

# AIRWORTHINESS QUARTERLY NEWSLETTER

No. 2, FALL 2014

## EXECUTIVE SUMMARY

This is the second edition of the Airworthiness (AW) Newsletter. We received terrific feedback from the first newsletter and believe we are facilitating communications with the LCMC enterprise. So once again our focus will be to provide insight into all of the facets of the USAF AW process; we'll share some of our successes and where we have uncovered weaknesses, identify improvements. Please let us know what you think.

## KUDOs

C-5 M was issued a Military Type Certificate after mitigating a Serious risk. In May 2013, during the legacy flight authorization review, the C-5M was issued a Military Flight Release due to a Serious risk. The Program Office and Mobility Directorate actively undertook to mitigate the risk. This is exactly the behavior that was sought through AF AW Policy and is in the best interest of the USAF and our warfighters.

CONGRATULATIONS!

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## POLICY

AFPD 62-6, and then AFI 62-601, are still under revision with an ECD by the end of the year. The update is primarily in response to the issuance of DODD 5030.61, AW Directive. This directive requires an AW Authority (AA) and outlines some additional roles for AW. At this time the TAA is the only USAF AA. For our Sister Services and Int'l partners, an AA has authority over the Technical design, Production, Safety, and Operations and Maintenance of air systems. So the USAF is considering establishing an AA. The additional roles which the USAF AW Office is preliminarily addressing are:

1. Conduct AW assessments for operations on foreign owned aircraft — In conjunction with the other Services, we have created a checklist for operator appraisals of the foreign processes and we have begun recognition of Int'l Military AAs.
2. Provide AW assessment and flight authorizations for leased contractor operations which are public— This process is being addressed through a new AW Bulletin.
3. Execute AW assessments for USAF modification of FMS systems — This process is being addressed through a new AW Bulletin.

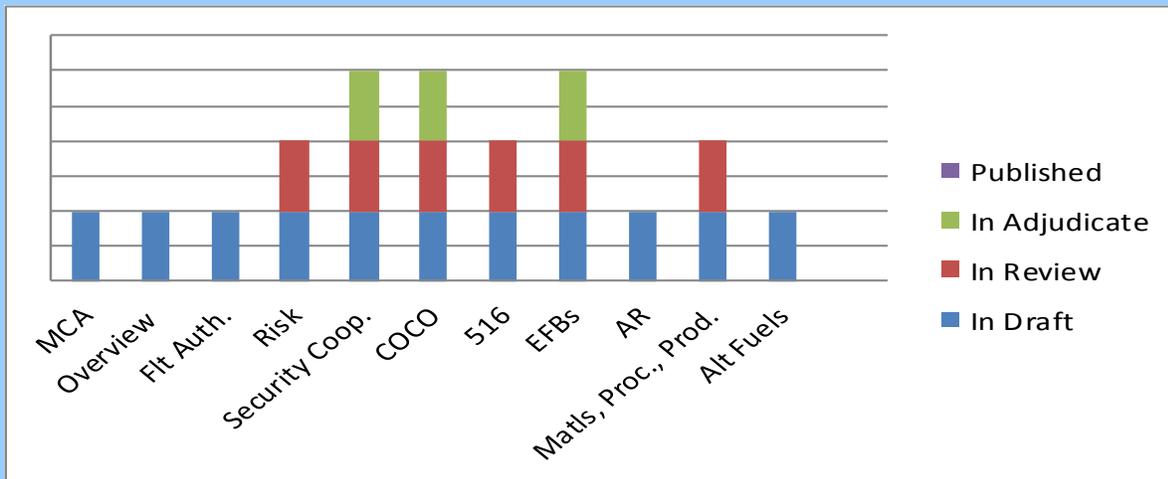
More about policy implementation within this newsletter.

Eleven bulletins are in development with plans for publishing. The chart below shows the current status of each. Bulletin . Below is a short description of each.

1. Military Certificate of AW – an update to AWB 018A providing the newest guidance for the PMs.
2. AW Overview —provides the layout of the AW process and products from Plan to Flight Authorization
3. Flight Authorization — combines AWB 006 and 015A to discuss the two types of flight authorizations issued (MTC & MFR) Includes information on the difference between the authorizations, when they are issued, information on nomenclature and when it changes for modifications (reportable and non-reportable), what would cause a change in a flight authorization.
4. Risk Assessment Methodology - aligns AW with MIL-STD-882E, System Safety, discusses improvements to communication during the flight authorization process and maximizes the opportunity for objective based System Safety risk assessments. This bulletin had substantial comments which need adjudication, further reviews with System Safety, and review repeat.
5. Security Cooperation (FMS Programs) – addresses the AW process for international work. AFSAC is engaged to ensure alignment with their processes and then publishing is intended.
6. Contractor Owned Contractor Operated (COCO) - guidance document for “public use” determination when “leased” or “directed” COCO aircraft services are used. For public use, the USAF must issue a flight authorization after data is gathered for an AW assessment. The draft bulletin was implemented by AFRL, AFTC and the TAA’s AW Office. Findings from these executions and Navy inputs are refining the final

7. AWB 516 - a process is identified which allows the USAF to capture time-critical changes that need to be included in the next update of MIL-HDBK-516. The actual changes (Change Notices) will be hosted on the AW Share Point site and reviewed in a similar fashion as the AW Bulletins. The CNs will be prepared by the Subject Matter Expert (SME) to include the criteria, standard, and method of compliance for inclusion along with rationale for the change. After this bulletin is published several change notices will be reviewed.
8. Electronic Flight Bags (EFB)– outlines the AW process for assessment of an MDS unapproved electronic device (flight bag) and provides a generic certification basis (CB) for potential effect. Additionally it delineates when an EFB has no AW impact.
9. Aerial Refueling- lays out the process for dealing with Aerial refueling modifications and how coupling aircraft are notified and assessed for AW affect. A generic CB was created for this too.
10. Materials, Processes, Product Forms- describes the process for deploying new or substitute materials, processes, and product forms impacting AW on currently certified weapon systems/ mission design series.
11. Alternate Fuels Certification – addresses how alternate fuels certification will be evaluated for AW and the process for dissemination to the DTAs to minimize duplication of effort.

**AW Bulletin Status**



## TOOLS

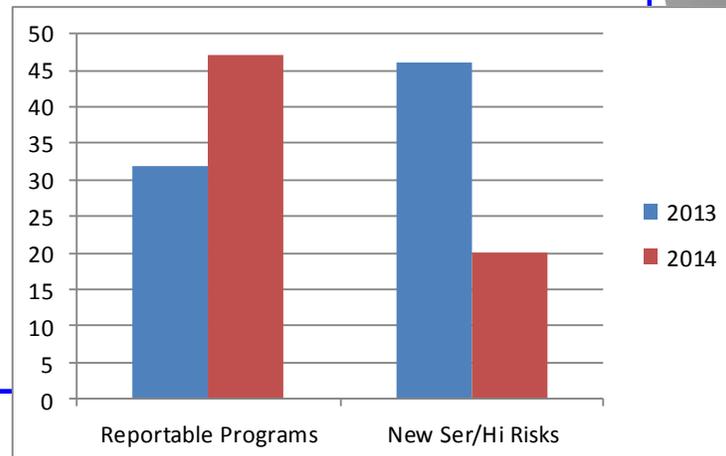
**MIL-HDBK-516C:** The next version of MIL-HDBK-516 , labeled MIL-HDBK-516C, was released through ASSIST for the final 30 day publication review. Essential comments will need to be adjudicated, and then the document is officially published (ECD: mid Dec-early Jan).

**Automated Flight Authorization Tool:** AFLCMC sponsored creation of an automated tool, but we are still awaiting contractor finalization. The tool was demonstrated for the TAA , AFLCMC/CV, and Beta tested with selected engineers. Some select modifications were recommended. ECD: Jan15.

## PROCESS & METRICS

Through the AFLCMC Flight Authorization Standard Process, Dashboard everyone can see metrics on the process.. They can be found at: <https://cs4.eis.afmc.af.mil/sites/1749/appV11/MetricReporting.aspx>

A key item to look at is the increase in the number of programs obtaining flight authorization from 2013-2014, with a faster completion of the authorization than called out in the Standard Process guide, 60 days in lieu of 72 days. The reasons for this improvement in timeliness could be faster responses from the Program Office and fewer Serious/High risk acceptances ( 2013 : 46 Serious/High risks were identified—2014: 20). The entire Center has effectively met this Standard and reduced prior timelines.



## TRAINING

### SYS 316, MIL-HDBK-516C

We successfully offered the SYS 316 Beta class in July through AFIT. This course is geared toward instruction for the new MIL-HDBK-516C. Thanks to AFIT, our AFTC delegates and some local chief engineers, who were our guinea pigs. Based upon recommendations, we are making slight improvements to the slides and course book. The next course offerings are:

3 –12 December

6-17 April

10-21 August

Sign up will occur thru AFIT and instruction is at WPAFB

### AW Policy and Implementation

We believe familiarization is improving all of the AW products coming through the system. Over 500 individuals have received this training to date and over 125 individuals at Edwards, Hanscom and Wright Patterson AFBs in this last quarter. One recent change made to this course is the addition of instruction on the AW Determination Form. Please look on the AW site for the next offering— it will be coming to Hill, Tinker and Warner Robins AFBs in FY 15.

You can find more information on **USAF Airworthiness** at the Share Point site:

<https://cs.eis.afmc.af.mil/sites/AeroEngDisciplines/Systems/Airworthiness/default.aspx>

## OUTSIDE AGENCIES

**ADIAG** This quarter we held two virtual Telecom meetings with Industry:

The 1st focused on making them aware of the COCO responsibilities within DoD 5030.61 and what USAF is doing. The Navy participated in this meeting as they have an entire team implementing these flight authorizations. Key to understanding why the Gov't is involved is knowing what an FAA Experimental "X" Ticket allows the holder to do. It largely restricts the holder to doing work on their **own behalf** with their **own personnel**. So Gov't directed work with or without Gov't personnel can make their X Ticket invalid.

The 2nd meeting was on USAF Cybersecurity, and while this is broader than AW; it was a topic of interest to the contractors. Our next virtual meeting will be 8 Dec.

Additionally, several of the industry contractors have come to visit to share what they are doing to build upon their internal AW programs. Our Program Offices can tap into these groups for assistance, just call for contact information.

**NAC/INTERNATIONAL ACTIVITIES** Collaboration with our Sister Services and the FAA has advanced many areas: Unmanned Aircraft Systems, MIL-HDBK-516C update, Electronic flight bags, COCO flight authorizations, and the most significant (at this time) satisfying the intent of DODD 5030.61. To assist the DoD operational communities in satisfying the need for an Airworthiness Assessment prior to flying on foreign aircraft, the NAC has established a process to assess and recognize Int'l MAAs. The level of "recognition" enables DoD to fly on aircraft managed under the MAA's processes. It doesn't imply that we can bring their systems into our inventory with no further technical review/approval. Substantially more work is entailed for this, and not required by DODD5030.61. At this time, the NAC has recognized the MAAs of Australia, Czech Republic, Israel, United Kingdom, and New Zealand. This recognition asserts that these MAAs have comparable AW policies/processes as the US. More recognitions are underway.

The USAF TAA has received recognitions from Netherlands, Italy, Norway, Turkey, Australia, New Zealand and United Kingdom. These recognitions specify MDSs for which they intend to leverage the USAF AW for their flight certifications. Recognitions will be posted to Share Point.

## PERSONNEL



### Farewells

**Kevin Burns, Technical Director EZS has retired! His leadership is already missed.** Robert Zack is the Acting Technical Director, until the replacement comes in Jan 15.

### Hails

**Doug Ivey and Maureen O'Brien** have joined the AW configuration management team.

**Lisa Glover**, new Commercial Derivative Tech Expert and **Graham Burdette**, Military Tech Specialist are in place. More personnel actions are expected in the next quarter.

### Endorsements

132 SMEs are endorsed at levels 2 and 3

for AW across WPAFB. All SMEs performing reportable reviews are endorsed. Expanding endorsement to all of AFLCMC/EN-EZ across the Center is being worked. When the plan is agreed, the AW office will share it.



## PROGRAMS

### Ongoing AW Projects

The following MDS's have sought, or are in the process to obtain, approval of plans, certification basis or Flight Authorizations through the TAA AW Office during this last quarter.

AFRL, A-10C, AC-130J, A-29, F-16, C-27J, C-5M, E-3, E-8, E-11, EC-130H, F-15SA, F-15 C & E, F-16, F-22, F-35, JSTARS Recap, MC-130J, KC-46, MQ-9, PAR, QF-16, and RQ-4

### Upcoming Meetings

The AW Office is planning an AW/ Safety Summit to ensure that these two organizations are appropriately aligned for risk identification, acceptance, and mitigation; but also in the area of Mishap investigation and reporting. It is important that as the USAF community evaluates a mishap that the design /engineering community fully understand the implication to the MDS, USAF fleet and underlying design standards.

### Audits

As discussed in the 1st Newsletter, we are picking up the pace on audits. In this quarter Edwards AFTC and E-11 program Offices were audited.

All audited POs are doing well; but a finding is some AW bulletins require clarification updates.

1. All **operational** MDS aircraft should have a Military Certificate of AW, regardless of the type of flight authorization ( MTC or MFR)
2. All AW risks are Safety risks and should be integrated into the PO's Safety Program
3. MIL-HDBK- 516 Standards , for Non-reportable modifications, can't be "tailored down". The USAF "bar" for compliance remains constant. Perform your own self assessment, call if you have questions.

### Mishap Lessons Learned

At this time there are no specific lessons learned to share. However several mishaps are being investigated to determine if criteria or processes need to be altered., information will be relayed when necessary.

**CONTACTS**



**Supporting Airmen Through Responsive,  
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**U.S. Air Force Airworthiness Office**

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*Thanks for reading. If you have comments or suggestions for the next Newsletter, please let us know.*

**EZSA Airworthiness Branch**

**ABBREVIATIONS**

AA	Airworthiness Authority	EFB	Electronic Flight Bags
ADIAG	Airworthiness Defense Industry Advisory Group	FAA	Federal Aviation Authority
AFIT	AF Institute of Technology	FMS	Foreign Military Sale
AFTC	Air Force Test Center	LCMC	Life Cycle Management Center
AW	Airworthiness	MAA	Military Airworthiness Authority
AWB	Airworthiness Bulletin	MFR	Military Flight Release
CB	Certification Basis	MCA	Military Certificate of Airworthiness
CE	Chief Engineer	MDS	Mission Design Series
CN	Change Notice	MOA	Memorandum of Agreement
COCO	Contractor Owned Contractor Operated	MTC	Military Type Certificate
CV	Commander, Vice	NAC	National Airworthiness Council
DoD	Department of Defense	PM	Program Manager
DODD	DOD Directive	PO	Program Office
DoE	Director of Engineering	SME	Subject Matter Expert
DTA	Delegated Technical Authority	TA	Technical Advisor
ECD	Expected Completion Date	TAA	Technical Airworthiness Authority
		TD	Technical Director