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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 450

[Docket No.: FAA-2026- 9937; Notice No. 26-24]

RIN 2120-AM43

Flight Safety Limits Objectives Burden Reducing Clarification

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: FAA proposes to amend its commercial space launch and reentry licensing regulations to streamline the licensing process and reduce regulatory burden for license applicants. Specifically, FAA proposes to clarify the requirements for establishing flight safety limits that define when a vehicle operator must initiate flight abort.

DATES: Send comments on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Send comments identified by docket number FAA-2026-9937 using any of the following methods:

- Federal eRulemaking Portal: Go to www.regulations.gov and follow the online instructions for sending your comments electronically.
- Mail: Send comments to Docket Operations; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, West Building, 5th Floor (W58-213), Washington, DC 20590-0001.
- Hand Delivery or Courier: Take comments to Docket Operations in Room W58-213 of the West Building, 5th Floor at 1200 New Jersey Avenue, SE,

Washington, DC 20590 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: Fax comments to Docket Operations at (202) 493-2251.

Privacy: In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to inform its rulemaking process better. DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at www.dot.gov/privacy.

Docket: Background documents or comments received may be read at www.regulations.gov at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W58-213 of the West Building 5th Floor at 1200 New Jersey Avenue, SE, Washington, DC 20590 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Lisa E. Cacciatore, Office of Commercial Space Transportation, Federal Aviation Administration, 1200 New Jersey Avenue, SE, Washington, DC. 20590; telephone (202) 880-1489; email Lisa.E.Cacciatore@faa.gov.

SUPPLEMENTARY INFORMATION:

I. Overview

In accordance with Executive Order (E.O.) 14335, "Enabling Competition in the Commercial Space Industry," FAA proposes to amend its commercial space launch and reentry regulations at 14 CFR part 450 to further streamline the commercial licensing process. The regulations at 14 CFR 450.108(c) require a vehicle operator to determine flight safety limits that define when the operator must initiate flight abort. To address applicant confusion about the meaning of 14 CFR 450.108(c)(4), FAA proposes to

reword the paragraph to clarify which inputs are necessary for establishing flight safety limits to prevent high consequence events.

II. Authority for This Rulemaking

The Commercial Space Launch Act of 1984, as amended and codified at 51 U.S.C. 50901–50924, authorizes the Secretary of Transportation to oversee, license, and regulate commercial launch and reentry activities, and the operation of launch and reentry sites within the United States or as carried out by U.S. citizens. Section 50905 directs the Secretary to exercise this responsibility consistent with public health and safety, safety of property, and the national security and foreign policy interests of the United States. In addition, section 50903 requires the Secretary to encourage, facilitate, and promote commercial space launches and reentries by the private sector. As codified in 49 CFR 1.83(b), the Secretary has delegated authority to the FAA Administrator to carry out these functions.

III. Background

FAA has established commercial space regulations governing licensing of launch and reentry in 14 CFR chapter III. On December 10, 2020, FAA issued a final rule consolidating all substantive launch and reentry licensing regulations into a new part 450 (85 FR 79566) that went into effect on March 10, 2021.

On August 13, 2025, the President issued E.O. 14335, "Enabling Competition in the Commercial Space Industry," requiring the Secretary of Transportation to "reevaluate, amend, or rescind" the part 450 regulations for the purpose of further streamlining the commercial licensing process. This proposed rule is being published in furtherance of this E.O.

Section 450.101(c) provides that an operator may use flight abort as a hazard control strategy to protect against a high consequence event in uncontrolled areas.[1] Flight abort accomplishes a controlled ending to vehicle flight, such as through explosive destruct. Section 450.108 provides requirements for flight abort, including requirements for flight safety limits. Flight safety limits, in this context, define the criteria under which a vehicle operator must initiate flight abort.

One of the requirements for flight abort, located at § 450.108(c)(4), provides that an operator must determine and use flight safety limits defining when the operator must initiate flight abort "to prevent conditional expected casualties (CE_C) greater than 1×10^{-2} in uncontrolled areas due to flight abort or due to flight outside the limits of a useful mission from any reasonably foreseeable off-trajectory failure mode in any significant period of flight . . . ." The purpose of § 450.108(c)(4) is to ensure that, when an operator cannot develop flight safety limits that prevent hazards from affecting uncontrolled areas, the flight safety limits nonetheless protect against high consequence events in uncontrolled areas. The paragraph asks operators to compute the CE_C in each significant period of flight[2] where flight abort or flight outside the limits of a useful mission[3] may be an outcome for each reasonably foreseeable off-trajectory failure mode.[4] If the maximum

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[1] As defined by 14 CFR 401.7, an "uncontrolled area" is "an area of land not controlled by a launch or reentry operator, a launch or reentry site operator, an adjacent site operator, or other entity by agreement."

[2] As discussed in the final rule establishing part 450 "Streamlined Launch and Reentry Requirements" (85 FR 79566), a period of flight is considered significant if it is long enough for a mitigation, such as flight abort, to decrease the public risks or consequences materially from any reasonably foreseeable failure mode (85 FR 79566, 79604).

[3] As defined by 14 CFR 401.7, a "useful mission" means "a mission that can attain one or more objectives." The "limits of a useful mission," as defined by that section, means "the trajectory data or other parameters that bound the performance of a useful mission, including flight azimuth limits." The limits of a useful mission are developed as part of the flight safety analysis under 14 CFR 450.119.

[4] As discussed in the final rule establishing part 450 "Streamlined Launch and Reentry Requirements" (85 FR 79566), an off-trajectory failure is a failure "for which a vehicle deviates from its intended flight path—for example, due to failures of the guidance, navigation, or control systems" (85 FR 79566, 79620). Failure modes are categories of hazardous events that share significant similarity in cause and system response, prior to consideration of mitigations or hazard control strategies. Therefore an "off-trajectory failure mode" is a failure mode where a vehicle deviates from its intended flight path. AC 450.101-1, *High Consequence Event Protection*, provides additional background on "failure modes" and how applicants may identify "reasonably foreseeable" failure modes.

CE_C developed through this method is not greater than 1×10^{-2}, an operator can demonstrate high consequence event protection. If this analysis does not demonstrate compliance with high consequence event protection, an operator may modify the limits of a useful mission or flight safety limits, and an operator should update the flight safety limits analysis accordingly until compliance with § 450.108(c)(4) can be demonstrated.

However, the phrasing of paragraph (c)(4) has led some applicants to misinterpret the paragraph as requiring two separate CE_C calculations: one for outcomes resulting in flight abort and one for outcomes that result in flight outside the limits of a useful mission. Meanwhile, other applicants have interpreted the paragraph to mean that an applicant may select only one of these two outcomes and ignore the other in CE_C calculations. In AC 450.108-1, *Flight Abort Rule Development*, FAA attempted to clarify the requirement, writing that "[t]he CE_C results from various end states, such as break-up due to aerodynamic loads or FSS activation, from flight abort and flight outside the limits of a useful mission should be averaged together to compute the mean CE_C for each significant period of flight." However, misinterpretations of the rule have persisted and led to repeated exchanges with the applicants, requiring additional time and effort to develop an acceptable application.

IV. Discussion of the Proposal

The proposed rule would reword § 450.108(c)(4) to reduce confusion among applicants regarding how to comply with the requirement. The proposed rule would clarify that the CE_C should be calculated as an average that accounts for both breakup states due to flight abort and any outcomes involving flight outside the limits of a useful mission–but not breakups within the limits of a useful mission–and evaluated against the threshold for each failure mode within each significant period of flight. This clarification would ensure that both outcomes are combined and accounted for as a single CE_C for each failure mode within each significant period of flight.

V. Regulatory Notices and Analyses

A. Regulatory Impact Analysis

E.O. 12866 ("Regulatory Planning and Review") and E.O. 13563 ("Improving Regulation and Regulatory Review") require agencies to regulate in the "most cost-effective manner," to make a "reasoned determination that the benefits of the intended regulation justify its costs," and to develop regulations that "impose the least burden on society." The Office of Management and Budget has determined this proposed rule is not a significant regulatory action as defined in Section 3(f) of E.O. 12866. FAA is seeking comments on the following analysis.

Currently, 14 CFR 450.108(c) requires a vehicle operator to determine flight safety limits that define when the operator must initiate flight abort. The proposed rule would reword 14 CFR 450.108(c)(4) to clarify which inputs are necessary for establishing flight safety limits to prevent high consequence events. The current wording has caused confusion among vehicle operators, which has prompted operators to seek guidance from FAA.

The analysis first provides an estimate of the cost savings per operator. This is a one-time cost savings per operator because they would only seek this guidance once. FAA estimates the labor time, per operator, to provide this guidance is eight hours for FAA and operators each. For FAA, an analyst at a G-Band would complete this work at an hourly wage with benefits of $72.80.[5] This amounts to $582 per operator. For an operator, an aerospace engineer would seek this guidance from FAA. At an hourly wage

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[5] FAA Technical Pay Band, G Band with Washington DC locality; effective Jan. 2026, maximum salary of $111,138. The government overhead rate is 36.25 percent. This results in the loaded salary of $151,426 ($111,138 * 1.3625 = $151,426). The total loaded salary of $151,426 is divided by 2,080 hours to get the $72.80 hourly wage. 2026 FAA Core Compensation Plan Pay Bands, available at: www.faa.gov/jobs/working_here/benefits/pay/core_salary_with_conversion.xlsx; Office of Management and Budget, *Update to Civilian Position Full Fringe Benefit Cost Factor, Federal Pay Raise Assumptions, and Inflation Factors Used in OMB Circular No. A-76, "Performance of Commercial Activities"* (Mar. 11, 2008), available at: www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2008/m08-13.pdf.

rate[6] with benefits[7] of $96.28, the aerospace engineer cost is $770 per applicant.[8] Thus, the cost savings per operator would be $1,347.

The cost savings would be minimal because FAA expects there to be 40 new license applications over the next 5 years. Assuming eight applications per year, the total undiscounted cost savings would be $53,880. At a seven percent discount rate, the total cost savings would be $50,355, and $48,888 at a three percent discount rate.

B. Regulatory Flexibility Act

Under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601–612), agencies must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rulemaking on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). No regulatory flexibility analysis is required, however, if the head of an agency certifies that the proposed rule would not have a significant economic impact on a substantial number of small entities. FAA has concluded and hereby certifies that this proposed rule would not have a significant economic impact on a substantial number of small entities; therefore, an analysis is not included.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96-39), as amended by the Uruguay Round Agreements Act (Pub. L. 103-465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is

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[6] Bureau of Labor Statistics (BLS), *Occupational Employment and Wage Statistics – May 2024, Industry: Cross-industry, Private, Federal, State, and Local Government, Aerospace Engineers (17-2011),* available at: data.bls.gov/oes/#/industry/000000.

[7] The total wage includes BLS compensation data. For 2024, BLS has wages at 70.5 percent of total compensation, while benefits are 29.5 percent. See BLS, *Employer Costs for Employee Compensation – December 2024*, available at: www.bls.gov/news.release/archives/ecec_03142025.htm (Mar. 14, 2025).

[8] The hourly salary is $67.88. The total loaded factor is 1.42 (1/0.705 = 1.42). Therefore, the total overhead wage is $96.28 (1.42*$67.88 = $96.28).

not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety, and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, they be the basis for U.S. standards.

FAA has assessed the potential effect of this proposed rule and determined that it would not create unnecessary obstacles to the foreign commerce of the United States.

D. Unfunded Mandates Assessment

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531--1538) governs the issuance of Federal regulations that require unfunded mandates. An unfunded mandate is a regulation that requires a State, local, or Tribal government or the private sector to incur direct costs without the Federal Government having first provided the funds to pay those costs. FAA determined the proposed rule would not result in the expenditure of $193,000,000 or more ($100,000,000 adjusted for inflation using the most current Implicit Price Deflator for the Gross Domestic Product) by State, local, or Tribal governments, in the aggregate, or the private sector, in any one year.

E. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires FAA consider the impact of paperwork and other information collection burdens imposed on the public. FAA has determined there would be no new requirement for information collection associated with this proposed rule.

F. International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. FAA

has determined there are no ICAO Standards and Recommended Practices that correspond to these proposed regulations.

G. Environmental Analysis

The Department has analyzed the environmental impacts of this notice of proposed rulemaking pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321, et seq.). FAA has determined this proposed rule is categorically excluded pursuant to FAA Order 1050.1G. Categorical exclusions are categories of actions FAA has determined normally do not significantly affect the quality of the human environment and therefore do not require either an environmental assessment (EA) or environmental impact statement (EIS). In analyzing the applicability of a categorical exclusion, FAA must also consider whether extraordinary circumstances are present that would warrant the preparation of an EA or EIS. This rulemaking, which would clarify the requirements for establishing flight safety limits that define when a vehicle operator must initiate flight abort, is categorically excluded pursuant to FAA Order 1050.1G, Appendix B, Paragraph B-2.6(f), which categorically excludes issuance of regulatory documents. FAA does not anticipate any environmental impacts, and there are no extraordinary circumstances present in connection with this rulemaking.

VI. E.O. Determinations

A. E.O. 13132, Federalism

FAA has analyzed this proposed rule under the principles and criteria of E.O. 13132, Federalism. FAA has determined this action would not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, would not have federalism implications.

B. E.O. 13175, Consultation and Coordination With Indian Tribal Governments

Consistent with E.O. 13175, Consultation and Coordination with Indian Tribal Governments,[9] and FAA Order 1210.20, American Indian and Alaska Native Tribal Consultation Policy and Procedures,[10] FAA ensures Federally Recognized Tribes (Tribes) are given the opportunity to provide meaningful and timely input regarding proposed Federal actions that have the potential to affect uniquely or significantly their respective Tribes. At this point, FAA has not identified any unique or significant effects, environmental or otherwise, on Tribes resulting from this proposed rule.

C. E.O. 13211, Regulations That Significantly Affect Energy Supply, Distribution, or Use

FAA analyzed this proposed rule under E.O. 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). FAA has determined it would not be a "significant energy action" under the E.O. and would not be likely to have a significant adverse effect on the supply, distribution, or use of energy.

D. E.O. 13609, Promoting International Regulatory Cooperation

E.O. 13609, Promoting International Regulatory Cooperation, promotes international regulatory cooperation to (1) meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or (2) prevent unnecessary differences in regulatory requirements. FAA has analyzed this action under the policies and agency responsibilities of E.O.13609 and has determined this action would have no effect on international regulatory cooperation.

E. E.O. 14192, Unleashing Prosperity Through Deregulation

This proposed rule, if finalized as proposed, is expected to be an E.O. 14192 deregulatory action.

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[9] 65 FR 67249 (November 6, 2000).

[10] FAA Order No. 1210.20 (January 28, 2004), available at www.faa.gov/documentLibrary/media/1210.pdf.

VII. Additional Information

A. Comments Invited

FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. FAA also invites comments relating to the economic, environmental, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should submit only one time if comments are filed electronically, or commenters should send only one copy of written comments if comments are filed in writing.

FAA will file in the docket all comments it receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rule. Before acting on this proposal, FAA will consider all comments it receives on or before the closing date for comments. FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. FAA may change this proposal in light of the comments it receives.

B. Confidential Business Information

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and is relevant or responsive to this NPRM, it is important you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to

the person in the **FOR FURTHER INFORMATION CONTACT** section of this document. Any commentary FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

C. Electronic Access and Filing

A copy of this NPRM, all comments received, any final rule, and all background material may be viewed online at www.regulations.gov using the docket number listed above. Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year. An electronic copy of this document may also be downloaded from the Office of the Federal Register's website at www.federalregister.gov and the Government Publishing Office's website at www.govinfo.gov. A copy may also be found at FAA's Regulations and Policies website at www.faa.gov/regulations_policies.

Copies may also be obtained by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW, Washington, DC 20591, or by calling (202) 267-9677. Requesters must identify the docket or notice number of this rulemaking.

All documents FAA considered in developing this proposed rule, including economic analyses and technical reports, may be accessed in the electronic docket for this rulemaking.

D. Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104-121, 110 Stat. 857, Mar. 29, 1996) requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. A small entity with questions regarding this document may contact its local FAA official or the person listed under the **FOR FURTHER INFORMATION**

CONTACT heading at the beginning of the preamble. To find out more about SBREFA on the Internet, visit www.faa.gov/regulations_policies/rulemaking/sbre_act/.

List of Subjects in 14 CFR Part 450

Aircraft, Aviation safety, Environmental protection, Investigations, Reporting and recordkeeping requirements, Space transportation and exploration.

The Proposed Amendments

For the reasons discussed in the preamble, the Federal Aviation Administration proposes to amend chapter III of title 14, Code of Federal Regulations, as follows:

PART 450— LAUNCH AND REENTRY LICENSE REQUIREMENTS

1. The authority citation for part 450 is revised to read as follows:

Authority: 51 U.S.C. Chapter 509.

2. Revise § 450.108(c)(4) to read as follows:

§ 450.108 Flight abort.

* * * * *

(c) * * *

(4) To prevent conditional expected casualties in uncontrolled areas, averaged over outcomes that result in either flight abort or flight outside the limits of a useful mission, greater than 1×10^{-2} from any reasonably foreseeable off-trajectory failure mode in any significant period of flight; and

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Issued under authority provided by 49 U.S.C. 106(f) and 51 U.S.C. chapter 509 in Washington, DC.

Anh Minh Ngoc Nguyen,
Deputy Associate Administrator, Office of Commercial Space Transportation.

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