

Professional Airways Systems Specialists Statement on the FAA Fiscal Year 2002 Budget April 27, 2001

The Professional Airways Systems Specialists (PASS) provides exclusive representation for more than 11,000 of the FAA's System Specialists, Flight Inspection Pilots, Procedure Development Specialists, Aviation Safety Inspectors and safety support staff. As the union that certifies aviation safety, our members have in-depth knowledge of the National Airspace System (NAS) and understand the components that must be in place to achieve true NAS modernization and to maintain adequate aviation safety levels. These are the people who install, maintain and certify systems; conduct aviation, manufacturing and flight inspections; and perform flight checks and procedures development throughout the NAS, which is in a period of unprecedented growth and change. The national airspace comprises more than 29 million square miles and each day handles more than 55,000 flights that use more than 12,000 instrument approach procedures and carry almost 2 million passengers. Several weeks ago, the president released his fiscal year 2002 budget request that called for fully funding the FAA operations and facilities and equipment accounts as authorized in the FAA Reauthorization bill. While PASS supports full funding of these accounts, we are disappointed funding was not allotted to increase the Inspector, Systems Specialist and NAS Maintenance workforces and feel this subcommittee should also earmark funding for staffing, training and travel to ensure the dedicated FAA workforce can properly oversee the NAS.

AIR TRAFFIC SERVICES

Airway Facilities

PASS represents 7,200 Systems Specialists and support personnel in the FAA's Airway Facilities (AF) division, who certify, maintain and repair systems at the 49,000 facilities and equipment that comprise the NAS. In the past year, PASS has suggested many changes to the processes, procedures and resource utilization to enable expedited modernization of the NAS' equipment and systems, including the much-touted Standard Terminal Automation Replacement System (STARS). STARS-full-service level (FSL), which is still in development, is intended to replace outdated terminal automation systems at approximately 172 towers and Terminal Radar Approach Control facilities (TRACON's) between 2003 and 2008. FAA has worked with PASS to design a training method that provides Field Specialists with the pre-requisite skills and STARS-specific training, including performance and certification exams prior to commissioning, while also ensuring current on-site systems are fully supported during installation and testing. The STARS situation is a prime example of the achievements possible when management collaborates with its employees.

However, one aspect of STARS cannot be overemphasized — the absence of a contingency plan should the FSL system not be able to be deployed beginning in 2003. PASS has suggested a "back-up plan" be developed quickly. While STARS is intended to upgrade terminal and tower automation systems, the current Automated Radar Terminal System (ARTS) IIIA sites, approximately 50 in number, are most critical because they are the oldest automation systems and *cannot* withstand further delays in replacement. Other options are available and PASS would like this subcommittee's support to ensure the FAA devises an alternative solution should STARS once again miss a deadline.

Free Flight Phase I is another example of the benefits of collaboration between PASS and the agency. By working together on Free Flight's five tools — Collaborative Decision-Making (CDM), Surface Movement Advisor (SMA), Traffic Management Adviser (TMA), Precision Final Approach Spacing Tool (pFAST) and User Request Evaluation Tool (URET) — everyone involved expects full deployment by the target date, December 31, 2002. These tools are designed to benefit scheduling and capacity by shifting from a centralized command-and-control environment between pilots and air traffic controllers to a distributed environment allowing pilots more capability to choose a route and flight plan that are

more efficient and economical. While these tools are essentially “off-the-shelf,” they still need to be adapted to accommodate local site peculiarities and unique integration problems. Through site-level user teams composed of local management and PASS Technical Specialists, evolution of each tool is conducted on-site with integration problems solved as they arise. This method, often called “spiral development”, is developing these tools on schedule. We ask this subcommittee to fully fund the agency’s request for Free Flight Phases 1 and 2.

While collaborative examples exist, not all modernization efforts are conducted in a cooperative manner. Currently, too many initiatives at the FAA either do not involve PASS Specialists in the design or planning, involve them too late in the process to meaningfully affect the outcome or ignore and discount their input altogether. Examples include the Airport Surveillance Radar Model 11 (ASR-11), Next Generation Air/Ground Communications (NEXCOM), Automatic Dependent Surveillance-Broadcast (ADS-B) and Airport Surface Detection Equipment Hardware (ADSE) projects.

Systems Specialists cannot participate in these programs or begin participation too late because staffing levels have been reduced significantly in the field. The future staffing picture is even bleaker with 30 percent of the current workforce eligible to retire within the next five years. Since the training process for Systems Specialists can take up to five years, the FAA needs to hire an additional 900 technicians in fiscal year 2002 over and above attrition, including 172 software specialists (one for each STARS site), followed by an additional 600 technicians during fiscal years 2003 and 2004. At the same time, 150 technicians need to be hired to staff the Operations Control Centers, which are not covered by our staffing agreement with the FAA. While we realize modernization efforts will make operating the NAS more efficient, the agency has much work ahead to obtain “true modernization” and the already reduced levels will negatively impact the process. In fact, the Federal Managers Association also testified before this subcommittee on March 28 and emphasized the need for an additional 900 technicians in fiscal year 2002.

In addition, we ask this subcommittee to provide the proper oversight and funding for our training agreement with the FAA. As we testified last year, this plan, when fully implemented, will ensure an employee’s skills match the current and future requirements of the job through a focus on local and on-the-job training (OJT), while also keeping them available for facility restoration on the legacy systems. The current system, which requires travel to the FAA Academy in Oklahoma City, does not properly train the workforce. While the agency has agreed with local and distance training, we are concerned that its budget request would cut funds for distance learning from \$2.1 million in fiscal year 2001 to \$1.3 million in fiscal year 2002. At the same time, the request would increase FAA Academy funding from \$7.1 million this year to \$12 million in fiscal year 2002. We cannot stress strongly enough the need for local and distance training. Therefore, we ask this subcommittee to increase the agency’s budget request for distance learning by \$6 million. Implementation of the PASS training plan can cure problems with the current system, such as many shifts not being manned by Specialists trained and certified to work on the NAS’ critical systems. For example, the back-up Direct Access Radar Channel (DARC) system at the Boston Enroute Air Traffic Control Center failed in early April during a scheduled upgrade of the primary Host system. While two Specialists were on duty, they were not trained or certified, causing an approximately six-minute delay in services and endangering air safety.

The FAA’s continued inability to implement valid improvements in a timely fashion is also a roadblock that can increase costs tremendously. For example, the FAA agreed with a PASS recommendation three years ago that the video and power modules needed to be reconfigured for the Display System Replacement (DSR) to facilitate troubleshooting and reduce cable and connector failures. PASS Specialists, working with FAA experts, developed a new design with a cost estimate of \$2 million for all 20 Air Route Traffic Control Centers. Today, only the Washington Center at Leesburg, Va., has the new design incorporated. Since the original estimate, FAA has “re-engineered” the fix and it will now cost an estimated \$32 million and take nearly five years to complete. PASS no longer supports the DSR reconfiguration and believes it now needs to be part of the display upgrade to a flat-panel screen already on the schedule.

PASS asks this subcommittee for support in one other AF area — requisite funding for congressionally required projects. Last year, Congress named 40 towers for replacement/improvement with only \$40 million allocated, but the estimated cost was \$210 million with the difference coming from the already stretched AF operations budget.

Aviation Systems Standards

PASS represents 300 Flight Inspection Pilots, Airborne Electronic Technicians and Instrument Flight Procedures Development and Aircraft Maintenance Specialists at the FAA's Aviation System Standards (AVN) division. AVN employees are responsible for design, development and flight inspection services for ground- and space-based navigation systems at more than 3,000 instrument airports in the U.S. and numerous airports in 46 other countries. AVN has the responsibility for designing instrument approach and departure procedures for the 21st Century NAS in accordance with Federal Aviation Regulations safety standards. Since 1995, the number of NAS instrument procedures has increased more than 50 percent. In the same time frame, staffing has decreased by more than 10 percent. AVN has a sound plan to accomplish the safety procedures, incorporating the agency's NAS Architecture and Redesign initiatives, and to meet industry's request to fully utilize ground, aircraft and space-based navigation systems for improved safety, capacity and operational flexibility. However, the funding must be available to increase staffing levels and provide proper training, especially considering AVN's attrition rate is one of the FAA's highest. The number of retirement eligible employees has grown dramatically with more than 75 percent of NAS Inspection Pilots eligible for retirement within the next four years. Aircraft and Avionics Maintenance Specialist demographics are similar. With 18- to 30-months training required to become fully qualified, new personnel need to be hired immediately. We ask this subcommittee to earmark funding to hire 25 additional Procedures Development Specialists and 25 administrative support staffers for Instrument Flight Procedures Development. At a recent AVN-1 briefing, *AVN Potential Staffing Crisis*, the agency reported its research showed 50 percent of United Airlines pilots would be eligible to retire by 2010. Industry has already begun attracting pilots from AVN's dwindling workforce. The private sector is also beginning to tap the government's top source for AVN employees, the military. The FAA must begin offering comparative incentives and benefit packages to attract and keep its employees.

In addition, outdated technology to maintain NAS databases — a component of the AVN strategic plan — needs to be replaced. Although AVN personnel have the knowledge, skills and ability to use today's technology, they are forced to use outdated methods to monitor the sophisticated new aircraft flight management and space-based systems. For example, AVN obstacle evaluations and airport airspace analysis activities, which are federally mandated, have increased by more than 30 percent to 37,000 annually. These activities require Specialists to conduct a complete evaluation of the NAS structure surrounding the new obstacle. Outdated equipment requires Specialists to rebuild complex data files and complete numerous hours of tedious manual topographical evaluations to meet their objective — aviation safety. AVN must begin aggressive technological upgrades to keep pace with the growth in public demands and utilize its highly skilled staff.

The backbone of the NAS structure — the VHF Omni-Directional Range (VOR) facility, a navigation mainstay — is also suffering. More than 40 percent of these NAS critical navigational aids require rotation realignment to zero degree variance of magnetic north this year, which, under the current system, will take millions of man-hours to amend all take-off, arrival and instrument approach procedures and airway structures associated with each facility. For example, a rotation of the Baltimore VOR in late 2000 took a team of seven Specialists in excess of 5,100 hours to build the databases and amend the procedures affected by that rotation. If each of the 409 sites requires this amount of time, more than 2 million man-hours will be spent to accomplish this mandated goal. Keep in mind, this total does not include the vast expenditures for crews to prepare the aircraft and fly certification and validation flights for each component affected by the VOR and to chart and publish new and amended procedures.

REGULATION AND CERTIFICATION

Flight Standards

PASS represents 2,800 Aviation Safety Inspectors and additional aviation safety support personnel in the Flight Standards division of the FAA. On March 28, PASS members Bob Kerner and Keith DeBerry, Flight Standards Safety Inspectors, asked this committee to ensure FAA provides needed funds for proper staffing levels, adequate training and internal policies to promote the highest levels of aviation safety, providing first-hand accounts of the FAA's decision making on the workforce. While Congress has appropriated funds to meet the FAA's request for the Flight Standards division, the

money has been allocated for other purposes. As a result, the money for inspectors to complete their jobs has decreased, while aviation demand has increased significantly.

FAA choices have reduced the ranks of the Aviation Safety Inspector to critical levels and stifled professional development in an arena that demands currency training. As the workforce has dwindled, the number of required (“R”) inspections mandated by Congress, including enroute inspections and maintenance checks, has continued to grow with the increasing number of air agencies and air carriers. Funding levels are so anemic that Flight Standards District Office (FSDO) managers across the country, fearing funding will be exhausted by the latter part of the year, are pushing Inspectors to complete their “R” item inspections in the early part of the year. All other needed surveillance is either not performed or performed on a limited basis. For instance, a memorandum from the Acting Manager of the Flight Standards division, released on April 25, indicated a critical shortage in Southern Region travel funding for the third quarter. “To minimize the impact of the current shortages, I am asking you to support me with the following: no overnight travel is to be incurred unless you have carry over funds from second quarter; modified workdays should be established to minimize approved overtime or compensatory time; and if your certificate requires work functions outside of the normal workdays of 8 a.m. to 5 p.m., it will be your responsibility to modify work schedules to conduct appropriate surveillance,” the manager wrote.

The staffing problem could be partially mitigated by hiring additional aviation safety technicians (AST), who could perform research in support of investigations, certifications, inspections, and surveillance; prepare accident, incident, and enforcement reports; answer Freedom of Information Act requests; interface with the public; and assist the inspector in completion of certification, investigative, and surveillance tasks. Inspectors would then be freed from these tasks to perform more certification and safety inspections in the field and thus spend more time on safety oversight and enforcement of regulations.

Since 1998, training funds for Flight Standards has been significantly reduced to levels where active Inspectors receive little or no technical training. The current aviation arena has become highly complex and ever changing and requires regular currency training. The evolution of advanced avionics technology (glass cockpits) and highly technical aircraft systems coupled with continued operation of aging aircraft, such as the DC-9, B-727, and the B-737, demands that Inspectors receive regular, structured currency training. The lack of training funds has wreaked havoc on all programs, including the Air Transportation Oversight System (ATOS) with several of the needed training programs not yet created. For example, data analysts are still unable to fully analyze ATOS data for trends and Inspectors are not fully trained on using trend data to conduct surveillance.

The agency has just begun the process of hiring 100 Inspectors requested in its fiscal year 2000 supplemental request. While these additional Inspectors will certainly help, they won’t begin to make an impact on the “serious staffing deficit” created in the past several years. We believe an additional 300 Inspectors and 200 administrative personnel, including AST’s, Aviation Safety Assistants and computer specialists, are needed, along with adequate training and travel funding, to ensure proper oversight.

The inspectors also touched on several other important areas, including Initial Operation Evaluations, switching of oversight responsibilities, enroute and ramp inspections and air carrier sanctions. Complete statements from both inspectors were submitted for the record at the time of the hearing.

Manufacturing Inspection District Office (MIDO)

PASS represents 131 Aviation Safety Inspectors and 16 assistants at the Manufacturing Inspection District Offices, who assure aircraft and associated products currently being manufactured and operated, maintain safety levels through evaluating manufacturers on their capability to maintain quality levels. They also oversee FAA Manufacturing Designees who conduct new aviation equipment inspections. The Manufacturing Inspector workforce is woefully understaffed. The number of Inspectors has decreased by 12 percent since 1996 and will be cut in half by 2006 due to retirement. PASS believes Manufacturing Inspectors could reasonably be expected to supervise 10 designees and 10 to 12 facilities. In many offices nationwide, inspectors are currently overseeing 25 designees and 50 facilities. With 100 additional Inspectors, MIDO could properly oversee the 2,300 current Manufacturing-related Designees. The increasing trend of the

"internationalization" of aircraft and parts manufacturers means a tremendous increase in workload for the scarce manufacturing inspector workforce.

While the workforce continues to be cut, the Manufacturing Inspector workload has increased by more than 40 percent in the last decade. Manufacturers are introducing a record number of safer and more efficient products, but the insufficient staffing of manufacturing aircraft certification personnel is impeding the ability of the FAA to achieve compliance with regulations. As a result, these companies are unable to deliver these new products timely enough to assure aviation safety and to keep pace with our country's competitiveness in the international marketplace.

In essence, additional FAA Manufacturing Inspectors equal better service to industry, a more competitive business position and a strong job market for U.S. employers in a global marketplace. In this branch of the FAA, safety and industry growth need to coexist. The General Aviation Manufacturers Association, which represents 52 manufacturers of general aviation aircraft, engine, avionics and component parts, understands the importance of an increased Aircraft Certification Manufacturing Inspector workforce and has testified additional Inspectors are needed.

Due to the relatively smaller size of the workforce, MIDO has had to rely on designees to conduct a majority of the new aviation equipment inspections. However, continual staffing cuts are resulting in designees assuming responsibility for all of these inspections, with minimal FAA oversight. Although the manpower is not available to properly oversee the current designees, the FAA continues to increase the number of designees to compensate for its staffing shortcomings. With additional Manufacturing Inspectors, these increases in the number of designees would be acceptable. However, the current status of the workforce has relegated Inspectors to mere "paper reviewers" of designee work, jeopardizing aviation safety.

Ideally, Inspectors should be able to inspect factories at least three or four times a year to pick up on problems, but many sites are only being visited by Inspectors once a year. The staffing scenario places Inspectors and designees in dangerous positions. In the past, Inspectors could oversee designees and provide assistance on difficult certification cases. Since contact with designees is minimal, Inspectors cannot properly ensure authorized individuals are conducting inspections nor that airworthiness certificate tags are valid.

For example, the New England region has only 28 Manufacturing Inspectors, who oversee 331 FAA designees at 320 facilities, including several major manufacturers, such as Pratt-Whitney Engines and General Electric. Most of the facilities only receive an on-site visit once a year. Detailed quality inspections are conducted only once every three to four years at many facilities. Starting this past year, Inspectors had to obtain special permission from managers to conduct some on-site visits. Budget cuts, changes in policy, and staffing shortages have diminished the "gut instinct" of the Manufacturing Inspector to conduct an on-the-spot surveillance deemed necessary. This problem is compounded by other factors. In that region, 14 of the 28 Inspectors are retirement age and will be gone by 2006. Since Inspectors cannot be hired off the street and capable of immediately performing their jobs, the situation needs to be addressed now. New hires must receive an average three years of training to be truly qualified in all disciplines.

Another startling development is the FAA's new practice allowing, and soon to be mandating, industry to choose its own designees. MIDO Inspectors are already one layer removed from personally inspecting aircraft parts and quality systems. With this new, expanded Organizational Designated Airworthiness Representative (ODAR) practice, they will now become twice removed. Without the ability to properly oversee designees and visit manufacturers on a regular basis, including occasional unannounced visits, PASS believes both will begin to become lax and aviation safety will suffer.

In closing, PASS needs this subcommittee to hold the FAA accountable for prioritizing appropriate modernization and inspection efforts and allocating its resources accordingly. We will provide this subcommittee with continuous progress reports on modernization and safety endeavors, such as STARS and ATOS. The resources must be available to make progress with our AF training and to hire additional Systems Specialists. Funding must also be available to provide proper training and increase the staffing numbers of our Inspectors and NAS Maintenance workforces. These measures can only be guaranteed through the FAA's continued enthusiasm and support, which can only be maintained through oversight from this subcommittee.