CALLBACK

Safety Depends on "Lessons Learned"

The ASRS Celebrates Its *30th Anniversary*

On April 15, 2006, the NASA Aviation Safety Reporting System (ASRS) celebrated its 30th year of continuous operation.

The longevity and success of the ASRS program are remarkable examples of how aviation system users can contribute their "lessons learned" to a government program that collects and analyzes this information to solve the issues associated with our modern aviation system.

The ASRS concept embodies a *circle of information feedback* that begins with pilots, controllers, maintenance technicians, flight attendants, dispatchers and others who voluntarily report their safety experiences to the program. During its 30-year history, the ASRS has analyzed this information and returned it to the aviation community through a wealth of safety products.

- **More than 4,000 Safety Alert Messages provided to government and aviation industry decision makers.**

- **7,100 database Search Requests in response to aviation community task force efforts, research studies, publications, safety promotion activities, accident investigations, and more.**

- **317 issues of ASRS's award-winning monthly safety bulletin, *CALLBACK*, which is delivered to more than 70,000 individual addresses by e-mail notification and U.S. Mail.**

- **Publication of more than 70 topical research studies, including completion of more than 124 Quick Response efforts examining all aspects of human and system performance.**

- **Public access to program information, publications, immunity policies, database report sets, reporting forms, and more on the ASRS web site at: http://asrs.arc.nasa.gov.**

ASRS information feedback to the aviation user community allows a learning process to take place, and helps ensure that corrective actions will be appropriate and effective.

The Price of Progress

Progress towards safety goals often comes at a price, and the founding of the ASRS program was no exception. A tragic and potentially preventable airline accident became the catalyst for establishing a national aviation incident reporting system.

On December 1, 1974, TWA Flight 514 was inbound through cloudy and turbulent skies to Dulles Airport in Washington, D.C. The flight crew misunderstood an ATC clearance and descended to 1,800 feet before reaching the approach segment to which that minimum altitude applied. The aircraft collided with a Virginia mountaintop, killing all aboard.

A disturbing finding emerged from the ensuing NTSB accident investigation. Six weeks prior to the TWA accident, a United Airlines flight crew had experienced an identical clearance misunderstanding and narrowly missed hitting the same Virginia mountain during a nighttime approach. The United crew discovered their close call after landing and reported the incident to their company. A cautionary notice was issued to all United pilots.

Tragically, at the time there existed no method of sharing the United pilots' knowledge with TWA and other airline operators. Following the TWA accident, it was determined that future safety information *must* be shared with the entire aviation community. Thus was born the idea of a national aviation incident reporting program that would be non-punitive, voluntary, and confidential.

The FAA and NASA Collaborate

The first step in establishing a national aviation incident reporting program was to design a system in which the aviation community could place a high degree of trust.

The FAA Administrator quickly recognized that the regulatory and enforcement roles of the FAA would discourage the aviation community from using a new safety program that depended on voluntary sharing of safety events. The FAA therefore assumed a sponsorship role for the new program, but turned to a neutral and highly respected third party – NASA – to collect, process, and analyze the voluntarily submitted reports.

Under a Memorandum of Agreement between the two agencies in August 1975, the blueprint for operating the newly designated Aviation Safety Reporting System was set in place: the FAA would fund the program and provide for its immunity provisions, while NASA would set program policy and administer operations. The ASRS program began day-to-day operation in April 1976.

The ASRS Concept Is Proven

The ASRS program has continually demonstrated the value of "safety lessons learned." If a system's users are encouraged to report the safety problems they encounter to a program they can trust, safety goals will be reached much sooner than if we never hear the stories of those lessons learned.

ASRS Alerts Issued in Feb/March 2006	
Subject of Alert	**No. of Alerts**
Aircraft or aircraft equipment	16
Airport facility or procedure	8
ATC procedure or equipment	4
Company policy	2
Total	**30**

Feb/March 2006 Report Intake	
Air Carrier/Air Taxi Pilots	4542
General Aviation Pilots	1515
Controllers	189
Cabin/Mechanics/Military/Other	388
TOTAL	**6634**

ASRS Safety Products Are AOK with Program Users

ASRS program users often send us letters and e-mails telling us how they like, and use, the various data products produced by the program, from database Search Requests to *CALLBACK*. Along with the incident reports received by the program, this feedback helps us to stay wings level and on course. Here is what recent users of program materials have to say:

About ASRS Alert Messages:

The information provided via the ASRS was very useful in determining corrective action.

- Air Traffic Control Tower Manager

The FAA is very committed to the NASA reporting process and takes these alerts very seriously. We can report that both issues have been addressed, resolved, and you may consider them closed.

- FAA Tower Support Specialist

I do appreciate the role that NASA plays in working toward a safer system and I feel that ASRS reports have played an important role. I am forwarding this Alert Bulletin up my chain at the FAA. We also consider the problem to be very serious! Thank you for your help...

- FAA Air Traffic Manager

About Database Search Requests:

…I want to comment on the outstanding service you provide and the extreme value of the data….This is the second time I have used your reports while investigating causal factors and root causes of aircraft accidents. On both occasions, the data provided valuable insights that would not have been gained through any other methods. In this context, your program is truly unique. We appreciate your support and look forward to working with you again soon.

- FAA Aviation Safety Inspector

Thank you so much for your prompt and detailed response to our search request…The information is very useful and important.

- ALPA

...I would like to express a personal note of appreciation for all the cooperation and support your organization has given us by providing us with these specific reports... At Jeppesen we look forward to continued cooperation toward...mutual objectives supporting aviation.

- Jeppesen-Sanderson

About CALLBACK:

I would like to inform you that I think the work you do is simply fantastic. It's too bad we can't measure how many "saves" CALLBACK is responsible for.

- A Private Pilot

Please mail me future monthly safety bulletins as I am a newly hired commercial airline pilot. My Captain gave me one to read the other day and I found it to be very informative.

- An Air Carrier Pilot

Thank you for your work on CALLBACK. I read your newsletters as a private pilot in college and now very much enjoy them as an air traffic controller.

- An Air Traffic Controller

ASRS Future Developments

We don't have a crystal ball that will reveal all of the innovations that ASRS will achieve as it continues to expand and evolve, but we can tell you about a few of the program enhancements that we are working on today:

ASRS Database Online

Users of ASRS data have long wanted to be able to access the database and retrieve incident reports for use in research, safety promotion, and task force efforts. In response to popular demand, we have developed a user-friendly web browser version of the ASRS database that will be available this summer.

ASAP Integration

The Aviation Safety Action Program (ASAP) is a partnership that brings together the Federal Aviation Administration, airlines, and employee groups. The purpose of ASAP programs is to encourage the voluntary reporting of safety issues and events by aviation employees to their employers. Enforcement-related incentives have been designed into the ASAP program to encourage reporting. With 28 ASAP programs submitting reports to the ASRS, ASRS has become the national repository for ASAP data. We will be working with our airline partners to integrate additional programs and expand use of electronic data transfer in the coming months. Of course, we continue to accept paper ASAP submissions.

Electronic Report Submission (ERS)

In cooperation with NASA's Jet Propulsion Laboratories (JPL) – home to the Mars Rovers – ASRS has fully explored privacy protection and confidentiality concerns for secure electronic report submission. ERS will become operational in 2006.

Analyst Workbench

ASRS is implementing a "front-to-back" electronic report management software package that will, when combined with ERS, result in increased capture of ASRS report narratives and ASRS Expert Analyst coding.