LEGACY DDAAFS EXCEL AVRM TOOL

DASA wishes to advise MAOs that an independent review of a legacy Directorate of Defence Aviation and Air Force Safety (DDAAFS) Aviation Risk Management (AVRM) Tool has identified an embedded coefficient that reduces the calculated likelihood and therefore, risk level. This means that the use of the tool may incorrectly characterise risk to be lower than it is.

An integral part of any safety management system is the management of hazards, through identification and subsequent management of the risks that those hazards present. Current DASR regulation (reference DASR SMS.A.25.b.2.2) requires that MAO manage risk in accordance with the Defence 7-Step Safety Risk Management (SRM) process. The Defence Aviation Safety Manual provides further advice and guidance in the matter. The Defence Flight Safety Bureau does not mandate the use of a particular SRM tool, only requiring that the processes and decision-making requirements are complied with and effectively recorded.

An independent review of existing risk artefacts, commissioned by AMG, found that likelihood levels and subsequent risk levels recorded in the AVRM tool to be lower than would be expected. Further investigation found that the reduction of likelihood was caused by a calculation within the legacy DDAAFS Excel AVRM tool utilised by AMG. The AVRM Tool, dating from the period 2016-17, was developed internally and utilised Accident Outcome Analysis (AOA) tree methodology to determine preventative and recovery controls. It should be noted that the resultant risk level determined by the tool, was independent of the achievement of SFARP as required by the WHS Act.

The AVRM Tool also performed likelihood calculation using the likelihood of the trigger event and effectiveness of identified preventative and recovery controls. The ‘coefficient of luck’ was incorporated within the recovery controls to correlate the calculated and observed/instinctual likelihoods of events at the time of development. A fixed success rate of 20% was found to align both sets of data. While the effectiveness of the ‘luck’ control is low, there is still an effect on the subsequent calculation for the effectiveness of recovery controls and subsequent likelihood of the accident outcome.

The subject tool is a legacy item no longer maintained or promoted by DFSB however, is still in use within the DAC. Organisations that are using the AVRM Tool, or tools that have been developed from it, should be aware of the impact of the ‘coefficient of luck’ adjustment, and re-assess any risk documentation accordingly.

The impact of ‘luck’ can be modified or made in-effective (i.e. zero effect), those users wishing to do so can contact the DFSB POC SQNLDR Greg Foord, gregory.foord@defence.gov.au , (02) 5108 6950.

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