



AF-HB-9700-002

Space Mission and Restricted-Activity Sustainability Handbook

Space / Aviation / Defense

FIRST EDITION

AF 9700 SUPPORTING DOCUMENT

Document identity and use

FIRST EDITION MANUSCRIPT - Prepared for Aerospace Federation review

Field	Controlled identity
Document	AF-HB-9700-002 - Space Mission and Restricted-Activity Sustainability Handbook
Parent standard	AF 9700 - Sustainable Aerospace & Lifecycle Management
Edition / language	FIRST EDITION / English master text
Family	Manuals
Primary source anchors	6-9, 11, 25-27, 32, 34, 39; Annexes D-E, I, K, M
Suggested local owner	Space sustainability owner
Authority	Publisher approval and effective date are not assigned. Local use requires authorized adoption and completed parameters.

Use with the main standard

This document implements the identified AF 9700 clauses and annexes. Read the complete applicable requirements in the main standard. The source anchors are navigation references; a template does not replace technical judgement, evidence, permission or eligible approval.

AF-ML-9700-001 lists the complete supporting set. AF-CM-9700-001 maps the main clauses and annexes to working documents. AF-TP-9700-001 establishes the common local parameter baseline; add the relevant discipline profiles.

Record control

Identify the object, configuration, record owner and dates. Reference attachments by stable identifier and version. Keep superseded evidence and decisions traceable. Use the approved local retention, access and authentication arrangements. No technical limit, numerical limit, interval or acceptance value is assigned by a blank template.

Implementation model: Translate the stated responsibilities and controls into the actual organization. Informative examples remain explanatory; use approved programme-specific values for operational decisions.

1 Define a complete mission service

1.1 Functional basis

State the delivered service, quality, coverage, availability and duration before comparing mission concepts. Payload mass or launch count alone may not represent equivalent service. Use AF-PR-9700-003 to document the function and reference flows, including contingency and replacement assumptions.

1.2 Lifecycle boundary

Include development, low-volume production, failed articles, test campaigns, transport, launch preparation, ground infrastructure, computing, operation and end-of-mission. Benefits claimed from the mission's output are separate counterfactual claims. They do not cancel the mission's own inventory or eliminate other impact categories.

2 Evaluate launch and reuse assumptions

2.1 Inventory and characterization

Apply AF-PR-9700-022. Identify propellant production, quantities, exhaust species, trajectory context and release altitude at the appropriate controlled detail. Distinguish known inventory from modelled atmospheric impacts. Where a suitable impact model is unavailable, preserve the flow and the uncertainty instead of reporting no effect.

2.2 Shared and reusable systems

Document the basis for allocating shared launch and ground services. Examine sensitivity where mass, volume, energy or another justified service basis changes the outcome. Reuse scenarios include refurbishment, recovery operations, attrition and achieved or supported cycle counts. Design aspiration is not fleet evidence.

3 Preserve orbital and end-of-mission responsibility

3.1 Capability through operation

The mission authority defines applicable prevention, tracking, communication, reserve and end-of-mission conditions. Verify these capabilities during design and monitor their continued availability. Mission extensions reopen the assessment of degradation, exposure and final-action capability. This handbook supplies no maneuver design or operational permission.

3.2 Evidence of achieved state

AF-WI-9700-010 records actual observations against defined criteria. A command, expected trajectory or stopped service is not proof of final state. Failure or uncertainty retains an owner, observation plan and escalation. AF-RG-9700-010 preserves continuing duties after the programme ceases normal operations.

4 Govern restricted evidence and closure

4.1 Eligible access

Use AF-PR-9700-023 to retain a complete internal assessment under valid access control. Independent reviewers receive sufficient authorized evidence for their stated conclusion. Public disclosures identify withheld scope and limitations without revealing protected details or describing unavailable data as verified zero.

4.2 Cost, resilience and transfer

Transition and closure plans include ground dependencies, funding, treatment, observation and record retention. Contractual transfer identifies receiving capability and retained obligations. AF-PR-9700-030 links changes, findings, continuing duties and disclosure correction. Environmental preference, security release and mission permission remain separate decisions.

Required evidence: Mission model; launch and reuse scenarios; capability/reserve evidence; actual final-status record; restricted-review and continuing-duty records.

Decision control: Successful service delivery does not demonstrate completion of the mission's environmental or orbital obligations.