

4. Regulation of Space Safety

Introduction

1. This Chapter establishes requirements for the management of the Defence Space Safety Regulations (DSSR) and related standards. The requirements contained herein are applicable only to the Defence Space Safety Regulator as the sponsor of the DSSR. This chapter is not directly applicable to commanders and managers.

The Defence Space Safety Regulations

2. The DSSR must be applicable to the safety management of all space activities within the scope of the Defence Space Safety Program (DSSP) as defined in Chapter 1 of this Volume.

3. The Defence Space Safety Regulator must ensure that the DSSR:

- a. covers all space safety-related components and systems associated with space launch facilities and the launch/operation/return of space objects
- b. provides clear definitions for terms that set the scope of DSSR coverage, for example space object, launch, return and accident
- c. enables commanders and managers in:
 - i. ensuring space safety risks to Australian Defence Force (ADF) members and other persons are eliminated or otherwise minimised so far as is reasonably practicable (SFARP)
 - ii. meeting their statutory safety obligations and internal to Defence safety requirements while retaining the flexibility to respond to compelling operational imperatives
 - iii. meeting their international space safety Treaty obligations
- d. continues to reflect international good practice in military and civil space safety by aligning, where appropriate, with:
 - i. the Commonwealth *Space (Launches and Returns) Act 2018*
 - ii. leading international military and civil space safety regulations and policies
 - iii. UN space safety and sustainability guidelines, where adopted as policy by the Australian Government
- e. continue to be credible, defensible, and suitable for the Defence context

- f. are updated as necessary to address emerging or newly identified space safety risks.
4. In establishing the DSSR, the Defence Space Safety Regulator must make provision for the following:
- a. where it can be shown that an equivalent level of safety to that attained by the application of the DSSR can be achieved by other means, the Defence Space Safety Regulator may approve such other means as compliant with the intended regulatory outcome
 - b. The Defence Space Safety Regulator may specify conditions and limitations in conjunction with a Space Safety Authorisation (SSA), where this restricts authorised activities to elements meeting the level of safety provided by the application of the DSSR
 - c. The Defence Space Safety Regulator may recognise an extant authorisation issued by a competent military or civil space safety authority as contributing in part, or in full, to compliance with the DSSR
 - d. The Defence Space Safety Regulator may allow a credible and defensible level of space safety performance where an equivalent level of safety to that provided by the application of the DSSR cannot be demonstrated, but can be supported by the application of sound risk management processes.
5. The DSSR will comprise overarching General Requirements (GR) plus three regulatory Parts dedicated to the following space activity segments:
- a. orbital payloads
 - b. launch facilities
 - c. space launches and returns.

General Requirements

6. GR establish overarching provisions that are applicable to commanders and managers responsible for space activities within the scope of the DSSP. While commanders and managers are not required to produce evidence of compliance with the GR, compliance is nonetheless a requirement for the issue and ongoing validity of an SSA.
7. The GR must specify that:
- a. an SSA must be obtained before commencing each space activity within the scope of the DSSP
 - b. Defence must meet its statutory safety obligations, including that risks to ADF members and other persons must be eliminated or otherwise minimised SFARP

- c. Defence must obtain and maintain all necessary approvals from the relevant Commonwealth and local government departments, and Defence's internal regulators
 - d. nothing in the DSSR authorises Defence to forego compliance with statutory requirements and Defence's internal regulations and higher policies
 - e. commanders may exercise flexibility provisions which enable Defence to undertake space activities even though they do not entirely meet the DSSR, when there is a compelling operational imperative.
8. The GR details commanders and managers responsibilities to:
- a. report to the Defence Space Safety Regulator any changes in systems and/or operations that may credibly affect the validity of an issued SSA
 - b. comply with the Defence Space Safety Regulator imposed conditions for the issuance, maintenance and revocation of an SSA
 - c. cooperate with the Defence Space Safety Regulator oversight and enforcement activities on individuals and organisations
 - d. cooperate with independent accident investigations
 - e. retain full accountability for ensuring space activities are safely executed, regardless of whether an element is within or outside the scope of the DSSP
 - f. manage risks not associated with space safety (and therefore outside the scope of the DSSP), for example risks to Defence space capability, reputation, property damage, heritage sites and environmental protection.
9. In relation to the conduct of the Defence Space Safety Regulator oversight and enforcement activities, the GR must establish:
- a. conditions for the collection, exchange and dissemination of information
 - b. conditions for the Defence Space Safety Regulator to conduct oversight and enforcement activities.

DSSR Parts

- 10. The DSSR Parts establish regulations specific to launch facilities, orbital payloads, and space launch and return activities.
- 11. The three DSSR Parts must be outcome-focused and specify requirements for each regulated activity. They may include associated supporting information in the form of Acceptable Means of Compliance (AMC) and Guidance Material (GM).
- 12. Each DSSR Part requires the following:

- a. accurate details must be provided for the space activity
- b. structural and functional integrity of all space objects and facilities should meet established safety standards for the anticipated scope of space activities. The Defence Space Safety Regulator may issue mandatory standards as necessary to meet statutory and international treaty obligations
- c. safety-related support systems for all space objects and facilities should comply with established safety standards. The Defence Space Safety Regulator may issue mandatory standards as necessary to meet statutory and international treaty obligations
- d. design, construction and maintenance of space objects and facilities must be undertaken within a defined engineering management system
- e. operation of space objects and facilities must be undertaken within a defined management system including planning, processes, risk management, data management and records retention
- f. space service providers must demonstrate competency and means to safely complete nominated services
- g. appropriate safety assessments must have been completed and effective safety management programs must be in place. The Defence Space Safety Regulator may issue mandatory safety standards for the management of risks to personnel on the ground, on water and in the air; and space collision risks
- h. an effective space safety-related occurrence reporting program and strategy to support continually improving the safety of space operations must be in place
- i. evidence that personnel managing and executing operations are prepared and competent to enact safe space operations, respond to contingencies, identify hazards and manage space safety risks
- j. physical and information security arrangements must be in place, to the extent that they can affect space safety
- k. liability arrangements must be established and maintained
- l. responsibilities for individuals holding an SSA must be defined.