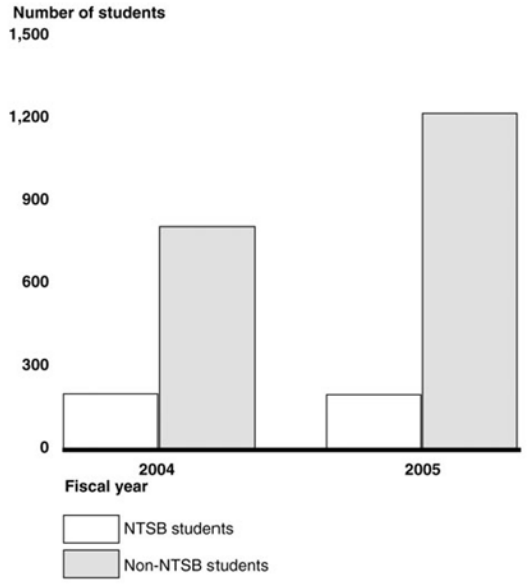

Source: GAO's analysis of NTSB information.

Note: Bars indicate classroom use. For example, two stacked bars indicate that two classrooms were in use on a particular day.

While a relatively small percentage of the academy's students have been NTSB staff, the agency is taking efforts to increase their enrollment at the academy. About 20 percent of the academy's approximately 1,000 students[30] in Fiscal Year 2004 were NTSB staff, and about 14 percent of the 1,400 students in Fiscal Year 2005 were NTSB staff. Over the 2 years, about 400 NTSB students[31] attended 38 of the 49 class sessions conducted at the academy during Fiscal Years 2004 and 2005. (See *Fig. 13*) NTSB is making efforts to have staff more fully utilize the facility. In Fiscal Year 2004, 1 of 18 sessions was only for NTSB investigators; in Fiscal Year 2005, 5 of 31 sessions were only for NTSB investigators.[32] While increasing the use of the academy by NTSB staff would reduce the costs of sending them to external training,

it is important that NTSB not reduce the number of external, paying students in the process.

**Figure 13: Number of NTSB and Non-NTSB Students, Fiscal Years 2004 and 2005**




Source: GAO's analysis of NTSB data.

NTSB staff receive most of their training from outside the academy, which may be due to the courses lacking the subject matter that they require. Our analysis of staff training requests for Fiscal Year 2006 showed that 97 percent of all training is expected to be from external sources and the remaining training from NTSB's academy. NTSB staff have requested external training being provided by organizations that include FAA's Transportation Safety Institute, the University of Southern California, the U.S. Department of Agriculture, and Kettering University for training in subjects such as human factors in aviation safety, turbine engine investigation, or automotive design and safety. Training requests cover other specialties such as helicopter training, flight training currency for pilots, technical writing, supervisory and management skills, and industry conferences. Investigators and writer editors with whom we spoke had positive views on the quality of academy training courses but provided several reasons for not taking further courses there. Ten of the 23 investigators and writer editors we interviewed told us that they had taken (or taught) courses at the academy and thought the courses were excellent;[33] none of the investigators and writer editors had anything negative to say about the quality of any academy course. However, none of the staff we talked with had plans to attend academy training in Fiscal Year 2007. One reason noted for this situation was the remoteness of Ashburn, Virginia, from their residences. Another reason was the lack of courses on new transportation technologies and the skills and competencies needed by an investigator-in-charge. Eight investigators told us that they find workshops by manufacturers, such as aircraft and automobile manufacturers, more valuable to their work than academy training.

The academy is not utilized more by NTSB staff, in part, because the agency has not developed a core curriculum for its staff that could then be offered at the academy, as mentioned previously in this testimony. The academy only offers one course that is required for NTSB staff—a 2-week course on aviation accident investigation that is required for new NTSB investigator staff. The Deputy Manager of the academy told us that the academy plans to eventually offer more internal training covering subjects such as management skills, retirement, and computers.[34] However, no milestones or specific plans have been established for that effort.

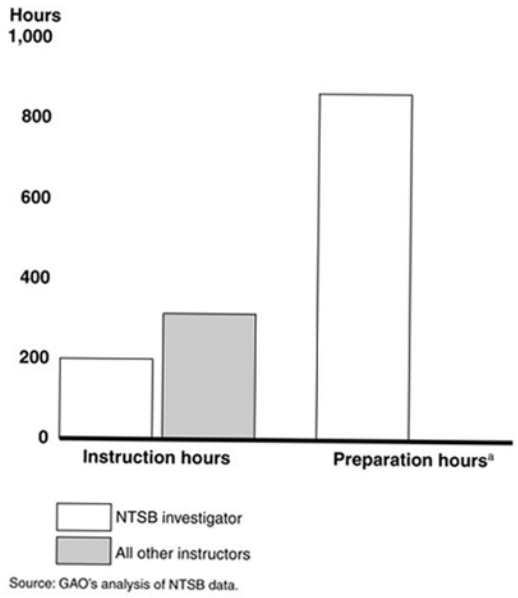
Although most students at the academy are from outside NTSB, several factors can affect the agency's ability to attract additional outside students. First, the lack

of a business or marketing plan may be affecting NTSB's ability to fully utilize the academy. Second, academy training is similar to training provided by other institutions. FRA, FAA, and PHMSA officials told us that their investigators do not attend NTSB training because similar training is provided in-house by DOT's Transportation Safety Institute. For example, an FAA investigator told us that new investigators take a basic accident investigation course at the Transportation Safety Institute and subsequently take mid-career follow-up courses there. Furthermore, our comparison of NTSB's Fiscal Year 2006 curriculum with that of several other institutions that teach courses on accident investigations showed that other institutions offered courses similar to 12 of NTSB's 19 courses. For example, DOT's Transportation Safety Institute offers basic courses on aviation and bus accident investigations, and the University of Southern California offers a course on human factors related to accident investigations.

*Additional Issues Concerning the Academy*

You asked that we provide information concerning the academy's use of NTSB investigators as instructors and NTSB's compliance with the Anti-Deficiency Act, with regard to its accounting for its academy lease. Concerning the first issue, academy courses are taught by a combination of academy staff, NTSB investigators and managers, and contractors. Use of investigators as instructors is limited and is likely to have little impact on investigators' overall workload. During Fiscal Year 2005, 51 NTSB investigators or managers taught at the academy. On average they spent an estimated 22 hours to prepare for and teach courses. (See *Fig. 14.*)

**Figure 14: Length of Time NTSB Investigators Spent Teaching and Preparing to Teach Academy Courses and the Length of Time All Other Instructors Spent Teaching, Fiscal Year 2005**




Source: GAO's analysis of NTSB data.

Note: Other instructors include NTSB academy staff, volunteers, and contract instructors from outside NTSB. Data on the number of hours "other" instructors spent preparing to teach is not collected by NTSB.

Finally, NTSB classified its lease for the academy as an operating lease rather than a capital lease. As a result, NTSB has been noncompliant with the Anti-Defi-

ciency Act because it did not obtain budget authority for the net present value of the entire 20-year lease obligation at the time the lease agreement was signed in 2001. NTSB realized the error in 2003 and reported its noncompliance to Congress and the President. NTSB has proposed in the President's Fiscal Year 2007 budget to remedy this Anti-deficiency Act violation by inserting an amendment in their Fiscal Year 2007 appropriation, that would allow NTSB to fund this obligation from their salaries and expense account through Fiscal Year 2020.

**Conclusions**

Mr. Chairman, we have developed several conclusions from our analysis of NTSB to date. To the credit of the current leadership at NTSB, much of the agency's progress toward following leading practices is due to recent management initiatives. The performance management plan, draft staffing plan, and implementation of controls over financial transactions are all positive steps. NTSB's progress in these areas will likely remain incomplete without additional actions, however. For example, without a more comprehensive strategic plan than it currently has, NTSB cannot align staffing, training, or other human resource management to its strategic goals or align its organizational structure and layers of management with the plan. NTSB will also likely miss opportunities to strengthen the management of the agency until it develops a strategic training plan for its employees, implements a full cost-accounting system, and improves communications within the agency.

We have also concluded that, despite the many safety recommendations NTSB has made and seen implemented over the years of its existence, inefficiencies have resulted from the process that the agency uses to close out safety recommendations. In particular, the absence of a computerized documentation system and the sequential reviews that NTSB currently requires slow the process and prevent expedient delivery of information about recommendation status to affected agencies. Finally, in terms of its academy, NTSB is missing opportunities to increase the value of this asset. Without a comprehensive marketing plan, NTSB will likely be unable to efficiently attract users who would help pay the ongoing costs of the facility.

**Recommendations for Executive Action**

To improve the efficiency of agency operations, we are making eight recommendations to the Chairman of the National Transportation Safety Board based on our completed work to date. To improve agency performance in the key functional management areas of strategic planning, human capital planning, financial management, and communications, we recommend that the Chairman implement the following three recommendations:

- Improve strategic planning by developing a revised strategic plan that follows performance-based practices; developing a strategic training plan that is aligned with the revised strategic plan and identifies skill gaps that pose obstacles to meeting the agency's strategic goals and curriculum that would eliminate these gaps; and aligning their organizational structure to implement the strategic plan and eliminate unnecessary management layers.
- Develop a full cost-accounting system that would track the amount of time employees spend on each investigation and in training.
- Develop mechanisms that will facilitate communications from staff-level employees to senior management, including consideration of contracting out a confidential employee survey to obtain employee feedback on management initiatives.

To enhance the efficiency of the report development and recommendation closeout processes, we recommend that the Chairman take the following two actions:

- Identify better practices in the agency and apply them to all modes. Consider such things as using project managers or deputy investigators-in-charge in all modes, using incentives to encourage performance in report development, and examining the layers of review to find ways to streamline the process, such as eliminating some levels of review and using concurrent reviews as appropriate.
- Improve the efficiency of the review process for changing the status of recommendations by computerizing the documentation and implementing concurrent reviews.

To enhance the utilization of the academy and improve the ability to generate revenues that will cover academy costs, we recommend that the Chairman take the following three actions:

- Develop a comprehensive marketing plan for the academy. The plan should consider such things as outreach to potential users, working with USDA and GSA

to market it as classroom and conference space, and conducting market research for additional curriculum development. If ethical and conflict-of-interest issues can be addressed, the plan should also consider options for allowing transportation manufacturers to conduct company-sponsored symposia and technical training at the academy facility, which would benefit NTSB investigators in keeping up with new technologies. In addition the plan should consider the feasibility of subleasing a portion of the academy space.

- Develop core investigator curriculum for each mode and maximize the delivery of that training at the academy.
- Conduct a study to determine the costs and feasibility of moving certain functions from headquarters to the academy facility in preparation for the renegotiation of the headquarters lease, which expires in 2011.

**Agency Comments**

We obtained comments on a draft of this testimony from NTSB. NTSB's Managing Director concurred with our recommendations and provided clarifying comments and technical corrections, which we incorporated as appropriate. In addition, NTSB commented that the draft did not sufficiently distinguish improvements that have been made over the past year. We revised the testimony to more clearly distinguish those actions.

**Scope and Methodology**

To determine the extent to which NTSB is following leading practices in selected management areas, we reviewed past GAO work on leading management practices in the areas of strategic planning, performance management, human capital management, financial management, and communications. We interviewed NTSB board members, senior officials, managers, investigators, and writer editors regarding their experience with those practices at NTSB, and their perceptions of the effectiveness of those practices. We also determined NTSB's response to recommendations made by the DOTIG. We reviewed NTSB documents, including its strategic, staffing, and performance management plans; management advisory e-mail; and information regarding the current staffing levels; and employees' training plans for 2006.

To determine the extent to which NTSB is developing accident investigation reports and closing safety recommendations in an efficient manner, we interviewed NTSB investigators, writer editors, managers, and senior officials regarding the investigative process and their role in it. We randomly selected 15 of the 210 investigators and 8 writer editors evenly across the 4 modal offices. The views represent the particular individuals and are not representative of all NTSB investigators and writer editors. We reviewed policy guidance on the investigative process and the level of current and past investigation activity. We examined data on recommendations acceptance rates and close-out status from NTSB's recommendation database, and we determined that the data were sufficiently reliable for the objectives of this review. Additionally, we reviewed studies done by the RAND Corporation and Booz Allen Hamilton that examined NTSB's investigation process and determined the extent to which the agency had implemented their recommendations.

To determine the extent to which NTSB is generating sufficient revenues to cover costs at its academy, we reviewed financial data on NTSB's academy, including the revenues and expenses for Fiscal Years 2004 and 2005. We reviewed the course curriculum of the academy, and compared it with classes offered by DOT's Transportation Safety Institute, Embry Riddle, the University of Southern California, and the Southern California Safety Institute. We examined data on the student makeup of academy classes and analyzed data on the preparatory and teaching time used by NTSB investigators who taught at the academy. We interviewed NTSB investigators, writer editors, and managers and senior officials at DOT's modal administrations regarding their current and planned use of the academy. Finally, we examined the lease for the academy to determine how NTSB may utilize the space.

We conducted our review from December 2005 to May 2006, in accordance with generally accepted government auditing standards.

**Contacts and Acknowledgments**

For further information on this testimony, please contact Dr. Gerald Dillingham at (202) 512–2834 or by e-mail at *dillinghamg@gao.gov*. Individuals making key contributions to this testimony include Teresa Spisak, Colin Fallon, Eric Fielding, Tom Keightley, Maren McAvoy, Josh Ormond, and Jena Whitley.

**ENDNOTES**

[1] Department of Transportation Act, P.L. 89–670, Oct. 15, 1966.
[2] Independent Safety Board Act, P.L. 93–633, Title III, 1974.

[3] NTSB conducts safety studies as a result of identifying safety concerns rather than as a result of specific accidents.

[4] Not more than three members may be appointed from the same political party. At least three members are appointed on the basis of technical qualification, professional standing, and demonstrated knowledge in accident reconstruction, safety engineering, human factors, transportation safety, or transportation regulation.

[5] 49 U.S.C Sec. 1132(c).

[6] Pub. L. No. 103–62.

[7] GAO, *Results Oriented Cultures: Creating a Clear Linkage between Individual Performance and Organizational Success,* GAO–03–488 (Washington, D.C.: March 14, 2003).

[8] GAO, *A Model of Strategic Human Capital Management,* GAO–02–373SP (Washington, D.C.: March. 15, 2002) and GAO, *Human Capital: Key Principles for Effective Strategic Workforce Planning,* GAO–04–39 (Washington, D.C.: December 11, 2003).

[9] GAO, *Executive Agency Management Diagnostic Survey* (draft).

[10] Each investigative team initially consists of at least one investigator-in-charge and other technical support investigator positions based on the complexity of the accident.

[11] RAND Institute for Civil Justice, *Safety in the Skies: Personnel and Parties in NTSB Accident Investigations* (Santa Monica, CA.: 2000).

[12] GAO, *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government,* GAO–04–546G (Washington, D.C.: March 1, 2004).

[13] GAO, *Executive Guide: Creating Value through World-class Financial Management,* GAO/AIMD–00–134 (Washington, D.C.: April 2000).

[14] DOTIG, *Audit of the Purchase Card Program,* FI–2005–072 (Washington, D.C.: Aug. 23, 2005) and *Report on Financial Management Practices and Internal Controls,* FI–2003–004 (Washington, D.C.: Dec. 11, 2002).

[15] Cost accounting involves the accumulation and analysis of financial and nonfinancial data, resulting in the allocation of costs to organizational pursuits such as performance goals, programs, activities, and outputs. Nonfinancial data measure the occurrences of activities and can include, for example, the number of hours worked.

[16] RAND Institute for Civil Justice, 2000.

[17] GAO, *Results-Oriented Cultures: Implementation Steps to Assist Mergers and Organizational Transformations,* GAO–03–669 (Washington, D.C.: July 2, 2003).

[18] We randomly selected 15 investigators and 8 writer editors evenly across the 4 modal offices and interviewed them to obtain their views on NTSB's processes. The views represent the particular individuals and are not representative of all NTSB investigators and writer editors.

[19] The writer editors held a conference in February 2004.

[20] Booz Allen Hamilton, *NTSB Organizational Process and Efficiency Study* (Washington, D.C.: Aug. 12, 2004).

[21] In Fiscal Years 1999 and 2002, Booz Allen Hamilton found that the average time to complete a major investigation was 1.8 years; in Fiscal Years 2001 and 2003, the average time was 1.9 years; in Fiscal Year 2000 the average was 2.4, mainly due to several lengthy aviation investigations that took over 4 years to complete.

[22] Booz Allen Hamilton, however, found that the logic and rationale for changes made during the review process were not transparent.

[23] 49 U.S.C. Sec. 2135(d). NTSB pointed out that for those recommendations on the Most Wanted List, it specifically updates the list each November to ensure sufficient time for DOT to file its annual report to Congress.

[24] Senate Report 109–109 accompanying P.L. 109–115, the Transportation, Treasury, the Judiciary, Housing and Urban Development, and Related Agencies Appropriations Act of 2006.

[25] The revenue deficient for the 14 sessions totaled $54,279, and the revenue surplus for the two years totaled $307,203.

[26] If the tuition fee is set by dividing the costs attributable to a course by the projected class size, the fee may not be competitive with fees charged by other institutions offering similar courses. In that case, the projected class size might not be attainable without lowering the tuition to a competitive level, with the result that fee revenues collected might not cover the attributable costs.

[27] NTSB has a memorandum of understanding with GAO for the two agencies to reciprocate in providing continuity of operations. There is no annual fee associated with this agreement, only cost reimbursement after the first 14 days of providing space.

[28] The academy facility contains five classrooms, a large warehouse that houses aircraft and other wreckage, eating and lounge areas, and office space for five employees who constitute NTSB's Washington field office.

[29] We excluded federal holidays and the last week in December from our analysis. In some cases, courses used multiple classrooms. We lacked specific information on which courses used multiple classrooms. To account for that situation, we rounded up the percentage of space utilized. The use of multiple classrooms does not affect the information on the lack of using any classrooms for 21 weeks.

[30] The total number of students is the sum of the participants in all classes. Individuals who attended more than one class at the academy were, therefore, counted multiple times.

[31] Individuals that attend more than one class are counted multiple times.

[32] These course sessions were Conducting Effective Technical Presentations; two sessions each of Media Training and Major Investigation Protocol and Processes; and a joint training class with the Federal Bureau of Investigation.

[33] Our review of course evaluations for Fiscal Years 2004 and 2005 indicated high positive responses by students to the academy courses. The data lacked information for us to compare evaluations by NTSB students and non-NTSB students.

[34] NTSB is considering contracting out more courses such as these.

Senator BURNS. Dr. Dillingham, let's just follow up with your recommendations and some of the things that you've taken note of. Now, your doing this management review, when will that study be complete?

Dr. DILLINGHAM. We expect that the study will be complete before the end of the year, sir.

Senator BURNS. And in recent years, the reports from the Office of Inspector General and a report done by the RAND Institute on NTSB, how has the NTSB responded to these reports?

Dr. DILLINGHAM. The NTSB has taken action, particularly on the RAND report. In fact, I think it's important to note that both the RAND report and a subsequent Booz Allen report were commissioned by the NTSB itself, recognizing that they needed this kind of information.

Senator BURNS. Now, are there still some obstacles to be overcome before we undertake some of those, and I'd address this to both of you. What obstacles do we see in front of us that would prevent them from taking the steps as recommended from those reports?

Dr. DILLINGHAM. Do you want to go first?

Mr. ROSENKER. Doctor, thank you. Mr. Chairman, as it relates to the work that we've been doing with the GAO, I think it was a very constructive engagement and we are pleased we had the opportunity to work with them. Their recommendations are right on target. Much of what they've said, we've actually begun to try to accomplish. Areas such as the cost accounting system, something we find to be a valuable tool, and would like to continue to work on. We actually began last year with Quicktime in our payroll. We've actually had some examples where we've accomplished things like our ability to track specific costs. Most recently we did one at the request of the State Department. We did an investigation over in Sudan that we were going to be reimbursed for. We needed to be able to track every single dollar that had been involved in that investigation. We also did one for NASA a number of years ago on the *Columbia* Shuttle accident.

So, we have the tool, if you will, in a basic way. But to do it across the board, which we would like to do, I believe, complies with the recommendation that the GAO has suggested, would cost

us several hundred thousand dollars, and unfortunately today, I don't have that. But, I can assure you, it is an objective that we do wish to comply with.

Senator BURNS. In other words, it's a lack of funds more than anything else?

Mr. ROSENKER. Yes, sir.

Senator BURNS. You're proposing, now I noticed in your statement that you're proposing for 2007, 399 full-time equivalents but then in the out years 2008 and 2009, you're requesting 475. Why the increase?

Mr. ROSENKER. Sir, over the past five years, we've actually lost people. Approximately four years ago, we had something close to 440 people. We are now down to 399, it's a loss of 10 percent. These were critical skills, in some cases, that we lost. As we move into a more technologically advanced era, we need people to be able to understand and be able to do the kinds of critical investigations that will be necessary to prevent accidents that will occur, not could occur, but will occur.

So, these positions we are trying to fill over the next two or three years will go a long way to helping us in that area. They will primarily be in the technological area where we don't have these skills at this moment, additional fire people, we are looking for additional simulation people, we are looking for computer people, we are looking for avionics people, we are looking for composites people, and we're actually looking for investigative bodies. We must have investigative bodies that will be sent to our regional offices if we are going to be able to keep up with the workload.

Senator BURNS. How many regional offices do you maintain?

Mr. ROSENKER. Ten, sir.

Senator BURNS. Now, with new technologies, does that mean that an employee can be more efficient, or we're just meeting different challenges now when we look at accidents as they occur?

Mr. ROSENKER. Both of those, Mr. Chairman, we're looking for new technological advances that we can employ in our investigations. But, at the same time, the kinds of equipment we'll be looking at, aircraft that are fly-by-wire, aircraft that are made of composites. We need the technical skills in order to be able to accomplish and guarantee that we know exactly what happened to be able to prevent it from happening again.

Senator BURNS. As you know, the IG is authorized to review the financial management and by the way, I think this committee is pleased that you've established a CFO for physical infrastructure. But, you know, sometimes we get penny-wise and dollar-dumb in the things that we do and we know we've got to react, how do we use new technologies to cut down the time on these reports and the recommendations made after the reports are known and studied?

Mr. ROSENKER. We're looking at that right now. We recognize that, in some cases, in many cases, it takes too long to bring a report to final and to bring it to the Board for public access. We're taking a look. There are too many layers of oversight and examination. Now, we don't want to, in any way shape or form, do a shortcut, we don't want to lose the quality of the report. But, we believe that at the management level we can do better. Matter of fact, sir, in the past year, if you take a snapshot at where we are today as

opposed to where we were a year ago, we've improved productivity by 50 percent. We've gone from 14 reports to 21 reports to this point right now.

Senator BURNS. Do we get burdened in just paperwork?

Mr. ROSENKER. Part of it, Mr. Chairman, is paperwork, part of it, in fact, is a backlog, part of it is a resource management issue and some of it, sir, is really the complexity of the accident. Some accidents will take significantly longer. A good example of that is TWA Flight 800, the explosion of the TWA center wing fuel tank. Most recently a major accident, American 587, where the composite vertical stablizer was ripped off. These are very complex accidents and we must get them right, so they will take time, and again, we will not take shortcuts.

Senator BURNS. Senator Lautenberg.

Senator LAUTENBERG. Thanks Mr. Chairman, Mr. Rosenker, it takes awfully long to get reports finally issued, and GAO found it takes an average of three and a half years to finish a report. I mean, that really is a glitch that's got to be tended to, and when you think about hearing there was an accident, and we often find the reason that these accidents take place fairly quickly, but yet the report drags on and drags on. What do you point to as the single delay factor that creates this, beside the continuing cry about more resources? And we understand that.

Mr. ROSENKER. Well, I'm not going to blame that on resources alone, but I will dispute, and again this has been an excellent report, that the GAO has done. Unfortunately, I'm not sure they defined what that three and a half year accident would be. If we are talking about major accidents, and that's what I just described as Flight 800, a TWA Flight 800, where in fact it took months. The FBI was doing a parallel investigation because we were not sure it was not terrorism.

Another good example, as I say, is 587, which happened only 40 days right after September 11th. Once again, we had to be correct. Those do take a great deal of time. They take science, they take a great deal of analysis, and, unfortunately, these are complex issues that we wish we could answer right away. But there are competing issues that go into something like this, we cannot make the wrong move, we must be right in these kinds of accidents.

But, for the most part, in our general aviation accident reports, we're really in a six month, six to nine month category. Many of our rail accidents, one that I was going to share with Senator Pryor this morning, one that happened in his state, we're going to have before it's a year old. We try to target these——

Senator LAUTENBERG. But we're——

Mr. ROSENKER. Yes, sir——

Senator LAUTENBERG.—talking about averages. So it brings them all together.

Mr. ROSENKER. Yes, sir, and I would believe, again, I hate to disagree because it has been a very good report, but the three and a half years I think is more in the major aviation type of actions.

Senator LAUTENBERG. How about giving us a response to that, take a second look and put down your views on what's taking place.

Mr. ROSENKER. Yes, sir.

Dr. DILLINGHAM. Senator Lautenberg.

Senator LAUTENBERG. Yes.

Dr. DILLINGHAM. Could I please?

Senator LAUTENBERG. Please, sure.

Dr. DILLINGHAM. I'm glad you hate to disagree with us, but that's not going to save you.

[Laughter].

Dr. DILLINGHAM. Anyhow, it is, indeed, an average and I think it's fair to say that major accidents like TWA 800 does skew it, because those are sort of outlyers. However, and it's also true that NTSB will issue interim recommendations when they find something that is an immediate safety issue. However, in terms of where some of the length comes, that back-end process, within NTSB in terms of getting the recommendations out and processing the report, and all of those things are major contributors to the overall length of investigations.

Senator LAUTENBERG. Mr. Rosenker, you advocate states actively take a proactive view of things and try to make the changes necessary to wherever they can, to make the roads, the rails, the rivers safer, the water body safer. Now, I wrote the law that raised the drinking age to 21 and we had enormous success with it, saving over 1,000 lives each and every year since 1984. But one of the things I found, that was interesting, Mr. Chairman, I was at a rodeo out west, in a state very familiar to you——

Senator BURNS. Don't get to meddling now.

Senator LAUTENBERG.—and the, I noticed a lot of young people drinking beer and so forth, and I asked the officer, who was very polite, very nice, and I enjoyed even seeing the kids riding the q-tips and the whole business, I had never seen that before, q-tips being the sheep and little kids riding them, so I said to the police officer, do you know the drinking age? With respect, he replied, he said, yes sir, 21. So I said, do you think these young people are 21? He said, Mr., I do traffic.

[Laughter].

Senator LAUTENBERG. And I tell that story, not to be so critical, but because I think there is probably some logic to his response. The fact of the matter is, I think if law enforcement were more rigid here, we'd save even more lives and it's a constant battle between the kids who want to have fun and the society generally. Now, when you talk to states, do you have the opportunity to say, be more rigid on enforcing the law on 21, we could bring the rate down. We see that drunk driving or under the influence accidents continue to take a larger share of the fatalities that we have on the road. It's a real menace and you lose, I think, 17,000 people a year as a result of driving under the influence. Can we do anything, do you think, to stimulate more attention to that mission?

Mr. ROSENKER. Senator Lautenberg, first let me applaud the work that you've been doing. You've been a leader in this area, and we at the NTSB recognize that and are most greatful for the support you've provided in that area. Unfortunately, the drunk driving issue is a very difficult one, because in many cases it is the hardcore drunk driver who is sick. Enforcement clearly is an issue and we need more of that. Technology, we believe, can also play a role in that. But, as we go around, and our Members, the five Members of our Board, one of their major roles is to be advocates for safety

regulation, safety legislation, and we appear routinely before State Legislatures requesting the 21 age limit, requesting the graduated drivers licensing, requesting work to be done to improve our ability to bring down the numbers of drunk driving accidents and to improve the safety on our highways. Around 43,000 people every year, at least last year, and it's close pretty much every year, die on our Nation's highways. Three million are injured in seven million accidents. We need to do significantly more. It is the most dangerous mode of transportation, not only in the United States, but in the world.

Senator LAUTENBERG. Mr. Rosenker, you spent some time working for the Motorcycle Lobby, did you at any time during that work oppose federal requirements for universal motorcycle helmet laws?

Mr. ROSENKER. Sir, when I was representing the Motorcycle Safety Foundation, simultaneously I was representing the American Safety Helmet Council, so I thought I had an inside way of getting the helmets put onto riders. I am an advocate of that personally, I believe it is very important and its fool hardy to be in any way, shape, or form on a motorcycle or a bicycle without a helmet.

Senator LAUTENBERG. Well, because we had a helmet law on the books. I was the author, and after about three or four years, a couple of my colleagues decided that that wasn't the free spirit enough, and they had them taken off and in checking with our emergency clinics in New Jersey, found out that head and neck injuries, the primary cause of death or paralysis went up in reverse to the requirements for helmets. So, I'd like, I'm going to try again to get a helmet law in place and I just wondered whether you would have any opposition.

Mr. ROSENKER. Not in the least, sir, and I applaud that effort and any way we can be helpful to you, sir, we will.

Senator LAUTENBERG. Mr. Chairman, I thank you for holding this hearing, it's very important and because of the time crush.

Senator BURNS. Thank you very much, I thought you were going to tell some rodeo stories, we can go back in the back.

Senator LAUTENBERG. You know, I had a good one, I had a rodeo experience.

Senator BURNS. Did you?

Senator LAUTENBERG. If you think it wasn't hard getting up——

Senator BURNS. Getting up on that bull, you're mistaken.

[Laughter].

Senator BURNS.—I'll tell you a little story about that, you know——

Senator LAUTENBERG. Alright.

Senator BURNS. Every kid's gotta try one and I, not being the exception, but you can also, if you try two, that's a dead giveaway to your I.Q., too, if you try the second one.

[Laughter].

Senator BURNS. I even tried three and that doesn't say much.

I've got a couple other questions, we're voting now and we want to complete that, and I just appreciate you coming up on this abbreviated hearing this morning. We are going to be working very hard, and working with Senator Lautenberg to get this reauthorized, and I look forward to you being confirmed in your new posi-

tion at the NTSB, I think you're going to be a good leader, and I appreciate the work of Dr. Dillingham and his work. He's institutional, he doesn't need any notes, he knows more about this outfit than they know about themselves, I would imagine, some that he can't talk about. But in other words, the relationship is a good one and it makes the organization more efficient and with a due respect for each other and I appreciate that very much. So we will leave the record open for a couple of weeks and any questions you might get, you might respond again to the Committee and to the individual Senator, and I appreciate you coming early this morning.

Dr. DILLINGHAM. Thank you, Mr. Chairman.

Mr. ROSENKER. Thank you, Mr. Chairman and thank you, Senator Lautenberg.

Senator BURNS. Yes, sir.

[Whereupon at 9:46 a.m. the hearing was adjourned]

# A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO GERALD L. DILLINGHAM

*Question 1.* In your testimony, you state that in the past two fiscal years the Academy has been operating, it has not been able to generate sufficient revenue in order to cover its operating costs. In your estimation, is there a way the Academy could maximize the use of the space in order to generate more revenue?

Answer. Yes. As a first step to maximize the use of space and generate additional revenue, we have recommended that the National Transportation Safety Board (NTSB) develop a comprehensive business plan or marketing strategy for its training Academy, which is leased through 2021. During Fiscal Years 2004 and 2005, the Academy collected over $12,000 and $91,000 respectively, from sources other than course fees. However, our Office of General Counsel is investigating whether NTSB has the authority to retain the proceeds from any subleases of Academy property. Our preliminary review indicates that NTSB does not have special authority to do so. We do know the General Services Administration is generally required to turn over all proceeds from the sale of federal property to the Treasury as miscellaneous receipts under 40 U.S.C. Sec. 571. We are investigating whether this provision applies to NTSB. Another consideration is whether the retention of proceeds would be considered an improper augmentation of appropriations. Generally, federal agencies would need specific authority to be able to retain and use these funds. Although NTSB does have specific authority under 49 U.S.C. Sec. 1118(c) to impose and collect fees for services provided, such as course fees, we do not believe this authority extends to the subleasing of Academy property. We anticipate fully addressing this issue in our final report on the NTSB that is due out later this year.

Nonetheless, other options to maximize the use of Academy space include the following:

- Subletting additional unused space to other users. For example, during Fiscal Years 2004 and 2005, the Academy rented space to organizations such as the Society of Automotive Engineers, George Washington University, and the National Association of State Boating Law Administrators for meetings, conferences, and boat storage. NTSB should continue to pursue this option.
- Marketing space to academic users. Certain space is already configured as classrooms, and the Academy is located on George Washington University's suburban Virginia campus.
- Possibly relocating some headquarters staff to the Virginia facility when the headquarters lease expires in 2011. NTSB is not precluded by its Academy lease or its lease for headquarters space in Washington, D.C., from relocating some headquarters staff to the Virginia facility. At this time, there is very little difference in the base cost of the Academy lease and the headquarters lease at L'Enfant Plaza. Specifically, the headquarters lease requires an additional expense of real estate taxes at about $3 per square foot since the lease is through a privately-owned business, while the Academy is leased through a nonprofit organization, which is exempt from those taxes. Upon renewal in 2011, the downtown lease could increase or decrease, but that is unknown. Furthermore, the costs of relocation could equal or exceed the savings that NTSB might realize by moving some staff to the Academy and renting less space in Washington, D.C. For example, the Academy is currently configured as classrooms and lecture halls so an immediate cost would be new construction to configure office space. Other costs could include computer and phone networks, relocating staff, moving furniture and laboratory and other equipment. We have recommended that NTSB conduct a study to determine the costs and feasibility of moving certain functions from headquarters to the Academy.

*Question 2.* In your opinion, what options does the NTSB have in order to attract more students to the Academy?

Answer. The National Transportation Safety Board (NTSB) has options to attract more external and internal students to the Academy. In Fiscal Year 2005, NTSB had about 1,400 students, of whom about 86 percent came from outside NTSB. Options to attract more external students include the following:

- Create unique courses and aggressively market them. Currently, the Academy provides training that is similar to training provided by other institutions. Officials from the Federal Railroad Administration, Federal Aviation Administration, and Pipeline and Hazardous Materials Safety Administration told us that their investigators do not attend NTSB training because the Department of Transportation's Transportation Safety Institute provides similar training in-house. If NTSB were to offer different courses, it could potentially attract and retain new students. A marketing study could help NTSB assess the demand for different types of courses.
- List the availability of Academy training on the General Service's Administration (GSA's) website at *www.gsa.gov/aircraftpolicy.* At this site, GSA identifies training opportunities for personnel in the federal aviation community, such as "annual aviation workshops" and "training for federal aviation." Other training entities, including the Transportation Safety Institute, Embry Riddle Aeronautical University, and the Southern California Safety Institute, publicize their aviation training on this site.

To attract more internal students, we have recommended that NTSB develop a core curriculum and add more classes that address the skills and competencies needed by its investigative staff. NTSB staff currently take most of their training outside the Academy, perhaps because the Academy courses do not cover the required subject matter. Attracting more internal students would not increase revenues for NTSB, but would lower its external training costs. According to our analysis, 97 percent of the NTSB staff training requests for Fiscal Year 2006 are for external courses costing over $924,000. The remaining 3 percent of training is scheduled to come from courses at the Academy.

Other actions that NTSB could take to increase internal enrollment at the Academy include:

- allowing transportation manufacturers to conduct company-sponsored symposiums and technical training at the Academy, which could help NTSB investigators keep up with new technologies and
- offering more internal training on subjects such as management skills, retirement, and computers.

*Question 3.* In your opinion, should overhead costs such as building lease, maintenance, building security, and personnel be built into the price they charge for their courses, in order for the Academy to begin to be self-sustaining?

Answer. In our opinion, the National Transportation Safety Board (NTSB) should not build overhead costs into the price the Academy charges for its courses. Currently, NTSB determines tuition prices by estimating direct course costs (such as the costs for course materials, contracted instructors, and the instructors' travel) and dividing that cost by the projected class size. The cost to lease Academy space alone is a fixed annual expense of about $2.5 million. If this annual fixed cost were divided among the students who now attend the Academy, class costs would dramatically increase and would be less competitive with fees charged by other institutions for similar courses unless the annual fixed cost was offset by revenue from a large influx of additional students. A large number of additional students may not be possible, since there are likely to be good reasons to keep class sizes relatively small.

The NTSB Academy currently charges as much or more per course than the average cost per course charged by other safety institutions. For example, the cost of NTSB's Aviation Accident Investigation course is $2,400 for 10 days of instruction. DOT's Transportation Safety Institute's 8 day course on aviation accident investigation currently costs $1,687. The Southern California Safety Institute's similar 11 day course ranges from $2,587 to $2,875 depending on the number of enrollees. Any additional charges for NTSB's courses could reduce the Academy's revenues by pricing the courses out of comparable range for other transportation safety training institutions. For example, if the Academy lease cost of $2.5 million was divided among the 36,160 student hours in Fiscal Year 2005, the additional cost per student hour would be $69. For NTSB's 10 day Accident Investigation course, the additional cost

per student would be $5,520, increasing the cost to the student from $2,400 to nearly $8,000.

*Question 4.* Do you think the funds that are currently going toward the Academy would be better used for investigations?

Answer. If the funds currently going to the Academy were used for National Transportation Safety Board's (NTSB) investigations and investigative staff, they would more directly support NTSB's mission. We estimate that the net expenses of the Academy totaling $3,880,478 in Fiscal Year 2005 could fund over 25 additional investigative positions each year. However, since there is no cancellation clause in the Academy lease, NTSB would have to pay the remainder of the 20-year lease should it vacate the facility, which would amount to about $2.5 million annually through 2021. It is not unusual for a lease to lack a cancellation clause, because that allows for a lower monthly payment for the agency, but it also precludes NTSB from freeing up these funds for any other use during the life of the lease.

*Question 5.* Do you think the NTSB's practice of citing a "probable cause" precludes an in-depth evaluation of all relevant factors in an incident or accident; and that it creates an atmosphere of "establishing blame" rather than one of determining all means to prevent a future occurrence? Does the Board have the resources that would be necessary to increase the depth and scope of investigations?

Answer. In our opinion, the National Transportation Safety Board's (NTSB) practice of citing a "probable cause" does not preclude an in-depth evaluation of all relevant factors in an incident or accident. In analyzing NTSB accident reports, we found that the "probable cause" determination requires an in-depth analysis of all relevant factors during NTSB investigations. Moreover, because NTSB considers multiple factors in its analysis, the probable cause is often a comprehensive statement or paragraph, as opposed to a specific isolated cause. We found that NTSB's process of fact finding and analysis during accident investigations does not in itself constitute or create an atmosphere of establishing blame. Instead, the process results in determining causes and making recommendations so that the chance of a similar accident occurring in the future is lessened. NTSB attempts to ensure that any factors that may have influenced an accident are discussed in the proper context in its analysis and final report.

NTSB is able to provide the necessary depth and scope examining the incidents and accidents it does investigate. But with additional resources, it would have more flexibility to conduct additional investigations. Under the current staffing levels at NTSB, the agency makes a judgment as to whether to launch a full investigation, especially in areas other than aviation, which has a more defined legislative mandate. For the most part, NTSB managers make a determination of potential safety implications and consider the availability of resources, as well as the effect on ongoing investigations. Our ongoing work is evaluating NTSB's accident investigation process as well as how decisions are made to launch investigations.