BY ORDER OF THE COMMANDER
AIR FORCE GLOBAL STRIKE COMMAND

AIR FORCE GLOBAL STRIKE COMMAND
INSTRUCTION 90-203

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Special Management

AVIATION RISK MANAGEMENT

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This instruction implements Air Force Policy Directive (AFPD) 90-8, *Environmental, Safety & Occupational Health Management and Risk Management*. This instruction applies to Air Force Global Strike Command, Air Force Reserve Command (AFRC) and Air National Guard (ANG) units under AFGSC operational control (OPCON). Does not apply to United States Space Force (USSF). This instruction applies to the USSF unless and until such time as separate service guidance is published. In this event, USSF guidance shall prevail in application to the USSF. This publication may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFI 33-322, *Records Management and Information Governance Program*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the DAF Form 847, *Recommendation for Change of Publication* The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("**T-0, T-1, T-2, T-3**") number following the compliance statement. See Department of the Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, for a description of the authorities associated with the tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the publication OPR for non-tiered compliance items.

SUMMARY OF CHANGES

This document is minimally revised. Changes include an updated purpose paragraph adding application to USSF, added tiering, and corrections to publication names and dates.

1. Overview. Commanders are responsible for ensuring an effective aviation RM process is in place. To meet this responsibility, commanders must balance the cost of risks with the value added and the desired outcome.

1.1. The objectives of aviation RM are to have the crew(s) identify and discuss risk elements that affect the flight mission, mitigate risk where possible, and ensure remaining risk is accepted at the appropriate level of command. While the product of the RM worksheet is a number corresponding to a risk acceptance level, the worksheet will be used by crew(s) and flight supervision to discuss hazards specific to the flight during planning, briefing and pre-flight activities. (**T-3)**

1.2. The RM number value is a method of quantifying an overall risk measurement, but it is not intended as a substitute for sound judgment and decision-making. It is not intended as a "go/no-go" value, but as a tool to inform commanders at all levels (aircraft, squadron, etc.) on risk mitigation and acceptance.

1.3. Units should use safety days, crew resource management training, commander's calls, or similar unit functions to address risk management principles and their application to the mission.

2. Roles and Responsibilities.

2.1. Enroute Supervision. Commanders will ensure mechanisms are in place to receive enroute risk updates during mission execution. (**T-3)**

3. Risk Management. AFGSC aviation units will utilize locally-produced RM worksheets for all sorties. (**T-3)**. **Attachment 2** includes the Heat Index Chart (**Figure A2.1**), Cold Stress Risk Determination (**Figure A2.2**), and Human factor considerations (**Table A2.1**). Crews will reference these items and will address those applicable factors for each crew member during the decision to fly process. (**T-3)**

AARON L. ULLMAN, Colonel, USAF
Director of Safety

Attachment 1

GLOSSARY OF REFERENCES AND SUPORTING INFORMATION

References

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFI 90-802, *Risk Management*, 1 April 2019

AFPAM 90-803, *Risk Management (RM) Guidelines and Tools*, 23 March 2022

AFPD 90-8, *Environmental, Safety & Occupational Health Management and Risk Management,* 23 December 2019

DAFI 48-151, *Thermal Injury Prevention Program*, 6 April 2016

DAFMAN 90-161, *Publishing Processes and Procedures,* 15 April 2022

Prescribed Forms

None

Adopted Forms

DAF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFGSC—Air Force Global Strike Command

HF—Human Factors

RM—Risk Management

Attachment 2

HUMAN FACTORS

A2.1. Introduction. Historically, USAF mishap investigations cite human factors (HF) in 80% of all mishaps. To mitigate this risk, AFGSC aviation units will incorporate the following HF aspects into their locally-developed RM worksheets as applicable to their airframe. **(T-3)**

A2.2. Human Factor Categories.

A2.2.1. Stress. Stress is the body's response to any demand (positive or negative, internal or external). Studies have shown that some stress is beneficial, but problems arise when the individual is unable to cope with the demands placed upon the body. As every individual is different, this area is subjective and therefore purposely ambiguous, allowing aircrew to determine appropriate report levels. Areas to discuss include:

A2.2.1.1. Personal Fitness. Overall personal fitness level, recent exercise habits, physical fatigue from recent exercise, etc.

A2.2.1.2. Personal Health. Hydration, nutrition, recent food intake, recent illness/injury, etc.

A2.2.1.3. Personal/Family Stress. Physical health, stress management techniques, family stress, finances, relationships, etc.

A2.2.1.4. Perceived Mission Pressure. External pressure (supervisory, command, operational) and internal pressure (self-imposed or perceived).

A2.2.2. Fatigue. Fatigue is an abstract term that describes the internal state of an individual. It takes many forms and degrees, both across people and within the same person at different times. **Table A2.1** describes seven fatigue areas that will be addressed for each crewmember with corresponding objective criteria.

Figure A2.1. Heat Index Chart.

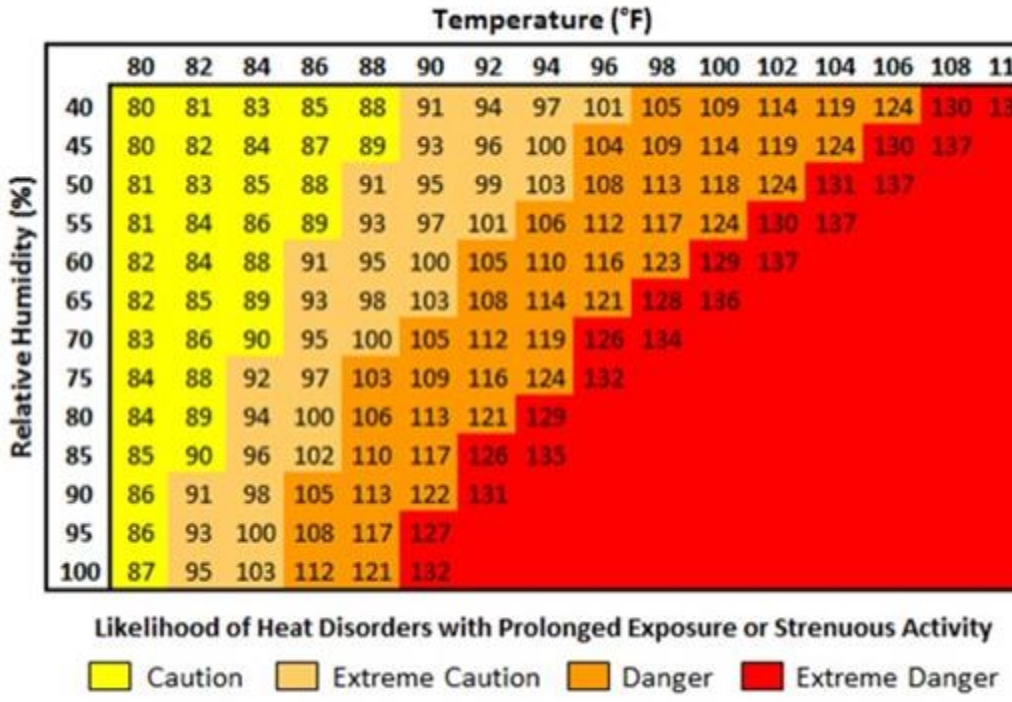

Figure A2.2. Cold Stress Risk Determination.

Wind Speed (mph/kph)	Air Temperature (°F/°C)											
	10/-12	5/-15	0/-21	-5/-21	-10/-23	-15/-26	-20/-29	-25/-32	-30/-34	-35/-37	-40/-40	-45/-43
5/8	>120	>120	>120	>120	31	22	17	14	12	11	9	8
10/16	>120	>120	>120	28	19	15	12	10	9	7	7	6
15/24	>120	>120	33	20	15	12	9	8	7	6	5	4
20/32	>120	>120	23	16	12	9	8	8	6	5	4	4
25/40	>120	42	19	13	10	8	7	6	5	4	4	3
30/48	>120	28	16	12	9	7	6	5	4	4	3	3
35/56	>120	23	14	10	8	6	5	4	4	3	3	2
40/64	>120	20	13	9	7	6	5	4	3	3	2	2
45/72	>120	18	12	8	7	5	4	4	3	3	2	2
50/81	>120	16	11	8	6	5	4	3	3	2	2	2

Note: Time in minutes until the occurrence of cheek frostbite in the most susceptible 5 percent of personnel; wet skin could significantly decrease the time for frostbite to occur

Severity	Color	Description
Low	Green	Freezing possible but unlikely
Moderate	Yellow	Freezing could occur in 10-30 minutes
Severe	Red	Freezing could occur in 5-10 minutes
Extreme	Black	Freezing could occur in <5 minutes

Table A2.1. Fatigue Risk Factor Areas.

	LOW	**MODERATE**	**HIGH**
Number of 12+ hour work or duty days in past week	0-2 days	3 days	≥ 4 days
Total hours of sleep in last 72 hours	> 18 hours	15-18 hours	< 15 hours
Total hours of sustained wakefulness at landing/end of mission	< 17 hours	17-24 hours	> 24 hours
Time of day for any critical phase of flight (Local)	0601-1200 or 1501-2200	1200-1500 or 2200-0000	0001-0600
Net number or time zone crossings in past 5 days	≤ 4	5-8	> 8
General sleep quality in last 24 hours	Slept soundly, woke 1-2 times	Generally good sleep, woke 3-4 times	Poor/restless sleep, woke > 4 times
Amount of sleep in last 24 hours	> 8 hours	4-8 hours	< 4 hours