DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE LIFE CYCLE MANAGEMENT CENTER
WRIGHT-PATTERSON AIR FORCE BASE OHIO

BULLETIN
AWB–245
28 April 2023

United States Air Force Airworthiness Bulletin (AWB) - 245

Subject: Non-Standard Airworthiness Assessment

Attachments: (1) References and Supporting Information

1. **Purpose.** To define the non-standard airworthiness (AW) assessment (NSAA) process.

2. **Office of Primary Responsibility.** USAF AW Office, AFLCMC/EZZ (USAF.Airworthiness.Office@us.af.mil).

3. **Applicability.** This bulletin applies to air systems in which the Technical AW Authority (TAA) determines that the standard AW assessment cannot reasonably be accomplished and a compelling military need to operate the air system exists.

4. **Policy.** DAFI 62-601, *USAF Airworthiness,* allows the TAA to approve specific changes to the standard AW assessment process to suit a special need or purpose.

5. **Background.** An NSAA will be utilized when the standard process in AWB-100, *Airworthiness Process Overview and Terminology,* cannot reasonably be accomplished and NSAA execution is approved by the TAA. An NSAA is a MIL-HDBK-516 subsection focused risk-based assessment of an air system using available data associated with design, configuration, usage, and operating environment. The assessment is not evaluated at a criteria level, rather with a subsection view of reasonable hazards and risks for the planned operations; and risk is determined IAW AWB-150, *Airworthiness Risk Assessment and Acceptance*. An NSAA may result in elevated risk levels. NSAAs do not assess compliance to a certification basis.

6. **Utilization.** Only the TAA may authorize use of an NSAA unless delegated in writing. NSAA-specific delegations may be documented in a TAA-approved AW plan (AWP) or Delegated Technical Authority (DTA) letter. For systems where fielding is projected, it is essential that anticipated AW criteria be accounted for in the design. The following are examples when a NSAA might be utilized:

6.1. Science and Technology or experimental programs that involve limited testing and/or are not projected for fielding.

6.2. Contractor Owned Contractor Operated (COCO) air systems requiring an assessment on baseline configurations without existing technical data (ref. AWB-340, *USAF Airworthiness Requirements for Contractor-Owned and Contractor-Operated Air Systems*).

6.3. Initial fielding of Urgent Capability Acquisition programs as defined in AFI 63-101_20-101, Para 4.19.

7. **Process.** The process requires an AWP and an assessment identifying hazards and risks.

7.1. **AW Plan**. The program office (PO) or contracting activity (hereafter both referred to as the PO) shall submit an AWP in accordance with (IAW) AWB-110, *Airworthiness Planning*. The PO should contact the USAF AW Office prior to developing the AWP to ensure the

planned approach is viable. Approval of the AWP constitutes authorization to utilize an NSAA. In addition to the content required in AWB-110, the AWP must address the elements below.

7.1.1. Rationale for deviating from the Standard Process.

7.1.2. Technical areas for evaluation, as defined by MIL-HDBK-516 subsections.

7.1.2.1. The PO may utilize AFLCMC/EZZ Template 110-1.1, Attachment 1, *Functional Impacts*, for this purpose (see AWB-100 for website link).

7.1.2.2. For projects where DTA delegation is not requested, the Modification Hazard Assessment in AWB-110-1.1 Attachment 1 may be omitted.

7.1.2.3. Additional technical areas impacting flight safety requiring evaluation (e.g., new technologies or capabilities).

7.1.3. Independent assessor(s) are approved by the TAA in the AWP, for each applicable technical area for that specific assessment. In cases where a delegation exists, the DTA should approve suitably qualified technical assessors and use endorsed AW SMEs (ref. AWB-230, *AW Expert Endorsement*) when available. If an assessor does not have an AW endorsement, they should have appropriate experience in airworthiness and the technical discipline in which they are assessing.

7.2 Assessment. Approved assessors review available data and identify potential risks associated with their assigned technical disciplines. The assessment will include the following:

7.2.1 System description (use AWB-110, *Airworthiness Planning*, para. 7.2 as guidance).

7.2.2 For each applicable technical area established in the AWP:

7.2.2.1 Substantiating data references applicable to the assessment, to include document identifiers, revisions, date, and titles should be provided.

7.2.2.2 Identify, based on review of the data, if hazards for the technical area exist. Provide a narrative rationale for the existence (or not) of hazards. Hazards must be AW related. An assessor may report no credible hazard for a particular technical area. Identify the following for each hazard (ref. AWB-150):

7.2.2.2.1 Clear and concise hazard statement(s) focused on the source, mechanism, and outcome of the hazard(s) associated with the subsection.

7.2.2.2.2 Initial risk assessment code (RAC). The initial RAC considers all available substantiating data and restrictions documented in referenced technical data.

7.2.2.2.3 Narrative rationale supporting the initial RAC.

7.2.2.2.4 Recommended restrictions to mitigate the initial RAC, if applicable.

7.2.2.2.5 Target RAC considering the full implementation of the recommended restrictions if a restriction is applicable.

7.2.3 Approval of the NSAA will be obtained from the TAA, unless delegated via the approved AWP or NSAA-specific delegations within the Delegated Technical Authority letter.

8. Format. The AFLCMC/EZZ Template 110-1.1 should be utilized for the AWP. The AW Certification Tool (ACT) should be utilized unless otherwise approved in the AWP. For programs (e.g., special projects) not using ACT, The Modification Hazard Assessment in AWB-110-1.1 Attachment 1 may be used, if delegated, to document the assessment.

9. AW Approval. NSAAs will result in a Special MFR after risk acceptance (ref. AWB-160, *Airworthiness Approvals*).

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Director, Engineering and Technical Management/Services
USAF Technical Airworthiness Authority

Attachment 1

REFERENCES AND SUPPORTING INFORMATION

References

DoDD 5030.61, *DoD Airworthiness Policy*, Incorporating Change 3
AFPD 62-6, *USAF Airworthiness*
DAFI 62-601, *USAF Airworthiness*
AWB-100, *Airworthiness Process Overview and Terminology*
AWB-110, *Airworthiness Planning*
MIL-HDBK-516, *Airworthiness Certification Criteria*
AWB-150, *Airworthiness Risk Assessment and Acceptance*
AWB-160, *Airworthiness Approvals*
AWB-340, *USAF Airworthiness Requirements for Contractor-Owned and Contractor-Operated Air Systems*
AWB-130, *Certification Basis*
AWB-230, *AW Expert Endorsement*

Abbreviations and Acronyms (in addition to AWB-100)

NSAA – Non-Standard Airworthiness Assessment