



Space (Launches and Returns) (High Power Rocket) Rules 2019

I, Karen Andrews, Minister for Industry, Science and Technology, make the following rules.

Dated 26 August 2019

Karen Andrews
Minister for Industry, Science and Technology

Contents

Part 1—Preliminary	1
1 Name.....	1
2 Commencement	1
3 Authority.....	1
4 Definitions	1
Part 2—Definition of high power rocket	3
5 Definition of <i>high power rocket</i>	3
Part 3—Australian high power rocket permits	4
Division 1—Additional criteria for grant of Australian high power rocket permit	4
6 Additional criteria.....	4
Division 2—Standard Australian high power rocket permit conditions	5
7 Standard conditions.....	5
8 Launch information and notice of changes	5
9 Plans.....	5
10 Other launch conduct requirements.....	6
11 Report must be given after launch	6
12 Compliance with requests for information	6
13 Personnel.....	6
Division 3—Application for grant of permit	7
14 Purpose of Division.....	7
15 Application must be in writing and in English.....	7
16 Information about applicant	7
17 Organisational structure and personnel	7
18 Information about launch	8
19 Information about flight path	8
20 Information about high power rocket.....	9
21 History of kind of rocket.....	9
22 Information about facility	10
23 Information about payload	10
24 Launch management plan	10
25 Risk hazard analysis.....	11
26 Flight safety plan	12
27 Emergency plan	12
28 Environment	12
29 Technology security.....	13
30 Insurance/financial requirements	13
31 Contracts.....	14
32 Outstanding approvals	14
33 Matters to be verified	14
34 Application may include additional information.....	14
35 Application may be updated	14
Division 4—Application for variation of permit	15
36 Variation of launch site or permit conditions.....	15
37 Extension of permit period.....	15
Division 5—Application for transfer of permit	16
38 Purpose of Division.....	16
39 Application to be made by transferee.....	16

40	Application must be in writing and in English	16
41	Statement from current holder of permit	16
42	Other contents of transfer application	16
43	Application may be updated	17

Part 1—Preliminary

1 Name

This instrument is the *Space (Launches and Returns) (High Power Rocket) Rules 2019*.

2 Commencement

- (1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information		
Column 1	Column 2	Column 3
Provisions	Commencement	Date/Details
1. The whole of this instrument	30 June 2020.	30 June 2020

Note: This table relates only to the provisions of this instrument as originally made. It will not be amended to deal with any later amendments of this instrument.

- (2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.

3 Authority

This instrument is made under the *Space (Launches and Returns) Act 2018*.

4 Definitions

In this instrument:

ABN has the meaning given by section 41 of the *A New Tax System (Australian Business Number) Act 1999*.

ACN has the meaning given by section 9 of the *Corporations Act 2001*.

Act means the *Space (Launches and Returns) Act 2018*.

Agency means that part of the Department known as the Australian Space Agency.

current version, for a plan relating to an Australian high power rocket permit, means:

- (a) the plan as included as part of the application for the permit (including any variations to the application); or
- (b) if the holder of the permit has subsequently given a copy of an amendment of the plan to the Minister—the plan as amended.

Section 4

Flight Safety Code means the document of that name published by the Department, as in force from time to time.

insurance/financial requirements means the insurance/financial requirements in Division 7 of Part 3 of the Act.

period, in relation to the launch of a high power rocket, means the period that includes all of the days on which there is a window for the launch.

window, in relation to the launch of a high power rocket on a given day, means the window or windows of time on that day in which the rocket is able to be launched.

Part 2—Definition of high power rocket

5 Definition of *high power rocket*

For the purposes of the definition of *high power rocket* in section 8 of the Act, an object is a high power rocket if:

- (a) it is a rocket propelled by a motor or motors with a combined total impulse greater than 889,600 Newton seconds; or
- (b) it is a rocket propelled by a motor or motors with a combined total impulse greater than 40,960 Newton seconds and is fitted with a system or systems that allow active control of its trajectory.

Part 3 Australian high power rocket permits

Division 1 Additional criteria for grant of Australian high power rocket permit

Section 6

Part 3—Australian high power rocket permits

Division 1—Additional criteria for grant of Australian high power rocket permit

6 Additional criteria

- (1) For the purposes of paragraph 38(2)(e) of the Act, the criteria in this section are prescribed.
- (2) The high power rocket must be as effective and safe as is reasonably practicable having regard to the purpose of the launch.
- (3) The flight path for the launch must be as effective and safe as is reasonably practicable, having regard to the purpose of the launch, the design of the rocket and the launch safety standards in the Flight Safety Code.
- (4) The risk hazard analysis for the launch must be consistent with the Flight Safety Code.
- (5) There must be adequate planning to address the environmental impacts of the launch.

Division 2—Standard Australian high power rocket permit conditions

7 Standard conditions

For the purposes of paragraph 40(c) of the Act, the conditions in this Division are prescribed.

8 Launch information and notice of changes

- (1) The holder of the permit must, at least 2 days before the launch but not more than 10 days before, give the Minister:
 - (a) confirmation of the day the launch is scheduled to take place and the launch window on that day; and
 - (b) information about any subsequent days, and the launch window on each of those days, that the launch may be attempted if it does not occur on the scheduled day; and
 - (c) confirmation of the planned trajectory of the high power rocket.
- (2) If the launch does not occur on the scheduled day mentioned in paragraph (1)(a) and the holder of the permit intends to attempt the launch on a day mentioned in paragraph (1)(b), the holder must notify the Minister as soon as practicable.
- (3) The holder of the permit must notify the Minister of any change to the payloads that will be launched.
- (4) The holder of the permit must give the Minister any changes to the assumptions and data used in the risk hazard analysis for the launch, along with a statement from a suitably qualified expert as to whether the risk hazard analysis continues to fall within the launch safety standards in the Flight Safety Code.
- (5) The holder of the permit must notify the Minister of any changes to the information mentioned in section 19 (information about flight path).
- (6) The holder of the permit must not make changes to the information mentioned in section 19 less than 2 weeks before the launch period without the agreement of the Agency.
- (7) The holder of the permit must, as far as is practicable, conduct the launch consistently with the information mentioned in section 19 that has been given to the Minister (either in the application for the permit or subsequently).

9 Plans

- (1) If the holder of the permit amends any of the following, the holder must give a copy of the amendment to the Minister:
 - (a) the launch management plan for the launch;
 - (b) the flight safety plan for the launch;
 - (c) the technology security plan relating to the launch.

Section 10

- (2) The holder of the permit must not amend the plans mentioned in subsection (1) less than 2 weeks before the launch period without the agreement of the Agency.
- (3) The holder of the permit must ensure that the launch is conducted in accordance with the current version of each of the plans mentioned in subsection (1).

10 Other launch conduct requirements

- (1) The holder of the permit must ensure that the launch is conducted in accordance with the Flight Safety Code.
- (2) The high power rocket must not cross into the territory or airspace of a foreign country unless an arrangement for the purpose of the activity is in place between Australia and the foreign country.

11 Report must be given after launch

The holder of the permit must give the Minister, as soon as practicable after the launch, a report on the compliance of the launch with the launch safety standards in the Flight Safety Code and with the assumptions and data used in the risk hazard analysis for the launch.

12 Compliance with requests for information

The holder of the permit must give the Minister any information about the permit that the Minister asks for under section 60 of the Act.

13 Personnel

- (1) The holder of the permit must notify the Minister of any changes to the following:
 - (a) the organisational structure that was described under paragraph 17(1)(a) in the application for the permit;
 - (b) the identity of the individuals who have the responsibilities and roles described in subsection 17(2);
 - (c) the duties or functions of an individual who has a responsibility or role described in subsection 17(2).
- (2) If an individual assumes a responsibility or role described in subsection 17(2), the holder of the permit must give the Minister the information mentioned in subparagraphs 17(1)(b)(i) to (iv) about the individual.

Division 3—Application for grant of permit

14 Purpose of Division

For the purposes of section 44 of the Act, this Division sets out requirements for an application for the grant of an Australian high power rocket permit.

15 Application must be in writing and in English

- (1) The application must be in writing and, subject to subsection (2), in English.
- (2) If a document required to be included in the application is not in English, the application must also include an English language translation of the document.

16 Information about applicant

The application must include the following:

- (a) the name of the applicant;
- (b) the name, position and contact details of an individual who will act as contact officer for the purposes of dealing with the application;
- (c) the applicant's ABN (if any);
- (d) if the applicant is a company registered under the *Corporations Act 2001*—the applicant's ACN;
- (e) information about which persons or entities have ownership, control or direction of the applicant, including the nationality of those persons or entities.

Note: For paragraph (e), examples include a corporation that the applicant is a subsidiary of, significant shareholders in the applicant, or the government administering the applicant.

17 Organisational structure and personnel

- (1) The application must include:
 - (a) a description of the organisational structure of the applicant, including the chain of command within the structure and the duties and responsibilities of each position in the chain of command; and
 - (b) the following information about each individual described in subsection (2) (whether or not the individual is part of the applicant's organisational structure):
 - (i) the individual's name, date of birth and place of birth;
 - (ii) the address of the individual's usual place of residence;
 - (iii) the individual's relevant qualifications and experience;
 - (iv) how long the individual has occupied the individual's current position.
- (2) Paragraph (1)(b) applies to the following individuals:
 - (a) the applicant's chief executive officer or equivalent;
 - (b) each individual in a position that would have authority to direct:
 - (i) the conduct of the launch; or

Section 18

- (ii) the operation of the high power rocket;
- (c) each individual in a position that has or would have any duties or functions directly connected with operating the high power rocket;
- (d) each individual in a position within the organisational structure of the applicant that has or would have authority or oversight in relation to manufacture or maintenance of the high power rocket;
- (e) each individual in a position that would have authority or oversight in relation to tracking or communicating with the high power rocket;
- (f) if the launch is to be conducted from a facility—each individual in a position that would have:
 - (i) authority to direct operation of the facility or a part of the facility; or
 - (ii) authority to direct operation or maintenance of the grounds systems of the facility;
- (g) each individual in a position that would have authority or oversight in relation to integration of a payload with the high power rocket;
- (h) each individual in a position that has or would have authority or oversight in relation to:
 - (i) installation of software in the high power rocket; or
 - (ii) verification that the software functions correctly;
- (i) each individual in a position that has or would have authority or oversight in relation to verification that the structural system, propulsion system, fuel system, electrical system or electronic system of the high power rocket functions correctly;
- (j) each individual who had authority or oversight in relation to preparing the technology security plan included in the application (as required by section 29);
- (k) each individual in a position that would have a role in implementing or monitoring the technology security plan.

18 Information about launch

- (1) The application must include the following information:
 - (a) a description of the purpose of the launch;
 - (b) the facility or place from which it is proposed to launch the rocket, including the latitude, longitude and elevation of the launch;
 - (c) the launch period and launch window.
- (2) For the purposes of paragraph (1)(c), if the launch period extends over more than 1 day the application must also include an estimated launch day.

19 Information about flight path

The application must include the following information:

- (a) a description of the flight path;
- (b) the name and location of any critical asset that is:
 - (i) directly under the flight path; or
 - (ii) within an area of reasonable probability in which any debris may land (both scheduled debris within the meaning of the Flight Safety Code and unscheduled debris);

- (c) for critical assets referred to in paragraph (b)—an explanation of why the applicant considers the flight path is appropriate and safe given the location of the assets;
- (d) the highest planned altitude of the flight;
- (e) the potential maximum altitude of the high power rocket;
- (f) the planned range of the flight;
- (g) the potential maximum range of the high power rocket;
- (h) the sequence of events in the flight and the overall duration of the flight.

20 Information about high power rocket

- (1) The application must include the following information in relation to the high power rocket:
 - (a) the type of rocket;
 - (b) the name and address of the designer;
 - (c) the name and address of the manufacturer;
 - (d) the country of manufacture;
 - (e) a copy of the manufacturer's quality assurance system, or a description of the system if a copy is not available to the applicant;
 - (f) information showing whether the manufacturer has quality assurance certification that is in accordance with a recognised standard;
 - (g) information showing whether the rocket has been manufactured in accordance with the designer's specifications and tested and inspected having regard to the designer's specifications;
 - (h) information showing whether the rocket has received appropriate import approvals;
 - (i) technical specifications of each of the systems mentioned in subsection (2);
 - (j) whether the rocket is or contains a nuclear weapon or weapon of mass destruction of any other kind;
 - (k) whether the rocket contains a nuclear power source or any other hazardous materials (including radioactive materials), and if so the amount of each hazardous material.
- (2) For the purposes of paragraph (1)(i), technical specifications are required for the following systems of the rocket:
 - (a) the structural system;
 - (b) the propulsion system;
 - (c) the fuel system;
 - (d) the electrical system, including the power supply and power distribution;
 - (e) each of the electronic systems, including the guidance system, communications system, flight control system, computer system and data management system;
 - (f) the flight safety system.

21 History of kind of rocket

The application must include the following information:

Section 22

- (a) an outline of the publicly available information on the flight history of the kind of high power rocket for the previous 5 years;
- (b) the safety record of the kind of high power rocket;
- (c) if the safety record includes anomalies or failures—the measures taken to reduce the risk of future anomalies or failures.

22 Information about facility

If the launch is to be conducted from a facility, the application must include the following information:

- (a) the safety record of the facility;
- (b) if the safety record includes anomalies or failures, the measures taken to reduce the risk of future anomalies or failures;
- (c) the licensing or accreditation the facility has received;
- (d) the standards to which the facility was designed and built and under which the facility operates.

23 Information about payload

If the launch is proposed to include one or more payloads, the application must include the following information for each payload:

- (a) a description of the payload;
- (b) the purpose for which the payload is intended to be used;
- (c) the owner of the payload;
- (d) if the owner of the payload is a corporation—information about significant shareholders in the corporation;
- (e) if the owner of the payload is an individual—the address, date of birth and place of birth of the owner;
- (f) the manufacturer of each subsystem of the payload and the country of manufacture;
- (g) the sensors and other information-gathering devices that are attached to the payload or powered by it;
- (h) whether the payload contains any hazardous materials (including radioactive materials), and if so the amount of each hazardous material;
- (i) if the owner of the payload is not an Australian national—a copy of any authorisation or permit from the owner's country obtained in relation to the launch of the payload.

24 Launch management plan

- (1) The application must include a launch management plan for managing the launch.
- (2) The plan must include the applicant's arrangements and procedures for conducting the launch, including the following:
 - (a) arrangements to ensure the safety of associated ground operations;
 - (b) procedures for identifying and responding to adverse weather conditions for launch;
 - (c) procedures for launch countdown;

- (d) procedures to recover from any anomalies or failures during the launch.
- (3) The plan must include the following:
 - (a) arrangements for reporting to the Minister on the launch;
 - (b) arrangements to ensure that personnel who have duties or functions in connection with the launch are properly prepared;
 - (c) a statement identifying all hazardous ground operations associated with the launch and a description of the procedures to manage those operations;
 - (d) communications arrangements for the launch, including the following:
 - (i) launch area communications;
 - (ii) communications from drop zones to the launch area;
 - (iii) telemetry communications (including the radio frequencies to be used);
 - (iv) emergency communications;
 - (e) the system to be used for:
 - (i) making and keeping records in relation to the operation of the high power rocket; and
 - (ii) maintaining documentation (such as manuals and procedures) relating to the operation of the high power rocket;
 - (f) arrangements for maintaining the high power rocket, including the system for recording scheduled and unscheduled maintenance.
- (4) The plan must include a timeline for the launch and flight that identifies all safety-critical events.

25 Risk hazard analysis

- (1) The application must include a risk hazard analysis for the launch.
- (2) The application must describe the methodology, assumptions and data used in the analysis.
- (3) The methodology must apply the launch vehicle probability of failure set out in the risk hazard analysis methodology in the Flight Safety Code.
- (4) If the methodology used differs from the risk hazard analysis methodology in the Flight Safety Code in any other respect, the application must:
 - (a) describe the methodology used in a form that can conveniently be assessed against the methodology in the Flight Safety Code; and
 - (b) set out each difference between the methodology used and the methodology in the Flight Safety Code; and
 - (c) demonstrate, having regard to those differences, that the methodology is technically sound.
- (5) The application must describe any software used to carry out the analysis, including, for software that is not a generally available commercial product, a description of how the software operates to implement the methodology used.
- (6) The application must include written confirmation by a suitably qualified expert that the risk hazard analysis and the methodology used in the analysis is technically sound.

Section 26

26 Flight safety plan

- (1) The application must include a flight safety plan for the launch.
- (2) The plan must include the following:
 - (a) the strategies and arrangements to be used by the applicant to ensure that the launch will be conducted:
 - (i) in a way that reduces the level of risk to third parties to as low as is reasonably practicable; and
 - (ii) within the launch safety standards set out in the Flight Safety Code;
 - (b) arrangements for subsequent reporting to the Minister on the compliance of the launch with the launch safety standards.
- (3) The application must include written confirmation by a suitably qualified expert, who is approved by the Minister and is not a related party of the applicant, that the launch will fall within the launch safety standards if carried out in accordance with the flight safety plan.
- (4) The written confirmation may be by the same person who gave written confirmation in relation to the risk hazard analysis under section 25.

27 Emergency plan

- (1) The application must include a plan for responding to:
 - (a) accidents and incidents involving the high power rocket; and
 - (b) any other kind of emergency at or near the launch site.

Note: The terms *accident* and *incident* are defined in sections 85 and 86 of the Act.
- (2) The plan must include the following:
 - (a) a description of actions to be taken by the persons responsible for responding to an accident, incident or other emergency;
 - (b) a list of the authorities or persons to be notified by the applicant in relation to an accident, incident or other emergency;
 - (c) a description of the arrangements for coordinating any action to be taken in relation to the accident, incident or other emergency with those authorities or persons;
 - (d) evacuation procedures for an accident, incident or other emergency;
 - (e) procedures to be followed, in the case of accident, for:
 - (i) locating the high power rocket or its wreckage; and
 - (ii) in accordance with any necessary permission of the Minister or Investigator under the Act—recovering and removing the high power rocket or its wreckage;
 - (f) arrangements to ensure the applicant would meet the applicant's obligations under any law of the Commonwealth or law of a State or Territory in the event of an accident, incident or other emergency.

28 Environment

The application must include one of the following (whichever is applicable to the launch):

- (a) evidence that the environmental impact of the launch is addressed by the environmental plan of the licensed launch facility from which the launch is proposed;
- (b) information about environmental approvals required for the launch under any other law of the Commonwealth or a law of a State or Territory;
- (c) an assessment of the likely impact of the launch on the environment, and information on how any adverse effects on the environment are to be monitored and mitigated.

29 Technology security

- (1) The application must include a technology security plan relating to the launch.
- (2) The plan must include the following:
 - (a) arrangements and procedures for safeguarding the technology to be used in operating the high power rocket, including:
 - (i) procedures to prevent unauthorised people from having access to the technology; and
 - (ii) the cybersecurity strategy to be used;
 - (b) if there is in force an agreement of any kind between Australia and another country that relates to safeguarding all or part of the technology— information on how the plan ensures that Australia gives effect to its obligations under the agreement.
- (3) The application must include a written assessment of the adequacy of the cybersecurity strategy in the plan by a person with suitable qualifications and experience who is not a related party of the applicant.

30 Insurance/financial requirements

The application must include:

- (a) evidence of the capacity of the applicant to satisfy the insurance/financial requirements for the launch; and
- (b) if the amount for which the applicant is providing the evidence mentioned in paragraph (a) for the launch is less than the amount specified for the launch in rules made for the purposes of paragraph 48(4)(a) of the Act:
 - (i) the calculations used in the determination of the amount under paragraph 48(4)(b) of the Act for the launch; and
 - (ii) the name of the person who made the calculations mentioned in subparagraph (i).

Note 1: Under subsection 47(2) of the Act, the holder of an Australian launch permit covering a launch or return satisfies the insurance/financial requirements for the launch or return if:

- (a) throughout the liability period for the launch or return, the insurance requirements in section 48 of the Act are satisfied; or
- (b) the holder has, in accordance with rules made for the purposes of paragraph 47(2)(b) of the Act, shown direct financial responsibility for the launch or return for an amount not less than the amount that would otherwise have been applicable under subsection 48(4) of the Act for the launch or return.

Note 2: Under subsection 48(4) of the Act, the total insurance, for each launch or return concerned, must be for an amount at least equal to the lesser of the following amounts:

Part 3 Australian high power rocket permits

Division 3 Application for grant of permit

Section 31

- (a) the amount specified in the rules for the purposes of paragraph 48(4)(a) of the Act (which must not exceed \$100 million);
- (b) if the rules set out a method of determining an amount for the purposes of paragraph 48(4)(b) of the Act—the amount determined using that method.

Note 3: See the *Space (Launches and Returns) (Insurance) Rules 2019* for the matters mentioned in paragraphs 47(2)(b) and 48(4)(a) and (b) of the Act.

31 Contracts

The application must include copies of the contracts that the applicant has entered into, and information on contracts that the applicant proposes to enter into, for the purpose of the launch, including the following:

- (a) any contracts for use or lease of facilities;
- (b) any contracts for others to undertake activities connected with the launch;
- (c) any contracts for carrying payloads.

32 Outstanding approvals

The application must include the following:

- (a) a list of all activities in relation to the launch for which an approval (however described) is required under any other Commonwealth law or law of a State or Territory but not yet obtained;
- (b) for each such activity, arrangements (including the time frame) for obtaining the required approval.

33 Matters to be verified

The application must include the following:

- (a) a list of matters mentioned in the launch management plan or technology security plan that are yet to be verified or validated;
- (b) for each such matter, arrangements (including the time frame) for obtaining the verification or validation.

34 Application may include additional information

The application, and any document required to be included in the application, may include any other information that is relevant to demonstrating whether the criteria in subsection 38(2) of the Act for granting an Australian high power rocket permit to the applicant are met (including the criteria prescribed by Division 1 of this Part).

35 Application may be updated

The applicant may, before the Minister's decision whether to grant an Australian high power rocket permit to the applicant, update a part of the application (for example, to update information that is no longer correct or to change the plans for conducting the launch).

Division 4—Application for variation of permit

36 Variation of launch site or permit conditions

- (1) For the purposes of section 44 of the Act, the holder of an Australian high power rocket permit may apply to the Minister for:
 - (a) the launch facility or place specified in the permit to be varied; or
 - (b) the conditions of the permit to be varied.
- (2) The application must include:
 - (a) a description of the variation the holder is requesting; and
 - (b) the reason for requesting the variation.
- (3) The application may include any supporting material the holder believes will assist the Minister in deciding the application.

37 Extension of permit period

- (1) The holder of an Australian high power rocket permit may ask the Minister to extend the period of the permit under subsection 39(3) of the Act.
- (2) The request must include:
 - (a) the period of extension being requested; and
 - (b) the reason for requesting the extension.
- (3) The request may include any supporting material the holder believes will assist the Minister in deciding whether to extend the period of the permit.

Section 38

Division 5—Application for transfer of permit

38 Purpose of Division

For the purposes of section 44 of the Act, this Division sets out requirements for an application for the transfer of an Australian high power rocket permit.

39 Application to be made by transferee

The application must be made by the person to whom it is proposed to transfer the permit.

40 Application must be in writing and in English

- (1) The application must be in writing and, subject to subsection (2), in English.
- (2) If a document required to be included in the application is not in English, the application must also include an English language translation of the document.

41 Statement from current holder of permit

The application must include a statement by the current holder of the permit explaining why the transfer is being sought.

42 Other contents of transfer application

- (1) The application must include all of the material required to be included in an application by sections 16 to 33.
- (2) A requirement for the application to include a plan may be met by:
 - (a) providing a copy of the current version of the plan of the current holder of the permit; and
 - (b) including a statement that the applicant proposes to conduct the launch under the same plan.
- (3) A requirement for the application to include any other information or material may be met by providing a copy of the information or material that was included in the application made by the current holder of the permit, if the information or material is still correct.
- (4) The application, and any document required to be included in the application, may include any other information that is relevant to demonstrating whether the criteria in subsection 38(2) of the Act for granting an Australian high power rocket permit to the applicant are met (including the criteria prescribed by Division 1 of this Part).

Note: Subsection 42(1) of the Act provides that the Minister may transfer an Australian high power rocket permit to another person if the Minister could grant the permit to the other person under section 38 of the Act.

43 Application may be updated

The applicant may, before the Minister's decision whether to transfer an Australian high power rocket permit to the applicant, update a part of the application (for example, to update information that is no longer correct or to change the plans for conducting the launch).