

FireNet Response to US Blue Ribbon Airtanker Survey

The following is a response to the Blue Ribbon Airtanker Survey sent directly to the panel and was then presented to FireNet for general information and discussion purposes. The author, Walt Darran, was a pilot of an S2A Airtanker (T84), he has included his name and contact information at the bottom of the letter. Comment or discussion can be directed either to Walt or posted to FireNet for all of the members to read, and which will then be forwarded to Walt who currently is not a member of FireNet.

Purely by coincidence following the mailing of this letter to the panel, T84 went in for its regularly scheduled 200 hour inspection and was found to have a "bunch of corrosion in the wing" and was then promptly grounded. Hence the reason for why the phrase "was a pilot" is used above. It has been reported that increased attention is being made to airtanker structural integrity during inspections following the fatal crashes this fire season of a 46 year old C-130A in California and a 57 year old PB4Y-2 in Colorado during which either one or both of the airtankers wings separated from the fuselage during flight. Directly following these two crashes a significant portion of the US airtanker fleet was grounded for immediate inspection during which other aircraft were found to have corrosion in the wings or "stress fractures" in the vicinity of where the wings join the fuselage.

To: USFS/BLM Blue Ribbon Panel

Gentlemen;

Here are some random thoughts regarding a few of the problems and opportunities facing the airtanker industry. I speak for myself, not necessarily the associations I am affiliated with or my employer.

Things haven't improved much since I submitted the 1996 report to AAP that I sent you a month ago. But today most of the aircraft are older, stresses have accumulated, parts are harder to find and more expensive to duplicate. Plus, the airspace is more crowded, the urban interface continues to expand, wildfire containment is more costly, and environmental pressures continue to grow. The BRP charter is encouraging; there is a crying need for an objective, on-going professional audit of the entire airtanker program. But that only makes sense if there is a commitment to follow up on its findings and recommendations. The agencies, operators, and pilots that have built and endured this system are too close to it to objectively critique it all by themselves, although they obviously need to be a part of the process.

The ageing/rebuilt vs. brand new/mission-specific aircraft debate is too complex for me to address here. I would ask for toughened inspection and maintenance standards for whatever aircraft we use, and for the agencies to expeditiously define their requirements and do what is required to obtain realistic funding for their real needs.

Appropriate, well-maintained aircraft are absolutely essential for survival of aircrews and our industry, but they won't be an effective fire-fighting tool in the hands of a novice crew that doesn't have the fire knowledge and experience to fully utilize it's capabilities. If the C130A/PB4Y2 shutdown continues, with no firm idea on where USFS will go next, and without a commitment to transition displaced crews into replacement aircraft, how many experienced airtanker pilots will depart for more stable jobs? How long can a pilot's marriage or relationship endure, given the stress, industry uncertainties, and the extended dispatches and relocations that airtanker crews have been subject to for the last several years, 2002 in particular? That, on top of the risk that is part of this job, which is put in perspective by the exorbitant cost of airtanker crew life insurance.

I'd like to focus on three unfortunate realities of the airtanker program; an atrocious accident rate (fixed- *and* rotor-wing), inadequate funding, and minimal involvement in the planning and executive processes by operational personnel.

Under-funding contributes to the accident rate; accidents increase costs and deplete budgets. Current budgets are inadequate to cover day-to-day operations, let alone improvements or upgrades. Emergency fire suppression funding is not as available as it once was to make up for the shortfall. In addition, inadequate or "creative" budgets distort real requirements, capabilities, and costs, disrupt operations, and make it impossible to plan ahead. With the current system, operators cannot bid newer, more expensive, aircraft and remain competitive. Training and compensation costs will normally be kept to the minimum required to meet contract specifications; agencies will, by action or omission, set minimum standards, and they must bear responsibility for that. One bidder with outstanding (but more expensive) training, maintenance, and employee compensation programs was totally shut out of the 1st round last year. They kept aircraft and people ready, and USFS ended up paying them much higher severity rates after the C130A/PB4Y2 shutdown. But not all operators can, or will, bet on the come.

A rational examination of funding for the Federal airtanker program should consider a tie-in with Homeland Defense, and/or some sort of agency/aircraft-owner model, similar to CDF's, involving contract operators. That will be controversial, but it needs to be

thoroughly studied, as well as the true costs and effectiveness of MAAFS on real-world fires. If the agencies really want to do it right, they've got to stop kidding themselves, the public, and us, and stop playing shell games with budgets.

Aerial fire suppression is an incredibly complex and costly enterprise, with infinite scenarios. The fire itself will vary according to weather, fuel, and terrain, which will indicate which, if any, air resources are appropriate and effective. Location may dictate if fighting it is even necessary. Are you fighting a grass fire in flat, open, country, or one in heavy timber at the bottom of a steep gorge? Are lives or structures threatened? What are up-coming aircrew time-off and aircraft maintenance requirements? What are turn around (reload) times; are reload bases manned and equipped? Does the fire call for water, foam, or long-term retardant; which aircraft can use which types? What is the availability of water for dipping or scooping? Economics and availability will also determine assignment of SEAT, medium/heavy fixed-wing, MAFFS, rotor-wing (type I or II), amphibious scoopers, and overhead (leadplane, ASM, Air Attack/ATGS).

One size does *not* fit all. Some of the high costs and inefficiencies of the airtanker program are a direct result of using minimally trained personnel to assign and dispatch aircraft. The position of dispatcher needs to be re-thought; it screams for significantly upgraded training and qualifications. Perhaps an FAA Dispatcher license, along with a thorough understanding of fire dispatch levels, aircraft capabilities, and contract requirements, would provide a basic qualification, a starting point.

No two fires are the same, but if they are caught early, a relatively small rapid response Initial Attack team often does the trick. If the fire grows and becomes more complex, the situation calls for a larger and more sophisticated selection of tools, tactics, and strategy. Once it gets beyond a certain point our efforts are often limited to life and property protection. The cost of in-flight cancellations and jettisoned retardant because of a preemptive dispatch must be weighed against the cost of a Sour Biscuit fire, with months of extended attack and mop up. Rapid initial attack is what airtankers do most effectively; let us do it.

Suggested priorities:

Increase meaningful participation of aircrews in all aspects of the airtanker program.

In 1995 the Pressler Bill tasked NTSB with investigating all non-military aircraft accidents. AAP managed to get one pilot admitted as an Interested Party in the 1994 T82 accident investigation; no official involvement by an AAP pilot has occurred since. We need help and cooperation from agencies and operators in training and fielding qualified accident investigators. Ideally our AAP/CFPA Go Team would consist of qualified investigators for structures, power plants, operations, an administrator, and a go-fer. We are initially aiming to field one line pilot, to examine the operational aspects.

Many accident investigations have glossed over contributing factors that needed to be addressed, sometimes (it seemed to us) simply because focusing on those items might cause embarrassment in certain quarters. Line pilots and mechanics, not associated with management or training programs, need to participate in each and every accident and incident investigation, not just fatal accidents on a fire dispatch. We need to present an operational viewpoint in the report, and to glean every ounce of knowledge we can from the mishap to prevent a reoccurrence. We are seeking a thorough investigation from all perspectives, access to a widely distributed report, and specific recommendations followed by appropriate action, no matter where the fault lies.

There are no contract aircrews on any agency boards or committees, and we are no longer on any agency's mailing list for operational or safety communication. The airtanker program currently lacks meaningful participation by operational personnel (aircrews and mechanics) at the agency level, including hardware and software selection and testing, firefighting workshops, safety programs, operational studies, and contract development and implementation. Agency personnel, operators, management aircrew members, even mechanics often have different priorities and viewpoints than the folks who make their living at the pointy end of the airplane. If you are serious about improving the airtanker program, consider involving the people who are ultimately going to execute it. This simple step by itself could purge a lot of problems before they are bought and entrenched.

Perceptions often seem to overshadow reality. If we (AAP and CFPA) are not allowed to participate in the system, we need to develop our own PR program, and strategies to accomplish our goals. We will have to appeal to political and media champions for help. We really don't want to get involved in that, but we don't feel we have a choice, unless there is a change in agency and operator mindsets. But we would rather coordinate efforts and work with operators and agencies, not duplicate or compete with them.

We *all* need to become pro-active, search for problems, and fix/improve the system, or it will continue to fall apart around us. Many of our problems are obvious; it doesn't take a rocket scientist to see them. But they are often costly or uncomfortable to deal with. FOQA (Flight Operations Quality Assurance) programs have been very successful when

fully supported by management and employees. To work for us it would have to be a joint effort by agencies, operators, and aircrews.

In 1995 AAP was granted observer status on the IAB and sent two representatives to their meeting in San Diego that year, but AAP has not received any correspondence from IAB since. The proposal for a National Aviation Safety Manager, or committee, to coordinate the safety programs and share information between the various fire agencies and industry groups, appears to have died, although AAP is holding talks with AFIA on that subject.

Meanwhile CFPA (California Fire Pilots Association), representing approximately 45 contract air attack and airtanker pilots, has affiliated with the International Association of Machinists and Aerospace Workers. CFPA signed their first contract with DynCorp this year, the current CDF contractor, and is working with DynCorp and CDF to pro-actively deal with problems and opportunities in the CDF aerial fire suppression system. So far, the union solution seems to be working there.

Eliminate “silent intimidation”.

An aircraft pilot-in-command is the ultimate decision maker and the last link in the safety chain. We accept that responsibility. At the same time we know that a Captain's authority and options are often severely degraded by factors such as equipment malfunctions, fatigue, stress, intimidation, inadequate support, and corporate culture. If an airtanker pilot downs his aircraft for maintenance “too often”, questions inadequate training, declines a drop, calls in sick for a less-than-life-threatening physical or emotional problem, or criticizes a lead plane pilot or base manager to their face, he will walk away from the situation alive and righteous, but he does so at some risk to his wallet and career options. There have been attempts at improvement in this area, but we are still more likely to get a pat on the back for discretely “pressing” than for shutting down in a questionable situation. If aircrews or mechanics doubt the integrity of the system (they often do), they will do their best to circumvent minefields, rather than clear them, to save their jobs and their butts. We need the guarantee of a fair and open hearing to protect us from capricious authority, to encourage us to stand up to demagoguery.

Provide support for families of aircrews killed in the line of duty.

An on-going project that AAP has had since it's beginning is a memorial fund to help the survivors of airtanker and air attack/lead plane pilots killed in the line of duty. California Assembly Bill AB1748 recently granted death benefits to survivors of contract aircrews

killed in CDF fire suppression operations. Federal contract fire-fighting aircrews are still not covered by the Public Safety Officers Benefit Act (although a bill has been introduced to provide coverage).

USFS/BLM has no Critical Incident Response Program (CIRP) that applies to airtanker pilots or their families. Aircrews may get counseling at a base after an accident occurs, but there is little or no follow-up. There is no plan to contact next of kin; they often hear of the accident first on CNN or the AAP website. Some operators have implemented CIRP on their own, but there is no contract requirement for it. CDF, DynCorp, and CFPA have CIRP notification, assistance, and counseling programs in place, and cooperate on implementation.

Improve communication.

This year's biennial OAS/USFS operator/lead plane pilot gathering in Reno (usually held in conjunction with the annual AAP meeting) was cancelled for lack of funds, thereby eliminating the only (biennial) opportunity for agencies and aircrews to share ideas at a pre-announced face-to-face get-together. That should be an *annual* event, without fail.

USFS, OAS, and BLM put contract pilots on their mailing list for safety publications for a year or so in the mid 1990's. That has been discontinued, although various web sites contain much of the information *if* we know where to find it. But there is little or no communication that I am aware of, either by phone, mail, or email, from agencies *directly* to aircrews or mechanics. Communication through operators or base managers often gets filtered or lost in the shuffle. There are times when we should talk with each other directly. The program would benefit if top management spent time with the troops.

AAP ceased regular publication of its newsletter (Hot Spots) in 1996, concentrating on the Internet for communication with members and the public. Results have exceeded expectations, and we anticipate continued growth and improvement of the site. CFPA has its own, similar, web site. Laptops with modems, Internet providers, and cellular phones now allow us to stay in touch with agencies, our boss, and each other in this nomadic occupation. We have only scratched the surface of web applications for our operations; we can do a lot more in this area.

The USFS SAFECOM and CDF's accident/incident/hazard reporting systems need a thorough overhaul. They currently lack credibility; once submitted, reports either seem to disappear, or they are available to anyone, unsanitized. There is little or no feedback (as from NASA ASRS *Callback*) on actions taken (as in FAA ASAP reports). There is

widespread feeling that reports will more likely result in action against an individual than a fix to the problem. So why participate when the risk/reward ratio is skewed?

FOIA and “Return receipt requested” is still occasionally the only way that pilots, mechanics, or associations, can get an official response to an inquiry from agencies.

Upgrade training.

Institute industry-wide comprehensive annual recurrent training requirements, to cover appropriate “hot” topics, ground and flight instruction in type, plus specific needs of the fire suppression mission, i.e., high-performance maneuvering and drop accuracy. Provide comprehensive IFR training and proficiency flights for crews certified and equipped for IFR dispatches. Provide CRM training for airtanker crews, maintenance, lead plane/air attack pilots, ATGS, base managers, and dispatchers. License dispatchers! Provide basic aviation training for base managers and others in operational control of aircraft, and “Pinch-hitter” flight training for ATGS. Upgrade SEAT training requirements, especially if there is a chance they will be mixed with large tankers and/or used in high density/congested areas.

Attendance at the National Aerial Fire-fighting Academy (NAFA) in Marana is highly restricted. You must be sponsored by an agency or an approved contractor to attend; an individual cannot even apply for an open “standby” slot. There is no provision for recurrent training. Similarly, an otherwise qualified pilot cannot be carded on his own, without a job with an approved operator; there is no provision for a “CWN relief pilot”.

A few additional concerns we need to address, in no particular order:

Cockpit voice recorders and digital flight data recorders to assist in accident investigations, operational trend analysis, and FOQA studies.

Multi-radio monitoring responsibility (traffic control, base ops, FM tactical) within an airport traffic area. Standardized procedures for operations at uncontrolled airports.

Tanker operations in high-density/congested areas. Climb-out (loaded) corridors.

Legal rights, obligations, and liabilities of tactical pilots acting for government

agencies, flying Public Aircraft. Liability insurance, or a waiver, for aircrews?

Flight Operations Quality Assurance (FOQA) programs to cover training, maintenance, work rules, and operational procedures.

Fatigue, mental and physical, including dehydration, aircraft environmental systems, rest, meals, and requirements to keep airtankers washed during extended operations.

Dispatching procedures and work rules that recognize the safety and morale implications of extended hours on consecutive days, and extended periods away from home, and that compensate with extra time off, at home, during slack periods.

Cockpit workload saturation, without autopilots, especially in single-pilot aircraft. KISS!

"User-friendly" (intelligible) operations manuals consolidating applicable FARs, company, and agency requirements (DynCorp recently published one for CDF ops).

Aircraft flight manuals, concise and up to date, with simple and logical procedures.

Paid sick leave for aircrews, and sufficient relief pilots to cover assigned aircraft.

“Liquidated damages” is an incentive to fake it when aircraft (or aircrew) maintenance is needed. In its present form, it is unquestionably an encouragement to “press”.

Treat aerial firefighting as a career, treat the crews as assets. Review initial and recurrent qualifications and training programs, and establish seniority, along with experience and ability, as a basis for upgrading and carding. Provide cross-training opportunities in the event of FAA medical loss, work-related liability insurance, annual compensation commensurate with responsibility and experience, a realistic retirement program, and reasonable benefits, including year-round medical insurance and survivor benefits (PSOBA). If the agency doesn't require all contractors to do the right thing, an individual contractor will not be able to supply those benefits and still bid competitively. The agency has to set a minimum standard.

Closely monitor new technologies for applications and hardware that might add cost-effective capabilities or safety margins to airtanker operations, i.e.:

1. Data-linking, moving map displays, FLIR, TCAS, and ACARS.
2. HUD, Angle of Attack, and Enhanced Vision Systems. Capstone/synthetic vision.
3. Non-Destructive Inspections (NDI) and Life Extension Technologies (prognostic maintenance), Structural Anomaly Mapping.

TCAS in all fire suppression aircraft is an absolute imperative; airtankers have suffered 6 fatal mid-air since 1962. How will the Feds deal with aircraft that don't have TCAS next season? We have several close calls each fire season with General Aviation aircraft; an S2A airtanker had a mid-air with a Piper Tomahawk trainer in the traffic pattern at Romona in 1979. What excuse for not having TCAS installed will we use when an airtanker (fixed- or rotor-wing), Air Attack, or leadplane has a near-miss, or worse, with a commuter, airliner, or corporate jet over the LAX basin or SFO Bay, in the pattern at UKI or CIC, or anywhere else? It's only a matter of time; NASA ASRS has over 1600 reports related to TCAS on file. Everyone I talk to at CDF supports TCAS, but it is not yet scheduled for installation in CDF aircraft (many of which are owned by USFS).

What do we really need, what can we afford, today and in the next generation airtanker? What can we *not* afford to disregard? If contract airtankers are not safe, effective, and efficient, if we do not restore confidence and credibility in the system, we'll be out of a job. Someone, something, will replace us.

What sort of pilots do you really want; seasonal pick-ups, or stable, career-oriented professionals? Are you willing to pay the price---either way? What do you expect from aircrews? Do you want them to be active participants in the program, or do you want to treat them like mushrooms?

I think we've got some valid questions and some good ideas, but we need more juice to accomplish our goals. We'll work with fire agencies, operators, elected or appointed government officials, professional associations and unions, even the media, to do what needs to be done to eliminate the waste of airtanker accidents, enhance the effectiveness of the system, and provide reasonable compensation and job security for fire suppression aircrews. Which is, after all, in everyone's best interest.

Thank you for your time, and for your efforts to help us do our job.

Respectfully submitted,

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